LAUREA
UNIVERSITY OF APPLIED SCIENCES
Together we are stronger

Co-creating an engaging live-streamed concert with potential viewers

Pursiainen, Erika

2016 Leppävaara

Laurea University of Applied Sciences
Leppävaara

Co-creating an engaging live-streamed concert with potential viewers

Erika Pursiainen
Degree Programme in Service Innovation and Design
Master's Thesis
February 2016

Laurea University of Applied Sciences **Abstract**
Leppävaara
Degree Programme in Service Innovation and Design

Erika Pursiainen

Co-creating an engaging live-streamed concert with potential viewers

Year 2016 Pages 111

This master's thesis is an academic development project. Through service design and co-creation, the project takes a practical and human-centered approach to defining what aspects engage viewers with a live-streamed concert. Taking an interactive approach to viewer engagement, the project also seeks to identify the co-creational aspects of an engaging live-streamed concert. By doing this, the thesis builds on existing knowledge, both academic and professional, on concert live streaming, value co-creation and viewer engagement.

The need for this thesis arises from a gap in related academic research, documented professional knowledge on concert live streaming and data on aspects, which engage viewers with live-streamed concerts. To deliver relevant findings, the thesis was produced in cooperation with a partner company, a live streaming startup, and a case concert, a weekly singer-songwriters' night, both of which are based in Nashville Tennessee, the United States.

The project takes a multi-method approach to data sourcing by combining primary and secondary research tools. Contextual information on concert live streaming was sought through a combination of ethnographic methods and desk research. The main method for the thesis was a co-creation session, which was held in Nashville in spring 2015. The session gathered together 15 fans of the case concert to co-create an engaging live-streamed version of the concert. Silent storytelling, brainstorming, role play, and prototyping were used to gain valuable insights into the participants' experiences.

Based on the co-creation session, the thesis brings forward two concepts, one for a memorable live music experience and another for an engaging live-streamed concert. In the form of the concepts, it suggests a number of different aspects to create engaging live music experiences with the viewers. Reflecting this information, the thesis proposes a model for co-creational aspects of an engaging live-streamed concert and suggests ways to harness interaction and participation in viewer engagement.

According to the findings, viewers engage with a live-streamed concert on two levels: in a two-way, interactive relationship with both other people involved in the concert (online viewers, venue audience, artists, host, etc.) and the technological solutions used in the production. Getting the best results out of these interactive relationships that hold promise to engage the viewer requires harnessing new ways of co-creation and innovative tools such as virtual reality.

Keywords: concert live streaming, live music experience, music industry, music business, value co-creation, viewer engagement, interaction, service design

Table of contents

1 Introduction 5
1.1 Background 5
1.2 Purpose, objectives and design drivers 6
1.3 Limitations 8
1.4 Structure of the report 8
2 Concert live streaming in the music industry 10
2.1 Music industry 10
2.2 Live streaming 16
2.3 Concert live streaming 18
2.4 Partner company 22
2.5 Case concert 23
2.6 Changing roles in the music business ecosystem 23
3 Value co-creation and viewer engagement in service literature 26
3.1 Development of service research 27
3.2 Value co-creation of live music 27
3.3 Viewer engagement – learning from video games context 36
4 Design and implementation of the development project 43
4.1 Service design process and methods 43
4.2 Service design process and methods adopted in the development project 47
5 Development project findings and discussion 66
5.1 Co-creation session findings – a memorable live music experience 66
5.2 Co-creation session findings - an engaging live-streamed concert 73
5.3 Model of co-creational aspects of an engaging live-streamed concert 87
6 Conclusions 91
6.1 Summary of the development project and findings 91
6.2 Validity and reliability of the development project 92
6.3 Suggestions for further development 93
7 References 95
Illustrations 106
Figures 107
Tables 108
Appendixes 109

1 Introduction

This master's thesis is an academic development project that aims at co-creating an engaging live-streamed concert with potential users of the service. Through service design, the development project takes a human-centered approach to defining what aspects make a live-streamed concert experience engaging for the viewer. Based on the identified aspects, the project aims at conceptualizing an engaging live-streamed concert and defining co-creational aspects of a live-streamed concert. The thesis was produced in cooperation with a partner company and a case concert.

1.1 Background

The digitalization of music, especially the increasingly popular music streaming services, has resulted in a major decline in record sales over the past 15 years. After years of struggle, the music industry has finally started to adapt to digital and acknowledge the value digital channels can have in connecting artists and their fans. Now, music fans, who expect an easy access to music, can enjoy music in a variety of formats on a device of their liking. It is easier than ever for the fans to discover new music.

Whereas live concerts used to support record sales, we are now in the situation where record sales can be seen supporting live concerts. However, in the growing world of digital music, it is important to go beyond record sales and touring. The music business is at a crossroads and needs to find ways to make the revenues grow again. As music continues to be an important part of everyday life, the music distribution channels need to support the needs of the new music consumer.

Nowadays, music is not tied to any specific place or time and fans can reach artists and their music from all over the world. Thus, music producers have the opportunity to engage people from outside their immediate operating environment by embracing new, innovative distribution channels and services. Concert live streaming is one of these new channels and has potential to support musicians' other efforts by not only generating additional income but by providing them with new opportunities to reach new audiences and engage their fans.

To achieve this supportive role, concert live streaming has to deliver what the public needs and wants. Based on discussions with music professionals during the thesis process, there are a lot of strong assumptions and beliefs about concert live streaming within the music business. For example some believe concert live streaming will directly affect ticket sales in a negative way. In addition to this, nobody really knows what the live stream viewer wants to watch and experience to be engaged with the stream beyond technical factors and basic

interactive and participatory features. Thus, the viewers and their service experience call for attention in order to design co-creative, engaging live-streamed concert experiences. Based on these remarks, to be able to make concert live streaming more engaging for the public and thus, valuable for the musicians and the music business, it is important to go deeper into what the viewer values in live concerts and what they want to experience during a concert live stream. This is the starting point for this thesis.

1.2 Purpose, objectives and design drivers

The development project derives from the personal interests and motives of the thesis author to create visible information for a field that has so far been quite limitedly documented and embraced within the industry and academic research and is mainly relying on the inside information of the few industry professionals. The author feels the subject holds great promise in the future and finds it inspiring to be part of developing new, innovative ways for the music fans to enjoy music in this growingly digitalized world.

The purpose of this thesis is to:

1. contribute to creating engaging live-streamed concerts for music fans.

So far, the field of concert live streaming has been mainly studied from a technical point of view by concentrating on technical solutions and systems or (often illegal) peer-to-peer live streaming. Research on concert live streaming lacks a human-centered, interactive approach and studies that recognize the active role of the viewers and their needs and wants during a live-streamed concert. Thus, this thesis attempts to fill in gaps in academic research on concert live streaming, co-creation and viewer engagement and by this, contribute to creating engaging live-streamed concerts for music fans.

The objective of this thesis is to:

1. map out aspects that engage the viewer in a live-streamed concert experience,
2. conceptualize an engaging live-streamed concert, and
3. identify co-creational aspects of an engaging live-streamed concert.

Based on an extensive review on industry information, both documented and discussional, the starting point for this thesis is that there appears to be quite limited justifiable information on what the viewers want to experience to be engaged with a live-streamed concert. Live streaming professionals seem to be unaware of the factors or elements that affect the viewer experience and engagement of a live-streamed concert beyond basic level assumptions. Academic research supports this assumption as the most relevant studies have been conducted within other fields than music such as video games live streaming. Thus, this thesis

attempts to map out the aspects that make a live-streamed concert so engaging that the viewers stay glued to their computer screens during the entire broadcast.

> *”We don't really know as much about how musicians, singers or bands or entertainers can better engage their fans while live streaming. The only way I know of now for fans watching the show online to engage in the show itself is to comment or chat during the show. Usually through Facebook and Twitter. Is there really many more ways than that for fans to realistically engage with the artists during a show?*
>
> *I think you were onto something when you were talking about viewers not turning off the laptop or device and going onto something else. I think the part that is the hardest for anyone streaming anything to do is this.*
> *A) Getting them to tune in and engage at all!*
> *B) Once they do? Keeping them there.*
>
> *We solve this? And our network and your thesis will become a hell of a lot more valuable.*
>
> *If what we discover is that there is a better format that will keep viewers viewing from what they tell us. Then that is the best goal. Everything we are doing. Everything the musicians on these shows are doing. Everything depends on ”length of engagement”. The value of the shows and the artists that appear on them will always be based on this one simple thing.*
>
> *I’d love to know what it takes to keep them watching a live stream.”*
> (Shortened from a Facebook discussion with the partner company: The Nashville Loop 2014a)

After identifying the aspects that engage the viewer, the second objective of the thesis is to conceptualize an engaging live-streamed concert. Finally, to further embrace engagement as an interactive construct, the thesis aims at identifying different opportunities for the viewer to participate in co-creating the show. The concept and co-creational aspects can then be used to develop the case concert from a venue-based show into a co-creative, engaging virtual experience that entertains and connects people.

In order to reach the objectives, this development project uses the following design drivers.

1. What kinds of aspects constitute an engaging live-streamed concert?

2. What does a potential viewer of a live-streamed concert appreciate in a live concert experience?

These design drivers guide the project throughout the design process to deliver practical findings that can easily be embraced in live-streamed concert productions.

1.3 Limitations

Instead of focusing solely on either audio or video live streaming, to create a holistic picture of the viewer experience the project concentrates on the full audiovisual live-streamed concert experience. Thus, rather than paying attention to one-level technical factors such as the impact of video stream quality on viewer engagement the thesis concentrates more on holistic productional issues and contents of the show as sources to generate viewer engagement.

In terms of the audience focus, the development project concentrates on business-to-consumer live streaming, from venues to personal devices. Even though the subject is applicable to a wider audience, the focus is on the American concert live stream viewer. Referring to the service literature on value co-creation and viewer engagement, the project studies interactive aspects of the relationship through the concept of value-in-use. Thus, the focus is on harnessing two-way communication to engage (American) viewers.

1.4 Structure of the report

The second chapter of the report introduces the context of the study. It analyses the current state of the music industry and discusses how live streaming could contribute to creating a new channel for live concerts in the growing market of digital music. The information relies on both existing industry documentation and ethnographic research on the subject. The second chapter also introduces the partner company and the case concert of this project.

In the third chapter, different scholarly articles are discussed to give background for the project from the point of view of value co-creation and viewer engagement. Both constructs are approached from the interaction perspective, focusing on two-way communication between the service provider and the user. Relevant studies in the music industry are introduced and complemented by studies in the video games context due to the gap in relevant research.

The fourth chapter outlines the design process of the project. The process includes five parts: gathering information on the context, defining strategic guidelines, generating ideas, creating

concepts, and visualizing the findings. The thesis takes a multi-method approach to data gathering to reach versatile and justified insights into the context and the experiences of potential viewers and to test methods that are not previously widely used within the context. The main method used was a co-creation session in Nashville Tennessee in April 2015. Following the design drivers, the session included two parts: 1) finding out what makes a live music experience memorable, and 2) designing an engaging live-streamed concert.

Chapter five introduces the findings of the project in three parts. First, the chapter proposes a concept of a memorable live music experience based on the real life experiences of the co-creation session attendees. Second, an equivalent concept of an engaging live-streamed concert is proposed by outlining the various ideas suggested during the session. Third, based on the concept of an engaging live-streamed concert, a model of co-creational aspects of an engaging live-streamed concert is brought forward to further address co-creation as a source for interactive viewer engagement.

The last chapter concludes the project and summarizes the most important details of the report. The validity and reliability of the thesis are also evaluated. Finally, topics for further development are suggested.

2 Concert live streaming in the music industry

As briefly mentioned in the introduction, the music industry has faced major challenges because of the rapid digitalization of music. The consumption of music has changed dramatically from the golden days of the CD and new, disruptive channels of music distribution have claimed their place within the music market. This chapter looks into the changes within the music industry in more detail and discusses concert live streaming from the point of view of a new way of delivering music to music fans.

The partner company and the case concert of this development project are introduced at the end of the chapter. Because both of them are American, in addition to discussing the global music consumption, some details of the U.S. music consumers are also offered.

2.1 Music industry

The 1990s were the golden age for recorded music with the CD at the top of its life cycle, Mulligan (2010) recaps the time before the steep decline of physical record sales. The music fans started abandoning the CD and turning to free file sharing. Streaming services grew fast and were considered as "*eating*" the recorded music, Resnikoff (2014) illustrates the transformation of the music business (see illustration 1). Change was inevitable from distribution of music to a consumption era where "*music fans expect music to be on tap, unlimited and whenever and wherever they want it*", Mulligan (2010) continues. Unfortunately, the music business was not fast enough to embrace digital, and online piracy boomed. In ten years (2000-2009) the recorded music revenues dropped to 42% of the starting point in the US and European markets, Mulligan refers to a Forrester Research report. Even though it is perhaps not fair to compare the 2000s with the 1990s since the recording industry enjoyed a sales boost along with the introduction of the CD in the 1990s, the industry could be seen as having growing pains in monetizing the new models, Goldman (2010) of CNN adds.

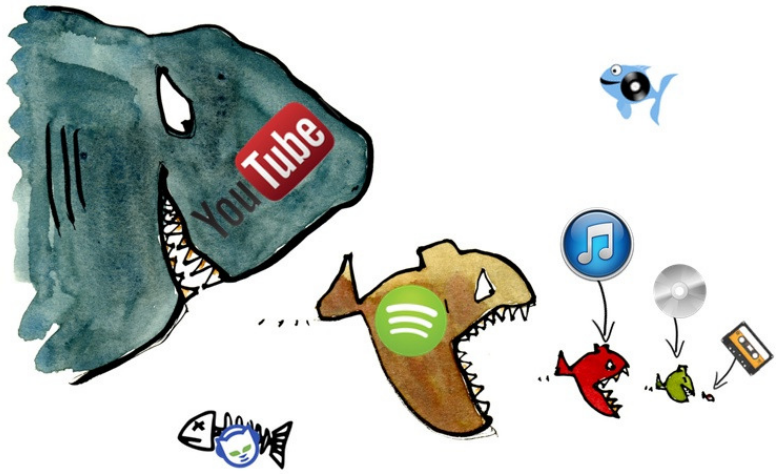

Illustration 1: "*This is how streaming ate recorded music*" (Resnikoff 2014)

Masnick (2012) approaches the changes from the perspective of the entertainment industry, which as a whole has also been considered dying because of digitalization. He refers to his research report, which shows that on the contrary, the entertainment industry (including music) has in fact grown 50% during the decade discussed above. The amount of content is growing "*at an astounding rate*" and people are continually increasing their spending on entertainment. He suggests the challenge is not the business getting smaller but "*it's about the challenge of an industry getting larger, but doing so in ways that route around the existing structures*". This opens up more content choices for consumers, more options for content creators, and more opportunities for businesses and artists to make money, he suggests. According to Masnick's report, the global music industry value grew from $132 billion in 2005 to $168 billion in 2010.

2012 was the first year since 1999 that the global music industry reached a slight increase and digital music was finally considered saving music instead of killing it, Pfanner (2013) writes on The New York Times and quotes Edgar Berger, Chief Executive of the Sony Music Entertainment International. The increase of 0.3% to $16.5 billion reported by the International Federation of the Phonographic Industry (IFPI) raised hopes that the industry was on the road to recovery. New sources of revenue, including digital music in a variety of forms, grew enough to offset the continuing decline in CD sales. The record labels and music executives who used to see only the threat from online piracy, now seemed ready to embrace the opportunities of new digital business models, Pfanner suggests. However, it is worth noting that the development of the overall market has remained almost flat ever since, IFPI (2015) reports.

According to Argillander, Kalli, Martikainen, Muikku, and Tuovinen (2012), the situation has led to an increasing supply of online music services that aim at meeting the needs of an

individual fan. The fans are now more willing to pay for a service that meets their needs than the content itself, they suggest. IFPI (2015) reports that the fans are now enjoying music from a diverse range of channels, including physical format sales of CDs and vinyl LPs, downloads, subscription-based and ad-supported streaming, mobile personalization, and performance rights licensing. For the first time, in 2014, the shares of global digital and physical revenues were of equal size. This resulted from the rise of streaming, which is becoming an important source of revenue for the industry, and the decline of physical format and download sales. As opposed to the global trend, digital revenues enjoyed a 71% share of the total U.S. recorded music market, their report reveals.

The American music consumer

Despite the changing market, a Nielsen (2015a) report on music consumption shows that the Americans still love music and are listening to it all the time, 91% of them in 2015, spending more than 24 hours a week listening to their favorite tunes. The appetite of Americans remains strong but the ways how fans consume music have changed, Nielsen reports (2015b). They might not spend on physical albums as much as they used to but they are still spending on music. In 2014, consumers spent $109 on average on music activity out of which just over a half on live music events. Furthermore, the Americans are not only spending increasingly on live events and festivals but fans are also attending festivals online when they cannot be there in person, Nielsen (2015a) informs.

According to their Music 360 2015 report, Nielsen (2015a) reveals that 75% (+12% from 2014) of American music consumers listen to music online in a typical week. Along with becoming more digital, music listening is becoming more mobile. The listeners are eager for apps and mobile sites, which is why artists and record labels are offering exclusive material on apps to excite and engage fans, generate awareness and additional revenue streams, and increase overall consumption, Nielsen (2013a) reports. Furthermore, streaming music continues to surge in the U.S., even at a faster pace than in 2014, they (2015c) add. While the number of on-demand streams was 164 billion for the full year of 2014, the Americans had already streamed 135 billion tracks during the first half of 2015, up more than 90% compared to the same period the year before.

Even though there is debate on whether the digitalization of music is a positive or negative phenomenon for the music industry, the steep growth of digital music and the fragmented music consumption described above can be seen as opening up new opportunities for different actors in the field. The music fan is embracing the new channels and services at a growing rate.

New opportunities for the music consumers

According to IFPI (2015), the music industry is entering a new phase in its transition to the digital world. This phase is driven by the shift from music models based on ownership of music to models based on access. The music consumer is now demanding instant access to a widening choice of music on mobile devices through diverse services. Even though music streaming is steadily growing its market share (see figure 1), it is important to offer music in all the formats the music fans demand, IFPI suggests. Already in the 1960s the band Grateful Dead realized that offering music in a variety of formats is a win-win situation for both the artists and the fans – something the music business is only now starting to grasp, McGarry (2013) writes. According to Nielsen (2015c), in the current fragmented music ecosystem artists are communicating with fans through sales, streams, airplay, and social media. Even though album and song sales are decreasing, Argillander et al. (2012) suggest that the market for physical records will not disappear altogether but it will become a niche market.

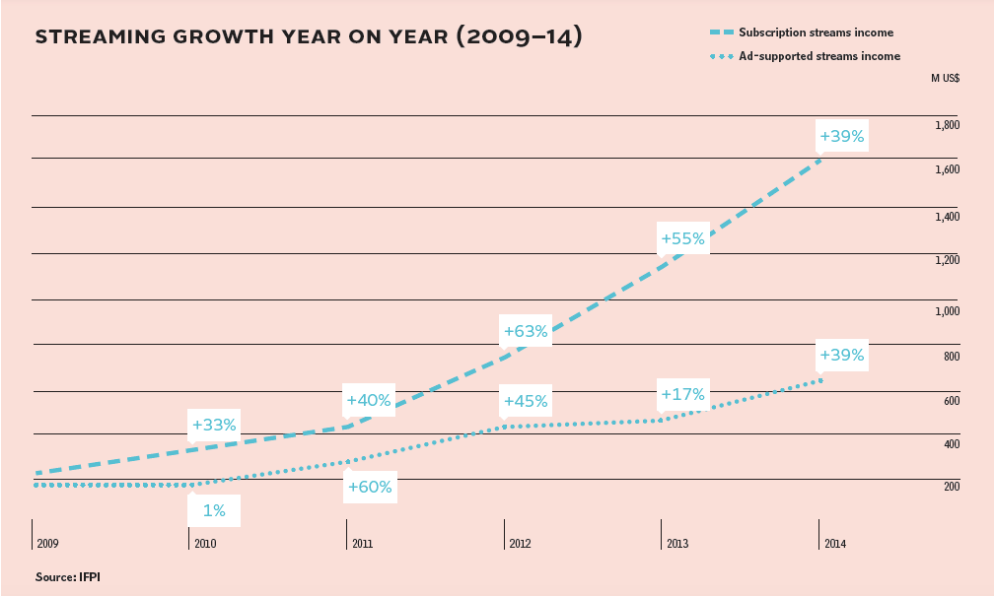

Figure 1: Global streaming growth 2009-2014 (IFPI 2015)

The widening choice and access to music "*changes people's listening habits, they are more likely to experiment and discover new music*", IFPI (2015) quotes Rob Wiesenthal of Warner Music Group. Even if the digital transition has expanded both the supply (Sahlman 2014) and demand of music (Waelbroeck 2013), it has also increased the demand for online music services that support easy search of material. It is easy for a music fan to get lost in the sea of music from all over the world.

Argillander et al. (2012) suggest that for consumers who are actively looking for new content, in addition to being able to use easy search applications, deepening content such as biographies, interviews, and videos related to artists and their work will offer them the most value. Even though the value of recorded music has decreased for the consumer they are ready to pay, either directly or indirectly, for services that meet their own personal habits and needs. This makes communal online services very valuable for active fans, they propose, because they allow them to communicate with both consumers like them and the artists they love.

Tate (2013) discusses the digital transition from the artist's perspective and refers to Princeton Economist Alan Krueger's papers on the "*superstar economy*" of the music business. Because of the increasing usage of streaming services and social media it is easier than ever for aspiring musicians to break out and build a fan base. However, these types of new opportunities have not spread to the live performance business where inequality between successful and unknown bands still flourishes, he argues. Today, when live concerts are growing their importance (Music business entrepreneur 2015), the top 1% of live acts continue to own 56% of total concert revenue, the same ratio in 2013 as in 2003, Tate (2013) continues. However, he sees some potential in concert streaming for indie (independent) bands that are underdogs in the concert business: "*If people can eventually be convinced to pay for concert streams […] the economic picture could change substantially for indie bands […]*".

Even though the digitalization of music is challenging the music industry as a whole Sahlman (2014) also suggests it offers opportunities for independent bands and artists to promote, publish, and sell their material without a record deal. Argillander et al. (2012) talk about D2F (direct-to-fan), an alternative business model that promotes direct sales between an artist and their fans. It allows musicians and bands to override traditional value chains and operators such as record labels and to develop business models that better serve their needs. Many such services aim at strengthening the relationship and communal feeling between musicians and their fans without any direct sales, they continue. The relative value of this type of special online services will grow in the digital market when producers and artists use them to promote the sales of their main products, they suggest. The music business is indeed changing and independent music entrepreneurs have potential to create fresh, new business models that will replace the old ones, Musicians Institute (2015) proposes.

The future of the music industry

On the one hand, the music industry has been the first field in content production that started taking advantage of digital distribution channels in the late 1990s and on the other,

suffering from illegal content sharing online the longest, Argillander et al. (2012) write. According to IFPI (2015), the music industry has finally started to adapt to digital and recognized that technology is connecting artists and audiences. They suggest that the record companies are leading the business back on the road to recovery by investing in new artists, embracing change, and responding to the needs of the consumer.

In their report, IFPI (2015) quotes Francis Keeling, Global Head of Digital Business at Universal Music Group, who says that the wide-ranging portfolio of different services and businesses represent the strength of the music industry. The artists now have more opportunities to reach wider audiences who in turn, can access a wide array of music experiences. However, music is nowadays competing with all easily accessible entertainment online, which makes it harder for individual artists to stand out and engage people, Lefsetz (2015) adds.

Live Nation (2015), the global leader in the live events industry, believes live events are not threatened by technology but on the contrary, fans around the world who can now discover, follow, and share artists drive greater demand for live shows. The live concert business will have strong growth for years to come, they suggest. However, the current revenues of the overall industry are fairly flat and the development is still ongoing, IFPI (2015) notes. The music industry now aims at sustainable year-on-year growth by embracing new business models, areas of technology, licensing, investing, and widening consumer choice. IFPI considers virtual reality and wearables as promising areas for the future of music business. Furthermore, steps have to be taken to correct the value gap in digital music, "*the value that certain digital platforms extract from music and the value returned to rights owners*", they point out.

PwC (2015a) provides a 5-year forecast on the music industry for 2015-2019 and highlights six themes. They suggest the development rates of recorded and live music continue to diverge so that the growth of live music will just about compensate the declining recorded music. In terms of live music, PwC (2015b) visions that consumers will be willing to pay more for real-life entertainment experiences to the extent that live music will dominate 70% of the total music sales. Consumer spending on digital music will surpass the physical format sales and the digital transformation will spread across countries, they (2015a) continue. Along with the growing streaming services pressure is on to limit free access to music on ad-based services. Additionally, to boost consumer spending on subscription-based streaming services, more paid-for tiers need to be introduced. Finally, they also bring up technology, especially wearables such as smart wristbands and cashless on-site payments, which according to their forecast, will play a major role in the growing market of live music.

To conclude the analysis of the transformation of the music industry from the golden ages of the CD to today's expanding world of digital music, the changes have not only caused challenges for musicians and corporate actors but also opened up new opportunities to share new music with consumers. The challenges are by no means over yet, the power structures are molding, and many are still afraid of embracing digital solutions. However, this situation offers promising grounds for designing new, innovative service models that meet the needs of the contemporary music fan. Concert live streaming is one of those new, disruptive opportunities.

2.2 Live streaming

Before discussing concert live streaming in more detail, this chapter defines live streaming as a service. Also, different ways to enjoy live streaming are demonstrated briefly.

According to Smith, Obrist and Wright (2013), live streaming has existed for the last 20 years or so on the Internet. Thus, it is not a new invention anymore. More recently, along with new web services and advanced bandwidth, it has become a medium for not only professionals but anyone who wants to live stream anything they want, they suggest and add that some even call it DIY (do it yourself) broadcasting.

Live streaming is a phenomenon with many wordings and spellings. The industry literature addresses the phenomenon with e.g. "*live streaming*" (McGarry 2013; Rogers 2014; Whitney 2008; Hamilton, Garretson and Kerne 2014; Savitz 2013; Martin 2013), "*live-streaming*" (Robehmed 2012; Resnikoff 2012; Birmingham and David 2011; Smith et al. 2013), "*livestreaming*" (vLink Live 2015), "*webcasting*" (Knopper 2014; Juhlin, Engström and Reponen 2010), "*live webcasting*" (Bruno 2010), "*livecasting*" (vLink Live 2015), "*broadcasting live*" (Ozer 2011; Juhlin et al. 2010), "*live broadcasting*" (Toussi 2011), "*live online broadcasting*" or "*online live broadcasting*" (Schwartz 2015), and "*internet live broadcasting*" (Yonezawa and Tokuda 2012). This indicates that live streaming has not yet been fully established as a phenomenon. This thesis uses "*live streaming*" because it seems to be the most widely used wording among industry professionals.

What is live streaming then? In addition to an unestablished wording, it seems that the concept is also lacking a comprehensive, official definition. It might be because of the rather technical approaches of academics and journalists who assume there is no need to define the concept due to their knowledgeable audiences. Because of the lack of a generic definition beyond the different suggestive wordings, the thesis suggests that live streaming is easiest to understand through three elements: the concept of streaming, the live factor and the user perspective (in this case, the viewer), which are discussed below.

First, the concept of streaming is one-way communication per se and defined in the literature through the technology that enables it. According to Rayburn and Hoch (2005), streaming allows consuming audio and video content over the Internet without downloading it to a computer. The stream resembles a television or radio broadcast, they describe.

Second, as the name suggests, live streaming is streaming in realtime as the event unfolds.

Third, this realtime communication can be turned into interactive, two-way communication. Through various devices, such as desktop computers, laptops, tablets, or mobile phones, the viewer often has a possibility to interact with the live stream host, guests, or other viewers through for example a text chat, Twitter feed, voice, or webcam video (vLink Live 2015).

Live streaming can be used to share content between individual people, organizations, and corporate entities. Live streams range from small private events such as weddings and funerals to large public productions of music festivals and sports events. They can reach only one specific individual through a surveillance camera or a group of people during a cooking show, a yoga class, or a mass event. Some radio and TV stations live stream their programs and conferences share the presentations of their keynote speakers online. Musicians live stream intimate sessions to engage with their fans, live music venues and shows share their events online, DJs connect with fans and peers through live streams, and even the healing power of music can be harnessed through live streaming. Live streaming is also used to access behind-the-scenes material, observe animal behavior, hold church sermons online, observe medical procedures, celebrate New Year's Eve, for educational purposes, and so much more (see appendix 1). Even these examples represent only a small amount of all live streams out there.

As described above, basically anything can be live streamed. The examples and opportunities are pretty much endless. Many service providers have embraced this potential and created services and platforms for content producers. According to the focus of this project, the current services were benchmarked to find out which services provide concert live streaming for the music fans (see appendix 2). According to the benchmarking, there are currently only four platforms specializing in concert live streaming: Concert Window, Mixify, Stageit, and VyRT. Concert Window and Stageit are the main operators within concert live streaming (Employee of a concert live streaming company 2015).

Even though live streaming is already being embraced in a number of ways, according to Hutchinson (2015), the future is wide open for live streaming. He thinks that even though today, live streaming allows us to access "*another world*", the possibilities it offers are nowhere near realized at this stage. At the same time, live streaming in its current form has

some clear restrictions to take the next step. For example, it is not built to scale big enough nor does it offer content entertaining enough to reach masses, he argues. Hutchinson suggests two approaches for live streaming services to reach the new level and a wider audience: it either needs to appeal to a wider group of people who will come to produce their own content on the platform or it needs to become "*a hub of content so entertaining*" to attract more people more often. He questions the current services' ability to do this and thinks it will be the big players like Facebook that will win the game with their bigger resources. "*The game will change, and it could evolve quicker than you expect*.", he concludes.

2.3 Concert live streaming

Referring to Hutchinson (2015) and his ideas on the future of live streaming, concert live streaming is one of the untapped areas of live streaming that has potential to serve consumers with entertaining content. However, concert live streaming also faces a lot of resistance and negative attitudes, which can restrict the fans from accessing music through this channel. The following pages introduce concert live streaming as a service, analyze some of the prevailing industry perceptions on the phenomenon and discuss how current content providers engage with their viewers. Because concert live streaming has been quite limitedly documented so far, in addition to documented material, the text relies on ethnographic research.

An untapped digital service

> *"I can have my friends over to watch in HD […] on a 46 inch TV thru a decent sound system and we can eat, drink and be merry in the comfort and privacy of home". (Tarricone 2013)*
>
> *"[…] when you tune in, it looks unbelievable! […] It's like you're at the show". (Lefsetz 2012)*

iROCKE (Livelist 2013) well communicates the definition of live streaming drafted in the previous chapter in the context of concert live streaming: "*a live-streamed concert is a live concert or music performance that is digitally broadcast in real-time via the Internet to remote audience members who are able to watch, listen and interact using their computer, smart phone, tablet, television, or game console*". Live streaming offers a possibility to see concerts even if you are on the other side of the world (Audio engineer 2014). Through this accessibility fans are not limited to their surroundings anymore (Whitney 2008) and people in smaller places get to see big bands and artists that do not usually come to their cities (Heavy metal journalist and writer 2015). Through live streaming bands can reach global audiences

much bigger than the audience at the venue (Tamminen 2015a). Consumers are ultimately the real winners by gaining access to a wide range of programming which they can enjoy while on the go (Savitz 2013). Additionally, concert live streaming can offer live music experiences for those who find it more challenging to attend concerts such as disabled individuals (Tamminen 2016).

According to the historical timeline of live streaming provided by Timeline (2015), the first ever live-streamed rock concert was held on June 24, 1993 in Palo Alto California by a band called Severe Tire Damage. McGarry (2013) writes that early concert live streaming was a technical achievement because of the bandwidth. Despite the 1.2 mbps connection speed, some 36,000 viewers watched the first large-scale live-streamed event, the Tibetan Freedom Concert in 1996 with Beastie Boys, Red Hot Chili Peppers, No Doubt, and others.

Even though streaming music services (Pandora, Spotify, Rhapsody, and more) are everywhere, concert live streaming "*is still a relatively new phenomenon*", McGarry (2013) writes. According to Knopper (2014), for 15 years, artists and tech companies have been emphasizing the value of concert live streaming as an untapped area and the next big thing for online music. But it happens only sporadically, he continues, usually with big events such as concerts of successful artists and annual festivals. Knopper refers to Alex Luke, a former iTunes and EMI Music executive who thinks the music business is yet to find a way to take advantage of live streaming: "*no one has cracked the code to being the destination for consumers for live music in the digital space*". Still, the live streaming companies believe the business is about to take off any minute, Knopper says.

"*I think we're dealing with emerging technology. It's inconvenient for all but the early adopters.*", executive producer of a live-streamed concert (2014) says and refers to Moore (2014) and his book about marketing disruptive products. "*But soon, all TV will have the web component. It's the terrestrial and the subscription (cable, dish) that are endangered species*". Nielsen (2015d) and Bulldog Digital Media (2015) agree and suggest that consumers are pulling away from traditional television and media and instead, engaging in live video content.

Probably because of the untapped nature of the phenomenon, in addition to the limited general documentation, it looks like concert live streaming is quite narrowly reported in terms of numbers as well. According to iROCKE (Rogers 2014), the only source that seems to be reporting concert live streaming, live-streamed concerts reached 380 million viewers worldwide in 2013. The numbers were increasing compared to 2012: the number of live-streamed concerts by 43%, live streaming artists by 53% and live streaming platforms by 36%. Two trends contributed to the growth: increase in brands that sponsor free live concert

streams of top artists and festivals and the growing amount of new live stream platforms for concerts. Furthermore, the number of worldwide live concert stream viewers grew by 40%, mainly within the electronic genre with DJs. The growth was due to the increasing global reach of major festivals and "*a dramatic increase in the quality of live-streamed concerts*", iROCKE analyzes their results.

Perceptions on concert live streaming

According to Whitney (2008), some believe live streaming is the future and the others doubt it. Especially in the music business there are a lot of misconceptions and prejudice against live streaming and its potential and value are yet to be acknowledged, says Tamminen (2015b), a freelancer in audiovisual production, live streaming, and photography and one of the live streaming pioneers in Finland with over 20 years of experience. He thinks it will take some time until music managers realize the potential of concert live streaming and suggests that the music business is still quite old fashioned - all the musicians want to do is music and the managers do not see the value in new solutions (Tamminen 2015c). Some people for example believe that concert live streaming decreases the number of live audience (Tamminen 2015a) and concert ticket sales (Knopper 2014; International band manager 2014). Some others assume that people prefer to watch on-demand videos (Preston 2011) or find it challenging to replicate the live concert experience online (Bruno 2010; Heavy metal journalist and writer 2015; Musician and music entrepreneur 2014; Music business entrepreneur 2015; Musician A 2015).

On the other hand, some also see the potential of concert live streaming can offer for the music fans and disagree that it is cannibalizing ticket sales (Lefsetz 2012; Music business entrepreneur 2015; Knopper 2014; Pollstar 2014). For example, concert live streaming is considered as a way for musicians to connect with their fans (McGarry 2013; Executive producer of a live-streamed concert 2014; Employee of a concert live streaming company 2015) who in turn, can have a collective experience and share the experience with each other (McGarry 2013). Concert live streaming is also perceived as an efficient tool to boost marketing (Musician B 2014; Knopper 2014) and viral buzz (Knopper 2014) and used as a point of discovery for people who are looking for new and cool music that they cannot find in the media stream (Executive producer of a live-streamed concert 2014).

Engaged viewer

Those who see the potential of concert live streaming regard engaging the audience as the key to success (Employee of a concert live streaming company 2015). Interaction (CEO and one of the founders of a concert live streaming company 2015) and user participation

(Whitney 2008; McGarry 2013; Music business entrepreneur 2015) are considered to be the main aspects engaging the viewers so not to lose them to other websites during the live stream. Interactivity, along with authenticity, honesty, and personality is what the viewers want to experience (CEO and one of the founders of a concert live streaming company 2015).

Live streaming service providers hope interactive features such as chat and social media sharing will keep the viewers watching the entire set (Bruno 2010). Interaction can also take place between the artist and the viewers during the show (CEO and one of the founders of a concert live streaming company 2015). Unfortunately, the current live streaming services are not supporting active viewer interaction beyond a chat functionality, Tamminen argues (2015b).

In terms of user participation, "*the difference between watching those live events on TV and experiencing them online is that online you can have a participatory experience*" (McGarry 2013). The viewers can participate in the live stream by for example sending messages to the musicians to request songs and ask questions (Whitney 2008) or creating their own viewer experience by choosing the camera angles themselves (Music business entrepreneur 2015; Film festival producer 2015; Tamminen 2015a). Furthermore, virtual reality is considered offering a lot of possibilities in the future for engaging the live stream viewer through participation (Film festival producer 2015, Tamminen 2015a). According to Tamminen (2016), virtual reality will change the viewer experience in a considerable way by offering an immersive experience on an emotional level. The experience is stronger and the viewer can feel present at the venue when viewing the live stream through wearable technology such as Oculus Rift or Google Cardboard, he suggests.

Even though concert live streaming can be seen offering new experiences for the music fan, there are still some issues that restrict it from becoming the next big thing within digital music. For example, the cost of producing concert live streams (Bruno 2010; Knopper 2014; Tamminen 2015b; Schwartz 2015) and bandwidth (Knopper 2014) are still seen as holding content producers back from sharing their music with the fans. Achieving a sound quality high enough is also very important and can become a hurdle (Film festival producer 2015; Heavy metal journalist and writer 2015; Musician A 2015; Tamminen 2015a; Band manager 2014).

However, as described above, interaction and user participation are considered as effective ways to engage the viewer. Because an engaged viewer is regarded as a valuable viewer (Bruno 2010), it can be suggested that there is a need to find out what engages the viewer beyond the rather superficial current perceptions on interaction and user participation. Before attempting to do so, the following chapters introduce the partner company and the case concert of this development project.

2.4 Partner company

The partner company, The Nashville Loop, is a Nashville-based live streaming startup. They are currently pursuing investors to kick-start their operations. Their aim is to offer an online TV type of a network that live streams a variety of entertainment, including music and sports straight from Nashville. (The Nashville Loop 2014c)

The creative lead of The Nashville Loop, a musician himself, was signed nine years ago by a record label and he made two records. He felt that the label was not very supportive to him and unfortunately, he did not become a big star. He realized that there must be another way for aspiring talents to get exposure. This can be considered as the birth of The Nashville Loop when he started helping aspiring musicians in Nashville to get the attention he thinks they deserved. (The Nashville Loop 2014b)

The Nashville Loop (2014c) considers both aspiring and established artists as well as live venues, the scenes for the live broadcasts, their ”*beneficiaries*”. They think that the music business, as it existed before the digital revolution, has all but disappeared. The era of the record deal has passed. Even in Nashville, known as the Music City, the opportunities are quite limited for promising artists who come there to be discovered. Thus, in the world of popular music streaming services and music piracy, they suggest that the importance of live concerts is growing and it is possible to gain the needed exposure and a fan base to launch and/or sustain a music career through live streaming they offer.

The benefit for the global public is obvious, The Nashville Loop (2014c) believes. Their operations provide an access to Nashville as the home of wide selection of live events and a broader selection of artists beyond the successful ones. They think that live event streaming has potential to bring people together through apps and social media. The Nashville Loop was chosen as the partner company for the thesis because of this humane mission of theirs to bring people together, connect artists with fans and offer great live-streamed experiences to consumers.

Because The Nashville Loop is in a startup phase and not operable yet as such, this thesis does not include any detailed numerical or strategic information of the company. To kick-start their operations The Nashville Loop is looking for cooperative partners to have a pilot with. They have been discussing a potential test with a Nashvillean concert, Whiskey Jam. (The Nashville Loop 2014b) This development project builds on that potential cooperation and aims at providing concrete tools to plan a successful pilot and partnership with them.

2.5 Case concert

Celebrating its 5-year journey in January 2016 Whiskey Jam (2015b) has grown from an underground writers night into an established local brand in Nashville. Whiskey Jam is a Monday night event held at a midtown venue Winner's Bar and Grill that, according to their words, attracts both locals and tourists with its laid back atmosphere. The Nashville Loop (2014c) considers Whiskey Jam as the "*it*" place to network with fellow musicians and artists every week.

Whiskey Jam showcases a combination of established artists and aspiring stars of tomorrow that represent various genres, 7-9 acts per night in summer 2015. Along with occasional pop-ins by Nashville's (or Los Angeles' or New York's) top writers and artists they cherish the Nashville idea of "*you never know who you're gonna see*". No act has ever been paid to play the concert, they say. (Whiskey Jam 2015b, 2015c)

From its beginnings the show has spread on the road to other cities and outside the venue to a nearby parking lot. The outdoor concerts feature 8-10 signed acts and attract an average crowd of 2500-3000 people. Whiskey Jam's future goals focus on growing the outdoor shows into festival style events, developing the relationship with their current sponsors and growing their audience outside the venue and Nashville through capturing and streaming content. (Whiskey Jam 2015b)

2.6 Changing roles in the music business ecosystem

Based on the recent changes in the music industry described in this chapter, it can be noted that the relationship between the music fan and other actors in the music business is changing. Instead of owning a CD or other type of a physical realization of music of particular artists, the music fan now wants a 24/7 access to a widening choice of music. This reflects the change from selling products to selling services in music. The change from ownership to access brings the music fan closer to the artist and transforms the role of the commercial actors (or enablers) such as record labels. Figure 2 visualizes this change in simplified terms.

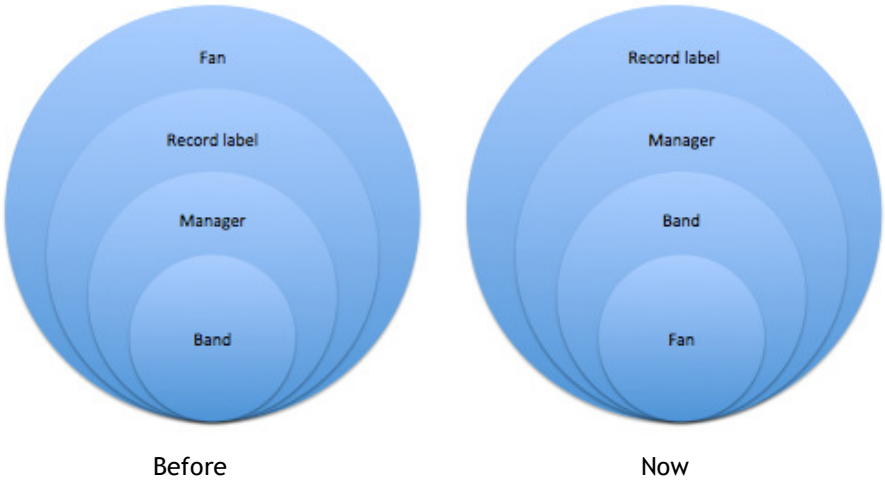

Figure 2: Transforming relationships within music industry

Argillander et al. (2012) suggest that even though the record producers such as record labels continue to be important within the music business their role will change so that they will concentrate more on their core competencies, which in the case of labels is content development and marketing. Now that bands have started offering their live shows online through their own websites changes the market from concert venues and third party websites that have always had a monopoly within the concert live streaming market, says Robehmed (2012). ”*DIY live streams seem to be the latest frontier for bands to interact with fans*” (p. 14).

The new relationship between the fan and other actors opens up opportunities for new forms of cooperation. It also offers the possibility for the artist to communicate and interact more directly with the fans through co-creation and interactivity. Concert live streaming is one example of such a two-way communication channel. The Nashville Loop (2014b) agrees that the meaning of record labels is about to change and suggests that live streaming has potential to push the music business to a new direction. They think concert live streaming can create new ways of working with artists.

In the context of the development project, concert live streaming can be seen as a network service. The live streaming providers that stream concerts at small venues can be considered having at least three kinds of relationships: with the live music venues they work with, the musicians they are trying to get more exposure to (and their record labels in case of booked artists), and the end-users behind their computer screens. When considering the networks of bigger live streaming productions, such as arena shows or music festivals, the networks involve even more stakeholders. On the other hand, when taking a concert live streaming

production into individual actor level the scope grows even further with different people, such as band managers, music promoters, venue owners, and venue staff.

To conclude, it is getting easier for the fans to reach the music they like without the heavy, traditional structures of the music business. Through new channels such as concert live streaming the artist can establish his/her own relationships and networks and either work without the traditional enablers or cooperate with them in a new way to engage fans.

This transformation follows a wider change within business and marketing from a goods-based approach to a service-based approach where companies are complementing their products with services or concentrating more on services as a strategy. At the same time they are paying more attention to relationships with their customers and two-way communication. This is the starting point for the next chapter, which describes the change from the point of view of the services market.

3 Value co-creation and viewer engagement in service literature

Approaching concert live streaming as a service, the aim of this chapter is to build a theoretical foundation for the development project by discussing relevant service literature around the subject (see figure 3). The chapter builds on the notion suggested at the end of the previous chapter that the recent changes within the music industry, along with new, disruptive services such as concert live streaming, are transforming not only the market but also the relationship between different actors. Music can be seen following a similar path of a more general market change from products to services (from goods-dominant logic to service-dominant logic) where the music producers (artists) are now closer to the fan than ever before. This creates new opportunities for interaction and co-creation with the fans. This as the starting point, the literature review approaches the transformation of music from the services market point of view and discusses how the new relationships affect both the value co-creation and viewer engagement processes.

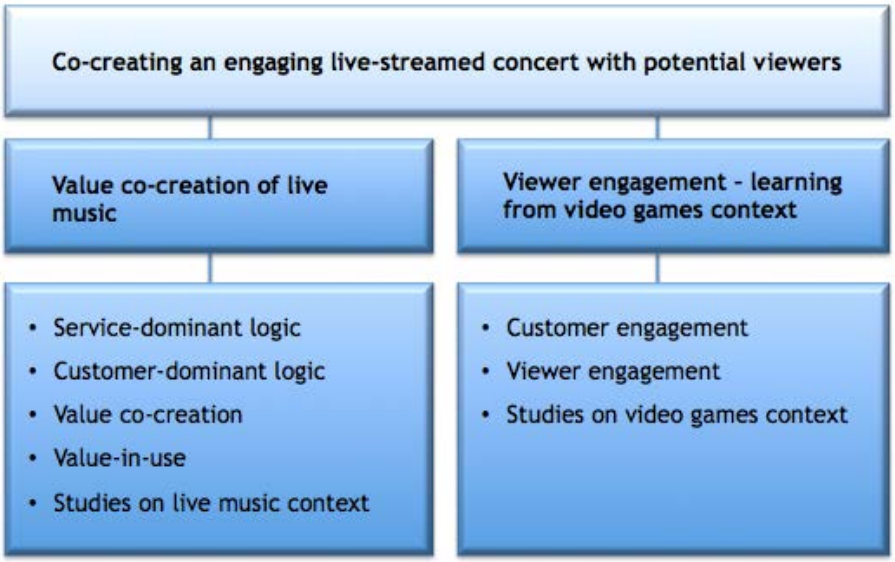

Figure 3: Topics covered in the literature review

The development project is based on service literature of value co-creation and viewer engagement. These themes are related and have common roots in service-dominant logic (Vargo and Lusch 2004), a widely recognized approach in service research. It is discussed side-by-side the customer-dominant logic (Heinonen, Strandvik, Mickelsson, Edvardsson, Sundström, and Andersson 2010) to include an even more human-centered approach to the project. According to the limitations of this project, the literature review focuses on studies that highlight interactive relationships with the viewer. However, facing a gap within this type of research in the live music context the literature review taps into the video games context to benefit from relevant lessons learned. To tie concert live streaming to the services

research agenda and lead the literature review to the key themes of value co-creation and viewer engagement the first chapter briefly discusses the development of the service industry and research.

3.1 Development of service research

The meaning of services for societies is increasing. According to The World Bank (2015), services corresponded to 78.1% of the Gross Domestic Product (GDP) in the United States in 2013. Along with considerable advances in the fields of service management, service marketing, and service theory during the last several decades (Chandler and Lusch 2015), the potential and opportunities for companies to market, manage and deliver services that satisfy the customers are increasing with the growing market share of services in the world economy (Zeithaml, Bitner and Gremler 2009).

Technology has instigated many innovations along the years and the Internet today is hosting a plethora of different e-services (Zeithaml et al. 2009). Information technology (IT) offers a new infrastructure for marketers to complement other channels and tools because people nowadays seek for multiple and simultaneous experiences offline and online (Gummesson 2012). Technology also enables new forms of service delivery and customer interaction (Kunz and Hogreve 2011). As an interaction channel between people with similar interests the Internet builds networks and communities through which suppliers, customers and other stakeholders form relationships (Gummesson 2012).

Along with the development of the service industry, companies have realized services present different challenges and advantages for marketing and management than goods (Zeithaml et al. 2009). The unique characteristics of services affect the customer experience differently compared to experiences with products (Moritz 2005). Every service encounter is different where the experience is made up through several touchpoints, contacts with different space, product and service components (Moritz 2005). This has created a lot of discussion as the field has developed and opened much recent discussion about the future of the field among long-time contributors within service research (Tronvoll, Brown, Gremler, and Edvardsson 2011).

3.2 Value co-creation of live music

Following the discussion about the special characteristics of services and the future of the field, Vargo and Lusch (2004) propose a new lense to stimulate new approaches to service research. They suggest taking the perspective further from the attempt to distinguish goods from services and building up "*a more service-dominant view of all exchange*" (p. 324) to develop more appropriate normative strategies for the whole field of marketing. They call

this approach the service-dominant logic (S-D logic). The S-D logic encourages focusing on value co-creation and service exchange (Tronvoll et al. 2011). Based on this development and referring to the recent changes within the music industry, this chapter discusses value co-creation through the S-D logic and the customer-dominant logic. Before linking value co-creation to live music productions the general basis and concepts are introduced.

Service-dominant logic and customer-dominant logic

With S-D logic, Vargo and Lusch (2004) propose everything is basically a service and economic exchange is fundamentally based on service provision. According to this view, goods provide service - they act as appliances of service. Along with this approach, Vargo and Lusch build on the work of service scholars who argue that goods and services should not be regarded as two separate targets for marketing but all marketing should move away from the traditional goods-based manufacturing model where the company is seen as creating value through manufacturing. Along with Gummesson (2012), they base their argument on views of many other scholars who have questioned the distinction between goods and products and support a more unified view of exchange.

Heinonen et al. (2010) criticize that both the goods-dominant logic (G-D logic) and the S-D logic are fundamentally based on a provider-dominant logic where the service provider dominates value creation. They argue that even though the S-D logic has been credited for being a customer-centered approach, it is still basically focused on production and interactions and thus, neglects a real customer-dominant logic. The discussion has also been on a philosophical level without enough concentration on empirical data, they continue. Thus, they feel a new perspective that concentrates primarily on the customer is needed and propose a customer-based approach: customer-dominant logic (C-D logic). The C-D logic perspective extends the focus from physical activities to mental and emotional experiences as accumulators of value for the customer.

Value co-creation

According to Voima, Heinonen and Strandvik (2010), the view of value formation has developed considerably during the past 15 years. The discussion of value in services derives from research on service quality in the 1980s. Since then, the subject has been discussed in relation to different themes such as consumer behavior, total quality management, strategy, pricing, and relationship marketing, they list.

In the 21st century, the marketing field has started to challenge the traditional view of one-sided, supplier derived value creation and started concentrating on value co-creation that

aims at mutual benefit between the company and the consumer, Choi and Burnes (2013) write. According to them, through co-creation, the customer has been given a more active role in participating in creating, testing, and developing products with firms resulting in products and services that meet the users' personal needs.

At the same time, business models, along with goods and products, and value creation are moving more and more online, Choi and Burnes (2013) add. The rise of the Internet and interactive media enable greater consumer participation in business development and by this, enhance value co-creation. The information flows more openly online and is not regulated by companies anymore, they suggest. Kunz and Hogreve (2011) agree that the increasing usage of technology in service delivery engages customers in value co-creation and co-creational activities. McEleny (2010), for example, writes about brands that invest in online co-creation, as far as long-term strategies, to develop products that meet the customers' wants and needs. According to her, the companies are empowering customers by engaging them in business decisions and harvesting their insights in return for rewards. From the start, they are involved in ideation, piloting and testing on online communities and social media, which leads to relevant products at the time of their launch, she writes.

By focusing on how customers perceive a service provider's offering, traditional service management, from which the value creation process and approach to marketing has evolved from (Voima et al. 2010), has been applying the G-D logic and approached value creation as the exchanged value between the customer and the service provider, Heinonen et al. (2010) write. Along with the S-D logic, concepts of value-in-use and value-in-context have been discussed to find out how value emerges when the customer uses the service, they continue. According to Tronvoll et al (2011), the S-D logic refers to value creation where neither the company or customer have value on their own but the value is co-created and experienced by the user in the context of the service. In this view, value is always co-created and the customer is always a co-creator of value in an interactive process with the service provider, Heinonen et al. (2010) continue. The company proposes value through their service offering and the customer continues the process of value creation by using the service, in the form of value-in-use, Voima et al. (2010) add.

According to Choi and Burnes (2013), the shift toward co-creation has been dealt with a variety of concepts and names, such as co-creation experience, open innovation, service-dominant logic, wikinomics, and user-led innovation. All of these mean basically the same thing: a new way of value creation where "*customers are value co-creators, knowledge providers, collaborative innovators and providers of competitive advantages for firms*" (p. 36). Instead of aiming at short-term results companies see co-creation as a long-term win-win situation where a closer relationship with the customer benefits both parties by delivering

better goods and services and increased profits and cost savings. Thus, value creation can be seen as a collective process and not governed by one party, they suggest.

According to Heinonen et al. (2010), the goal of a service should be to facilitate value for the customer. The value creation process for the customer can extend beyond physical activities to mental activity and thus, it is important to consider the customer's value creation processes in their own context and everyday practices, they suggest. Based on their C-D logic, they propose that value emerges when the service becomes "*embedded in the customer's context, activities, practices and experiences together with the service company's activities*" (p. 537). This view offers new perspectives on how value is realized for the customer and what co-creation can imply, they continue. By this, they say to build on Grönroos' idea that the company should support the customer's value creation process and this way, the potential value of the service activities can be larger than traditionally thought. Value creation extends beyond the service process to everyday life activities, before and after the actual service encounter, and without direct interaction between the customer and the service provider, they add. Thus, the focus should be on supporting "*what customers are doing with services […] to accomplish their own goals*", they suggest (p. 534). In other words, both experiences directly and indirectly related to the service affect on how value emerges.

Voima et al. (2010) further discuss C-D logic's approach to value creation. According to them, the C-D logic sees value creation as a multi-contextual, cumulatively and collectively experienced, and very complex process. For example a visit to the dentist is not an isolated interaction but the experience is being affected by the customer's previous visits and friends' experiences. If the service is experienced with a child or a friend the whole experience is influenced through these relationships. Also, financially the value of a service can be compared to other services that the same money could buy, e.g. whether to choose a holiday trip with the family or to enjoy weekly cleaning services for the next two years. This makes value a very relative and personal aspect embedded in the routines, activities, and practices of the customer. Additionally, the experience is dictated by the biological (age, status, family structure, etc.) and mental (education, personal history, roles, etc.) state of the customer, which influence how the customer feels, thinks, and acts. Thus, mental and emotional processes are considered central in buying behavior, they propose.

Value-in-use

Building on the discussion of the shift in thinking from G-D logic to the S-D logic, Grönroos and Voima (2013) criticize that a consistent understanding of value and value co-creation is missing from recent service literature and even the S-D logic does not provide an explicit

definition of value creation. According to them, co-creation is a function of interaction, either direct or indirect, and value creation refers to the customer's creation of value-in-use.

As discussed in chapter 2.3, value appears differently to different live-streamed concert viewers (see pp. 18-19). According to Grönroos and Voima (2013), several factors affect the customer's value creation process and their perception of value-in-use: both provider-based issues, such as product and service interrelationships and product and service bundling, and customer-based factors, such as customer needs, internal linkages, relational goals, roles, networks, ecosystems, experiences, logic, etc. The customer's buying decision is affected by both functional and economic benefits and emotional, social, ethical, and environmental factors, they continue. When the focus shifts from services exchanged for a price to value-in-use for the customer, value creation becomes an ongoing process that is affected by all the before mentioned elements. This makes the interaction between the customer and the service provider and the offering personal and contextual and is grounded in the customer's consumption and user experience, they suggest. They further refer to Voima et al. (2010) and argue that the complexity of the concept of value becomes evident when analyzing what value is, and where, how, by whom, and when it is created.

When considering the complexity of value creation and co-creation it can basically be concluded that everything is value creation and everyone can influence and co-create value in some way, Grönroos and Voima (2013) suggest. However, this kind of thinking decreases the concept's analytical usage and theoretical, practical, and managerial implications, they continue. By referring to the concept of value-in-use, they suggest concentrating on use as the fundamental concept because value emerges and is created through use and during usage. Value-in-use implies "*value is created by the user during the process of using resources/processes/outcomes*" (p. 144) in an interactive experience. Concentrating on use "*social, spatial, temporal, and physical contexts in which the usage takes place*" (p. 144) can be considered. This as the basis, they suggest a clear definition for the value creation process (p. 144): "*in our analysis of service logic, we define value as value-in-use, created by the user (individually and socially), during usage of resources and processes (and their outcomes). Usage can be a physical, virtual, or mental process, or it can be mere possession.*" Thus, the customer perceives and determines value through experiences within his/her context.

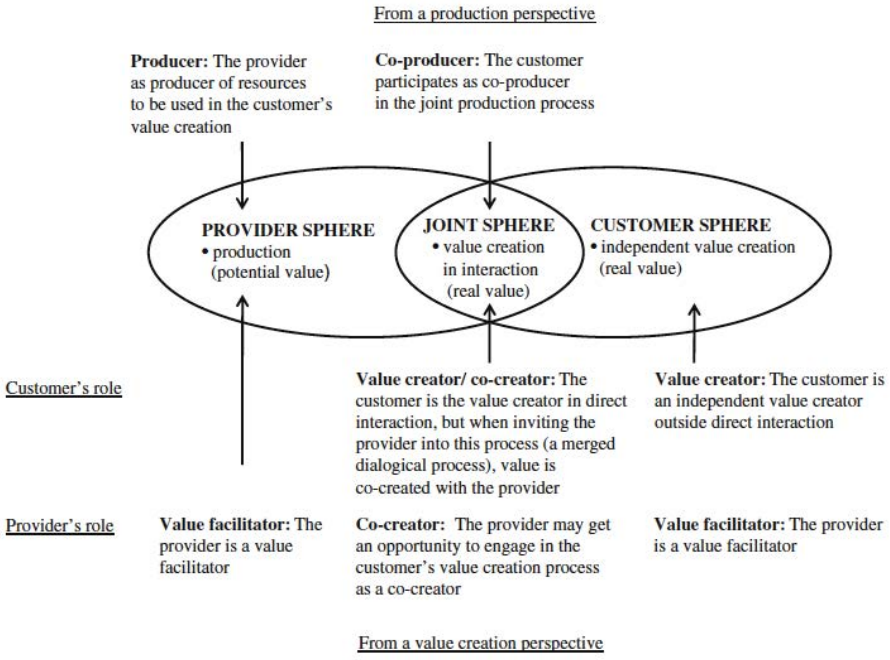

Figure 4: Value creation spheres (Grönroos and Voima 2013, 141)

Only if the service provider can access the customer's closed value sphere can co-creation exist and the customer can be a co-creator of value with the company, Grönroos and Voima (2013) propose (see figure 4). In this joint value sphere both parties operate within each other's processes and the sphere acts as a platform for co-creation. Based on this view, the company can be seen as a facilitator of value for the customer through the resources it produces in its own closed sphere, they say and suggest by referring to S-D logic that the service provider can in fact, go beyond making value propositions and influence the customer's value creation process throughout which value accumulates.

Value-in-use is one of the central concepts that lead the project. The thesis concentrates on the value co-created during a live-streamed concert to identify ways to engage the viewer. To add some more concreteness to the literature review the next chapter discusses more practical studies on value co-creation related to the thesis subject.

Studies on live music context

Apart from concert live streaming still being an untapped channel within the music industry, it seems there are also major gaps within related research. It appears that the subject of co-creation and viewer engagement within concert live streaming has not been researched extensively so far, especially from a service design perspective. Research on concert live streaming so far has concentrated more on technical solutions and the quality of the stream

from a computing perspective and less on content, productional factors and the overall viewer experience from a human-centered point of view. Also, the fact that concert live streaming literature uses different wordings for the subject makes distinguishing the research harder. This chapter discusses value co-creation studies in the live music context.

According to Choi and Burnes (2013), value co-creation activities have been identified in many fields and areas of business but not so much within the cultural sector, including for example TV, radio, film, theatre, books, and popular music. Instead of providing tangible benefits for consumers, in these industries the value arises from symbolic goods such as art installations or books, which evoke emotional responses and experiences in customers. Thus, Choi and Burnes aim at linking the subject of value co-creation to the context of the music industry through literature on "*cultural studies of media production and consumption in the digital age*" (p. 37).

Choi and Burnes (2013) distinguish similar views about value co-creation within marketing literature and the literature they reviewed about the music industry. The music industry has also moved from the traditional one-sided value creation where major record labels controlled value creation to the age of digital music that offers fans more possibilities to participate in value co-creation online, they analyze. Choi and Burnes suggest that internet-facilitated value co-creation can transform the relationship between music consumers and producers by promoting new, more positive relations and cooperation among record labels, artists and fans. They recommend shifting the focus from "*fans undermining the music industry through piracy, to fans enhancing and co-creating value in partnership with artists and small record labels*" (p. 47). Cooperation creates a win-win situation for all parties, each gaining economic and symbolic value, they propose. Fans can play an important role in enhancing and personalizing their own musical experience by taking part in co-creating musical value, they add.

Based on the symbolic value of music, Choi and Burnes (2013) propose that the Internet has provided fans and artists with the possibility to develop the non-monetary value they receive from music. This and the rise of interactive media models have enabled greater consumer participation in the development of products and services. At its best, artists view fans as allies, which creates a virtuous circle where the closer relationship leads to value co-creation that further enhances the relationship and promotes new ways for co-creating value. Thus, the fan-musician relationship and value co-creation is obvious when one cannot exist without the other, they conclude.

Cluley (2009) approaches the subject from a traditional co-production perspective on a more practical level by studying the role of promoters in co-producing live music. He argues that

musicians and the audience are not the only parties participating in the co-production of a live concert but there is a third group of actors in the value creation process: non-artistic labor, the people who are part of creating the live music experience by booking the bands, selling tickets, marketing the event, selling drinks at the venue, etc. These people involved in cultural production have the ability to influence the live music experience. "*The musician works at the center of a large network of cooperative people, all of whose work is essential to the final outcome*", he suggests (p. 381). All the parties and activities in the social co-production process influence the final outcome, he proposes.

According to Cluley (2009), cultural production is often analyzed by relying on the concept of consumer co-production. Cluley (pp. 373-374) describes this through the words of Bradshaw and Shankar: "*music can be thought of as a social model in which consumption and production co-exist and are mutually constitutive*". Thus, many times, live music is considered as a co-production between the musicians and the live audience. Instead of considering the audience as passive consumers of a live music product, many musicians and bands recognize the value of the audience and see them as partners in creating a successful live music experience, Cluley agrees with Choi and Burnes.

Cluley (2009) refers to Becker's approach on division of cultural labor, which follows Grönroos and Voima's (2013) view of value co-production in services (see p. 31). Live music as a cultural production can be considered as a space where makers (service providers: musicians and non-artistic labor) and users (customers: live music audience) do separate things and a space where they do things together, he explains. This approach allows conceptualizing the separate activities of cultural producers and consumers and also leaves room for them to co-produce. Thus, the organization of live music can be considered both as production and co-production, Cluley suggests.

Freeman (2010) concentrates on real-time collaboration between a performer and the audience, which according to him, can result in exciting and rewarding musical experiences. He suggests it is hard for the audience to have a significant impact on a live performance and sees potential in hybrid approaches to involve the audience in creating live music experiences. Instead of music flowing linearly from a composer to the audience, like in traditional live music situations, hybrid approaches, which combine online interactivity and participation with live concert performances, involve the audiences in creating the music. Thus, hybrid approaches can enhance audience engagement and motivate active listening, he proposes.

Even though using hybrid approaches may increase the risk of the performers who give up some of their control inviting audiences to take part in creating a live concert they can result

in surprising, novel musical experiences that could not have existed without the audience's participation, Freeman (2010) proposes. Hybrid approaches offer creative ways to engage audiences in making music online and in performance and create new social connections both among audience members and between the performers and their audiences, he adds. However, even though the aim of hybrid approaches is to create compelling live music experiences online and at the venue "*the musical product is secondary to the process by which it is created, the experiences of the people who are involved in creating it and the connections forged among those people*", he emphasizes (p. 158).

The paper of Yonezawa and Tokuda (2012) takes the interaction and co-creation during a live music performance yet another level and closer to the thesis subject than the other related studies. They argue that it is hard for musicians to communicate with their listeners by reading and writing comments on chat or social media while playing their instruments and thus, interactivity, a great advantage of live streaming, is lost in live musical performances. To address this, they propose a new communication mode that enables listeners to remotely control the performer's camera in real time. Their findings show that this type of interactive live streaming enhances not only nonverbal communication and camaraderie between a performer and listeners and amongst listeners but also the impact of the musical performance. Furthermore, when usually only the performers are spotlighted Yonezawa and Tokuda's solution spotlights the listeners as important participants in the show.

Cameras have the most dramatic impact on a live stream, Yonezawa and Tokuda (2012) suggest. In their communication model the viewers can control actions such as zoom, pan and rotate on multiple cameras in a simple way and affect the performance through nonverbal communication. Yonezawa and Tokuda suggest their solution could also be used to control other devices such as lighting, smoke generation or a mirror ball. They see wider potential in remote camera control to create more dynamic and attractive live streams by adding movable cranes or flying helicopter cameras.

Out of the four studies introduced above only one (Yonezawa and Tokuda 2012) directly concentrates on concert live streaming and co-creation. This well describes the challenge of locating studies closely related to the development project subject. Human-centered studies on concert live streaming seem to be exceptions among many technically oriented works. However, even if being somewhat technical as well, the study of Yonezawa and Tokuda offers interesting views in terms of this project through interaction. Interaction, as can be read in the next chapter and in the findings part of this report, is a closely related concept to both co-creation and viewer engagement. The next chapter builds on the discussion on co-creation from the point of view of viewer engagement.

3.3 Viewer engagement – learning from video games context

Engagement is a multi-layered concept that has roots in experience theories. To create an understanding around viewer engagement and the development project, the thesis acknowledges customer experience (Heinonen et al. 2010; Teixeira, Patrício, Nunes, Nóbrega, Fisk, and Constantine 2012; Chandler and Lusch 2015) and related contextual experience concepts (virtual live music: Jacka and Hill 2013) as important higher level aspects in terms of engagement but concentrates on contextual studies that emphasize interactive viewer engagement. However, besides the study of Yonezawa and Tokuda (2012) discussed in the previous chapter it seems that viewer engagement has so far been neglected within research of concert live streaming. Thus, the contextual studies in this part concentrate on video games viewer engagement, a field that concert live streaming could learn from.

Customer engagement

Engaged customers play an important role in strategic business management by influencing corporate performance in the form of sales growth, superior competitive advantage, and overall profitability, Brodie, Hollebeek, Jurić, and Ilić (2011) write. Engaged customers can also have an important role in product and service development and in co-creating experience and value, they add.

According to Chandler and Lusch (2015), different fields have taken different approaches to addressing engagement. Latulipe, Carroll and Lottridge (2011) agree and suggest that there are many facets of engagement, many ways to measure it and many ways to interpret the data.

Brodie et al. (2011) suggest that the conceptual roots of customer engagement can be found in theory on interactive experience and value co-creation within marketing relationships and thus, they base the concept in the S-D logic and the expanded domain of relationship marketing. Service and marketing research have approached engagement as "*a psychological state emerging from specific interactive experiences*" (Chandler and Lusch 2015, 8). Brodie et al. (2011) add that customer engagement occurs in co-creative customer experiences with a focal agent.

Zomerdijk and Voss (2010) suggest that finding out how to engage customers with a service and to connect them with a service on a personal level is the key to creating memorable experiences. However, within academic research on service design it is unclear which service elements create the most engaging contexts and how these elements can be used to connect customer emotions to a service, they add.

To link customer engagement to the online context, Brodie, Ilic, Juric, and Hollebeek (2013) approach online engagement from the point of view of interaction and express the need to further address virtual brand communities and their effect on consumer engagement. They criticize that even though research on engagement is increasing, most research on virtual brand communities and consumer behavior fails to conceptualize consumer/customer engagement. Their research suggests that there are established relationships between cognitive, emotional and behavioral dimensions of consumer engagement and the objects of engagement, such as different themes (brands, products, services, organizations, industry) and the online community (community per se, community roles, community members) within the consumer engagement process. Some of their findings also indicate consumer empowerment and value co-creation within the online community.

Viewer engagement

Instead of focusing on a wider view of customer engagement as related to all touchpoints with a company or brand, this project concentrates on the engagement during a live-streamed concert and thus, more specifically on viewer engagement. Even if the word viewer implies a one-way communication, the project focuses on interactive, two-way viewer engagement. At first, viewer engagement is discussed from a more general level to give an overview of the concept per se after which studies on interactive viewer engagement are introduced.

Otremba (2011) writes about viewer engagement and the increasing impact of viewers in content creation. According to her, viewers are now driving the content and forcing the content producers to adjust their offerings and offer content on multiple platforms. "*If you're not creating or repurposing content to meet their needs, you will miss out on a large opportunity to connect with this audience*", she quotes Ross Pollock, CEO of Celestial Pictures (p. 76).

Just like with the concept of engagement, academics seem to refer to and define viewer engagement through their approach to measuring it. For example, related to their study on brain activity and viewer engagement Smith and Gevins (2004, 286) refer to "*the mental activity of focusing attention on a commercial*" as viewer engagement. Lee, Lee and Hong (2009) on the other hand, consider engaging media as something that will glue people to their media delivery devices wanting to watch the content. In relation to television engagement, Askwith (2007, 154) defines viewer engagement as something beyond what happens in front of the television set, as a "*larger system of material, emotional, intellectual, social and psychological investments a viewer forms through their interactions with the expanded television text*".

When studying engagement literature, it is noticeable that academics approach viewer engagement mainly in objective and quantitative terms, referring to measurement methods and sales objectives rather than focusing on qualitative aspects such as wider effects of engagement, word-of-mouth or subjective perceptions. For example, Lee et al. (2009) mention the percentage of time of active watching compared to the total time a media device is powered on as an engagement metric. They have invented a system to record if viewers are actively watching, listening to, or interacting with a media that is powered on and thus, be engaged by the media. Also referring to quantitative metrics, Li (2007) suggests participation and interaction (sweepstakes) can increase viewership and viewer engagement with live, partially live or recorded public events and broadcasts such as sports matches or a talent show. As commercial broadcasting usually derives its revenues through advertising content producers seek ways to maximize the viewership. All in all, quantitative metrics seem to be more widely used because they provide a way to track and measure the impact of interactions (Pynta, Seixas, Nield, Hier, Millward, and Silberstein 2014) and they can be measured directly and objectively (Dobrian, Awan, Joseph, Ganjam, Zhan, Sekar, Stoica, and Zhang 2011).

Smith and Gevins (2004) and Pynta et al. (2014) study brain activity to measure viewer engagement. Like Nielsen (2015e), Smith and Gevins consider viewer engagement as something hard to directly distinguish and observe and thus, use brain signals to evaluate the elements that engage in television commercials. According to them, judgments on how engaging a commercial is, are usually more indirect in nature and surface in the form of, for example, ratings or changes in attitudes or consumer behavior. Pynta et al. on the other hand, analyze neural responses to explore the relationship between viewer engagement and a viewing experience across two screens. They propose that engaging in social media while watching a live television broadcast can considerably enhance viewer engagement in the television program, both short-term and long-term. The study measures real time viewer interactivity, which according to them, implies a similar relationship with programs that encourage viewer participation in the form of voting and commenting. They suggest approaching the second-screen relationship as a powerful tool to create viewer engagement for marketers, sponsors, broadcasters, and content producers.

Another way to measure viewer engagement is through analyzing the impact of video quality on viewer engagement. Dobrian et al. (2011) suggest that now that the distribution of videos online are more mainstream than ever, the users expect higher quality over different types of content. To find ways to increase user engagement (and user retention rate) they analyze how video quality affects user engagement at per-video and per-user levels. By studying long video on demand, short video on demand and live video (such as sports events and news feeds) they analyze quality metrics, content types and quantitative measures of engagement

such as buffering and bitrate. Krishnan and Sitaraman (2012) also suggest that video stream quality affects viewer engagement and viewer behavior. According to them, higher stream quality results in greater viewer engagement, less viewer abandonment and more repeat viewers. However, they also mention that other factors such as the captivity of the video content also have an influence on whether the viewer returns or not.

As discussed above, viewer engagement is often perceived as a one-way communication concept. To approach the interactive side of viewer engagement, the following chapter discusses viewer engagement in the video games context that emphasizes viewer interaction.

Studies on video games context

It seems that studies on viewer engagement closest to the thesis subject have been conducted within the video games industry, which indicates concert live streaming might benefit from those findings. This is why the thesis introduces three studies on video games live streaming. The studies emphasize the value of interaction and participation in engaging viewers.

In their paper, Cheung and Huang (2011) focus on video games spectators and engagement. They offer 9 personas to describe who the spectators are and why they spectate and discuss how different stakeholders affect the spectator experience and what makes game spectating entertaining. They refer to sports spectatorship where factors such as aesthetics, achievement, drama, escape (from life), knowledge, physical skills, social, and family are the main motivations behind spectating, many of the same reasons within their own research on video games spectatorship.

Cheung and Huang (2011) focus on Starcraft, a popular real-time video game and e-sport that has a community of millions of spectators that follow the games through various software tools, including live streaming. According to their findings, the spectators of Starcraft form communities where they work together to produce an enjoyable, common social experience. In addition to other factors, Cheung and Huang (p. 7) mention information asymmetry, "*the imbalance of information between the player and spectator*" as the fundamental source of entertainment. The spectator feels entertained as the information reveals during the game, creating suspense for both spectators and players, they explain. Suspense in general increases the overall enjoyment of the game, they add.

Even though according to Cheung and Huang (2011), Starcraft spectators often have the opportunity to influence the game in-progress, most of the personas identified can be considered passive in terms of participation. Cheung and Huang (p.2) consider the spectators

as people who "*follow the in-game experience, but are not direct participants in the game*" and emphasize information sharing as the main form of communication between the player and spectators. Smith et al. (2013) and Hamilton et al. (2014) approach video games viewership more from the point of view of interaction and participation.

Smith et al. (2013) use the work of Cheung and Huang (2011) as their inspiration to study video game live streaming communities from the point of view of activity (gamers) and passivity (spectators). Their aim is to better understand how a video game live streaming community works from the spectator's point of view and by this, gain insights that might be of interest to the interactive television community. Smith et al. concentrate specifically on players' motivations to live stream themselves and the viewers' perceptions on why they want to follow those streams.

According to Smith et al. (2013, 133), the "*enjoyment as a viewer comes from what the player/performer adds to the experience*". It is not about how well the gamers play but how entertaining they are as they play. Usually the player gives a narrative commentary on the gaming experience at the time it is being experienced. This means the player is actually acting as The Commentator (one of the 9 personas) at the same time, which can offer a more personal and real experience. The player emphasizes reactions and creates entertainment around the experience by framing the action of the game, unlike just giving a walkthrough and advice on the game, Smith et al. explain.

The research of Smith et al. (2013) concentrates on interactivity as a source of spectator engagement. The assistance, comments and feedback from spectators to the players help create a community around a certain player's broadcasts because it lets the spectators participate and alter their performance, they describe the games. This makes the experience and interaction flow both ways. To elaborate this, Smith et al. (2013) focus on one specific gamer who follows videos recommended to him by the viewers, answers questions and takes the viewers' recommendations and suggestions into consideration by mentioning them in his streams and altering his content accordingly. Furthermore, he co-creates content on a higher level to which Smith et al. refer as "*co-laboring in play*" (p. 136), amended from the research of Cheung and Huang. This means the viewers create levels or items for the gamer to play. The key is to break down the power relationship between viewer and broadcaster to bring the players closer to their viewers and make them feel part of a community and the creation of the content, they propose. The two-way relationship between the player and the viewer enriches the experience and makes the spectating more entertaining and engaging, they conclude.

Taking the subject even closer to this thesis, the paper of Hamilton et al. (2014) on live streaming participation and engagement is probably the most relevant and interesting study in terms of the development project. By researching video games streamers and viewers of the live streaming platform Twitch.tv they identify two reasons people engage in live streaming: because they are drawn to a unique content of a particular stream and they seek interaction and participation within that stream's community. The streamers on Twitch.tv do not only concentrate on playing games but on involving viewers in the shared, social experience and building virtual communities by engaging the viewers and forming a shared identity, they explain.

Hamilton et al. (2014) discuss different factors that draw viewers to a certain stream and engage them on a level that they are willing to be part of a live stream community. It is a play between content, streamer and community where the atmosphere reflects the streamer's personality, attitude, values, and behavior and draws likeminded crowd, they analyze. Many people watch streams for social interaction with people they can identify with and wish to be recognized and spend some time in the spotlight. Streamers usually address this by playing games with the viewers and letting them influence the stream, displaying fan art during the live stream and offering polls to vote what the streamer should do in the game. Hamilton et al. (p. 1320) suggest this gives "*a direct way for viewers to have a lasting impact on the stream and make it their own*". Furthermore, appreciating regulars and recognizing them as important community members engages viewers and promotes participation and sociability through their core roles within the community. Shared experiences, such as unusual, surprising moments, build an emotional connection between the community members, they add.

A live stream on Twitch typically includes live video of both the game being played and the streamer's emotional reactions, Hamilton et al. (2014) describe the experience. While playing, the streamer talks to the viewers who can comment through a chat feature. In streams with fewer people, the focus is more on participation, interaction and building community when on massive streams of more than 1,000 viewers the streamer and particular content is what draws people to the stream. This is because, as the number of viewers increases it is harder for the streamer to concentrate on individual viewers and the personal interaction breaks down, they explain. It is important to find ways to maintain the sense of community and level of participation because communities are at the core of the live streaming experience, they recommend.

As discussed in this chapter, what engages the viewer with a live concert stream has hardly been studied from the angle of this project. Most of the studies discussed in the literature review, and the ones closest to the development project subject, are based on a different

field than concert live streaming. According to Tamminen (2016), concert live streaming for now does not have a centralized platform such as the gaming platform Twitch, which engages its users on a level that is not yet reached with concert live streaming. However, as the gaming context shows some relevant findings of co-creation between the viewer and the players, it could be recommended that concert live streaming considered the lessons learned in studies conducted on co-creation and viewer engagement within different industries. The findings of these studies imply that co-creation can lead to strong viewer engagement.

Furthermore, the transformation from a goods-dominant music industry to a more human-centered, service-based business that operates closer to the music fan should also be extended to academic research. Continuing with the rather technical lense and concentrating research on topics such as stream quality, concert live streaming risks losing the momentum. Thus, this project harnesses human-centered research in the form of service design and attempts to find ways to engage the viewers in interaction with them.

4 Design and implementation of the development project

Service design offers a good approach for the development project because of its user-centered and interactive lense. As discussed in chapter 2 and elaborated through service literature in chapter 3, the music industry is moving from a G-D logic toward a more S-D and C-D logic. Thus, it is valuable to harness service design to respond to this change. Additionally, because the subject is rather untapped within academic research and not a lot of documentation exists, the research calls for innovative methods to get new insights into the experiences of potential users of the service.

This chapter discusses service design as a discipline and outlines different models and tools that can be used to design successful services. After getting into the background information, the service design process that has been adapted to this development project is introduced together with the different methods and tools used along the way.

4.1 Service design process and methods

Tuulaniemi (2011) suggests that even though services have been acknowledged as offering valuable, new business opportunities for companies the economy of services is still in a development phase and provides many opportunities for design. According to him, globally, services can be seen as the biggest platform for innovations in the future.

Stickdorn and Schneider (2011) argue that even though many have attempted to define what service design is, there is still not a common definition for the relatively new field. Moritz (2005) describes service design as a multi-disciplinary field that unites approaches from different disciplines and areas with related experience, such as design, management, marketing, and research. It helps organizations to create new, innovative services and improve the existing ones, he continues. According to Tuulaniemi (2011), service design can be seen as many things: a shared language, mindset and policy, a process, a toolbox, and a framework for designing services.

Stickdorn and Schneider (2011, 33) approach service design from the customer perspective: ”*When you have two coffee shops right next to each other, and each sells the exact same coffee at the exact same price, service design is what makes you walk into one and not the other*”. Moritz (2005, 39) complements them with a corporate view: ”*Service design is the design of the overall experience of a service as well as the design of the processes and strategy to provide that service*”. It aims at facilitating customers in co-creating their experiences by paying attention to service elements, such as the physical environment, customers and employees, and the service delivery process, Teixeira et al. (2012) add.

According to Curedale (2013a), service design has developed over the past 20 years. Thus, it is not actually a new innovation but more like a new way of combining old approaches, Tuulaniemi (2011) suggests. Before, designers and other people involved in design have in fact been doing service design without knowing it by that name, Curedale (2013a) adds.

Furthermore, according to Moritz (2005), the role of the user in the design process has changed during the years. Before starting to consider what the users might want, the designers used to see the users from an observational perspective. This perspective has shifted toward a participatory approach where the user is included in the design process and today, the approach is called user-centered design which involves the users in co-designing useful, usable, and desirable services that meet the user wants, needs, motivations, and contexts. IDEO (2015) describes this relationship from a wider, human-centered angle: "*Design thinking is a human-centered approach to innovation that draws from the designer's toolkit to integrate the needs of people, the possibilities of technology, and the requirements for business success*".

According to Stickdorn and Schneider (2011), a certain way of thinking, service design thinking, is needed to design services. It is a mindset that aims at building a better future by identifying new opportunities and solutions through empathy, collaboration, and experimentation, School of Design Thinking (accessed Sep 7, 2015) describes it. When business units traditionally approach operations from their perspective in the form of financial Excel sheets, marketing campaigns, employee satisfaction, or supply chain functions the service designer asks: "*What does the customer want and expect?*" and focuses on the customer as a human being instead of a business perspective, Aura (2013) adds.

Compensating the lack of a common definition for service design, Stickdorn and Schneider (2011) outline five core principles of service design thinking required to design services (see illustration 2): it is user-centered, co-creative, sequencing, evidencing, and holistic. They think that in order to design successful services the service designer needs to step into the user's shoes and experience the service through their eyes to understand individual service experiences. In addition to the user, all other stakeholders should be included in the service design process from the beginning until the end through co-creation. The service should be approached through a sequence of interrelated actions and touchpoints and visualized with the help of tangible artefacts, they continue. Finally, the service designer should consider the entire environment of a service when designing great services.

Illustration 2: 5 principles of service design thinking (Stickdorn and Schneider 2011, 35)

To address the special characteristics of services, and design complex and interactive experiences, processes, and systems that meet the user needs (Moritz 2005), according to Teixeira et al. (2012), service design takes an interdisciplinary approach and applies various special processes, methods, and tools from different fields. Moritz (2005) defines service design itself as a complex, iterative, and ongoing process that aims at integrating new service practices into organizations. He suggests that a service design model, which includes all the elements of service design and shows how they link to each other, can be used as a map in the process.

Because every service design project and thus, the service design process, is different (Moritz 2005; Stickdorn and Schneider 2011) there are probably as many service design processes and models as there are projects. In fact, because the process ultimately depends on the context of the project, according to Stickdorn and Schneider (2011), the first step of a service design process is designing the process itself. However, similarities can be seen within those processes and many service designers have attempted to create generic models and frameworks for service design. Some of these models are directed more to the insiders in service design or even specific companies when the others are more applicable to general practitioners and decision makers, Moritz (2005) suggests.

The general models or frameworks usually suggest three or more iterative steps (Stickdorn and Schneider 2011; Tuulaniemi 2011) or overlapping spaces (IDEO 2015 and Moritz 2005). Even though the wording varies, they fundamentally share the same mindset (Stickdorn and

Schneider 2011) and basic principles (Tuulaniemi 2011). However, as service design is about creating something new and thus, it is unique every time, it is really not possible to outline a process that would fit every service design process in every situation, Tuulaniemi (2011) argues. According to him, the general models and processes ultimately suggest operational frameworks for service design that can be adopted and adjusted to different types of service design projects. In the end, the way the framework is used varies based on the design context and available resources, Tuulaniemi concludes.

Stickdorn and Schneider (2011, 148) agree and stress that any restrictive instructions or manuals how service design projects should be conducted would be ”*at odds with the service design ethos*”. Thus, to construct a service design project, their book, as do various other service design and design thinking guidebooks, suggest a toolbox of popular service design methods and tools to choose from. The designer can choose the appropriate combination of tools based on the project and adjust the way to use them during the process, they propose.

According to Moritz (2005), many of the tools used in service design have been developed anew for service design but they can also be loaned, adopted or combined from other fields of related expertise. Many private organizations and designers have developed tools themselves to match the nature of their project, Curedale (2013a) adds. Thus, ”*the list of tools and methods available is endless*”, Moritz (2005, 185) suggests.

Even though quantitative market research and segmentation may be useful for selling services, it falls short of providing critical information on human behavior, how people actually use services, Moritz (2005) argues. He thinks most traditional research methods are not able to translate the findings into solutions. On the contrary, qualitative research focuses on people in their natural settings and seeks for deeper understanding and rich description based on words, images, video, and other artefacts, Crouch and Pearce (2012) describe. Martin and Hanington (2012) suggest that human-centered design methods help the service designers better understand and empathize with users in order to design meaningful solutions to them. Being often very visual they facilitate communication with different stakeholders and structure conversations around the design solutions. In terms of the data, even though human-centered design usually applies primary research (also known as fieldwork or empirical research) to source original data from users of a service, secondary research (desk research) gathered by others can also play an important role in a service design project by synthesizing existing data and suggesting research direction based on what has already been done and the remaining opportunity gaps, Martin and Hanington (2012) add.

4.2 Service design process and methods adopted in the development project

The service design process of this thesis is based on Moritz's (2005) model of service design. Moritz's process well acknowledges the interactivity and iterative nature of the different phases and offers flexibility for the service designer. It also fits the project well because of its practical approach by providing a "*practical checklist for service design tasks*" (p. 121). It is not as strongly concentrated on the execution part of the design process as some other models and thus, it is more suitable for the thesis that does not extend beyond conceptualization.

Moritz (2005) has analyzed several generic service design processes and models in order to develop the framework for service design and the areas and tasks it covers. Based on his analysis, he suggests a practical, generic model to cover everything that service design delivers (see figure 5). He calls the model a blueprint for service design. It includes six inter-linked categories for the tasks that need to be undertaken in different stages of a service design (SD) project: SD Understanding, SD Thinking, SD Generating, SD Filtering, SD Explaining, and SD Realising. According to him, the model can be applied both to innovating new services and improving the design of existing ones. As service design projects vary in nature, the order of the categories is flexible and can be adjusted according to the project, he suggests.

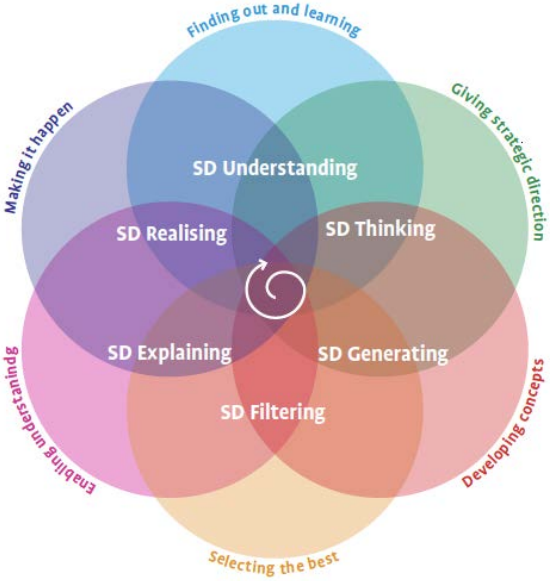

Figure 5: Service design categories (Moritz 2005, 149)

Each step in Moritz's (2005) service design process has its own goals and tasks and represents a specific mind-set in the project. The purpose of SD Understanding is to learn about the latent and conscious needs and motivations of users and to explore possibilities by finding out more about the context, constraints, and resources of the project, Moritz explains. This phase connects the project with reality and makes sure the findings are relevant and appropriate. Moritz suggests four main tasks for SD Understanding: understanding clients, contexts, providers and relationships.

SD Thinking (Moritz 2005) sets parameters for the other service design categories and gives strategic direction and structure to the project. It is often a transitional phase between SD Understanding and SD Generating as it specifies details and criteria, based on SD Understanding information, that will be used in the next phase and throughout the entire project, he explains. The direction set in the beginning of the project is refined based on analyses, insights, material, and findings sought during SD Understanding.

SD Generating (Moritz 2005) is based on information from SD Understanding and direction from SD Thinking. It is all about action and doing. The goal is to come up with innovative ideas and solutions to problems and create concepts by developing and combining these ideas and solutions, he outlines. In order to generate quality ideas, it is important to establish an appropriate environment and involve relevant people in idea generating. SD Generating follows the principles of brainstorming, Moritz suggests, meaning any idea is allowed at this point and the solutions are cut down later to relevant ideas based on project criteria.

During SD Filtering (Moritz 2005), the best ideas and concepts are selected and combined into concepts. The new concepts are then evaluated, measured and tested against different criteria and requirements established in SD Thinking. Furthermore, SD Filtering can lead to iterations to ensure relevant results, Moritz adds.

The goal of SD Explaining (Moritz 2005) is to make ideas and concepts visual, tangible, and easy to understand. This category seeks for ways to communicate abstract ideas to stakeholders by mapping processes and illustrating potential scenarios that reflect future possibilities. Moritz suggests that several visual and interactive tools, such as hand sketches, Photoshop mock-ups, animations, scenarios, and real life prototypes help create discussion and show how a service could be used. They are also effective in testing service experiences. SD Explaining usually leads the project toward SD Realising, the final phase of the service design process, but it can also be used to illustrate other categories to support the project and move it forward. This thesis does not extend beyond SD Explaining. The goal is to offer tools for The Nashville Loop and Whiskey Jam for them to decide how to best utilize the findings of the project for their and the potential viewers' mutual benefit.

The remaining pages of this chapter introduce how the first five categories and tasks of Moritz's model have been adapted to the project to co-create an engaging live-streamed concert (see figure 6).

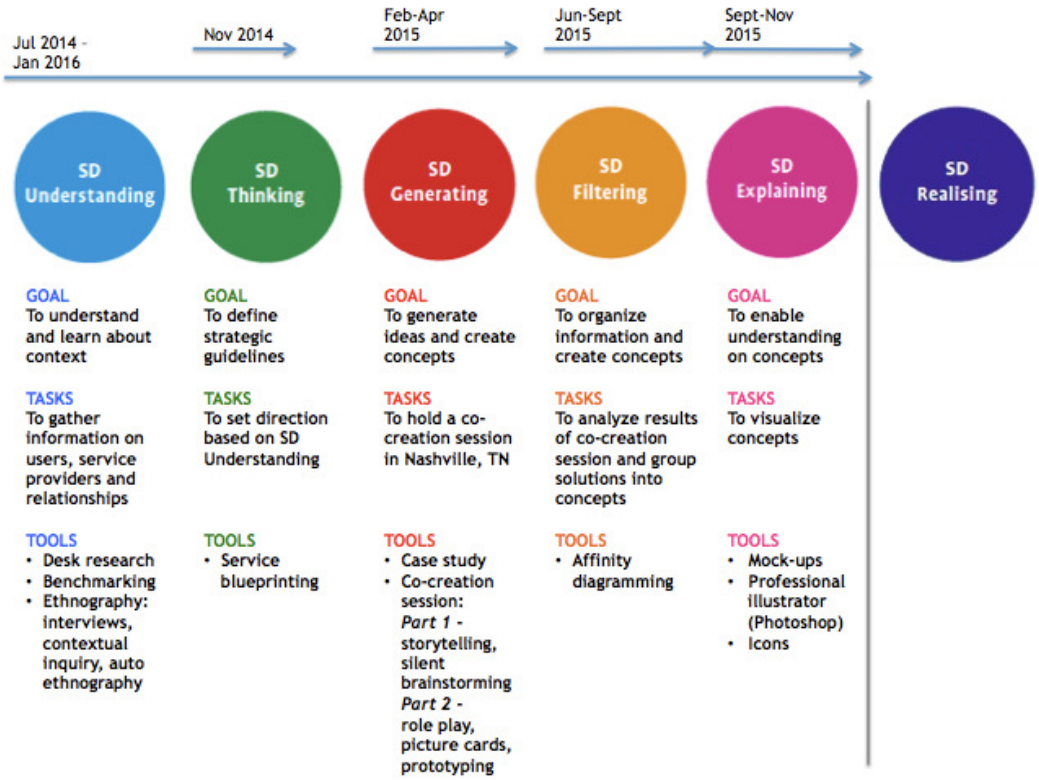

Figure 6: The service design process of the thesis (adopted from Moritz 2005, 123)

Even though the service design process in reality is nonlinear and the various tasks are often overlapping (Moritz 2005) for clarity, the thesis process has been simplified in the figure. The figure summarizes the steps of the thesis process and communicates the tasks executed and the tools and methods used to accomplish the goals of each SD category. These are explained in more detail in the following chapters.

A multi-method approach to data sourcing was used to gather evidence from multiple sources and approach the subject through versatile insights. The idea was also to test which methods fit the context of concert live streaming that has not utilized service design widely before. Primary data was complemented with secondary data to strengthen the findings. The methods and tools were selected carefully according to the design drivers to reach relevant findings. The overall approach and actions were planned to reflect the non-academic nature of the subject.

It was made sure to carefully document the project from the beginning until the end. Notes were taken along the way and the co-creation session was videographed and photographed. An electronic database was created for the project, which included all relevant material: drafts of the report, relevant literature, visualizations, notes, agreements, etc. Additionally, the key physical material was stored. The database serves as a wider source of reference for the subject and the project, including everything mentioned in this report, which can be utilized to support the study and to extend the project in the future if needed.

SD Understanding – learning about the context

In order to gain a deeper understanding on the context of concert live streaming from the perspective of the user, the goal of SD Understanding was to acquire information on the current and potential users of concert live streaming, the existing service providers, and the networks and relationships within the music industry related to concert live streaming that enable the current services. A combination of methods was chosen to reach the goal: desk research, benchmarking and ethnography (interviews, contextual inquiry and auto ethnography). This phase followed a project-long learning curve and extended from the beginning of the thesis process to the final phases of the project, from July 2014 to January 2016.

Desk research

According to Hague, Hague and Morgan (2013), desk research is a study of secondary, already existing data. It is a source of rich information gathered by others. The information can be gathered from a number of different sources to create an extensive compilation of data on a research subject. It is a quick and inexpensive way to compile data from a variety of sources such as different online sources, articles, presentations, market reports, industry news and bodies, company data, etc., they list.

The initial phases of the thesis included digging into the overall context of concert live streaming to understand the starting points for the project. Different online material, blogs, articles, and trade literature were read on concert live streaming to increase knowledge on the current market and operators (see reference list).

It fast became clear that concert live streaming is not widely documented and most of the information was relying on personal blogs and articles of people working in the music industry and live streaming. The information seems to be scattered around different sources which is why a number of writings were gathered on certain details of concert live streaming and composed into a holistic picture of the current market. The material was analyzed based on

both matching and complementing perceptions of people as well as opposing views on concert live streaming and later complemented with ethnographic data.

Benchmarking

Moritz (2005) describes benchmarking as looking into current service providers that offer different services with similar characteristics. Benchmarking helps getting a better idea of the existing market and service offering.

While looking into the general knowledge on concert live streaming it was found beneficial to benchmark the main live streaming service providers, which appeared in various references during the desk research. The benchmarking was conducted to understand the concert live stream viewer's perspective on accessing relevant services and using them. Along with the desk research, the benchmarking process continued throughout the thesis process.

The references acquired during the desk research guided the benchmarking. However, the confusing offerings of the current service providers made the benchmarking harder which is why the exercise relied on the support of the live streaming freelancer Tamminen (see reference list – Interviews). He helped define an accurate but non-exhaustive list of the best-known live streaming service providers in the current market (see appendix 2). Thus, the information was analyzed based on professional industry references.

Ethnography

Design ethnography uses various (usually) qualitative methods to understand the users' world in their natural settings and to gain insights for design empathy (Martin and Hanington 2012). According to Elliott and Jankel-Elliott (2003, 215), ethnography addresses one of the key problems in the study of human behavior: "*people don't always do what they say*". They suggest that ethnography can reach results that other type of research cannot and achieve a thick description of the wider social and cultural experience in the real life of a user. They propose using methods such as participant observation and interviews to get closer to the user and achieve deeper results by stepping into their shoes.

During the desk research, it became clear that the information was often very technical or superficial and did not reveal a lot about the viewers and their experiences. Ethnography was chosen as a method to move closer to the viewer and complement the secondary data with information on how concert live streaming is perceived as a service and what it can offer for the viewer.

People working in the music business were chosen as the main informants because of three reasons. First, they had extensive experience working with music fans which could reveal important information on the current and potential viewers of concert live streaming. Second, their knowledge and experience on the music industry could offer rich insights into concert live streaming. Third, the access to actual concert live streaming production sites through these people could increase the general knowledge on concert live streaming productions to build a connection between the productional aspects and the viewer. The ethnography with the informants was conducted in the form of interviews and contextual inquiry. Additionally, the author used auto ethnography to get closer to the viewers and their experiences.

Interviews

According to Moritz (2005), expert interviews are a good way to gain insights and understanding into a new environment in a very short period of time. Martin and Hanington (2012) add that personal discussions with professionals can provide with a sneak peek into firsthand experiences, opinions, attitudes, and perceptions on a subject. The interviews can either be structured with a predefined set of questions or have a more unstructured format that allows flexible conversation (Martin and Hanington 2012). In fact, much of the richest talk between the ethnographer and the informant derives from informal talks in a variety of contexts (Elliott and Jankel-Elliott 2003).

To collect perceptions from versatile angles, both experts, people who work within live streaming (concert and other type of live streaming), and people who were linked to the music business through their professions were interviewed. 15 people were interviewed in Finland and in the United States between September 2014 and January 2016 (see reference list). Some interviews also included emails, text messages, and other written channels.

The nature of the discussions was quite informal with only a guiding set of topics and the conversation was adjusted according to the situation, the informant, and his or her insights. Respecting the nature of the subject, it was made sure that the environment for the interviews was relaxed enough for true opinions to surface. The context of the interviews varied from smaller and more informal settings of cafes, bars, and restaurants to more formal places such as a drum school, an office, live streaming venues, and related events. Some interviews were pre-booked and some were more impromptu when a chance for an interview unfolded unexpectedly through other informants and events. Thus, the interviews ranged from brief chats to longer conversations about concert live streaming in general, the value of live streaming for different actors, the live streaming work phases and technology, viewer behavior, etc.

The interviews were analyzed by looking into patterns and differences in the insights of the informants. During the discussions it became clear that along with a few believers of the value of concert live streaming, there are a lot of people in the music business who have doubts and believe in different myths about concert live streaming. The factual data on what the online viewers appreciate in a live broadcast and what they would like to experience during a live-streamed concert, however, seems to be missing. The data acquired during the desk research was complemented with the insights from the interviews and combined into a holistic overview of concert live streaming in chapter 2.3 (see p. 18).

Contextual inquiry

To be able to design for the real context and meet the users' needs, the designer needs to have understanding on the real work environment (Holtzblatt, Burns Wendell and Wood 2005). Contextual inquiry, a method adapted from ethnographers, is a way to get insights into the work structures of professionals and understand their physical environment and day-to-day activities through observation and interviews (Martin and Hanington 2012). Observing and discussing the work environment helps understand the way service systems work and how people behave and use the service (Moritz 2005). It is important to have an open mind to data collection information, which can be used to guide the design process in the later stages of the project (Martin and Hanington 2012).

To better understand the viewer's experience within a live-streamed concert production the author also visited two live streaming productions (see illustration 3). The visit to a Nashvillean live-streamed concert production offered the possibility to see how such a production worked from the viewer and the producer's perspective. The author got to witness different sides of the production by observing the crew at work, visiting the production bus, watching the live stream of the event, observing the chat management, and asking questions from different people involved in the production. Observing the live streaming of a TEDx in Finland and discussing live streaming with the production crew of two different live stream productions complemented the data.

Illustration 3: Contextual inquiry

The information acquired was used to complement the technical information and the knowledge on different networks of live streaming productions received from The Nashville Loop. Additionally, it provided with important information on how the viewer sits in the overall production. The insights were used as background information to move the project forward: in service blueprinting during SD Thinking and when executing a co-creation session during SD Generating.

Auto ethnography

Auto ethnography is a method for the researcher to study his/her own behavior instead of others (Curedale 2013a). It is a way to step into the shoes of the users and understand what they experience through the experiences of the researcher (Moritz 2005). Auto ethnography provides with relevant insights into the subject and creates a new level of understanding on the users of the service (Moritz 2005).

After the desk research, benchmarking, interviews, and contextual inquiries, the user perspective on concert live streaming was still not clear enough. Thus, auto ethnography was used to get a closer perception how the viewer would experience a concert online. This was done by watching concert live streams on a laptop and mobile phone (see illustration 4). The experiences were documented in notes and used when planning the co-creation session in the next phase of the project. The notes are not included in the report because they are not essential in terms of the potential viewer of Whiskey Jam. However, they offered a clearer view of a concert live stream viewer's possible experiences as a basis to construct the co-creation session (see p. 56). Furthermore, regarding all the data gathered during SD Understanding, not all is included in the thesis in its original form due to both ethical and practical reasons: some of the information is confidential or simply too long for the report.

Illustration 4: Auto ethnography on mobile phone

To conclude the first phase of the project, even though the desk research, benchmarking and ethnography provided with valuable data and insights into concert live streaming and acted as an important base for further phases, yet, not a whole lot was known about the concert live stream viewer. Thus, it was decided to hold a co-creation session with potential viewers of the live-streamed Whiskey Jam to get real life insights into the users by including them in the project. The session was planned according to a service blueprinting exercise executed during SD Thinking.

SD Thinking – defining strategic guidelines

The goal of SD Thinking was to define strategic guidelines and set direction for the project based on the information gathered during the first months of SD Understanding. Making decisions on the approach based on service blueprinting and choosing the case concert helped refine the purpose and objectives of the project and carefully define the design drivers. Based on these crucial definitions, it was possible to start planning the empirical part of the study.

Service blueprinting

The service blueprint is a process map that can be used to communicate the delivery of a service on parallel rows of activities over time. It is an effective tool to frame insights and get to know the context and the user. (Curedale 2013b) Service blueprinting allows identifying the most crucial areas of a service to be explored in the beginning of a service design process (Stickdorn and Schneider 2011). Additionally, outlining the service reveals all

actors within the service delivery and shows how the different service components link to each other (Moritz 2005).

The information about networks and relationships within live-streamed concert productions acquired during the ethnography was used as a basis for blueprinting the conceptual live-streamed Whiskey Jam (see illustration 5). The service blueprinting was conducted with The Nashville Loop in Nashville in November 2014 after choosing the appropriate case concert for the project. In the blueprint, different actors and their relationships within a live-streamed Whiskey Jam delivery were identified.

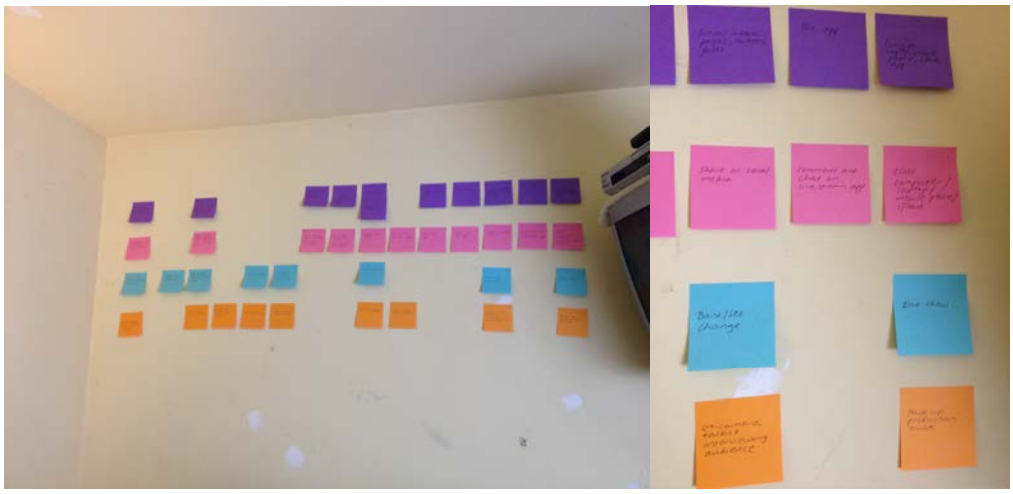

Illustration 5: Blueprint of conceptual live-streamed Whiskey Jam

The service blueprint clarified the service touchpoints and critical interactions between The Nashville Loop, Whiskey Jam, and the online viewer of the live-streamed concert. It showed how the live stream viewer interacts with the service and which touchpoints could open up opportunities for co-creation and thus, increase viewer engagement beyond the contact between the viewer and a viewing device. Based on the blueprint a decision was made to concentrate on viewer engagement during the show as the basis for SD Generating. This part of the blueprint was seen offering the best potential for co-creating an interactive live-streamed concert with the viewers.

SD Generating – developing ideas and solutions

The goal of SD Generating was to generate innovative ideas on how to engage the viewer of a live-streamed Whiskey Jam. Based on the ideas a concept of an engaging live-streamed Whiskey Jam was to be created. To achieve this, it was decided to hold a co-creation session in Nashville with potential viewers of the live-streamed Whiskey Jam, the case study.

A case study

A case study is an in-depth investigation of a single event in context (Martin and Hanington 2012). It is a way to research a case (an individual, group, organization, project, event, process, etc.) from historical, economic, technological, social, and cultural perspectives and to produce unique, holistic data about the case, rich in detail (Eriksson and Kovalainen 2008).

Illustration 6: Whiskey Jam at Winner's Bar and Grill

The co-creation session was based on Whiskey Jam (see illustration 6) as a case study. Because Whiskey Jam is not yet being live streamed, the participants were chosen among the fans of Whiskey Jam, the venue concert. These fans already knew the concert and had experiences from the venue, which could then be reflected to the equivalent live-streamed concert experience. The fans were considered as highly engaged people who could offer valuable perceptions on how to produce an engaging live-streamed concert based on their rich insights into Whiskey Jam.

Co-creation session

Co-creation, a core aspect of service design, is a way to include all stakeholders in the service design process and thus, reach relevant, context-based results. It is an interactive tool to collaborate with the users and gather a wide range of perspectives by placing the users at the center of the service design process. Co-creation can be used in conjunction with many other tools. A co-creation session, which aims at exploring potential directions for the future by

working with the users, usually involves people working in small groups and presenting their ideas to the larger group for discussion. (Stickdorn and Schneider 2011)

According to the above, a co-creation session was seen offering the best grounds for reaching the objectives of the project and generating innovative, relevant ideas to engage the viewers. The session was held with 15 participants and 3 facilitators at Winner's Bar and Grill, the venue of Whiskey Jam, in Nashville in April 2015 (see illustration 7). It was videographed and photographed, and complemented with the physical material the participants produced. After the session, the findings were carefully documented in an Excel sheet that served as a central database for the ideas and perceptions resulted from the session.

Illustration 7: Co-creation session at Winner's Bar and Grill in April 2015

The fans of Whiskey Jam were invited to participate in the co-creation session through two channels. The owner of Whiskey Jam tweeted the invite on Whiskey Jam's Twitter account the day before the session. Additionally, the same night, he announced the co-creation session during Whiskey Jam. To match with the relaxed study theme of live music the participants were offered free pizza and beer as an incentive to attend the session. The aim was not only to engage the participants in creative innovating but also to combine research and a relaxed atmosphere, to have fun, and brainstorm on a familiar and appealing subject to the participants.

Eight of the participants were men and seven women. Their ages ranged from 22 years to 57 years, all but two being 30 years old or younger. All the participants lived in the state of Tennessee, 13 of which in Nashville. According to the owner of Whiskey Jam (Whiskey Jam 2015a), the division of gender, the age range, and demographics of the participants well represented the typical customer profile of Whiskey Jam: 50/50 men/women between 25-35 years old from Nashville and only some people out of town. Eight of the participants were musicians and three others otherwise related to music (music publishing student, record representative and musician's wife). All of the participants said they had seen at least one

Whiskey Jam, most of them several, so they were familiar with the context. The participants were divided into two groups in the beginning of the session.

The co-creation session was structured in two parts. The first part utilized storytelling and silent brainstorming to find out what the potential viewers appreciate in live music experiences. The second part harnessed role play, picture cards and prototyping to identify which aspects engage a live-streamed concert viewer. Both parts were guided by the designated design drivers and designed in a way to collectively reach the objectives of the project.

Part 1 – storytelling and silent brainstorming

Storytelling opens up a communication pathway into the experiences of users in a form that can directly be used in design decisions (Martin and Hanington 2012). Storytelling is an effective method for sharing compelling narratives about a service and maintaining the relevance when communicating the ideas to stakeholders (Stickdorn and Schneider 2011).

Silent brainstorming is a tool to generate ideas individually where a person writes down one idea per sticky note in silence and then shares the ideas with the group by placing the sticky notes on the table or board and reading them out loud (Rogalsky 2012). It is a way to include both more extrovert and introvert people in the conversation.

The first part of the co-creation session was intended to act as a warm up exercise for the participants to make them relax and get them into a proper mindset before moving on to the second one. It was guided by the second design driver: What does a potential viewer of a live-streamed concert appreciate in a live concert experience? by asking the participants ”*What has been your best live music experience and why?*”.

In order to give all the participants a chance to share their thoughts and experiences and avoid more extrovert people dominating the discussion, silent brainstorming was applied in the beginning of the task. Each participant thought about their best live music experiences in silence and wrote down the aspects that made the experience memorable on sticky notes, one aspect per sticky note. Once done, the participants shared their experiences with each other in the form of a story (storytelling) and showed their sticky notes. The sticky notes were then placed on a plain paper canvas for documentation.

The idea behind the first task was to discover perspectives on what kind of aspects make a live concert memorable and by this, create a link between live music experiences offline and online. This would guide the design of an engaging live-streamed concert in the second part

of the co-creation session. Thus, the first task acted as the basis for the second part of the session and gave direction to the second task.

Part 2 – role play, picture cards and prototyping

Role play within service design is usually used to act out how a service works by playing out a customer journey or some element of the service experience (Moritz 2005) to forge empathy and map opportunities for design (Martin and Hanington 2012). Role play provides tools to meet the user needs (Stickdorn and Schneider 2011) and helps brainstorm and develop service interactions and experiences (Moritz 2005). It can also be called rolestorming when the participants "*adopt other people's identity while brainstorming*" (Curedale 2013a, 312). Picture cards can be used to evoke more conversation around experiences and initiate additional ideas (Martin and Hanington 2012).

Prototypes are effective in communicating how people interact with a concept under development (School of Design Thinking, accessed Sept 7, 2015). Low fidelity prototypes are common for early ideation processes in generative research and used to communicate the proposed concept in a physical realization such as concept sketches, sketch models, storyboards, or alike (Martin and Hanington 2012).

The idea of the second part of the co-creation session was to gain insights into the potential users of the live-streamed Whiskey Jam, through the session participants, by letting them design a prototype of an engaging live-streamed Whiskey Jam based on their own needs and wants as online viewers. The task was planned according to the first design driver: What kinds of aspects constitute an engaging live-streamed concert?. The findings were to reveal what the participants would like to experience to be engaged with the concert throughout the entire broadcast.

The task strived toward a holistic view of an engaging live-streamed concert by approaching the subject through different actors involved in the production. This was done with role play by recognizing different viewpoints of the main people involved in the live-streamed concert production. Each participant in both groups was assigned a role in a fictional live streaming production of Whiskey Jam: the audience member, musician, host/hostess, cameraman/woman, lighting technician, audio engineer, and producer of the show. The roles were defined according to the service blueprint drawn during SD Thinking.

Through the role play the groups had a chance to act as the production team of the fictional live-streamed Whiskey Jam and design the prototype based on their preferences as potential viewers of the show. Embracing their roles the participants were assigned to design an

engaging live-streamed Whiskey Jam they would want to watch online by considering how the person behind the role could affect the live stream experience of the viewer. For example, the participant with the lighting technician role concentrated on how lighting would affect the viewer experience and how lighting of the concert could be adjusted to offer a more engaging experience for the viewer. Thus, the role play task was intended to help the participants consider and brainstorm a variety of aspects and issues affecting the viewer experience from different perspectives, through the roles assigned to them (see illustration 8).

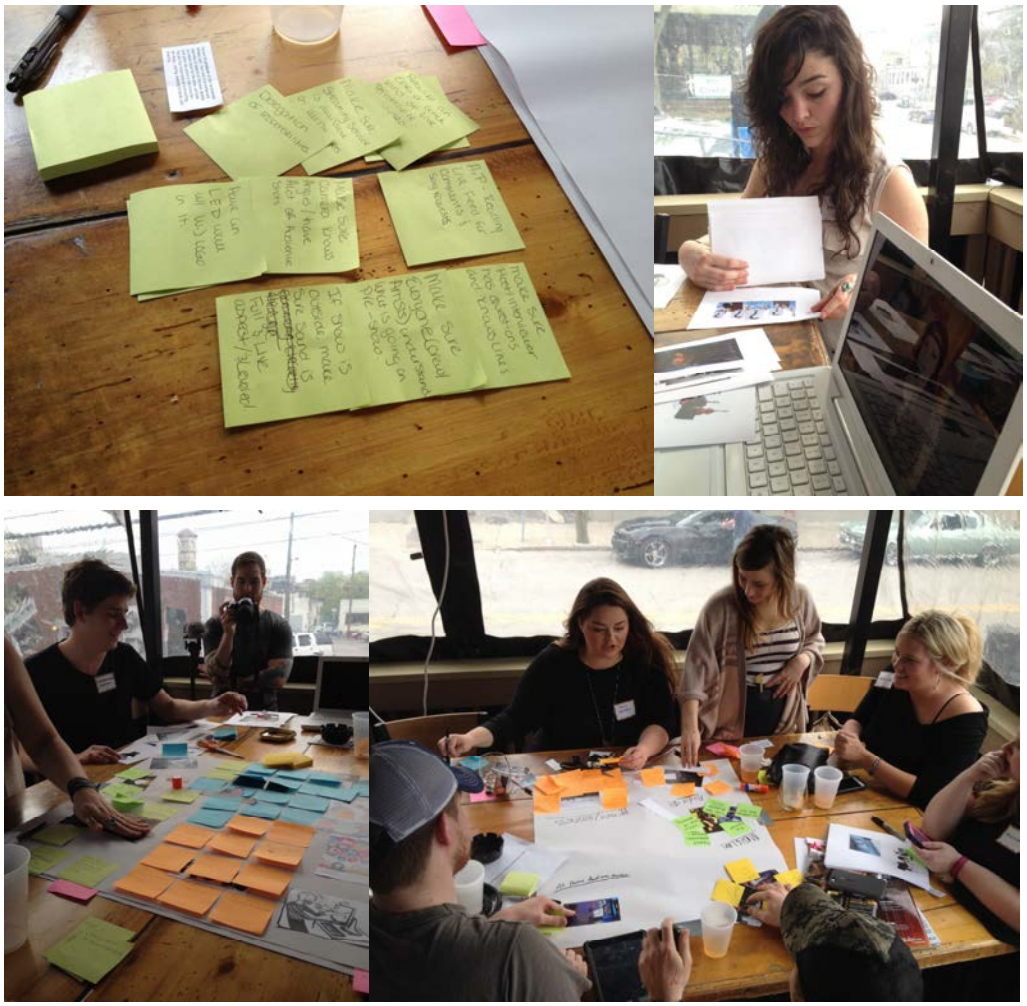

Illustration 8: Task 2 of co-creation session

The role play was kicked off with a similar silent brainstorming moment to the one during the first task of the co-creation session. After the individual brainstorming the groups continued with group work. Along with the roles, the participants were offered additional means to support the role play and brainstorming. They had a set of picture cards on the table to evoke more conversation in case they got stuck. The pictures ranged from themes directly linked to

live music productions and live streaming to topics that did not have any evident link to the task. Both groups also had a video of previous Whiskey Jams running in the background for them to memorize the contents and details of the show. Furthermore, holding the co-creation session at the venue of Whiskey Jam was to create a right atmosphere and help the participants relate to the subject on a more concrete level when having the chance to move around the venue.

Both groups compiled their ideas on a big white paper sheet to create a visual concept prototype of the engaging live-streamed Whiskey Jam (see illustration 9). The participants were offered different colored sticky notes, and magazines to work with and cut off pictures and words from for the prototype. They were encouraged to be creative, both with the fictional show and the presentation, and to freely choose the form of the prototype. The two groups were brought together at the end of the session for a final discussion and to present their prototypes to all the participants and facilitators.

Illustration 9: The visual concept prototypes of both groups

The findings of both tasks of the co-creation session were analyzed during SD Filtering and visualized during SD Explaining. These are explained in the next chapters. Again, not all the original data gathered during SD Generating is included in the report in its entirety because of the vast amount of information (two big concept prototypes, over two hours of video material, huge excel sheet of transcription and material organization).

SD Filtering – creating concepts

The goal of SD Filtering was to organize information and create concepts based on the findings of the co-creation session. Affinity diagramming was used to organize and analyze the findings based on which two concepts were drafted.

Affinity diagramming

Affinity diagramming is a way to gather and organize insights, ideas, and opinions and add structure to an issue by breaking it down into categories (Moritz 2005). It helps to organize a large amount of information and recognize the voice of the user by revealing issues and putting forward user requirements (Holtzblatt et al. 2005). The data is usually organized on a wall with sticky notes (Holtzblatt et al. 2005) in appropriate (non-predefined) groupings (Martin and Hanington 2012).

Even though the data already partly followed predefined groupings according to the role play task, the basic idea of affinity diagramming was used to analyze the findings of the co-creation session. Instead of compiling the data on a wall with sticky notes it was decided to use Excel because of practical reasons when working in different locations (see illustration 10).

4	Cameraman/woman (visuals)	Not a bad seat in house	in the front or you sit in the rafters (piippuhyllyllä).	
1	Producer (production)	Decent crowd but feels intimate	Mine was Tin Pan South at the (?) Festival couple of weeks ago. I like their shows because, every show I went to, every show had a decent crowd but it all felt small and intimate.	
2	Musician (live music)	Get to hear stories behind songs	It was nice to hear the back stories behind the scenes because it makes the song mean more if you know where it came from	
3	Musician (live music)	Get to interact with artists	...afterwards and have a thing to talk to them. It meant a lot too.	
of ents itati	**Role/theme**	**Sticky notes on paper canvas (if Italic, was mentioned only during groupwork)**	**Comment on video / presentation (if the comment was the content of the sticky note, not mentioned again)**	**Comment on video / group wo note (if / in the middle, there v not necessarily linked to the sp most appropriate (if the comm note, not mentioned again, tha empty)**
1	Producer (production)	Have a monthly calendar of shows	We kinda went around and did a quick synopsis on what everyone's goals were of their role. As the producer we're really digging in on content, having everything booked at least a month in advance.	Have a monthly calendar of shc the hostess and you know if we example), then they know whic said a house band but you nev about content that the audio g of content): Content would be (Producer): Oh yeah, having a c also go with the host too, cause going on and they're probably
		A.P - Reading live feed for	Having an associate producer. As far as now that we're live, I'm having an associate producer reading live feed and commenting on song requests. And then our main focus with audio, because no matter what, the audio and that sound is what's super	Associate producer, or the host for comments and song reques booking, I said require EPK, tha

Illustration 10: Analyzing the findings in Excel

All the key information was gathered from the visual concept prototypes and video material into an Excel sheet that was categorized based on the roles assigned in the second task of the co-creation session. The data from the first exercise was categorized under the same roles as equivalent but kept separate. The roles were then converted into matching themes in a live music production (see p. 67) based on which holistic concepts of a memorable live music experience and an engaging live-streamed concert were constructed. Furthermore, to emphasize the interactive aspects of the concept of an engaging live-streamed concert, a model of co-creational aspects of an engaging live-streamed concert was created.

SD Explaining – visualizing concepts

To further elaborate the concepts, the data was converted into visual forms during SD Explaining. Thus, the goal of SD Explaining was to enable understanding of different stakeholders on the ideas generated during the co-creation session and the concepts created based on the ideas. A professional illustrator created concept visualizations based on the author's mock-ups. Furthermore, certain components of the visualizations (icons) were used to construct a specialized model.

Mock-ups, professional illustrator (Photoshop) and icons

A mock-up is an illustration or a model that interprets ideas, visions and concepts. Mock-ups help explain service concepts and experiences (Moritz 2005).

The concepts of a memorable live music experience and an engaging live-streamed concert were first drafted in two sketches. To increase understanding of the stakeholders and make the concepts approachable for the audiences that might be interested in the findings the sketches were designed to reflect the special nature of the development project subject. In other words, the concepts were translated into an appropriate visual form of offline and online live music productions and the important aspects within. The professional illustrator then transformed the sketches into refined mock-ups with Photoshop (see illustration 11 and p. 66 and 73).

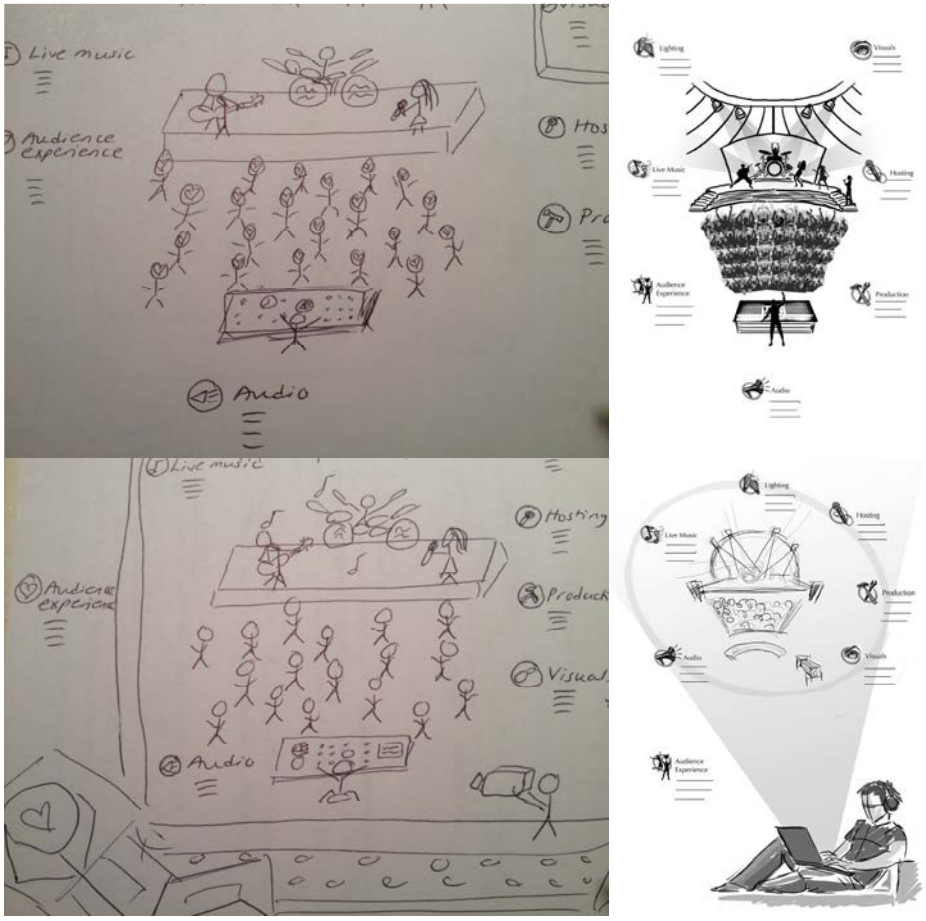

Illustration 11: Sketching and drafting the concept visualizations

The mock-up of an engaging live-streamed concert acted as the basis for a model of co-creational aspects of an engaging live-streamed concert that was drawn based on all relevant data gathered during the project. The model was constructed by using the icons from the concept mock-ups (see p. 87).

The key findings of the co-creation session, the concepts of a memorable live music experience and an engaging live-streamed concert, the model of co-creational aspects of an engaging live-streamed concert, as well as all the corresponding visualizations are introduced in the following chapter.

5 Development project findings and discussion

This chapter discusses the findings of the co-creation session and suggests concrete tools to create engaging and co-creative live music experiences. The first chapter introduces the findings of the first task of the session and suggests a concept of a memorable live music experience. The second chapter provides an equivalent concept and building blocks of an engaging live-streamed concert. The third chapter brings forward a model of co-creational aspects of an engaging live-streamed concert. The findings are visualized in a way that aims at helping content producers to co-create engaging live music experiences with their viewers.

Due to the limited documentation on concert live streaming, the thesis process included some heavy background research to reach enough contextual knowledge on the subject to be able to implement the empirical part of the project. This lead to two additional byproducts which are not included in the report but have the potential to offer valuable, analytical information for the field of concert live streaming. First, the author prepared an extensive overview of perceptions of people in the music business on concert live streaming. The overview was reviewed by Tamminen (2016) according to whom, it was the most extensive overview of concert live streaming he has seen so far and thus, very valuable for the industry. Second, the author draw a model for the potential of concert live streaming for the music business to make concert live streaming more concrete and approachable for the music industry and to create discussion around the subject. These byproducts will be shared with the industry through other channels.

5.1 Co-creation session findings – a memorable live music experience

The participants were very active throughout the co-creation session. They were clearly dedicated fans of Whiskey Jam and happy to be part of developing the concert they love and see it succeed. The owner of Whiskey Jam said after the session that he received positive feedback from the participants: "*I heard from several people they really enjoyed it*" (Whiskey Jam 2015d).

The first part of the co-creation session dealt with the participants' best, most memorable live music experiences. The task was guided by the second design driver: What does a potential viewer of a live-streamed concert appreciate in a live concert experience?

The findings of the first task are introduced and conceptualized in figure 7, which aims at providing a concept of important aspects of a live music experience for a concertgoer. The findings represent the combination of the experiences of the two groups. As the findings of this task are very personal, participant related, and based on perception and matter of taste,

there is no reason to compare the two groups but the findings can be seen complementing each other.

Figure 7: Concept of a memorable live music experience

For easier comparison of the findings between the two tasks of the co-creation session, the findings of both tasks have been grouped under the themes used in the second one, the role play exercise. To link the findings and the role play to reality and actual live concert productions and to provide content producers concrete tools to utilize the findings, instead of communicating the findings by each role, they are discussed according to the theme in the production respectively:

- Audience member – Audience
- Musician – Music
- Host/hostess – Hosting
- Cameraman/woman – Visuals
- Lighting technician – Lighting
- Audio engineer – Audio
- Producer – Production

The most interactive themes are discussed first followed by themes that are more one-sided when it comes to communication. In terms of both tasks, some of the aspects were mentioned in relation to more than one theme, which is why they are discussed from different angles depending on the theme. Each of the themes is illustrated with a relevant icon for easier connection between the written findings and the illustration.

Since the audience experience is obviously a sum of aspects of all the themes this part of the findings concentrates on the deeper feelings and elements, such as unity, sense of community, environment, atmosphere, and vibe that elaborate how deep and personal the live music experience can get for the audience.

The participants mentioned that strong interaction and audience participation can make the audience feel they are one with the artist. This is a two-way street where the energy and vibe of both the musicians and the audience feed from each other. When the crowd is amped up the musicians can feel their high energy and good vibes and play off the vibe of the crowd. The audience is into it, feeling the music and the musicians can stop singing and the song keeps going because everybody sings along. "*The song can be amazing but it's amazing times two when everybody else is gone with it too*", one participant memorized his best experience.

The atmosphere and sense of community play a big part in great live music experiences. Live concerts can become their own small worlds or realities to say. An intimate show can make you feel you are the only one there and the band is playing just for you even though you are

surrounded by your friends and hundreds or thousands of other people. An accepting atmosphere with people from all ages, cultures, sexual orientations, and lifestyles creates a unique, generational, and multicultural event. When the sense of community gets really strong you even know "*the dog on the tour*". Attending a festival together with likeminded people without any cell phone service can disconnect you from the "*real world*", in a positive way. One participant mentioned he loves travelling to shows, being there the whole weekend and getting his way back by Monday. "*If you could get that, I feel like that's the thing, if for some moment you could be separated from the real life and just live in that*", suggested another participant.

Building on both interactivity and atmosphere, most of the aspects related to great live music experiences were linked to the interaction between musicians and the audience and the overall live music experience from the point of view of atmosphere and vibe. Other comments dealt with aspects that support the musicians with their performance, such as instruments, set list, dynamics, staging, and surprise factors.

Sharing the best live music experiences evoked some deep, personal memories among the participants. Favorite artists and familiar music, the relationship with the artists, and different feelings such as passion towards music were discussed. The participants appreciated aspects related to the sense of belonging and being part of something and discussed the interaction between musicians and the audience as well as feelings of inclusion, exclusivity, and intimacy. Obviously, there is some overlap here with the theme of audience, especially when it comes to interaction because it is a two-way street.

Some participants mentioned their favorite artists or childhood idols and seeing their last concert or seeing them play for 150 times. For one participant, in his words, his favorite artist changed his life. Another one brought up unforgettable memories when seeing his first live concert ever that started his journey in music: "*I was on my dad's shoulders and I never wanted to leave the amphitheater*". It was more of a personal thing for him, a personal relationship with the artist. Winning tickets to a show and being in the front row hanging out with musicians that came to see the artist play made another participant feel exclusive. To be included made him feel awesome: "*That environment, that experience, that personal relationship, it's what did it to me. […] it felt like my thing.*"

The performance and music were also discussed. A good, energetic performance involves the audience in the concert. It is important that the musicians make the audience feel welcome and show that they are happy to be there. When you feel that the musician is feeling the vibe

of the crowd and they love what they are doing makes the experience of the audience even better.

Familiar music that can be sung along was appreciated. It is important that the music is ”*real*”, from the heart and true to the artist or the band. An artist that is very personal with the crowd, for example by playing an acoustic song, a song that was just written or a cover of a song that is very personal to the musician, was valued. A charismatic singer can engage the crowd to the level of being ”*give and take between the crowd and the performer*”. Even if it gets a bit rowdy at times it still remains friendly when everyone is enjoying himself or herself and ”*just rocking out too hard*”. The end result may feel like ”*a really good house party*” that no one really wants to leave.

Interaction with the audience was highly valued, both during and after the concert. The musicians need to recognize their audience and talk to them as persons. They can tell back stories behind the scenes and their songs. This makes any song mean more when the crowd knows where it came from. Interaction makes you feel you are part of what you are doing instead of just being there, watching the show. ”*You kinda become a part of it*.” Interaction is also linked to the stage presence. When the musicians move on the stage and interact with people they hold the interest of the audience throughout the show.

The live music experience can stretch beyond the actual concert through personal connection to the artist and their songs. One participant mentioned understanding the songs of one specific band more after seeing their show. After he saw their arena show, ”*the songs came out way cooler than they were on record*”. Something similar happened to another participant when he heard one song for the first time. It felt very personal and intimate to him during the concert and he was sure it was going to go someplace. A week later he heard the same song on the radio and memorizing that special moment made the experience even stronger for him. Furthermore, one participant met a radio host at a live concert, which was put up by the radio station of the host. He was able to cherish the memory of the live concert by listening to the radio and the host after the show.

The aspects supporting the musicians’ performance have their own effect on the live music experience. When one gets excited about strong drums the other has a great memory of a band getting up on a second surprise stage during an arena show and playing acoustic songs in the nosebleeds section. High energy from start to finish and versatile dynamics throughout the show make the concert interesting. The audience maintains their interest when the set list is versatile, including a mixture of uptempo and downtempo songs as well as both familiar and rare songs. Sometimes the band can go from acoustics to full bands and showcase one musician on an instrument he is not that known for.

Hosting was approached from the same angle within both groups. Surprise factors and guests make the concert exciting when you never know who is going to show up tonight or what is going to happen. That is something that happens in Nashville all the time and is typical for the Music City, they say: "*You get to see something that nobody else get to see unless they were there*". It is not just a regular show.

Based on the participants' perceptions, the aspects related to visuals can be divided into two groups: how good seating (or location at the venue) and view of the performance affects the vibe during a concert and how imagery and props engage the audience and draw them in.

When you are up close, in the front row, you can feel one-on-one with the artist. Even elsewhere in the venue, no matter where your seat is or where you stand or dance on the floor, the concert experience gets better when you can see well and have a good view. You are able to see the artists and watch them play. Some of the participants, being musicians themselves, appreciate seeing what the artists are doing, how they are playing, and what kind of gear they are using.

Imagery engages the audience and invites them to participate in the show. Visuals, such as screens, video, use of colors, and different props, like confetti falling from the ceiling, make the concert visually interesting. Even the very appearance of the band, how the band looks, draws the audience in.

There was no direct mention of lighting during the first task. However, some of the aspects linked to the other themes can be considered to be indirectly related to lighting, for example in terms of visibility.

It became quite evident throughout the entire co-creation session that the participants consider audio and sound quality as one of the most important factors when it comes to a live music experience (online or offline). The mix between the speakers and the

sound engineer has to be just right and reflect an accurate image and sound of a band. "*You can hear the drums but you can also hear the vocals, the guitar, the bass, and how they all fall together so it accurately depicts the band*", one participant said. You can hear and understand what the singer is saying. Sometimes the sound can get too muddy and mud cloudy so that it sounds gargled. Thus, great sound quality and mix with music and vocals are important for the concert experience.

According to the co-creation session participants, aspects related to overall production, especially to the venue and organization, are important in creating a vibe during a live music experience. It is important that everything is organized and works as it should, without any tension. The audience notices if there is something going on with the visual set when the crew is running on and off stage. It distracts the experience when the crowd wonders what is going on. A good working crew on and off stage, including the performers, and good communication ensure a pleasurable live music experience.

Additionally, it is important to maintain the focus of the audience, during and in between acts. Quick turnovers are essential so that the audience does not have to wait for too long for the next band to set up and lose their focus. During a performance an interesting stage design can allow the audience to see the artist no matter where they sit or stand or where the artist is on stage or how much he moves around. This is a good way to engage the audience and keep up the interest during the show.

Intimacy and comfort were discussed from the point of view of the size of the venue and crowd. Some participants told about their best live experiences at smaller venues and others at larger festivals. Together a small venue and a small crowd can create an intimate vibe for the show. When the venue has a decent crowd and is not too packed, there is space to move around and the audience can feel comfortable. You do not feel smothered by other people and are able to enjoy the show without being distracted by everybody who would otherwise push you around. Whether the show is a songwriters' night or a larger event it is important that the venue is roomy enough for people to dance and get into the vibe.

To conclude the findings of the first task of the co-creation session, the participants highlighted various aspects that together create a great atmosphere and vibe during a live concert. They want to have a communal experience with other people and feel included in the concert. Having the possibility to be part of something special that cannot be experienced elsewhere creates an experience that can feel like another world and stretch beyond the actual concert. Interaction and participation play a big part in creating memorable live music

experiences.

The aim of the task was to prepare and warm up the co-creation session participants for the second task and not to be the main source for findings. Thus, it is recommended to approach the concept of a memorable live music experience as a tentative conceptualization that will hopefully generate further development on the subject. Also, it is important to pay attention to the interplay between the aspects that together create the experience and not concentrate too much on individual factors. The findings of the second task support this proposition.

5.2 Co-creation session findings - an engaging live-streamed concert

In the second task of the co-creation session the participants, fans of Whiskey Jam and potential viewers of the live-streamed show, were asked to design an engaging live-streamed concert concept through role play. The task was to think about the aspects that make them engaged enough to watch the entire live broadcast of Whiskey Jam. The task was guided by the first design driver: What kinds of aspects constitute an engaging live-streamed concert?

Both groups had somewhat similar approaches to the task. After individually brainstorming the aspects through the roles assigned to each of them the producer, thus the leader of the group, went around the table to hear everyone's ideas for the show and the goals of their role. The ideas were then further discussed and the groups compiled their final ideas into a visual concept prototype of an engaging live-streamed Whiskey Jam. The participants considered the aspects that surfaced during the first task, which ended up creating a strong link between live music experiences offline and online.

Both groups had quite a bit of overlap with their ideas, which is why the findings have been combined. It can be suggested that rather than competing, the findings complement each other and thus, together form a more holistic view of an engaging live-streamed concert than when dealt with separately. The findings are introduced in figure 8. Just like with the first task, the findings are communicated in the form of a concept. Each theme and the related aspects are visualized with a descriptive icon that links the concept and its parts to the text that describes the illustration.

Figure 8: Concept of an engaging live-streamed concert

Because the viewer of the live-streamed concert is at the heart of the project, again, the theme of audience is discussed first. However, apart from interaction, it is important to note that all the other themes and aspects that surfaced during the co-creation session have been approached from the perspective of the viewer and thus, can be seen contributing to the overall viewer engagement.

Most of the aspects related to the live stream audience experience were connected to the vibe during the show and interactivity with both musicians and other audience members. Virtual reality was seen as offering new ways to experience the online concert. Additionally, some challenges to engage the audience were discussed.

All in all, the participants considered the online audience experience important when designing a live streaming production. The needed manpower has to be in place in order to give the audience what they need. ”*The main focus here is […] in capturing what we experience here every Monday in what they perceive and it will never, ever be the same but it has to be close*”. The audience wants to be entertained just like the venue audience.

Whiskey Jam is known for its own special vibe and spirit. The ”*X-factor*”, the random appearances, complete surprises, the celebrities that come by, the fact that everybody’s welcome is what makes it exciting and represents the soul of the concert. It was emphasized that it is important to value what the concert is and preserve the institution and the spirit when live-streamed. *”[…] everyone should be enticed to come to the show first, number one, and if you cannot make it to the show, you need to be online and watch the show*”. The concert is seen as *”[…] an open forum for anybody to come up here and have the most amazing performance or the most amazing show of their life from both the performer's perspective and the viewing perspective. I've played here before and it was the most amazing experience of my life because there was so many people here that were actively engaged*.”

Interactivity and the feeling that you are there at the venue (even though you are on your couch at home) were seen as playing important parts in an online experience. Several concrete examples were suggested and even some technical solutions to leverage virtual reality and create live-streamed experiences that are as close to the venue experience as possible. It is important to make it sound, look, and feel as if you are there when watching the live concert with your friends. To have a communal experience you have to be able to communicate both with the performers and the audience. Obviously, as interaction is a two-

way street, again, some of the points overlap with the musician's point of view but the participants managed to really dig in deep to find out what would entertain and engage them during a live-streamed concert.

From the point of view of audio, through earplugs or some other tool, it has to sound as if the online viewer is there in the room at the venue with everyone else. It is about having the right combination of the sounds: the live music and the audience. Two audio streams, one from the musicians to the audio monitor and one for the audience participation create the right bar room quality and feel of a live event and audience chatter.

In addition to making it sound like you are there, it has to look like you are there, too. With the help of multiple cameras you can choose where you want to be in the venue and what perspective you prefer. The viewer wants to have the feel of walking in the room and choosing the cameras for the right view.

Furthermore, the online viewer wants to connect with both the musicians and the crowd during the concert. The purpose of Whiskey Jam is to showcase new music so it is valuable for the viewer to hear the back stories and learn more about the new talent. Whether on stage during the performance or in an interview, hearing stories behind the songs and knowing where they came from adds value to the song and credit to the musician. By learning more about the artists the viewer stays interested and entertained and keeps watching the show.

Part of the experience at a live show is being able to enjoy the concert with other people. That part is lost when watching a concert online. Thus, having the possibility to sit on your computer and talk to the crowd and other audience members, through for example a chat feature, is valuable for the online viewer. Additionally, the viewers want to share their experiences and the stream with their families and friends on social media.

One of the participants came up with a creative idea to take the communication with other people, both the artists and the audience, to another level by allowing the online viewer to have the same voice as a venue audience member during the concert. This idea also adds to the discussion of choosing where to be in the room and the feeling as if you are there at the venue. He suggested an app that, through a live feed, allows the online viewer to see the perspective of somebody else, a "*surrogate*", that is present at the venue. The app gives the online viewer the possibility to watch the venue from the perspective of that person and communicate with him two-way as if physically standing next to him. Through the app he also has the same voice as the person he is following so that he can for example request songs directly from the performers. This way, the online viewer can virtually "*go out*" without actually leaving the house in real life. This changes the concept of Whiskey Jam from a live-

streamed concert to a "*personal hang*". By making it a personal experience and going to the show with your friends it is possible to keep the integrity of what the concert is, the participant suggested: "*The sound, the lights, the heat, the body heat, the smells, all those things. Preserve that as best as you can and invite people at home on their mobile devices […].*"

The same participant suggested another idea to experience a concert with other people. Watching the concert at home needs to be easy and it has to be more exciting than being a passive viewer: "*I don't think this is destined to be […] you behind the screen by yourself or on iPhone, all on your couch like a zombie watching this*". Rather than watching the show alone at home he proposed a more communal approach. A bar across town can stream the event to their bar so that it can be enjoyed together with other people and it becomes sort of a separate concert with a separate audience.

The challenge of keeping the audience around while unknown artists are playing was discussed in relation to both the audience experience and the theme of music. The reason behind this is that Whiskey Jam showcases singer-songwriters and even if the fans of the show, many of them singer-songwriters themselves, know who they are, the online audience might not have heard of them before. "*We all know Grateful Dead, we all know Bob Dylan. You all probably pay to go see them*" and watch the entire show. But the question is, are you going to pay or are you willing to sit through an hour and a half to see artists you do not know to see that one person you want to see?

There are usually several artists performing during each Whiskey Jam. The artists are currently placed strategically in the schedule and they do not announce the order of the acts prior to the show. Even when checking the list of the artists on Twitter during the concert, the list is random and does not reveal the order they go for. This makes the venue audience come to the venue by 8:30pm, have a couple of beers, go to a neighboring bar to grab a beer or two and then come back to see the artist they are waiting for. The same goes with the live stream, you as the viewer do not want to lose the stream but make sure you catch the artist you are expecting.

During the discussions, somebody mentioned a bar in Nashville that has static cameras for live streaming. Their cameras are aimed directly at their stage and they live stream everything that happens there. The unfortunate result is that nobody watches the stream. According to the participants, there has to be some kind of a catch to stay put and watch the entire show. Especially when it comes to monetization of the live streaming service. As one of the participants mentioned, the audience of Whiskey Jam, many of them struggling musicians, has a low disposable income for additional data consumption apart from their existing Netflix

account and At&t or Comcast bill. Thus, monetization has to be carefully considered when launching the new service. All in all, the people who are either going to be watching the show or are interested in engaging with the show need an incentive to view it at home, something special that keeps them glued to their online devices. That something needs to be easy and entertaining.

The role of the musician was discussed from the point of view of different aspects that support the artists in their work and let them perform their best to offer an engaging experience for the viewer.

For the vibe it is important for the artist to be able to relax. By preparing well for the concert the artist can relax and be himself. This allows him to interact casually with the audience and get them engaged with both the music and the concert. It was mentioned it is somewhat different for a known, major label artist compared to an up and coming musician.

It helps that Whiskey Jam is not a huge show people buy expensive tickets for and the musicians can play to a small crowd. They let the artists be themselves and joke around, have a drink and have fun that lowers the stress for the musicians. The vibe feels like you are playing for friends and you can let down the normal persona you have to have for a big audience. On the other hand, the stress increases and the artists have different attitudes when going on stage in front of a 100,000 people. The preparations, the crowd, everything is different. Thus, the aim is to find a balance between relaxing and keeping control: ”*If you have a chance to relax it makes stuff a lot smoother*”. The performers should not feel rushed even if it is a live streamed concert but to maintain the same feel as before.

A smooth set up, an easy load in and out and not getting stuck trying to fight through people to get to the venue keeps the artist calm. Being prepared for the set and having all instruments ready reduces some of the lag time in between acts and the waiting time for the audience. If the band is being interviewed during a set change it is good for them to know the basic questions or the general idea of what they want to talk about ahead of time to avoid a situation where the artist stumbles over words and feels dumb. Furthermore, the artist needs to know their audience, to whom they are playing to match the performance with their expectations.

Crowd interaction is an effective way to engage the audience, both at the venue and online. It is not enough to just have an upbeat set and keep the energy up but the musicians have to interact with their audience and acknowledge the fact that there is an audience watching

online. Performers being on autopilot is not a very exciting sight but they have to have eye contact. *"When they feel that they're looking right at you it makes it that much more powerful"*.

One musician mentioned it is important for the musicians to show off musicianship of their band members. This can be done by spotlighting them and doing a zoomed in shot of solos. This way the musicians get credit for what they do. In terms of songs, having a chance to stop and explain their songs if necessary from the point of view of, for example, songwriting creates more importance and meaning around the songs, the performance, and the artist. One interactive way that encourages action from the viewers is to give the online audience the chance to do song requests through a chat feature or a similar interactive tool. When the requests are kept up during the broadcast the most popular ones can then be played live.

One aspect that is also touched in the hosting section of the findings is displaying a bio of the artist, links to their website, a link to their iTunes account so that the viewers can buy CDs, etc. during their performance. The information goes across the bottom of the screen, off to the side or someplace else appropriate. This gives the audience the chance to find out more about the artists already during the performance and purchase their products. It helps the artists to make some extra revenue and get noticed. As for the extra revenue, an option for people watching online to leave tips supports lesser known artists that are fighting for tips just playing shows for free.

As mentioned in relation to the audience experience, one challenge for Whiskey Jam is to keep the crowd around when the unknown artists are playing. Unfortunately, this is a common challenge for Whiskey Jam. It boosts the musician's confidence when the audience stays around their performance. This aspect was also mentioned in relation to hosting by considering surprise guests, contests, and other means to keep up with the suspense and keep the audience watching the whole show. Similar means to engage the audience were considered in relation to music. The chance to work with new artists and surprise guests they normally would not is not only exciting for the other artists but by holding back the names and performing times of the surprise guests until they come up on stage keeps the viewers engaged. The host can do his part in maintaining suspense by talking about the surprise guests but not giving out too much information and this way keep people entertained.

If done nationwide, this issue becomes even more evident because the lesser known artists may be somewhat known in Nashville but not necessarily in other cities and states. In that case, there has to be at least one artist that everybody would know, the participants added.

Hosting was one of the themes that created the most discussion among the participants. In addition to the overall role of the host/hostess within a live streaming production, topics of viewer engagement, brand recognition and sponsors of Whiskey Jam were covered. The participants identified keeping the audience company as the hardest struggle in an online concert production.

The participants suggested that the role of the host is to generate smooth transitions during the concert. He introduces the artists and bands and coordinates any artist interviews during transitions. The host engages the online audience in connection with the performers and more directly, through different activities and communication directed at the remote audience.

Viewer engagement created a lot of discussion among the co-creation session participants. Going beyond the visible role of the host to introduce and interview artists, the job of the host is also to make the artists feel comfortable to talk with him. By getting the artists to share their stories the host is able to find out details that help the audience relate to the artist and like her. However, this requires some background research on the performers to get the best out of the conversations: *"It's not enough just to walk out there and give their name. I wanna hear, you know, this is this person, they played with this band or possibly they worked for this guy. Because, you know, there could be people that walk up on the stage I've never heard of them but as soon as you say they wrote a song for George Strait, they wrote a song for Garth Brooks I'm hooked, I'm gonna watch the entire set*." Even if the audience does not specifically know them by name, they may know something they did, like for example the big songs they have written.

By getting the audience to know the artists and relate to them it is also easier to keep them entertained, interested, and maintain their attention. Interviews are effective during turnaround between acts when the audience is starting to lose attention. *"[…] who's gonna stop them from saying 'Oh, you guys have a 10-minute set-up break, I'm gonna go watch Big Bang Theory' […]". "[…] you wanna draw the audience to you and not to the drummer setting up his area […]*"., one participant argued.

The host prepares himself for the interviews by asking the artists questions already before the show starts and builds the conversation from there during the actual interview in front of the live audience: *"[…] before the show I talked to Chris Weaver […] and this is what you played in high school*". Different questions for the interview and pre-interview were proposed:

- Your journey or road to where you are now?
- Age? How long in the business?
- What is your biggest inspiration? What was the thing that made you feel like this is what I am going to do for the rest of my life?
- What songs have they written? Any well known songs?
- Life and hobbies outside of music life? Family?

It was suggested to bring the artists closer to the audience by getting to know them as persons and not just unreachable performers. The questions can either be more serious or even a bit silly or goofy. The questions can be used as a way to plug the artist by telling a funny story, fact, or little tidbits about him before coming up on stage. The host can also ask about something outside music like current, hot topics or what they are excited or passionate about right now. The host can even have an ace up his sleeve and ask a "*weird factor*", one special question to entertain the crowd. This is something the artists would not normally be asked, something you cannot google about them, like their favorite drink or cereal or even their last text message.

In addition to introducing and interviewing the performers, it is important to have as much interest in the audience as the artists. The special thing about Whiskey Jam is it is like a small community where both regular people and musicians come to enjoy themselves every Monday and a lot of people know each other. *"[…] knowing that you have unbelievable artists that are playing but you also have unbelievable artists in the crowd that came to watch the people that are playing.*" Thus, the participants suggested interviewing not only the performing musicians but also the ones that came to see the show, asking them what brought them out tonight, whom did they come to watch. "*I think the one thing about reality shows, I always feel like if you watch you always feel like you wanna be there and that would make me wanna be there*".

Another special and different thing about Whiskey Jam that differentiates it from the other shows in Nashville is the surprise factor: "*The various thing about Whiskey Jam that I love is that you never know what's gonna happen*". The night before the co-creation session a famous American stand up comedian and actor got up on stage and did a 20-minute set without having a reserved slot for him. *"[…] that was the coolest thing about last show that no one gets to see*". Thus, asking the musicians in the audience to have a surprise performance or be on stage for an ex tempore interview during a set change is something that excites the audience. However, it was highlighted that you have to be considerate with the audience as they are at the concert on their free time and some of them want to be unknown and just spend a free night out.

As for scheduled surprise artists, they attract the audience very well but they need to be strategically marketed so that people do not target only specific shows they want to tune into or tune in to see only the bigger names. As the main focus of Whiskey Jam is on up and coming artists it was suggested to place no name artists and surprise guests randomly in between acts and within separate concerts to keep the suspense up and engage the audience.

Recognizing the online audience makes them feel more intimate and included when they are sitting alone at home or with their family. The venue audience members can include the online audience by acknowledging they are present and saying hey or waving hi to the cameras at the beginning of every show. The online audience is also engaged through a mixture of jokes, games and contests and on social media so that people at home can partake, too. One example of such a game mentioned is an online game "*Where's Waldo*" where the online viewers find a certain celebrity or the actual Waldo during a live stream. Furthermore, there was suggested to be a separate room with another host with different games and interviews going on ”*Jimmy Fallon style*” during transitions. All these means of engagement should vary according to the show so that it remains entertaining for the viewers and the show offers various ways to participate. Along with the contests, pictures, jokes, and tweets are displayed live during transitions. For example the winners of the most creative or largest group watching the concert can be showed on the live stream to boost their loyalty.

Another important factor is to mention where the viewers can find the artists online. Because on social media, on Facebook, Twitter, or Instagram, may be several people with the same name or bands with similar sounding names it is good to mention their actual website and social media information during the broadcast. This way the audience can find out more about the artist and see when they are on tour.

Just as promoting the artists, it is important to promote the brand of the concert and the sponsors of the show. Two ways to promote the concert brand were suggested: by telling a story of the show and how it was created and coming up with a theme song. A theme song grabs attention and everyone knows when the show starts when the song is played before the beginning of each concert or a short jingle plays right before the host comes back on stage. The jingle or theme song can also mark the beginning and end of a break in between acts to bring structure to the concert of multiple performers. Acknowledging the sponsors is also done in between performances. A banner along the bottom of screen and hashtags mentioning the sponsors work for the live stream and online audience.

Visuals, camerawork and view of the performance, were discussed by considering what to shoot and how interactivity would engage the online audience. Close cooperation was seen essential between the camera crew and the lighting technician to achieve best quality image.

Camera angles were reflected from the point of view of the performers, the venue audience, and the host of the show. The show is hosted by one of the incubators of the concert and because of that, he is known within the fans of the show. It was suggested that even before the concert starts, the stream could follow him to the venue in the car and walk up the ramp from the car to the venue with him.

During the concert, it is good to have a variety of angles, both close-ups and far away angles, to choose from for the stream. The performers need to be covered in clear shots of every musician, including their faces, and not just feature the main singer or the lead guitarist. By capturing all of them you are getting the full effect. This also includes shots of the crowd and their reactions to the performance as much as the band. For the vibe it is good to see that a lot of people have come to the show. ”*I think a big part of feeling like you're there is seeing the people you are surrounded by*”, one participant suggested.

In addition to the themes of audience, music and hosting, interactivity and virtual reality were mentioned in other occasions during the second task as well. The participants wanted to make the live-streamed concert interactive for the online audience to engage them through different venue angles. With permanent, stationary cameras, the viewer at home can be offered an interactive feature that allows choosing a position in the room. This way the online viewers can select what part of the venue they want to be at, be it at the front row seeing mainly the band without any crowd shots or far at the back of the bar having a wider view. Even though the cameras in this case are stationary, they still change angles and zoom in and out to make it interesting. Even places, such as the performer view from stage or venue customer areas or views, or following the host of the show, that would not normally be shown on a live broadcast could be included. Alternatively, different angles can be displayed as separate feeds in the corner of the screen.

Lighting was acknowledged as an aspect in a live streaming production to create atmosphere and vibe. It depends on the venue and situation, though, how to use lighting.

It was mentioned that lighting appears differently on a computer screen so it has to be made sure that the lighting is proper and enough for the stream. All the equipment has to be checked before the show. In general, the stage must be well lit. A lighting rig on the stage gives more light on the performers beyond the bar room and frames the stage. Moreover, a bar room lighting makes it feel real and creates atmosphere. However, the lighting needs to be adjusted according to the venue: *"[…] a part of the charm of [Whiskey Jam] is that it is in a bar so you don't wanna light it like it's at the Bridgestone*". It is also good to have the stage bottom lit to get a clear view of the artists and avoid items, such as cowboy hats or ball caps casting too much shadow. This helps to recognize the musicians.

In order to create vibe and engage the audience the lighting technician decides where to focus the lights during the show. A good way is to alter the lights according to different types of songs and reactions of the venue audience, the participants suggested. You can for example pick up brightness for upbeat songs and dim lights during downtempo. If the audience is very excited, "*going wild*", during a song, bright lights can be put on them. After a song the lights are shut off and turned on to the crowd. Thus, the vibe can be notched up with the sound and what is going on in the crowd.

The members of the band can also be emphasized in relation to the audience and according to their roles in the band or sections within songs. Warm lighting can be cast on the performers during a song while the lighting is dim to no lighting on the crowd. Spotlight is on the main artist, the lead part, be it the vocals or guitar or any other instrument during a song. Other performers can be lit with blues or reds or a dim colored light during that time to give atmosphere and vibe.

Just like it was brought up in the first task, the overall importance of audio became clear during the second task of the co-creation session. Audio was placed as the first, the most important factor in a live streaming production before all the other elements. Audio was seen as creating intimacy in a concert experience. Even if the camera angles are not right it is the audio that matters. *"[…] it's all about the music in the end, it's about hearing the song, hearing that instrument relationship, putting that song with that artist. […] it's the atmosphere, the song, it's about the memory.*", one participant described the experience.

The audio must be done right with a professional approach to work. Audio standards need to be met so that people at home do not have any issues from hearing the concert. It is also important to protect the copyrights of songs so that people cannot snag music after it has

been downloaded. The participants discussed different solutions to this and suggested offering a membership or a subscription service for the viewers. This could be done through Facebook or Twitter or an app and it would work on any device, such as a computer, an iPad, Apple TV, etc. Furthermore, they suspected that live streaming would eventually, if not immediately, move to TV and be available through a subscription with your own cable company. Monetization was mentioned from the point of view of the challenge to charge the service starting off.

Right before the show it is the responsibility of the stage management to make sure everything is tuned up, also from the perspective of different audio streams, so that everything sounds right. Devices need to be in tune and guitars have new strings. A timely soundcheck minimizes any unpleasant surprises during the show. A test broadcast shows how it sounds online when live.

As far as the live concert, it is important to have a combination of clear musician and audience sound, from all sectors and sides during the performance. With the help of proper miking, the sound must be set up so that you can hear the applause and the cheers of the crowd. The relation should, however, be in favor of the musicians so that the crowd noise is not overbearing and unwanted sounds, such as unrelated talking and yelling, are cut off from the stream. One participant noted, *"[…] you don't care if Sally saw Suzy for the first time…"*

It is also important to hear the lyrics clearly. It is great hearing a song live that was played on the radio a couple of hours earlier. Some songwriters that come to see the show want to hear both the lyrics and what the up and coming artists are talking about to figure out if they want to write with them. Instead of only hearing the groove they want to hear for example if the person lives in Nashville.

Furthermore, the participants considered approaching the live-streamed show from the point of view of a radio show and creating an on the air feel of radio. Supporting the audio with an on the air sign the online audience feels that they are there at the show with the others and that it actually is a live feed, real time. Grand Ole Opry, a country music radio show in Nashville, was mentioned as an example. A similar on the air sign lights up the atmosphere and adds magic to it. Additionally, the sign gives the added benefit of people at the venue being more mindful of what they say and do when they know the concert is being streamed out.

In addition to the on the air sign, another visual tool was suggested to support the audio during the show. Even though the names of the performers are announced before they come up on stage the audience often misses the introductions for one reason or another. It is hard

to tell even by looking online who just started playing because Whiskey Jam does not have a ready made schedule (for reasons mentioned earlier). A section on which to write or screen who is playing, both at the venue and online, would solve this problem.

Finally, the participants suggested that the producer of a live-streamed concert has to wear a lot of hats from organizing and scheduling to delegating the crew and responsibilities and ensuring technical starting points for an engaging show. The producer has to make sure that everybody within the production is in line and knows their roles, everything is set in advance, and everything needed is around for the concert.

A monthly calendar of shows was proposed with acts being booked at least a month in advance. The calendar ensures other people within the production, especially the host, know the upcoming schedule and how to prepare for it. When it comes to booking artists it is important to book acts with growth potential, they suggest. A good approach is to have a mix of familiar, big performers and new songwriters just coming out not all people in the audience knows of. Additionally, special guests are a bonus that keeps the people entertained when they do not know who they are prior to the show.

When the show is approaching several aspects need to be prepared for, including different roles during the concert, audio, cameras, and sponsors of the show. Also, to ensure an effortless concert experience, the live streaming service needs to be available on all devices and browsers. The producer makes sure both the crew and the artists understand what is going on pre show and during the show. For example, the host needs to have questions for the introductions and interviews in place and know her lines. The host, or an associate producer if assigned one, should also be ready to read and comment the live feed of comments and song requests.

The main focus is with audio, which is ”*up top number one*” and very important for Whiskey Jam, the participants emphasized again. It needs to be ensured that the online audience hears what the venue audience is hearing or even a little bit better. The sound cannot be too muddy or jargled. As with an indoor show, if the show is held outside it has to be made sure the sound is full and leveled with a live aspect. In addition to the audio, in case of outside shows the production should be the same and operated the same way as an indoor one with the accomplishment of the outside atmosphere and audio.

The producer also ensures the camera crew knows the angles they should be taking during the concert. It is all about the intimacy. Even if the venue only has 50 people out of the usual 100

the cameramen have ways to make it seem the place is full every night depending on the camera angle and the way they shoot it. The cameramen should also include a lot of audience shots because that is what creates a lot of the vibe for the online viewer. Seeing the venue audience, their participation and looks on their faces after hearing a song attracts the online viewers to come for a visit at the venue as well. The camera crew was proposed to have a few stationary cameras, one for interviews and a few around the bar, as well as a movable Go Pro and a couple of upper stationary cameras.

Whiskey Jam has several sponsors that need to be acknowledged during the show. It is important to hang banners from sponsors and make sure the host mentions and thanks them during the concert. An LED wall is dedicated to the logo of Whiskey Jam and the banners take care of sponsorship, the participants ideated.

To conclude the findings of the second task of the co-creation session, the thesis suggests that an engaging live-streamed concert experience can be considered as interplay between several different aspects. The live-streamed concert experience seems to originate from a careful and strategic relationship and co-creation between people and a number of audiovisual aspects that are included in a live concert production. Thus, it is not enough to pay attention to just one or two factors, such as audio or quality of the stream, but the production should concentrate on the multi-level online viewer experience. This conclusion, which also applies to the findings of the first task, is supported by Cluley (2009) who proposes that all actors, activities and physical factors affect the co-production of a live music experience. Zomerdijk and Voss (2010) also suggest that all personnel, both front stage and backstage, should participate in the delivery of the service experience.

The following chapter builds on the findings of the second task of the co-creation session and moves deeper into viewer engagement by discussing how co-creation could be harnessed to create engaging live-streamed concert experiences with the viewers.

5.3 Model of co-creational aspects of an engaging live-streamed concert

After defining the engaging aspects of a live-streamed concert on a holistic level, following the interactive basis of value co-creation and value-in-use, this chapter approaches the concept of an engaging live-streamed concert through the interactive relationship between the service provider and the user. Thus, a model of co-creational (or interactive) aspects of an engaging live-streamed concert is brought forward by concentrating on two-way communication during the concert (see figure 9).

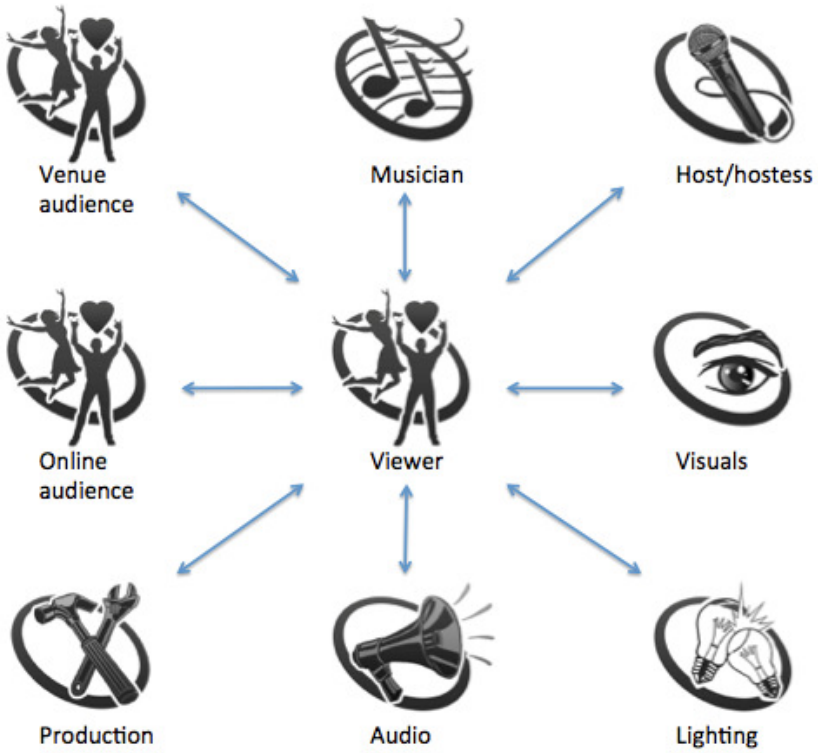

Figure 9: Model of co-creational aspects of an engaging live-streamed concert

Based on the concept of an engaging live-streamed concert, the model suggests that the live stream viewer can co-create the concert experience in interaction with both the people and technology in the production. The model proposes different ways to harness co-creation during a live-streamed concert to further engage the viewer through interaction and participation. The model builds on related studies on viewer engagement, interaction and user participation and supports previous suggestions that interaction and user participation are the key factors in engaging the concert live stream viewer. The aspects are further described in table 1.

Co-creative aspect	Co-creative measures	Channel/tool
Online audience	Sharing experiences, participating in communal adjustment of audiovisual effects (visuals, lighting, audio)	Chat, social media, audiovisual virtual tools (see more below)
Venue audience	Sharing experiences, gaining access to extra material from venue, experiencing with friends, being included in the communal experience	Chat, mobile phone, surrogate app, social media: on personal devices and screen at venue
Musician	Getting acknowledged; asking questions; commenting; requesting songs, personal stories and back stories of songs; gaining access to excusive views (backstage, tour bus) and material	Chat, extra cameras, social media
Host/hostess	Participating in games and interviews (asking questions from artists and venue audience), requesting content (who to interview, what to see, what information to receive, what games and contests during the show), sending pictures and jokes	Chat, extra cameras, social media
Visuals	Communicating with cameramen, choosing camera angles and where to be at venue, releasing confetti and other props, getting access to exclusive views	Chat, stationary cameras, 360-degree cameras, virtual reality, virtual switchboard, props
Lighting	Communicating with the lighting technician; adjusting lighting, focus, tone, brightness and colors; creating a light show	Chat, lights, virtual reality, virtual switchboard
Audio	Communicating with the audio engineer, adjusting volume and combination of sounds, choosing mics	Chat, mics, virtual reality, virtual sound board
Production	Communicating with production, requesting adjustments on the current and upcoming shows, affecting the artist mix and contents of show, giving feedback (technical issues, factors that work, requests)	Chat

Table 1: Co-creative measures of an engaging live-streamed concert

The model suggests that co-creation happens in interaction with the co-creational aspects, i.e. the productional aspects of a live-streamed concert, and takes different forms and uses different channels depending on whether the viewer is co-creating with a person or technology. Different interactive tools offer various possibilities to activate and engage the viewer through participation. Interacting with other audience members, online and at the venue, and the performers, including the host, as well as participating in different activities during the concert creates a sense of community and inclusion for the viewer. The possibility to choose camera angles, the position in the room, affect the lighting and hear the concert as if you were there creates a live feel and an experience as close to the venue experience as possible. The viewer can feel disconnected from the real world for a while, feel as if he/she

was really there, and have a voice just like everyone else at the venue.

Even if some of the aspects of an engaging live-streamed concert are somewhat non-interactive and are based on one-way communication per se, the model suggests they can be turned into more interactive with innovation and co-creation. A good reference to this is Yonezawa and Tokuda's (2012) study on interactive cameras (see p. 34). Accordingly, with appropriate solutions the viewer could also control for example lighting, audio and visuals such as confetti with a virtual switchboard. This does not have to affect the full experience of all the viewers (nor the venue audience) but the adjustments could be handled in a way that they are targeted at one specific viewer. This way, the viewer could be engaged by letting him/her alter audio levels and mics, release virtual confetti or choose the camera angle with a 360 camera. Obviously, considering these kinds of solutions requires further development but the model attempts to show that there are ways to interact with the viewer beyond a simple chat feature or social media.

The thesis also suggests, based on the desk research and ethnography on live streaming conducted during the development project, backed up with the co-creation session findings, that virtual reality and different interactive tools that encourage active participation are going to play a big part in engaging online audiences in live concerts in the future. If the viewer can also be offered something special, something that cannot be experienced through any other channel, engaging experiences can be created. Getting access to excusive places and views during a live-streamed concert and hearing stories and details no one else gets to hear makes the viewer want to be part of the experience.

To conclude the findings of the thesis, creating engaging live-streamed concert experiences with the viewers requires careful, strategic planning from the production team. It is important to include the viewer in the concert production through co-creation, interaction and participation in all phases of the production. By harnessing innovative technology the viewers can be engaged in co-creating memorable live concert experiences.

6 Conclusions

This last chapter of the report summarizes the main points of the development project and concludes the main findings and lessons learned during the process. The validity and reliability of the overall thesis are also evaluated. Finally, based on the findings and gaps in related studies topics for further studies are put forward.

6.1 Summary of the development project and findings

The purpose of this development project was to contribute to creating engaging live-streamed concert experiences by finding out what engages the viewer in a live-streamed concert. The idea was to conceptualize an engaging live-streamed concert and find out how to embrace co-creation to further engage the viewer through interaction during a live-streamed concert.

Due to gaps in academic research on the subject and documentation of industry information on concert live streaming, the project tested a number of different secondary and primary data gathering methods to reach deeper insights into the experiences of potential live stream viewers. After some extensive contextual research on concert live streaming the author held a co-creative session with the fans of Whiskey Jam, the case concert, to find out what would engage them to watch a live-streamed Whiskey Jam. Based on the findings a concept of an engaging live-streamed concert was constructed. The concept was further developed into a model of co-creational aspects of an engaging live-streamed concert to harness co-creation and interaction in live-streamed concert productions.

The main conclusion was that live-streamed concert productions require holistic, strategic planning in order to engage the viewer. An engaging live-streamed concert experience can be considered as interplay between different people and audiovisual aspects involved in a live music production that together co-create memorable experiences.

The findings build on related studies on the subject by supporting the prior findings on co-creative aspects of interaction and participation. However, the project has reached some deeper insights into both engaging and co-creational aspects of live-streamed concerts and provides practical tools for content producers to co-create engaging live-streamed concert experiences with the viewers. Still, work remains to be done to develop new tools and channels to harness the co-creative aspects of engaging live-streamed concerts. Innovative technology such as virtual reality holds promise in offering the viewers with co-creative and engaging live-streamed concert experiences. The project offers valuable findings for a field that has not traditionally harnessed human-centered research or service design. Co-creation,

working interactively with the users of the service, provides with new, innovative competencies for the music business.

6.2 Validity and reliability of the development project

The development project was constructed according to Yin's (2014) advice on case study research to ensure the quality of the findings. Based on the four tests he recommends using to establish research quality, table 2 demonstrates the choices that were made to maintain the validity and reliability in every step of the project.

Test	Tactic	Decisions
Construct validity	Use multiple sources of evidence	Multi-method approach to data sourcing, vast reference base based on primary and secondary data
	Establish chain of evidence	Report structure, key ideas from a number of sources, source relevance, documentation, objectivity
	Have the key informants review draft case study report	Providing contextual information for partner review, live streaming professional (Tamminen, see reference list - interviews) reviewing key industry information, professional illustrator, outside evaluation of readability
	Objectivity	Open mind for opinions and perceptions, neutral approach to informants, avoiding restrictive measures with informants, ensuring natural environment for informants, versatile approach to data gathering
	Definition and approach of the phenomenon	Approach from various perspectives, key people reviewing information, holistic approach through versatile methods
	Identifying operational measures	Decisions based on strategic planning and relevant literature, concrete findings, relevancy in approach, environment of procedures
External validity	Use theory	Relevant theory, contextual literature, findings build on gaps in theory
Reliability	Use case study protocol	A. Careful planning, considering starting points, extensive data gathering B. Relevant methods, planning, appropriate environment, respect toward informants, protecting individual people C. Relevant questions, flexible approach D. Service design process, reflecting the nature of subject throughout the project
	Develop case study database	Careful documentation from beginning until the end, notes, videographing, photographing, physical material, database for findings, central database and safety copies

Table 2: Constructing validity and reliability of the development project

The above table shows the careful planning and implementation behind the project. The nature of the thesis subject was reflected throughout the development process to ensure valid findings. All material was stored to serve as a central database for the extended material that can be utilized in a wider way in the future.

6.3 Suggestions for further development

Since this development project is one of the few human-centered studies on concert live streaming, value co-creation and two-way viewer engagement, there are obviously many topics that call for further development. However, this chapter concentrates on the ones that surfaced during the development process.

First of all, due to the lack of related academic research, the findings are hardly generalizable and require support from further development. This can be done by conducting an equivalent project with potential viewers of a conceptual live-streamed concert or by doing a similar study within a real life context to either support, complement or contradict the findings.

In terms of the informants, the co-creation session participants, there are a couple of approaches that can bring more depth to the findings. Instead of including people with a rather typical music-based profile of a Nashvillean citizen or people who could be called as trendsetters of music because of their backgrounds, co-creating with people who do not have direct links to music could reveal different perceptions. Additionally, people who have never experienced Whiskey Jam and those who live out of town (concert live streaming having a global audience per se) have potential to offer new insights. Furthermore, as Whiskey Jam showcases mainly new talent, working with fans of established artists can offer new viewpoints to viewer engagement. This is, of course, a matter of selecting the approach and target audience for the research.

Furthermore, it surfaced during the project that not many are aware of who the live-streamed concert viewer is, or what is a typical profile of a person who watches concert live streams. This opens up many opportunities for further development to find out who they are, what kind of lives they live, and why they engage with concert live streams to begin with and based on that, adjust the live-streamed content into their lives. As a reference, for example Nielsen (2013b) has researched music fans and created personas based on their music consumption habits. Thus, as service design suggests, deeper insights into the users' lives beyond basic demographics could be highly valuable for content producers. This approach offers various possibilities to utilize innovative service design methods.

Building on the findings of this project, the co-creational aspects of interactivity and participation call for further development. The model of co-creational aspects of an engaging live-streamed concert suggests a number of different factors that could be researched on a deeper level. Furthermore, as discussed in the report, innovative, interactive tools such as

virtual reality seem to be upcoming themes within digital media as well as the future of the music industry and thus, offer promising research subjects.

To conclude, the amount of the above suggestions reflect the notion of this development project that concert live streaming is still a rather untapped area within human-centered research. However, it also offers a virgin and promising field for academic research and business opportunities.

7 References

Articles and books

Argillander, T., Kalli, S., Martikainen, V., Muikku, J. & Tuovinen, T. 2012. Digitaalisen jakelun ekosysteemit. BusinessOulu, Digitaalisen sisällönjakelun ekosysteemiselvitys.

Birmingham, J. & David, M. 2011. Live-streaming: will football fans continue to be more law abiding than music fans? Sport in Society: Cultures, Commerce, Media, Politics, 14:1, 69-80.

Brodie, R. J., Hollebeek, L. D., Jurić, B. & Ilić, A. 2011. Customer engagement: Conceptual domain, fundamental propositions, and implications for research. Journal of Service Research, 14(3), 252-271.

Brodie, R. J., Ilic, A., Juric, B. & Hollebeek, L. 2013. Consumer engagement in a virtual brand community: An exploratory analysis. Journal of Business Research, 66 (2013), 105-114.

Bruno, A. 2010. YOU ARE THERE. Billboard, 6/19/2010, Vol. 122, Issue 24, 12.

Chandler, J. D. & Lusch, R. F. 2015. Service systems: A broadened framework and research agenda on value propositions, engagement, and service experience. Journal of Service Research, Vol. 18(I), 6-22.

Cheung, G. & Huang, J. 2011. Starcraft from the stands: Understanding the game spectator. CHI 2011, May 7-12, Vancouver, BC, Canada.

Choi, H. & Burnes, B. 2013. The Internet and value co-creation: the case of the popular music industry. Prometheus: Critical Studies in Innovation, 31:1, 35-53.

Cluley, R. 2009. Engineering great moments: The production of live music. Consumption Markets & Culture, 12:4, 373-388.

Crouch, C. & Pearce, J. 2012. Doing research in design. The UK: Berg.

Curedale, R. 2013a. Service design – 250 essential methods. Topanga CA, the United States of America: Design Community College Inc.

Curedale, R. 2013b. Mapping methods for design and strategy. Topanga CA, the United States of America: Design Community College Inc.

Dobrian, F., Awan, A., Joseph, D., Ganjam, A., Zhan, J., Sekar, V., Stoica, I. & Zhang, H. 2011. Understanding the impact of video quality on user engagement. SIGCOMM'11, August 15-19, Toronto, Ontario, Canada, 362-373.

Elliott, R. & Jankel-Elliott, N. 2003. Using ethnography in strategic consumer research. Qualitative Market Research: An International Journal, Vol. 6, No. 4, 215-223.

Eriksson, P. & Kovalainen, A. 2008. Qualitative methods in business research. The UK: SAGE Publications Ltd.

Freeman, J. 2010. Web-based collaboration, live musical performance and open-form scores. International Journal of Performance Arts and Digital Media, 6:2, 149-170.

Grönroos, C. & Voima, P. 2013. Critical service logic: making sense of value creation and co-creation. J. of the Acad. Mark. Sci., 41, 133-150.

Gummesson, E. 2012. Total relationship marketing – Marketing management, relationship strategy, CRM, and a new dominant logic for the value-creating network economy. Third edition. New York, the United States: Routledge.

Hague, P., Hague, N. & Morgan, C-A. 2013. Market research in practice: how to get greater insight from your market. 2nd edition. Great Britain and the United States: Kogan Page Limited.

Hamilton, W. A., Garretson, O. & Kerne, A. 2014. Streaming on Twitch: Fostering participatory communities of play within live mixed media. CHI 2014, April 26-May 1, Toronto, Ontario, Canada, 1315-1324.

Heinonen, K., Strandvik, T., Mickelsson, K-J., Edvardsson, B., Sundström, E. & Andersson, P. 2010. A customer-dominant logic of service. Journal of Service Management, Vol. 21, Iss. 4, 531-548.

Holtzblatt, K., Burns Wendell. J. & Wood, S. 2005. Rapid contextual design – A how-to guide to key techniques for user-centered design. San Francisco, the United States of America: Elsevier Inc.

Jacka, L. & Hill, M. 2013. Designing contemporary music courses for the 21st century musician: virtual worlds as a live music performance space. In H. Carter, M. Gosper and J. Hedberg (Eds.), Electric Dreams, proceedings ascilite 2013 Sydney, 412-421.

Juhlin, O., Engström, A. & Reponen, E. 2010. Mobile broadcasting – The whats and hows of live video as a social medium. MobileHCI '10, September 7-10, 2010, 35-43.

Krishnan, S. S. & Sitaraman, R. K. 2012. Video stream quality impacts viewer behavior: Inferring causality using quasi-experimental designs. IMC'12, November 14-16, Boston, Massachusetts, USA.

Kunz, W. H. & Hogreve, J. 2011. Toward a deeper understanding of service marketing: The past, the present, and the future. Intern. J. of Research in Marketing, 28, 231-247.

Latulipe, C., Carroll, E. A. & Lottridge, D. 2011. Love, hate, arousal and engagement: Exploring audience responses to performing arts. CHI 2011, May 7-12, Vancouver, BC, Canada, 1845-1854.

Martin, B. & Hanington, B. 2012. Universal methods of design – 100 ways to research complex problems, develop innovative ideas, and design effective solutions. Beverly MA, the United States: Rockport Publishers.

McEleny, C. 2010. Brands invest in online co-creation. New Media Age, Nov 18, 1-3.

Moore, G. A. 2014. Crossing the chasm – Marketing and selling disruptive products to mainstream customers. The United States: HarperCollins Publishers.

Moritz, S. 2005. Service design – Practical access to an evolving field. London: Köln International School of Design.

Otremba, J. 2011. Viewer engagement. Campaign Asia – Pacific, 76.

Pynta, P., Seixas, S. A. S., Nield, G. E., Hier, J., Millward, E. & Silberstein, R. B. 2014. The power of social television: Can social media build viewer engagement? A new approach to brain imagining of viewer immersion. Journal of Advertising Research, March 2014, 71-80.

Rayburn, D. & Hoch, M. 2005. The business of streaming & digital media. Burlington MA, the United States: Focal Press.

Robehmed, N. 2012. DIY live-streaming: The future of concerts? Forbes.com, 5/30/2012, 14.

Savitz, E. 2013. The content revolution: Emerging forms of online video. Forbes.com, 3/14/2013, 18.

Smith, M. E. & Gevins, A. 2004. Attention and brain activity while watching television: Components of viewer engagement. Media Psychology, 6, 285-305.

Smith, T. P. B., Obrist, M. & Wright, P. 2013. Live-streaming changes the (video) game. EuroITV ’13, June 24-26, 131-138.

Stickdorn, M. & Schneider, J. 2011. This is service design thinking. Basics – Tools – Cases. New Jersey, the United States: John Wiley & Sons, Inc.

Teixeira, J., Patrício, L., Nunes, N. J., Nóbrega, L., Fisk, R. P. & Constantine, L. 2012. Customer experience modeling: from customer experience to service design. Journal of Service Management, Vol. 23, Iss. 3, 362-376.

Tronvoll, B., Brown, S. W., Gremler, D. D. & Edvardsson, B. 2011. Paradigms in service research. Journal of Service Management, Vol. 22, Iss. 5, 560-585.

Tuulaniemi, J. 2011. Palvelumuotoilu. Hämeenlinna, Finland: Talentum Media Oy.

Vargo, S. L. & Lusch, R. F. 2004. The four service marketing myths: Remnants of a goods-based, manufacturing model. Journal of Service Research, Vol. 6, No. 4, 324-335.

Voima, P., Heinonen, K. & Strandvik, T. 2010. Exploring customer value formation: A customer dominant logic perspective. Hanken School of Economics, Working Paper.

Waelbroeck, P. 2013. Digital music: Economic perspectives. Telecom ParisTech, April 10, 2013.

Whitney, D. 2008. Streaming comes alive with music. Television Week, 3/17/2008, Vol 27, Issue 8, 14.

Yin, R. K. 2014. Case study research: design and methods. Fifth edition. The United States of America: SAGE Publications, Inc.

Yonezawa, T. & Tokuda, H. 2012. Enhancing communication and dramatic impact of online live performance with cooperative audience control. UbiComp ’12, Sept 5-8, 2012, Pittsburgh, USA, 103-112.

Zeithaml, V. A., Bitner, M. J. & Gremler, D. D. 2009. Services marketing – Integrating customer focus across the firm. Fifth edition. International edition. New York, NY, the United States: McGraw-Hill.

Zomerdijk, L. G. & Voss, C. A. 2010. Service design for experience-centric services. Journal of Service Research, Vol. 13, No. 1, 67-82.

Electronic sources

ABC7 News 2015. Categories/Technology/Droneview7: Bay Area’s first live drone broadcast. Accessed October 28, 2015. http://abc7news.com/technology/droneview7-bay-areas-first-live-drone-broadcast/838447/

Aura, M. 2013. Palvelut kukoistamaan. Lindorff Profit. Accessed December 3, 2015. http://profit.lindorff.fi/palvelut-kukoistamaan/

Bambuser 2015a. Accessed October 23, 2015. http://bambuser.com

Bambuser 2015b. About us/About the company. Accessed October 23, 2015. http://bambuser.com/about

BiteSizeTV 2015. About. Accessed October 27, 2015. https://bitesizetv.com/aboutbitesize/

Blab 2015. About. Accessed Nov 4, 2015. https://blab.im/about

Breakers.TV 2015a. Accessed October 23 and 28, 2015. http://breakers.tv

Breakers.TV 2015b. HowTo: Help & FAQ. Accessed October 23, 2015. http://breakers.tv/howto

Brentwood Baptist 2015. Media/Watch live. Accessed October 28, 2015. http://brentwood.churchonline.org

Brightcove 2015a. Company. Accessed October 23, 2015. https://www.brightcove.com/en/company/about

Brightcove 2015b. Products/Video marketing suite/Live streaming. Accessed October 23, 2015. https://www.brightcove.com/en/online-video-platform/live-streaming /

Bulldog Digital Media 2015. Accessed October 31, 2015. http://bulldogdm.com

Business Insider UK 2015. Tech/Twitter quietly bought a video startup that hasn't launched yet, Periscope. Accessed October 27, 2015. http://uk.businessinsider.com/twitter-acquires-periscope-for-a-sizable-amount-2015-3?r=US&IR=T#ixzz3lBXPkUy0

CIEE 2015. Alumni/CIEE alumni blog/Ruchira Gupta, anti-trafficking activist, speaks at Justice for Women Lecture Series 2015. Accessed October 27, 2015. http://alumni-news.ciee.org/2015/03/ruchiragupta.html

Concert Window 2015. Accessed October 23, 2015. https://www.concertwindow.com

DaCast 2015. Accessed October 23, 2015. http://www.dacast.com

Facebook 2014. About VyRT/Page info. Accessed Nov 14, 2014. https://www.facebook.com/WeAreVyRT/info

Facebook 2015a. Desktop help/Sharing/Videos/Uploading & Viewing videos/What is a live video? Accessed October 28, 2015. https://www.facebook.com/help/1468879913412530#What-is-a-Live-video?

Facebook 2015b. About FORA.tv/Page info. Accessed October 23, 2015. https://www.facebook.com/FORAtv/info/?tab=page_info

Facebook Newsroom 2015. News/Connect with public figures through Live. Accessed October 27, 2015. http://newsroom.fb.com/news/2015/08/connect-with-public-figures-through-live/

Finalweb 2015a. Accessed October 23, 2015. https://www.finalweb.com

Finalweb 2015b. Live streaming. Accessed October 23, 2015. https://www.finalweb.com/live

Finnkino 2015. Event Cinema. Accessed October 27, 2015. http://www.finnkino.fi/eventcinema/

Flixwagon 2015. Accessed October 23, 2015. http://www.flixwagon.com

Goldman, D. 2010. Music's lost decade: Sales cut in half. CNN Money. Accessed November 3, 2014. http://money.cnn.com/2010/02/02/news/companies/napster_music_industry/

Google Hangouts 2015. Accessed October 23, 2015. https://hangouts.google.com

Hang w/ 2015. FAQ. Accessed November 3, 2015. http://www.hangwith.com/faq

HS 2015. Kulttuuri/Suorat lähetykset yleistyvät vauhdilla sosiaalisessa mediassa – jo nyt voi seurata Anssi Kelaa soittamassa tai Ricky Gervaisia rapsuttamassa kissaansa. Accessed October 28, 2015. http://www.hs.fi/kulttuuri/a1441503405944?jako=bb286086faad8aab28f7f2ab85e0a416&ref=og-url

HuffPost Live 2015. Accessed October 30, 2015. http://live.huffingtonpost.com

Hutchinson, A. 2015. On the future of live-streaming – and why Facebook may be best positioned to win-out. Social Media Today. http://www.socialmediatoday.com/technology-data/future-live-streaming-and-why-facebook-may-be-best-positioned-win-out

IDEO 2015. About IDEO. Accessed October 20, 2015. https://www.ideo.com/about/

IFPI 2015. IFPI Digital Music Report 2015 – Charting the path to sustainable growth. Accessed June 18, 2015. http://www.ifpi.org/downloads/Digital-Music-Report-2015.pdf

iHeartRadio 2015. iHeartRadio LIVE. Accessed October 27, 2015. http://news.iheart.com/features/iheartradio-live-9

iNSTAGIB.tv 2015a. Accessed October 23, 2015. http://instagib.tv

iNSTAGIB.tv 2015b. HowTo: Help & FAQ. Accessed October 23, 2015. http://instagib.tv/howto

IoT Smart Systems 2015. Accessed October 23, 2015. http://www.iotsmartsystems.com

Knopper, S. 2014. Why live concert streaming has yet to take off. Billboard. Accessed November 13, 2014. http://www.billboard.com/biz/articles/news/digital-and-mobile/5915586/why-live-concert-streaming-has-yet-to-take-off

KROQ 2015. Live at KROQ. Accessed October 27, 2015. http://kroq.cbslocal.com/tag/live-at-kroq/

Kulak's Woodshed 2015. Accessed October 27, 2015. http://kulakswoodshed.com

Lefsetz, B. 2012. Concert streaming. The Lefsetz Letter. Accessed November 13, 2014. http://lefsetz.com/wordpress/index.php/archives/2012/12/14/concert-streaming/

Lefsetz, B. 2015. Adele not streaming. The Lefsetz Letter. Accessed November 20, 2015. http://lefsetz.com/wordpress/index.php/archives/2015/11/19/adele-not-streaming/

Livelist 2013. iROCKE blog/iROCKE Rankings FAQ 2013. Accessed November 11, 2015. http://blog.livelist.com/best-of-2013/irocke-rankings-faq-2013/

Live Nation 2015. Live Nation 2014 Annual Report. Accessed November 18, 2015. http://s1.q4cdn.com/788591527/files/doc_financials/2014/LYV-2014-Annual-Report.pdf

Livestream 2015a. Accessed October 23, 2015. https://livestream.com

Livestream 2015b. What is Livestream? Accessed October 23, 2015. https://livestream.com/about

Livestream 2015c. Pricing. Accessed October 23, 2015. https://livestream.com/platform/pricing

Martin, J. E. 2013. The streaming dream – How HuffPost Live is changing the social video model. Cloud Computing. Accessed December 3, 2015. http://cloud-computing.tmcnet.com/news/2013/10/28/7504488.htm

Masnick, M. 2012. The Sky Is Rising: The entertainment industry is large & growing… Not shrinking. Techdirt. Accessed November 13, 2015. https://www.techdirt.com/articles/20120129/17272817580/sky-is-rising-entertainment-industry-is-large-growing-not-shrinking.shtml

McGarry, C. 2013. Bands build brands and fans by streaming shows. TechHive. Accessed November 1, 2015. http://www.techhive.com/article/2029706/bands-build-brands-and-fans-by-streaming-shows.html

Melodic Caring Project 2015. Accessed October 30, 2015. https://melodiccaring.org

Mixify 2015a. Accessed October 30, 2015. http://www.mixify.com

Mixify 2015b. About Mixify. Accessed October 30, 2015. http://www.mixify.com/about

MTV 2015. Viihde/Anssi Kelan Facebook-keikka veti jättiyleisön verkkoon. Accessed October 28, 2015. http://www.mtv.fi/viihde/musiikki/artikkeli/anssi-kelan-facebook-keikka-veti-jattiyleison-verkkoon/5505826

Mulligan, M. 2010. Music industry meltdown: Recasting the mold. Forrester Research blogs. Accessed November 11, 2015. http://blogs.forrester.com/consumer_product_strategy/2010/01/music-industry-meltdown-recasting-the-mold.html

Music City Roots, Live From The Factory 2015. About Music City Roots. Accessed June 17, 2015. http://musiccityroots.com/about/

Musicians Institute, College of contemporary music 2015. Degrees & programs/Entertainment industry programs/Music business. Accessed August 13, 2015. http://mi.edu/degrees-programs/industry-programs/music-business/

NBCUniversal 2015. Newsroom/Press releases/NBC owned stations introduce live TV everywhere streaming. Accessed October 28, 2015. http://www.nbcuniversal.com/press-release/nbc-owned-stations-introduce-live-tv-everywhere-streaming

Niconico Live 2015. What's Nico Live? Accessed October 28, 2015. http://help.nicovideo.jp/live_en/001whats-nico-live/#040133

Nielsen 2013a. Getting appy: How artists use music apps to engage fans. Accessed November 6, 2015. http://www.nielsen.com/us/en/insights/news/2013/getting-appy-how-artists-use-music-apps-to-engage-fans.html

Nielsen 2013b. Turn it up: music fans could spend up to $2.6B more annually. Accessed February 3, 2016. http://www.nielsen.com/us/en/insights/news/2013/turn-it-up--music-fans-could-spend-up-to--2-6b-more-annually.html

Nielsen 2015a. Music is still the soundtrack to our lives. Accessed November 6, 2015. http://www.nielsen.com/us/en/insights/news/2015/music-is-still-the-soundtrack-to-our-lives.html

Nielsen 2015b. 2014 Nielsen music U.S. report. Accessed November 6, 2015. http://www.nielsen.com/content/dam/corporate/us/en/public%20factsheets/Soundscan/nielsen-2014-year-end-music-report-us.pdf

Nielsen 2015c. The Grammy effect: How music's biggest night drives sales and artist engagement. Accessed November 6, 2015. http://www.nielsen.com/us/en/insights/news/2015/the-grammy-effect-how-musics-biggest-night-drives-sales-and-artist-engagement.html

Nielsen 2015d. Case study: The evolution of digital video viewership. Accessed November 6, 2015. http://www.nielsen.com//content/dam/corporate/us/en/reports-downloads/2015-reports/nielsen-google-case-study-sept-2015.pdf

Nielsen 2015e. Consumer neuroscience. Accessed December 31, 2015. http://www.nielsen.com/ca/en/solutions/capabilities/consumer-neuroscience.html

Ooyala 2015. Accessed October 23, 2015. http://www.ooyala.com

Opentopia 2015. About/contact/About Opentopia. Accessed October 28, 2015. http://www.opentopia.com/about.php

Ozer, J. 2011. The moving picture: Going live with event video delivery. EventDV. Accessed November 14, 2014. http://www.eventdv.net/Articles/News/Feature/The-Moving-Picture-Going-Live-With-Event-Video-Delivery-77602.htm

Periscope 2015. Accessed October 27, 2015. https://www.periscope.tv

Pfanner, E. 2013. Music industry sales rise, and digital revenue gets the credit. The New York Times. Accessed November 11, 2015. http://www.nytimes.com/2013/02/27/technology/music-industry-records-first-revenue-increase-since-1999.html?_r=0

Pollstar 2014. Concerts on Yahoo make best of industry struggles. Accessed November 13, 2014. http://www.pollstar.com/news_article.aspx?ID=812871

Preston, J. 2011. Occupy video showcases live streaming. The New York Times. Accessed October 27, 2015. http://www.nytimes.com/2011/12/12/business/media/occupy-movement-shows-potential-of-live-online-video.html?_r=2&ref=technology

PwC 2015a. Global entertainment and media outlook 2015-2019/Segment data insights/Music. Accessed November 17, 2015. http://www.pwc.com/gx/en/industries/entertainment-media/outlook/segment-insights/music.html

PwC 2015b. Global outlook/Music/Global entertainment and media outlook 2015-2019: music. Accessed November 18, 2015. http://www.pwc.com/us/en/industry/entertainment-media/publications/outlook/music.html

Renegade Radio Nashville 2015. Accessed October 28, 2015. http://www.renegaderadionashville.com

Resnikoff, P. 2012. Austin City Limits: The greatest webcast in festival history… Digital Music News. Accessed November 19, 2014. http://www.digitalmusicnews.com/permalink/2012/10/15/acl

Resnikoff, P. 2014. This is how streaming ate recorded music… Digital Music News. Accessed June 18, 2015. http://www.digitalmusicnews.com/permalink/2014/05/20/streaming-ate-recorded-music

Rogalsky, S. 2012. Steve Rogalsky/Silent brainstorming: A guide to using post-its. SlideShare. Accessed October 19, 2015. http://www.slideshare.net/SteveRogalsky/silent-brainstorming-a-guide-to-using-postits

Rogers, K. 2014. IROCKE.COM releases 2013 rankings for global live streaming concert industry. PRWeb. Accessed November 3, 2015. http://www.prweb.com/releases/2014/01/prweb11462262.htm

School of Design Thinking. Mini toolkit design thinking. Accessed September 7, 2015. http://www.schoolofdesignthinking.com.au

Schwartz, E. 2015. The goldilocks paradox and the challenge of live online broadcasting. BitTorrent Blog. http://blog.bittorrent.com/2015/03/02/the-goldilocks-paradox-and-the-challenge-of-live-online-broadcasting/

Siegler, MG. 2009. Mogulus rebrands with a killer domain: Livestream.com. TechCrunch. Accessed November 4, 2015. http://techcrunch.com/2009/05/18/mogulus-gets-a-killer-domain-for-rebranding-livestreamcom/

Skype 2015. Accessed October 28, 2015. http://www.skype.com/en/

Southern Stream Live 2015. Accessed October 28, 2015. http://www.southernstreamlive.com

Stageit 2015. What is Stageit? Accessed October 23, 2015. https://www.stageit.com/static/static_pages/what_is_stageit

Tarricone, J. 2013. From the perspective of the couch phish | New Years run | NYC. GratefulWeb. Accessed November 3, 2015. http://www.gratefulweb.com/articles/perspective-couch-phish-new-years-run-nyc

Tate, R. 2013. We listen to indie bands online, but pay to see Madonna. WIRED. Accessed November 14, 2014. http://www.wired.com/2013/07/the-short-tail-of-concerts/

TechHive 2014. Security cameras/Keep an eye on your home with these two ridiculously simple surveillance apps. Accessed October 28, 2015. http://www.techhive.com/article/2099500/keep-an-eye-on-your-home-with-these-two-ridiculously-simple-surveillance-apps.html

TED 2015. Participate/Organize a local TEDx event/Before you start/Event types/TEDxLive. Accessed October 28, 2015. https://www.ted.com/participate/organize-a-local-tedx-event/before-you-start/event-types/tedxlive

The Guardian 2013. Music/Royal Opera Live: an exclusive behind-the-scenes live stream. Accessed October 30, 2015. http://www.theguardian.com/music/musicblog/2013/jan/03/royal-opera-live-behind-scenes-stream

The Verge 2015. Meerkat introduces live streaming straight from GoPro cameras. Accessed October 28, 2015. http://www.theverge.com/2015/7/24/9030745/meerkat-gopro-live-streaming

The World Bank 2015. Data/Services, etc., value added (% of GDP). Accessed October 21, 2015. http://data.worldbank.org/indicator/NV.SRV.TETC.ZS

Timeline 2015. A history of live streaming. Accessed November 3, 2015. https://www.timeline.com/stories/periscope-meerkat-remote-show-and-tell

Times Square Ball.net 2015. Accessed October 30, 2015. http://timessquareball.net

Twitch 2015. About/About Twitch. Accessed October 23 and 28, 2015. http://www.twitch.tv/p/about

UNICEF stories of innovation 2015. Unmanned systems bring support and communication when disaster strikes. Accessed October 28, 2015. http://www.unicefstories.org/2015/09/25/unmanned-systems-bring-support-and-communication-when-disaster-strikes/

USA TODAY 2015. Tech/Yahoo draws more than 15.2 million on NFL stream. Accessed October 28, 2015. http://www.usatoday.com/story/tech/2015/10/26/yahoo-draws-more-than-152-million-nfl-stream/74616812/

Ustream 2015a. Accessed October 23, 2015. http://www.ustream.tv

Ustream 2015b. Our company/About/About Ustream. Accessed October 23, 2015. https://www.ustream.tv/our-company?itm_source=footer_saas&itm_medium=onsite&itm_content=About&itm_campaign=footer

Uvlog 2015. About Uvlog. Accessed October 23, 2015. http://www.uvlog.com/about/aboutUs

Vapers.tv 2015a. Accessed October 23 and 28, 2015. http://vapers.tv

Vapers.tv 2015b. HowTo: Help & FAQ. Accessed October 23, 2015. http://vapers.tv/howto

Vaughn Live 2015a. Accessed October 23, 2015. http://vaughnlive.tv

Vaughn Live 2015b. HowTo: Help & FAQ. Accessed October 23, 2015. http://vaughnlive.tv/howto

Veetle 2015. About/Company. Accessed October 23, 2015. http://veetle.com/index.php/about

vLink Live 2015. Explore live streaming/Frequently asked questions/What is live video streaming or livecasting? Accessed October 27, 2015. http://www.vlinklive.com/explore-live-streaming/frequently-asked-uestions/what-is-live-video-streaming-or-livecasting/

VOKLE 2015. Accessed October 23, 2015. http://www.vokle.com

VyRT 2015. Accessed October 23, 2015. https://beta.vyrt.com

Yahoo Screen Live 2015a. Live Nation. Accessed October 28, 2015. https://screen.yahoo.com/live/livenation/

Yahoo Screen Live 2015b. Accessed October 28, 2015. https://screen.yahoo.com/live/

YLE 2012. Uutiset/KYSin leikkaukset teräväpiirtotekniikkaan. Accessed Oct 27, 2015. http://yle.fi/uutiset/kysin_leikkaukset_teravapiirtotekniikkaan/6167557

Yoogaia 2015. What is Yoogaia. Accessed October 27, 2015. https://yoogaia.com

YouNow 2015a. Accessed October 23, 2015. https://www.younow.com

YouNow 2015b. FAQ/Frequently asked questions/How does YouNow work?/What are levels, and how do I level up? Accessed October 23, 2015. https://younow.zendesk.com/entries/23198811-What-are-levels-and-how-do-I-level-up-

YouNow 2015c. FAQ/Frequently asked questions/How does YouNow work?/What are coins, and how can I earn them? Accessed October 23, 2015. https://younow.zendesk.com/entries/21105301-What-are-coins-and-how-can-I-earn-them-

YouTube 2014. Cooking with Tomo 3: Vegetarians revenge – Dough prep on VyRT Violet. Accessed October 28, 2015. https://www.youtube.com/watch?v=KRPUpkNP99c&noredirect=1

YouTube 2015. Live events: Do it live! Accessed October 23, 2015. https://www.youtube.com/my_live_events

Interviews

Audio engineer 2014. September 26, 2014. Brooklyn NY, the United States.

Band manager 2014. September 2, 2014. Helsinki, Finland.

CEO and one of the founders of a concert live streaming company 2015. October 27, 2015. Email.

Employee of a concert live streaming company 2015. April 10, 2015. East Nashville TN, the United States.

Executive producer of a live-streamed concert 2014. November 25, 2014. iMessages.

Film festival producer 2015. July 9, 2015. Helsinki, Finland.

Heavy metal journalist and writer 2015. June 11, 2015. Modern Heavy Metal Conference, Helsinki, Finland.

International band manager 2014. September 2, 2014. Helsinki, Finland.

Music business entrepreneur 2015. July 21, 2015. Helsinki, Finland.

Musician A 2015. October 24, 2015. Rauma, Finland.

Musician B 2014. November 14, 2014. Venice CA, the United States.

Musician and music entrepreneur 2014. September 26, 2014. New York NY, the United States.

Tamminen, J. 2015a. July 13, 2015. Helsinki, Finland.

Tamminen, J. 2015b. July 27, 2015. Helsinki, Finland.

Tamminen, J. 2015c. July 26, 2015. Helsinki, Finland.

Tamminen, J. 2016. January 11, 2016. Skype.

The Nashville Loop 2014a. November 13, 2014. Facebook.

The Nashville Loop 2014b. November 4, 2014. Nashville TN, the United States.

Whiskey Jam 2015a. April 6, 2015. Nashville TN, the United States.

Other sources

Askwith, I. D. 2007. Television 2.0: Reconceptualizing TV as an engagement medium. Massachusetts Institute of Technology, master's thesis.

Lee, H. C., Lee, M. J. & Hong, T. 2009. System and method for detecting viewer attention to media delivery devices. Patent application publication, No. US 2009/0070798 A1.

Li, K. W. 2007. Method and system for increasing viewership and viewer interaction with public events and broadcast presentation. Patent application publication, No. US 2007/0169143 A1.

Sahlman, J. 2014. Digital music distribution channels for independent bands. Laurea University of Applied Sciences, master's thesis.

The Nashville Loop 2014c. Business plan.

Toussi, R. 2011. Mobile Vision Mixer – A system for collaborative live mobile video production. KTH Computer Science and Communication, Department of Computer and Systems Sciences, master's thesis.

Whiskey Jam 2015b. Overview of Whiskey Jam.

Whiskey Jam 2015c. List of Whiskey Jam guests 2011-2015.

Whiskey Jam 2015d. April 9, 2015. iMessages

Illustrations

Illustration 1: "*This is how streaming ate recorded music*" (Resnikoff 2014) 11
Illustration 2: 5 principles of service design thinking (Stickdorn and Schneider 2011, 35) .45
Illustration 3: Contextual inquiry.....54
Illustration 4: Auto ethnography on mobile phone.....55
Illustration 5: Blueprint of conceptual live-streamed Whiskey Jam.....56
Illustration 6: Whiskey Jam at Winner's Bar and Grill 57
Illustration 7: Co-creation session at Winner's Bar and Grill in April 2015 58
Illustration 8: Task 2 of co-creation session 61
Illustration 9: The visual concept prototypes of both groups 62
Illustration 10: Analyzing the findings in Excel.....63
Illustration 11: Sketching and drafting the concept visualizations 65

Figures

Figure 1: Global streaming growth 2009-2014 (IFPI 2015) 13
Figure 2: Transforming relationships within music industry 24
Figure 3: Topics covered in the literature review 26
Figure 4: Value creation spheres (Grönroos and Voima 2013, 141) 32
Figure 5: Service design categories (Moritz 2005, 149) 47
Figure 6: The service design process of the thesis (adopted from Moritz 2005, 123) 49
Figure 7: Concept of a memorable live music experience 67
Figure 8: Concept of an engaging live-streamed concert 74
Figure 9: Model of co-creational aspects of an engaging live-streamed concert 88

Tables

Table 1: Co-creative measures of an engaging live-streamed concert.....89
Table 2: Constructing validity and reliability of the development project 92

Appendixes

Appendix 1: Examples of how live streaming can be used (a non-exhaustive list)..... 110
Appendix 2: Benchmarking of current live streaming services..... 111

Appendix 1: Examples of how live streaming can be used (a non-exhaustive list)

DJs share content from performances and connect with peers and fans (Juhlin et al. 2010).	**Music festivals** (e.g. Coachella, Made in America and Austin City Limits (ACL) live stream their performances (Resnikoff 2012).	Wildlife organisations **observe behavior of different species** by for example spectating a bird's nest through a camouflaged camera (Smith et al. 2013).	People from around the world can watch the festivities and the **Times Square Ball drop** in New York on New Year's Eve (Times Square Ball.net 2015).	**Virtual worlds** act as live music performance spaces and tools for higher music education (Jacka and Hill 2013).
Educational and cultural organization CIEE (Council on International Educational Exchange) live stream **lecture series to its alumni** (CIEE 2015).	Many **radio stations** live stream their shows alongside the show on the radio. Some also live stream additional content, e.g. Live at KROQ (KROQ 2015), iHeartRadio LIVE (iHeartRadio 2015) and Renegade Radio Nashville (Renegade Radio Nashville 2015).	Alongside movies, Finnkino **Cinemas** live stream additional content, such as opera, theater, ballet, musicals, concerts, sports and art exhibitions (Finnkino 2015).	**TED Conferences** are live streamed through a TEDxLive licence, which allows event hosts to feature their own live stpeakers and performers along with the live stream (TED 2015).	**Surveillance cameras and apps** stream live video to keep an eye on e.g. homes, pets or babies (TechHive 2014).
Sports live streaming: e.g. the first free worldwide NFL broadcast attracted more than 15.2 million viewers from more than 185 countries (USA TODAY 2015).	Tomo Milicevic of Thirty Seconds to Mars **cooks vegetarian food** live on VyRT (YouTube 2014).	Live Nation has a partnership with Yahoo to live stream **one concert every day** (Yahoo Screen Live 2015a).	By utilizing the **healing power of music**, the Melodic Caring Project live streams personal concerts to hospitalized kids (Melodic Caring Project 2015).	The Guardian has offered its readers the opportunity to watch **rehearsals at the Royal Ballet** and other **behind the scenes material at the Royal Opera** through a live stream (The Guardian 2013).
Many **churches** live stream their services Online. Brentwood Baptist live streams on Sunday mornings (Brentwood Baptist 2015).	Among many examples, **drones** are used for example in live news broadcasts (e.g. ABC7) and they can help capture live footage of disaster areas (ABC7 News 2015; UNICEF stories of innovation 2015).	Live streaming is used for **television and news** programming. For example NBC (NBCUniversal 2015), The Huffington Post (HuffPost Live 2015) and BiteSizeTV (BiteSizeTV 2015) live stream their programs.	Yoogaia is a live online yoga studio that offers **yoga, pilates, core, and barre classes** (Yoogaia 2015).	Southern Stream Live live streams **video "with a Southern Flair"**, incl. but not limited to gator, deer and turkey hunts, concerts, weddings, funerals, sporting events, and conferences (Southern Stream Live 2015).
Doctors observe surgeries in **hospitals** through multi-camera productions for educational purposes and consultation (YLE 2012).	Kulak's Woodshed, a **live music venue**, live streams all of their live shows on Concert Window (Kulak's Woodshed 2015).	Music City Roots, Live From The Factory is a weekly **concert and radio show** in Franklin, TN that is live-streamed on Livestream (Music City Roots, Live From The Factory 2015).	Opentopia shares live video streams from **public webcams** on their website (Opentopia 2015).	Musician Anssi Kela **engages his fans** on Facebook through live concerts and interaction (MTV 2015; HS 2015).

Appendix 2: Benchmarking of current live streaming services

Name of service	Description	Details	Website	References
Bambuser	Live broadcasting for any type of content	Free for personal usage and charities, premium plans for others, founded in 2008	http://bambuser.com	Bambuser 2015a, 2015b
Blab	App for DIY live streaming	Beta, interactive, supports 2-4 streamers at a time, founded in 2015	https://blab.im	Blab 2015
Breakers.TV	Live streaming platform for case and box breakers	Free, interactive, virtual currency, founded in 2013	http://breakers.tv	Breakers.TV 2015a, 2015b
Brightcove	Online video platform for media companies and brands	Interactive, founded in 2004	https://www.brightcove.com/	Brightcove 2015a, 2015b
Concert Window	Live broadcasting for musicians to connect with fans	Monetization options	https://www.concertwindow.com	Concert Window 2015
DaCast	Live streaming platform for any type of content	Monthly plans and event pricing, monetizing options, ad-free, embedding on own website possible	http://www.dacast.com	DaCast 2015
Facebook Live	Real-time broadcasting for public figures with a verified Facebook page or profile to connect with fans	Facebook Mentions app, interactive	https://www.facebook.com/liveonfacebook	Facebook 2015a; Facebook Newsroom 2015
Finalweb	Services for churches: create your own website, live streaming and mobile apps	Pricing options based on usage	https://www.finalweb.com	Finalweb 2015a, 2015b
Flixwagon	Live broadcasting for any type of content from mobile phones	Interactive	http://www.flixwagon.com	Flixwagon 2015
FORA.tv	Live streaming, video production, social media marketing, and other digital services	Founded in 2006	http://fora.tv	Facebook 2015b
Google Hangouts	Audio and video calls, messaging	Free, one-on-one or group calls and chat, interactive	https://hangouts.google.com	Google Hangouts 2015
Hang w/	Mobile phone live streaming platform	Monetization with ads, virtual currency	https://www.hangwith.com	Hang w/ 2015
iNSTAGIB.tv	Live streaming platform for gamers	Free, interactive, virtual currency, founded in 2011	http://instagib.tv	iNSTAGIB.tv 2015a, 2015b
LiveCast	Enterprise live streaming platform	Supports Internet of Things (IoT) services and devices, formerly known as ComVu Pocket Caster	http://www.iotsmartsystems.com	Juhlin et al. 2010; IoT Smart Systems 2015
Livestream	Live video platform for any type of content	Ad-free, unlimited and flat-rate, 4 million events yearly, more than 300,000 content producers, 40 million viewers monthly, founded in 2007, formerly known as Mogulus	https://livestream.com	Livestream 2015a, 2015b, 2015c; Siegler 2009
Meerkat	App that enables live streaming from phones and GoPro cameras		https://meerkatapp.co	The Verge 2015
Mixify	Live streaming platform for electronic dance music (EDM) DJs - "never-ending electronic music festival where DJs spin live for fans around the world"	Embeddable, mobile phone streaming option, tipping option, archiving	http://www.mixify.com	Mixify 2015a, 2015b
Nico Live	Japanese live streaming platform for any type of content	Viewer comments are overlaid directly onto the streaming video	http://live.nicovideo.jp	Niconico Live 2015; Yonezawa and Tokuda 2012
Ooyala	Modular, cloud-based video platform	Monetization options, more than 500 global corporate content providers	http://www.ooyala.com	Ooyala 2015
Periscope	"Lets you explore the world through the eyes of somebody else"	App for mobile phone live-streaming, purchased by Twitter in the early launch phase	https://www.periscope.tv	Periscope 2015; Business Insider UK 2015
Skype	Video calls, voice calls, instant messaging, screen sharing, and file sharing		http://www.skype.com/	Skype 2015
Stageit	Online concert venue	Interactive, monetization options, tickets in virtual currency, no archiving	https://www.stageit.com	Stageit 2015
Twitch	"The world's leading social video platform and community for gamers"	Interactive, more than 100 million viewers and 1.7 million broadcasters monthly, founded in 2011	http://www.twitch.tv	Twitch 2015
Ustream	Video platform for live and on demand video for any type of content	2 million broadcasts monthly, founded in 2007	http://www.ustream.tv	Ustream 2015a, 2015b
Uvlog	Social live streaming platform	Interactive, free, unlimited broadcasts, beta release (new version is in the works)	http://www.uvlog.com	Uvlog 2015
Vapers.tv	Live streaming video platform for vapers	Free, interactive, virtual currency, founded in 2013	http://vapers.tv	Vapers.tv 2015a, 2015b
Vaughn Live	Live streaming video website for any type of content	Interactive, free, virtual currency, founded in 2011, beta	http://vaughnlive.tv	Vaughn Live 2015a, 2015b
Veetle	Live video broadcasting for any type of content		http://veetle.com	Veetle 2015
VOKLE	Live streaming platform for any type of content	Interactive	http://www.vokle.com	VOKLE 2015
VyRT	Live streaming for musicians	"A unique virtual social experience", ticketing, founded in 2011	https://beta.vyrt.com	VyRT 2015; Facebook 2014
Yahoo Screen Live	Live news and events		https://screen.yahoo.com/live	Yahoo Screen Live 2015b
YouNow	Interactive live streaming for any type of content	Free, interactive, virtual currency	https://www.younow.com	YouNow 2015a, 2015b, 2015c
YouTube live	Live streaming for any type of content	Monetization option with ads	https://www.youtube.com/my_live_events	YouTube 2015