Documentation

Le Blockathon de la Musique

Concept // Goals // Analysis // Results

A project of: hack.institute and ContentSphere®

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Digitalisierung und Energie
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Content

Executive Summary

The Franco-German "Le Blockathon de Musique" focused on the development of approaches for a sustainably improved income situation in the digital sector for people working in the creative industries, especially musicians and composers. The focus of the programming challenges was on the generation, validation and use of metadata, the revision of existing workflows and the development of new business models. The implementation of the challenges with blockchain approaches and methods of artificial intelligence was stimulated.

The participating teams consisted of people unknown to each other, with different expertise in the areas of music, programming, consulting, marketing, design and blockchain. The mixed composition of the teams led to a very high learning effect; moreover, positive results were achieved in particular, where different perspectives complemented each other and led to a high level of communicative exchange.

Direct innovations were not achieved during the Blockathon. However, they were initiated. Here, too, it could be observed that communication rich in perspectives is the best breeding ground. A preceding event for the elaboration of the ideas and with space for targeted research would have made it possible to achieve innovative, prototypical developments already within the Blockathon.

The potential of the results produced by the six teams has exceeded expectations by continuing four projects; three teams will submit their projects for funding.

Most of the objectives have been achieved or even surpassed. Negative aspects of the concept and organisation can be found above all in the underestimated challenge of involving French participants and in the far from achieved gender balance. Further critical points are to be classified primarily under *Learnings* regarding efficiency, personnel planning, and role distribution.

In order to generate long-term sustainability based on promising team results, which benefits the creative industry as a whole and in particular composers and musicians, follow-

up projects are necessary. Within the framework of their implementation, learned knowledge can also be used, and mistakes avoided.

1 Introductory Remarks

The c/o pop Convention "Le Blockathon de la Musique" took place in Cologne-Ehrenfeld from 29 April to 1 May to kick off the event. It was a Franco-German event, set between hackathon, programming sprint, brainstorming and workshop.

The event focused on the search for innovative approaches to support musicians and composers. A major problem is the lack of quality and metadata. Without correct metadata, creative people will not get any revenue for their music. For decades, this *metadata chaos has* affected not only music but also games, film, television, advertising and print.

Musicians and people working in the creative industries were invited to participate as well as coders, marketing specialists and consultants. Possible tasks were proposed within a catalogue of twelve programming challenges. The participants were free to choose between programming, workflow design, blockchain architectures and algorithms or concepts from artificial intelligence and big data.

The digital transition within the music ecosystem is an international challenge due to the interlocking workflows and economic and cultural contexts. Therefore, the Franco-German Blockathon was intended to promote cooperation between technical and musical creatives from both countries and to create space for European innovations.

The Blockathon was organised by hack.institute and ContentSphere® and sponsored by the Ministry of Economics, Innovation, Digitisation and Energy of North Rhine-Westphalia. Co-initiator is the French Consulate General in Duesseldorf.

At this point, organisers would like to thank the team of CREATIVE.NRW, and especially Claudia Jericho, who ignited the launch of the project "Le Blockathon de la Musique".

2 Goals

The overall aim of the event was to find out how artists and all those involved in the creative process can be supported in making a living digitally. Given a large number of self-employed people, and those employed in small and medium-sized enterprises within the creative industries, this question plays a leading role in the course of the digital transition of the creative industries.

This question also concerns coders, who have long been part of the Content Value Circle. Nevertheless, both creative worlds, musical and technological, are not sufficiently intertwined. Communication between parties on both sides is hampered by a lack of togetherness and a language that is not shared by both. The result is misunderstandings and, as a result, mistrust, which lead to emotional and often argumentatively empty debates. However, understanding and cooperation are essential for identifying and solving the challenges posed by the changes in the creative industries. The high relevance of the goal of communicatively and integratively bringing music and technology closer together became evident in the course of the concept development. The relevance of the objective was not least responsible for a late adaptation of the concept (see Chapter 3).

Both the cultural promotion and the promotion of innovative technologies such as Blockchain, Artificial Intelligence and Big Data and the underlying business models were integral parts of the project.

In addition to the professional rapprochement of music and technology, the focus was on the coordinated international development of solutions. One approach within the Blockathon was the cooperation between France and North Rhine-Westphalia. It was the first step, given the Europe-wide harmonised framework. The Consul General of France in North Rhine-Westphalia, Dr Olivia Berkeley-Christmann, together with Prof. Dr Andreas Pinkwart, Minister for Economics, Innovation, Digitisation and Energy of the State of North Rhine-Westphalia, laid the foundation stone.

3 Concept

The concept relies on an open and tolerant attitude that allows the participation of people of all sexes, religious beliefs and national origins.

3.1 French-German Cooperation

Relevant for the French-German concept was the basic idea of mapping cooperation at all levels. In addition to participants from both countries, participants from both countries should also be identified and recruited for the roles of partners, mentors and jurors.

3.2 Promoting communication between music and technology

First, only developers were invited to participate. The interest, probably due in part to the lack of knowledge of the music industry, turned out to be too low.

It was clear that the solution-oriented approach of the event had to give way to a communicatively oriented concept. When the music ecosystem is searching for technological solutions, stakeholders on both sides must share their experiences. It was necessary to go deeper and unite the perspectives of different groups in finding solutions.

One possible way seemed to be to conduct the event with mixed teams, in which programmers, musicians and consultants, together with other participants in the music industry, could view challenges holistically and identify solutions.

This broad technical approach to promoting a shared base of communication has been pursued and implemented.

3.3 Sustainability

The sustainability of the project requires detailed documentation, which refers both to the results achieved and to the planning and implementation process.

The challenge lies in designing a project that is planned as a one-off project in such a way that it has a lasting effect even without continuation. In addition to freely available documentation, the aim should be to promote and support the networking of all participants within the event organisation. Another option is to consciously transfer experience, concept

and results to other projects and integrate them. This transfer allows working towards synergies in a broader environment.

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3.4 Content of the Blockathon

The task of a hackathon – here, the development of solutions with the help of technology in the music industry – is directly reflected in the particular programming tasks, the so-called challenges.

The selection of the challenges posed by the competition can be roughly divided into five fields: the generation, validation and use of metadata, concept and workflow design and finally the design of business models.

The challenges were not only concerned with the information of a song or work (composer, lyricist, title, publisher, label, collecting society, ISWC, ISRC and more), which is usually referred to as metadata. Further informative data on media, artists or legal persons could also be used or generated.

The competition was also open and flexible to all proposals submitted. As part of the Blockathon, it was possible to select one of the given challenges or to design it differently. Crossover applications or entirely new proposals were also allowed.

One limitation was that the Blockathon explicitly did not address the use of crypto-currencies in music. All solutions had to be created independently of any currency used.

The challenges in the wording of the competition:

3.4.1 Challenge 1 – Correcting Metadata

Find an *automated* way to correct existing metadata, e.g. by comparing it with other metadata or sources. Examples for a *manual* method are Wikis or a platform like Discogs[1]. Users compare registered data with those from their sources – in the case of Discogs, with the information from their collected CDs, vinyl records or cassettes.

Result: Program / Algorithm / Tool / App

3.4.2 Challenge 2 – Design of a multidimensional metadata model

What can a multi-layered metadata model look like that specifies how reliable all data is? It is necessary to determine the reliability of all verifying third parties to assess the credibility of data. A reliability factor for data could be calculated from this and from possibly influencing factors (e.g. the setting of a studio recording vs a jam session).

Result: Concept, implemented as programmed (clickable) or graphic dummies (fake screenshots if necessary)

3.4.3 Challenge 3 – Generation of descriptive texts

Create a tool to create lyrics that describe songs based on their metadata and the audio file. The text should be usable for press purposes (EPKs), social media and similar purposes.

Result: Program / Algorithm / Tool / App

[1] https://www.discogs.com

3.4.4 Challenge 4 – Recognition of used sounds and moods

Create a tool to automatically recognise and describe the sounds and moods used in the song. The tool can be used, for example, for syncing or to program external devices (synthesizers, FX, plug-ins) based on the results.

Result: Program / Algorithm / Tool / App

3.4.5 Challenge 5 – Identifying suitable cover images

Compare songs and their data with pictures and graphics and find suitable material for the design of the cover illustration. It doesn't have to be actual pictures; it can also be the style.

Result: Program / Algorithm / Tool / App

3.4.6 Challenge 6 – Branding through songs

Compare songs and their data with brands: Which songs fit a brand? The image of the brand, the corporate design or the product, for example, can serve as a basis.

Result: Program / Algorithm / Tool / App

3.4.7 Challenge 7 – Matching music and video

Develop an algorithm that identifies music that matches given movies or video clips (or vice versa). In addition to standard metadata of music and film, an analysis of the audio or video films is helpful (e.g. editing speed, editing type, changes in volume, image colour, brightness and contrast).

Result: Program / Algorithm / Tool / App

3.4.8 Challenge 8 – Automatic music-to-film editing

Develop a tool for automatic editing of music for a video. The identification of a suitable song is part of Challenge (7).

Result: Program / Algorithm / Tool / App

3.4.9 Challenge 9 – Concept of an improved metadata workflow

Design the concept of a cross-company workflow that eliminates duplicate metadata and minimises errors. It makes sense to limit yourself to a part of the life cycle of a song, e.g. composition to release. The restriction simplifies the detailed design.

Result: Concept, implemented as programmed (clickable) or graphic dummies (fake screenshots if necessary)

3.4.10 Challenge 10 – Concept for supported ingest and motivation during metadata entry

The metadata chain begins with composers, musicians and studio personnel. How can metadata entry be simplified and automated for them and others involved in the production process? How can they be motivated to enter data? Please consider GDPR and the avoidance of a monitoring effect.

Result: Concept, implemented as programmed (clickable) or graphic dummies (fake screenshots if necessary)

3.4.11 Challenge 11 – Business models for musicians and other creative people

How can a musician monetise data sharing and develop it into another source of revenue? Creative Passport[2] is just one approach – what's beyond? Metadata can change access to music through blockchain-based apps or APIs and UX design, and new revenue options open up.

Result: Business model, based on questionnaire

[2] https://www.creativepassport.net

3.4.12 Challenge 12 – Improving user experience with streaming

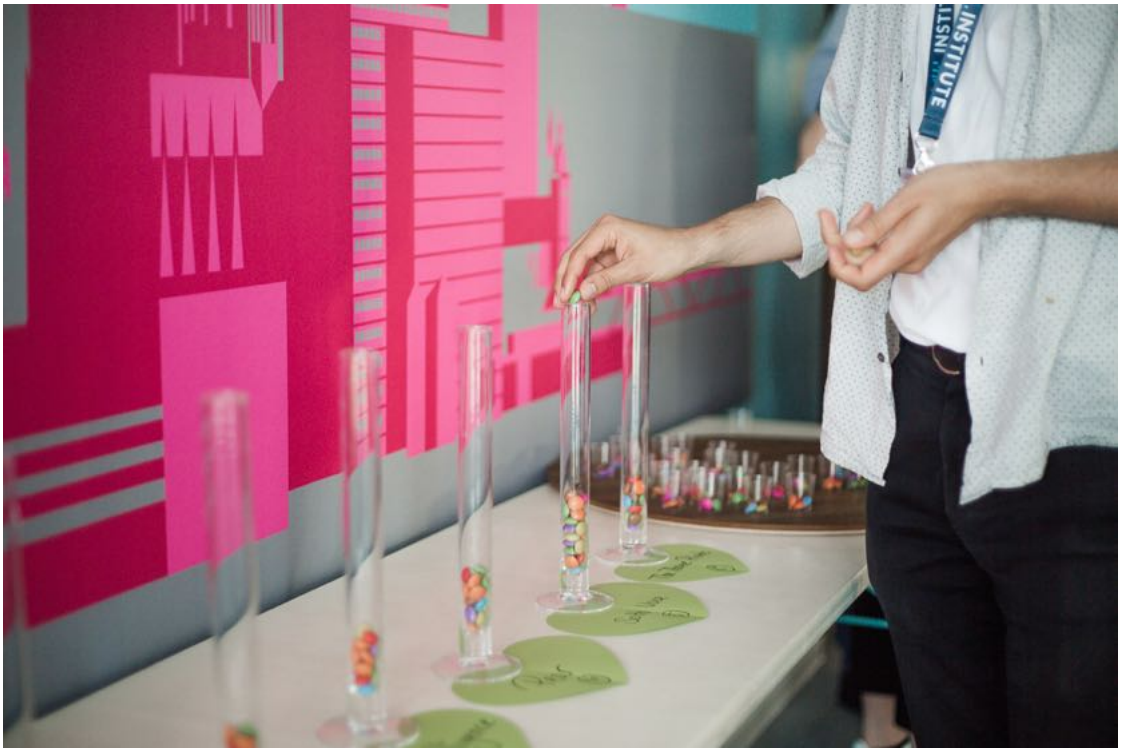
How can you improve your streaming experience? With better use of metadata? Alternatively, through changed search and recommendation algorithms? What opportunities do you see?

Result: Program / algorithm / tool / app; or concept, implemented as programmed (clickable) or graphical dummies (possibly fake screenshots)

3.5 Guide during the Blockathon

The teams required a guide during the event. Mentors were chosen to be in charge of that task. The selection of the mentors was based on their areas of expertise, which had to cover the topics and expected questions from the participants. The mentors were required to have years of experience in their respective fields. The number of mentors should be at least eight for an expected number of 50 participants and an average team size of five.

3.6 Evaluation of team projects



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A jury set up to evaluate the results shall not include too many members in order not to unnecessarily lengthen the duration of the evaluation process in practice. At the same time, nationality (French, German), professional competence (music industry, technology) and awareness had to be taken into account.

3.7 Gender Balance

For all groups (participants, mentors, jury), the concept provided for at least equal participation of the female and male sexes.

3.8 Supporting partners

Supporting companies and associations should be identified and contacted based on objectives and issues.

The involvement of the supporters could take place in different ways:

- a media partnership;
- the proposal of a challenge;
- the presentation of a short lecture (*Lightning Talk*);
- the participation of a mentor or juror on behalf of the company;
- by sending employees as team members.

No financial consideration was paid.

3.9 Supporting programme

The supporting program included Lightning Talks to introduce the topic as well as a get-together on the first evening with live music.

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4 Organisation

4.1 Task sharing

hack.institute[3] and ContentSphere®[4] were in charge of the responsibilities and project management:

- Project lead of event production:
  Sophia Grazdanow and Jan Kus (hack.institute);
- Project lead of content, concept & partner management:
  Wolfgang Senges (ContentSphere®);
- Project management and administration:
  Nadja Eminoğlu-Leuci (hack.institute).

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[3] https://hack.institute
[4] https://www.contentsphere.de

Thanks also to the rest of the hack.institute team; especially Fabian Beiner (mentor to the participants and moderator) and Andreas Rosing (organisation).

4.2 Acquisition of supporting companies

Potentially supporting companies and associations were identified and contacted as planned based on of the objectives and topics of the event. While the majority took on tasks as media partners, the focus was on gaining at least one partner who could provide the data as working material. The organisers would like to thank the Membran Group, who made this possible in the short term.

Other supporters participated with short lectures in the supporting programme (Jamahook, Board of Music and musikunterricht.de, Hamburg Kreativ Gesellschaft), provided participants as part of the teams (Fraunhofer IDMT, GEMA, Sacem) or were represented by mentors and jurors (Jaak, Resonate, MOD Devices, Sacem, CREATIVE.NRW, Alissia Music).

With Board of Music and tamanguu, two partners honoured the achievements of the winners with prizes.

4.3 Publicity

Advertising for the Blockathon began after the completion of the website in January 2019. After the personal networks, social media, Meetups and scene meetings were then addressed, and online advertising started. A further spread took place via

- the ticket portal Eventbrite;
- the platform for hackathon events, hackathon.com[5].

The partners contributed significantly to the promotion of the event.

In order to reach out to French communities, the organisers specifically approached French musicians or those living in France. In addition, persons, institutions and projects closely linked to France with well-established cross-border connections were involved: Technoport SA (Luxembourg), PopRat Saarland (Germany), Allez Hop Summit (German-French), Le

[5] https://www.hackathon.com/event/france-meets-germany--le-blockathon-de-la-musique-5c97c95c5a74e2001ba3b366

Bureau Export (France), Musicovery (France), LuxInnovation (Luxembourg), arte (Germany and France) and the “K8 Institut für strategische Ästhetik gGmbH” (Saarland).

4.4 Selection of participants

First, the selection was intended to be based on the results of a form as part of an application process. The form included questions about the activity background and state of knowledge regarding the core topics music industry, blockchain and metadata. The feedback was slightly hesitant so that the form was omitted.

Instead, free tickets were advertised; initially without any restrictions on the number of tickets ordered. In order to be able to roughly determine the scope and background of the participants, the campaign introduced a selection of tickets for

- Musicians and composers;
- Producers and engineers;
- Coders;
- Blockchain Experts;
- Marketing experts;
- Consultants;
- Designers.

After receipt of 160 obviously fake emails, the order mode was restricted to only one ticket per order process.

A selection of participants could not take place as planned due to a lack of information. Therefore, in the run-up to the event, participants were invited to a slack workspace. The aim was to allow participants, mentors, judges and organisers to get to know each other. Also, it was the first opportunity for the participants to organise themselves as a team.

4.5 Venue

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With the Co-Working-Space of ThoughtWorks Cologne a place was found, which brought along the necessary characteristics for a Hackathon:

- a big room for pitches, networking, the supporting program and breaks;
- more separate rooms;
- transparency;
- a good WLAN connection;
- access to a kitchen;
- relatively good accessibility from the centre;
- close to the venue of the c/o pop Festival.

4.6 Preparatory support for participants

4.6.1 Hardware and data sample

As required hardware, all participant-owned devices could be brought; the Membran Group provided a data sample to work with.

4.6.2 Research

Participants were advised to prepare by research before the Blockathon. If possible, further APIs or data sources should be identified. If required as test material, audio or video files could be brought along.

4.6.3 Data

Besides, a list of APIs, data and documentation had been made available that might have served as help in handling the challenges.

For inspiration and insight into existing standards, suggestions were made:

- DDEX Standard[6]
- MusicBiz Whitepapers[7]

Also, the CISAC (*International Confederation of Societies of Authors and Composers*) library was suggested for searching suitable documents:

- CISAC Library[8]

Due to the essential importance of IDs in database design, reference was made to brief descriptions of the International Standard Recording Code (ISRC) and the International Standard Work Code (ISWC):

- Songtrust[9]
- Creative & Productive[10]

[6] http://ddex.net/implementing-ddex-standards/
[7] https://musicbiz.org/insights/whitepapers/
[8] https://members.cisac.org/CisacPortal/searchSimple.do
[9] https://blog.songtrust.com/songwriting-tips/isrc-iswc-whats-the-difference
[10] https://www.creativeandproductive.com/iswc-vs-isrc/

The custom APIs and developer pages of the streaming services Spotify and SoundCloud were also referred to:

- Spotify[11]
- Spotify Music Metadata Style Guide v2.1[12]
- SoundCloud (API & SDK)[13]

Alternatively, it was possible to use freely available data sources and APIs from the web. First points of contact:

- AudioKit Pro (Sounds, Loops, FX)[14]
- BBC (Sounds, FX)[15]
- FreeMusicArchive (Audio)[16]
- FreeMusicArchive (API)[17]
- last.fm (API)[18]
- MusicBrainz (Metadata, API)[19]
- MusicMachinery (list of different APIs)[20]
- Programmable Web (list of different APIs)[21]
- RapidAPI (list of different APIs)[22]

4.6.4 Guide for participants

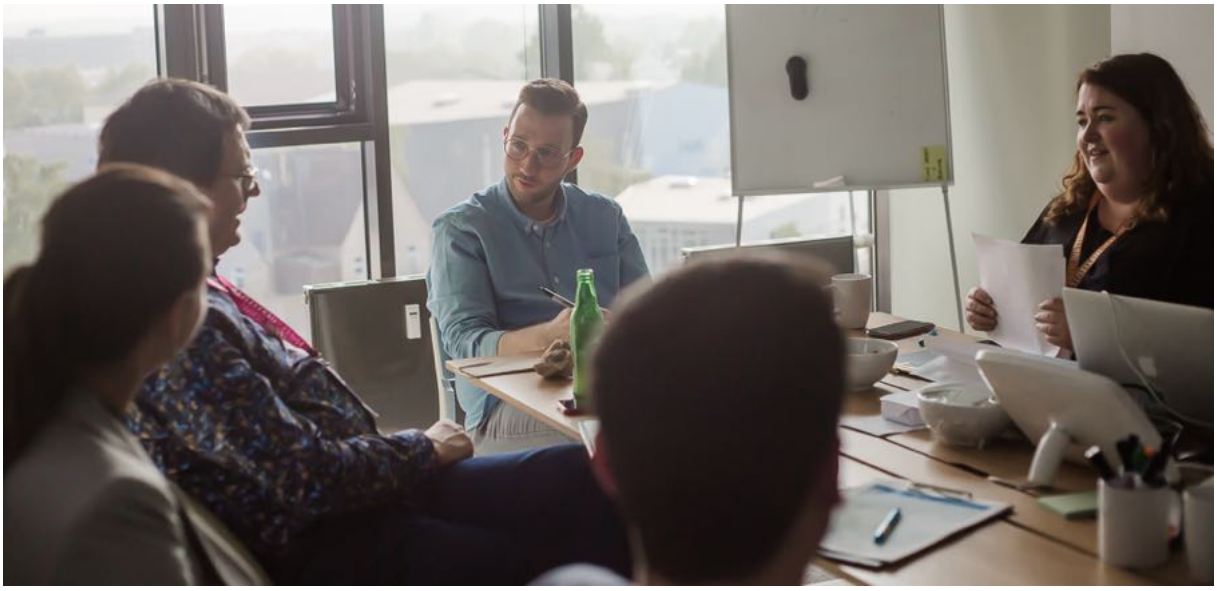
Also, the participants received a comprehensive document with further information shortly before the event.[23]

[11] https://developer.spotify.com/
[12] https://www.contentsphere.de/blockathon2019/SpotifyMusicMetadataStyleGuideV2.1.pdf
[13] https://developers.soundcloud.com/
[14] https://audiokitpro.com/free-toy-casio-loops/
[15] http://bbcsfx.acropolis.org.uk/; find also a related article on Lifehacker.com: https://lifehacker.com/download-over-16-000-free-sound-effects-from-this-bbc-a-1825472102
[16] http://freemusicarchive.org/
[17] https://freemusicarchive.org/api
[18] https://www.last.fm/api
[19] https://musicbrainz.org/
[20] https://musicmachinery.com/music-apis/
[21] https://www.programmableweb.com/category/music/api
[22] https://blog.rapidapi.com/top-four-free-music-data-apis/
[23] https://www.contentsphere.de/blockathon2019/guide2blockathon.pdf

4.7 Team building

The teambuilding already started in the Slack workspace and continued at an introductory event on the eve of the Blockathon. The actual pitching of ideas and the search for suitable team members was not completed until the morning of the first Blockathon day.

4.8 Panel of judges



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In order to ensure neutrality in the assessment of the team formed by GEMA and SACEM, a member of the organisers joined the jury at short notice. Wolfgang Senges replaced the SACEM representative Xavier Costaz for the evaluation of the team of collecting societies and also extended the jury for the final evaluation.

The organisers would like to thank the jury:

4.8.1 Rebecca Brook (Commercial Lead, JAAK)

Rebecca “Becky” Brook oversees commercial development at JAAK, a London tech company building blockchain based solutions to communicate, manage and monetise IP industries. With over twelve years of content industry experience, Becky is responsible for overseeing

JAAK's relationships with the global music, TV and film industries. Prior to JAAK, she was Vice President of Commercial Development at digital music services firm Omnifone, where she headed up the Global Licensing team. Before that, she held a variety of strategy and business development roles at companies including EMI Music, SeeSaw, Sony Pictures and Warner Music Group.

Web: https://www.linkedin.com/in/beckybrook/

4.8.2 Xavier Costaz (Director Innovations and Partnerships, SACEM)

Xavier Costaz joined SACEM, the Society of Authors, Composers and Publishers in 2014 as Project Manager for Innovation. By building partnerships with schools, start-ups and technology actors on various topics such as machine learning, crowdsourcing, blockchain, and fingerprinting, he was involved in the key innovation themes. He previously worked as a consultant and manager at ATKearney and PMP after completing his engineering studies at the École Polytechnique.

Web: https://www.linkedin.com/in/xavier-costaz-ba821a18/

4.8.3 Claudia Jericho (Head of the office, CREATIVE.NRW)

Claudia Jericho has been working between, for and with culture and (creative) business for around twenty years. During her studies in Cologne in the 1990s, she already developed music and art projects for organisations, cities and artists. She helped build up a listed company, then supervised the public relations work for a three-year initiative project of the German Federal Cultural Foundation at the Kölnischer Kunstverein. Until 2012, she established and headed the department of c/o pop Festival and the C'n'B – Creativity & Business Convention respectively and accompanied the Advance – International Web & Start-Up Conference as well as various projects at ecce – european centre for creative economy.

Web: https://www.linkedin.com/in/claudia-jericho-42826311/

4.9 Mentors

4.9.1 Fabian Beiner

Position: COO, hack.institute

Vita: Fabian Beiner is COO at hack.institute, consultant and programmer. Already during his employment as CTO in an agency, he organised numerous private community events such as BarCamps, Hackathons and more. Since 2016 he has been part of the hack.institute team where he is responsible for the operational business. Fabian was not only part of many hackathons, but also moderated and accompanied them for many years.

Web: https://www.linkedin.com/in/fabianbeiner/

4.9.2 Bosco Bellinghausen

Position: CEO and Founder, Alissia Music

Vita: Bosco Bellinghausen is an open-minded digital native. His vision is to use blockchain and distributed ledger technologies beyond payments and simple, smart contracts. He believes that the combination of blockchain and AI will create new opportunities for the entire musical value chain.

Web: https://www.linkedin.com/in/bosco-bellinghausen

4.9.3 Stephan Benn

Position: Head of Administration GLORIA Theater / Assessor Kanzlei Fleischer

Vita: Stephan Benn, born in Bergisch Gladbach, grew up in Hamburg, studied law in Osnabrück and Paris, lives in Cologne. From 2000 to 2018 he worked as a lawyer in Cologne with a focus on the creative sector. Comprehensive involvement in the independent music industry as board member, legal adviser and speaker of the working group GEMA of the association of independent music companies VUT e. V. between 1999 and 2012, delegate of the affiliated and extraordinary publishers to GEMA between 2006 and 2014, legal adviser of the professional

association mediamusic e.V. and until 2018 of the Cologne association of clubs and organisers KLUBKOMM. Various teaching activities, e.g. at the University of Paderborn, at the Institute for Music and Media of the Robert Schumann Hochschule Düsseldorf and the Leopold Mozart Centre of the University of Augsburg. Stephan Benn is currently working as head of administration for the operator of GLORIA in Cologne and as an assessor in the Fleischer law firm.

4.9.4 Marie Gauthier

Position: Freelance Full Stack Web Developer / Co-CTO, Resonate / Software Developer, MOD Devices

Vita: Marie Gauthier is a French software developer, music lover and creator. She has been developing web and mobile applications for more than five years, with a focus on UI/UX. She regards code as poetry and its execution as a melody. Today she is involved in various music-related projects such as the cooperative music streaming service Resonate. The point is to re-connect the music industry, which today is dominated by large corporations, which makes it difficult for independent artists and labels to find their way around. The goal is to solve these problems through a new streaming model such as #stream2own and the use of blockchain technology to build a comprehensive infrastructure for managing metadata, licenses and payments. Last but not least she performs as a DJ and makes music fun by playing with DIY modular synths, music software and programming languages.

Web: https://www.linkedin.com/in/mariegauthier/

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4.9.5 Matthias Hornschuh

Position: Composer / Speaker / GEMA Member of the Supervisory Board

Vita: Matthias Hornschuh works as a freelance composer in Cologne. He moderates, curates, teaches, writes and discusses music, film, culture, digital and more. He is chairman of the mediamusic professional association, a member of various associations and committees and was elected to the GEMA supervisory board by the composers' professional group in May 2018.

Web: http://hornschuh-musik.de

4.9.6 Anselm Kreuzer

Position: Composer and label owner

Vita: Anselm Kreuzer began playing the cello at the age of 9 and soon discovered composing as his great passion. Even then, he combined the classical approach with modern sounds. After graduating from high school, he studied musicology, media studies and phonetics at the University of Cologne and received his doctorate with a dissertation on film music. Today he is a proven specialist for TV

title topics, channel IDs, scores for series and TV dramas as well as music for new media and advertising. Whether symphony orchestra or electronic approach – Anselm has a passionate penchant for emotional, narrative and often catchy thematic music that blends with moving images and stories. He explores the boundaries between composition and sound design and passes on his know-how as a guest lecturer at several universities and media schools.

Furthermore, as a composer, he has created an oeuvre of more than 1000 internationally successful production music titles and is co-owner and managing director of the production music library MUSIC SCULPTOR[24], collaborates with more than 80 other composers and has extensive experience with digital distribution, marketing and metadata of music recordings. He is also a working group leader in the media industry association Eyes & Ears of Europe and a board member of the Composers Club. For further information, please visit his website.

Web: https://www.anselmkreuzer.de/

4.9.7 Wolfgang Senges

Position: Freelance Strategist & Project Manager, ContentSphere®

Vita: Wolfgang Senges has been a freelance music and technology consultant since 2008. He is the co-founder of the Blockchain and Metadata Working Group and a critical Blockchain analyst. His roots lie in machine learning, and he has over ten years of experience in projects related to metadata generation and processing. In the course of his work, he worked with artists such as Imogen Heap, Marillion, Martin Atkins, Amanda Palmer and Ingrid Chavez.

Web: https://www.linkedin.com/in/senges/

[24] https://www.musicsculptor.com

4.9.8 Martin Wisniowski

Position: Full Stack Developer, Railslove / Musician / Media Artist

Vita: Martin Wisniowski works as a web developer at Railslove, a Cologne-based agency specialising in web development. From 1999 to 2010, he has been very active in the netlabel and Creative Commons music scene: making music, releasing music, owner of several netlabels, writing about music and internet culture (reviews, news and interviews). Besides, Martin found time to organise conferences about music, the internet and Creative Commons related stuff. He is deeply into coding and arts, and he loves the internet and computer-related arts in general.

Web: https://nodepond.netlify.com

5 Blockathon[25]

5.1 Teams and projects

The concepts, projects and lines of argumentation represent extracts from the presentations of the pitch and the discussions with the teams. A correction, evaluation or a reflected review by the organisers will not take place in the following.

Photo by Nadja Eminoğlu-Leuci (nadjaleuci [at] gmail.com)
under a CC-BY-NC-ND 4.0 licence (https://creativecommons.org/licenses/by-nc-nd/4.0/deed.en)

We kindly ask you to respect the rights of the participants in the projects and concepts presented below. Participants are open to cooperation proposals.

The teams are anonymous in the following. However, the organisers will be happy to arrange contact with the teams on request.

Contact: wolfgang.senges [at] contentsphere.de.

[25] All images in chapters 5.1.1 to 5.1.6 are taken from the teams' pitch decks.

5.1.1 Project “Street Musicians”[26]

- Winner of the 1st prize ("Golden Award") and the community voting.
- Team size: three persons.
- The concept for "Street Musicians" is registered with the French Patent and Trademark Office, INPI.

Subject

With the "Street Musicians" project, Team Challenge 11 takes up Challenge 11 and presents a business model that addresses a specific target group of musicians.

Summary

“Street Musicians” aims at improving the life of street artists by digitising support for them. A solution based on digital technology will enable people to discover who the street artists are, to donate to them digitally and to promote the street artists at world scale.

[26] With respect to the copyright owners and the majority of the team’s wish, we unfortunately cannot disclose more details.

5.1.2 Project “GitMusic”

- Winner of the 2nd prize ("Silver Award").
- Team size: seven persons.

Figure 1: GitMusic – Logo

One of the biggest problems the music industry currently faces is the lack of complete and reliable documentation of copyrights. Currently, information about authors that is part of the metadata can get lost in the course of communication, collaboration or distribution. Incorrect or non-existent metadata leads to unclarified copyrights, which entails risks for the exploitation and licensing of rights.

The team intends to establish a new, standardised protocol "GitMusic" for the reliable tracking of authors, an automatised rights and royalties management on blockchain basis, as well as for the distributed and unchangeable data protection. The solution opens a fundamentally new way of rights management by introducing autonomous (music) files that embed and manage copyright information on their own. The starting point for this solution is a standardised open source protocol for trusted collaboration through version control. The protocol makes it possible to record every change made to a musical work in an unchangeable register of all changes. By registering each new version, artists can be identified as the originators of the change made. At the beginning of each music project, a Genesis (an origin) is configured, which acts as a smart contract for all conditions of later collaborations, licensing and distribution of the project. With its publication on the Internet, the project acts as an independent and unchangeable entity that can manage rights on its own and enables trusted collaboration.

Problem

The core of the problem is the possibility (and the common way) of using existing works or parts of them to build derivative works upon, by adding new works or changing existing ones. With every change, the list of authors increases:

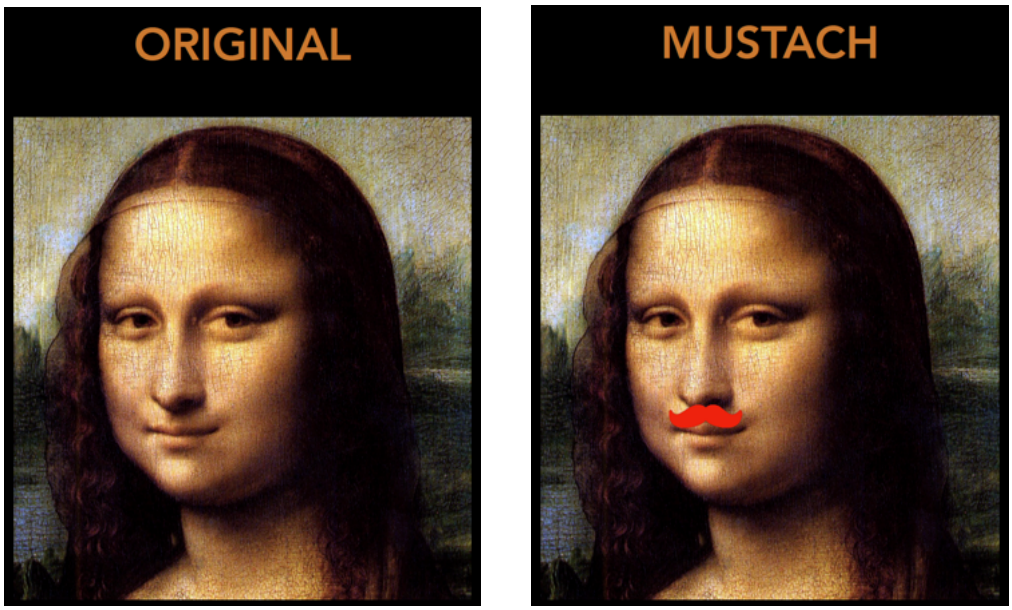

Figure 2: GitMusic – Original and modification

A signature does not prevent this, but can be used to identify or authorize a change:

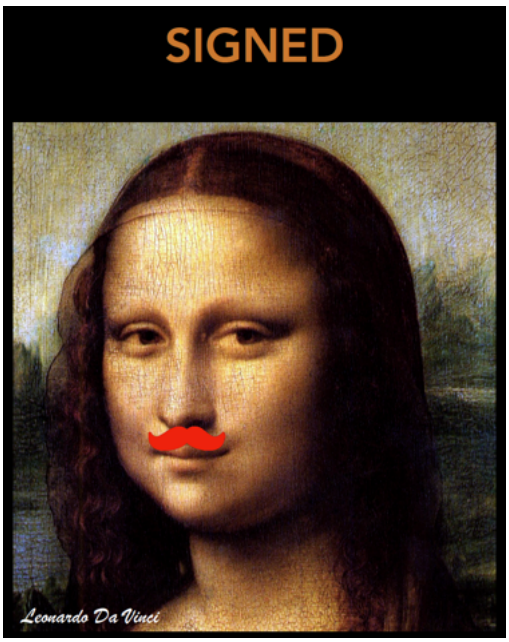

Figure 3: GitMusic – Signed image

If one introduces an exact copy, i.e. a clone of a previous version, a new basis for further versions is created:

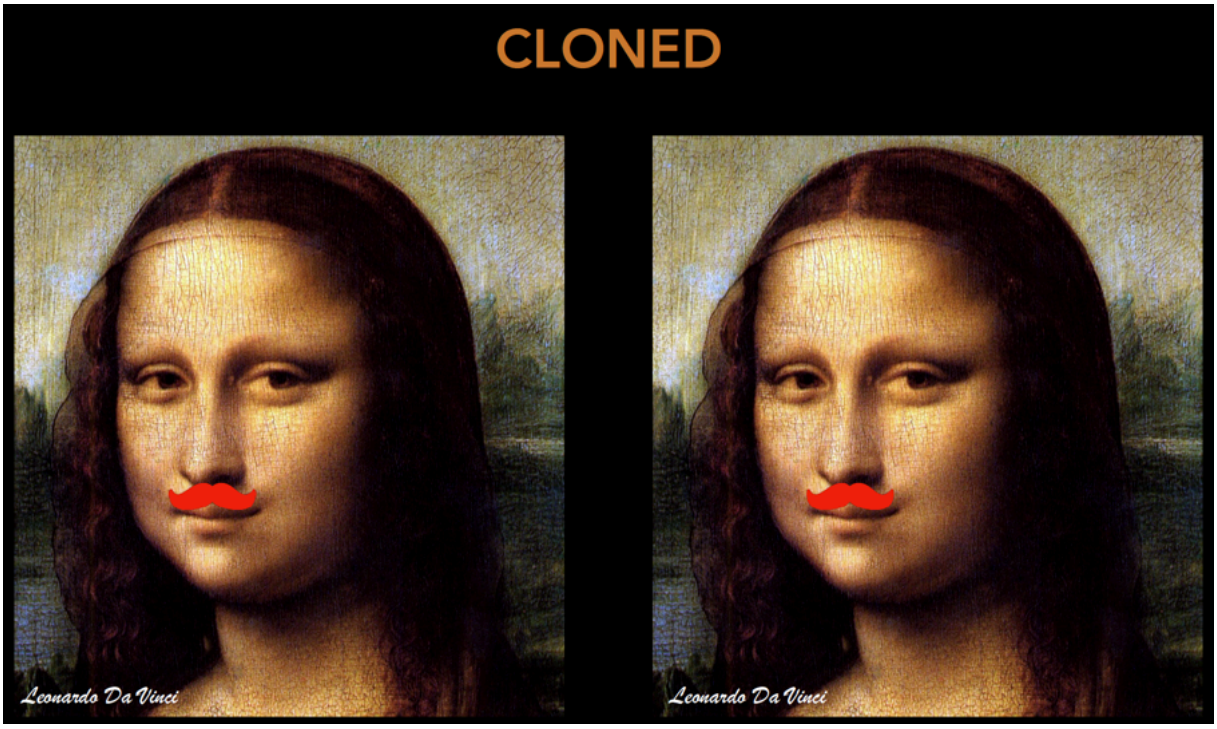

Figure 4: GitMusic – Cloned work

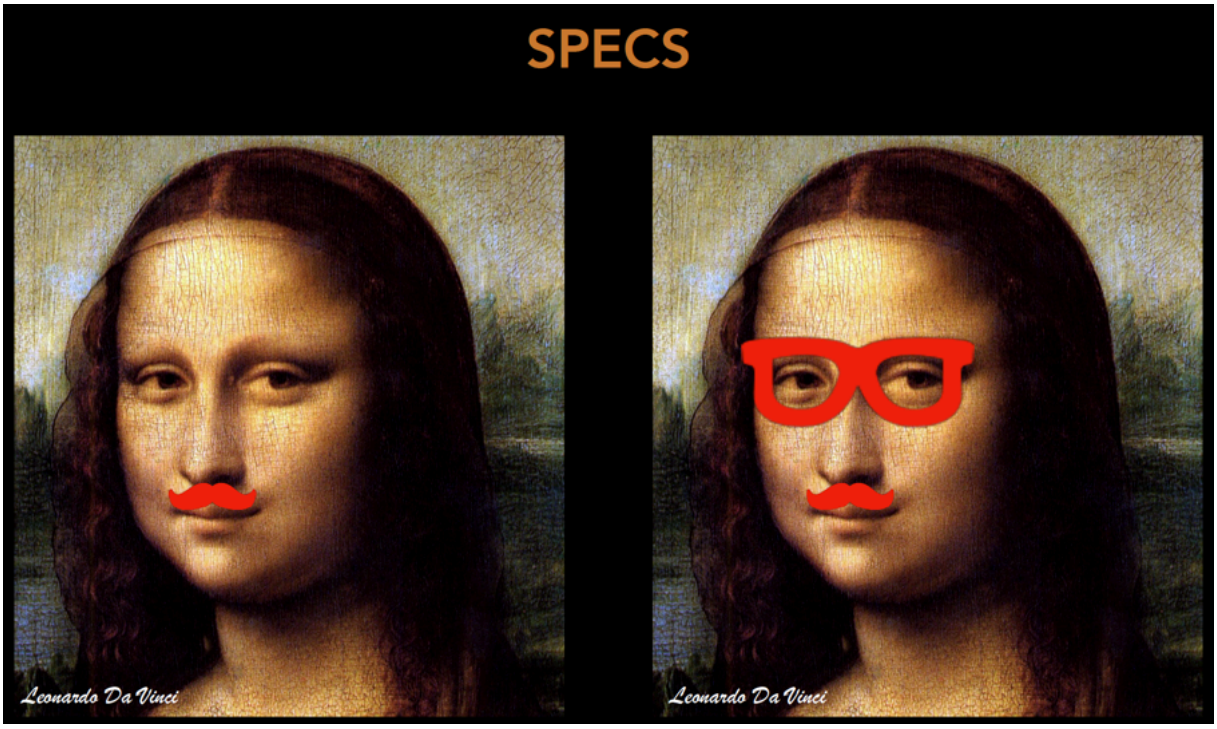

Figure 5: GitMusic – Changes to the clone (1)

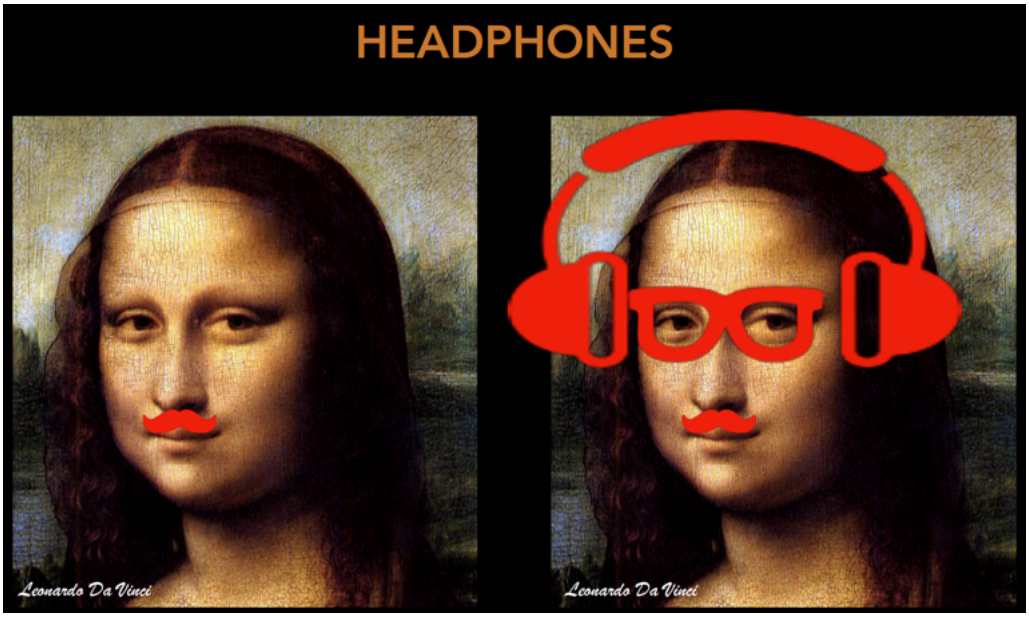

Figure 6: GitMusic – Changes to the clone (2)

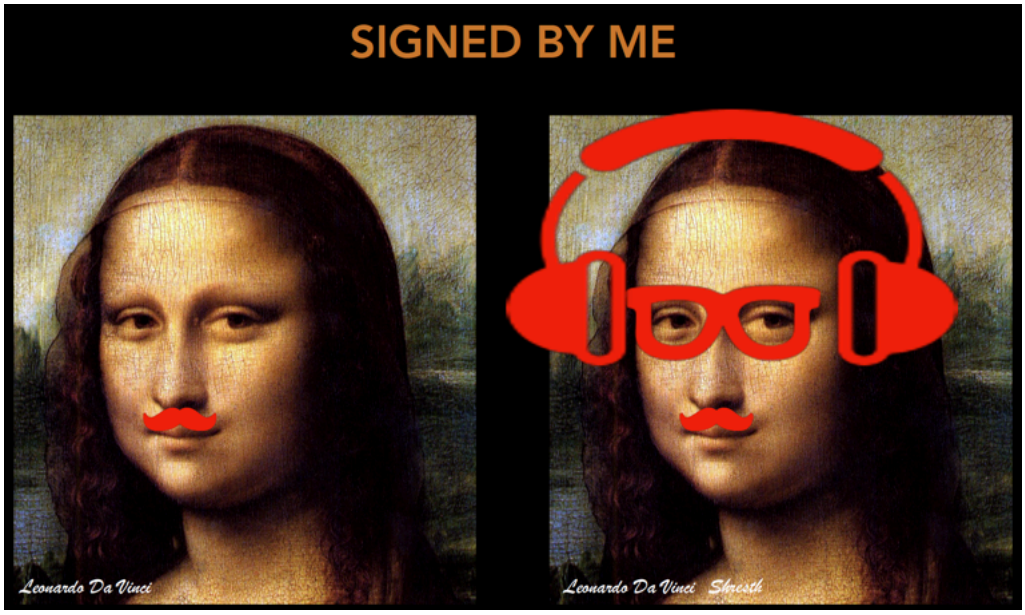

Figure 7: GitMusic – Signed version of the clone changes

Ultimately, the documentation of a "family tree" of changes is possible. All changes – and the identity of the persons responsible for the change – can be recorded in a register and confirmed by previous authors. The idea corresponds to the method of versioning in

software programming, and specifically the GitHub[27] tool. Finally, the structure of the register can be mapped onto a blockchain architecture.

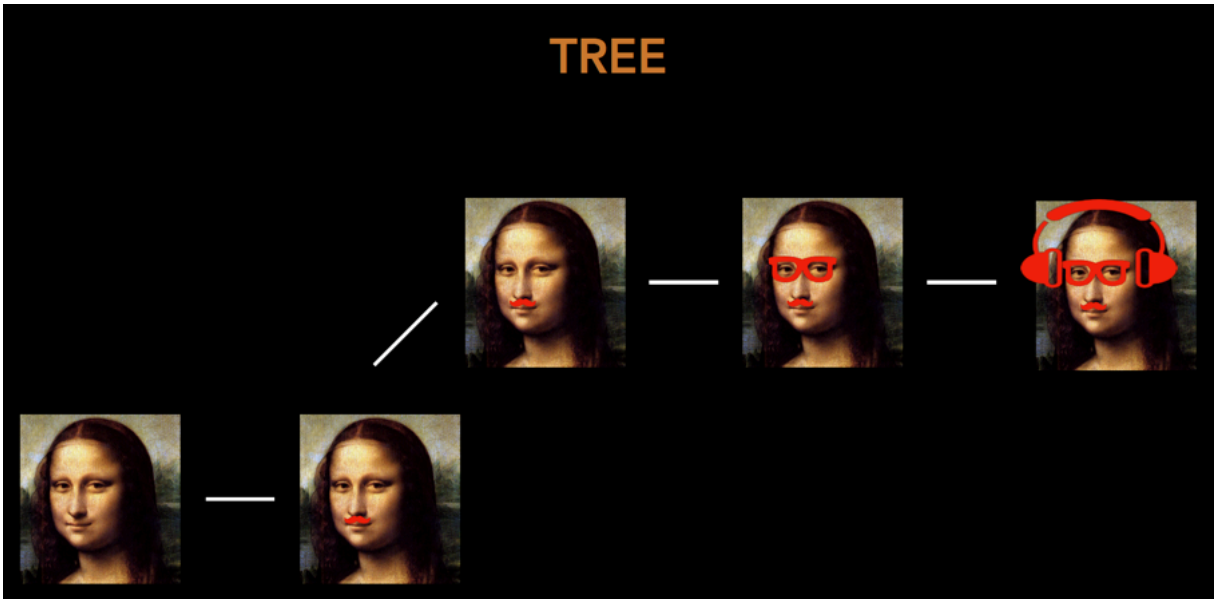

Figure 8: GitMusic – Tree view of the changes

Collaborations are also possible:

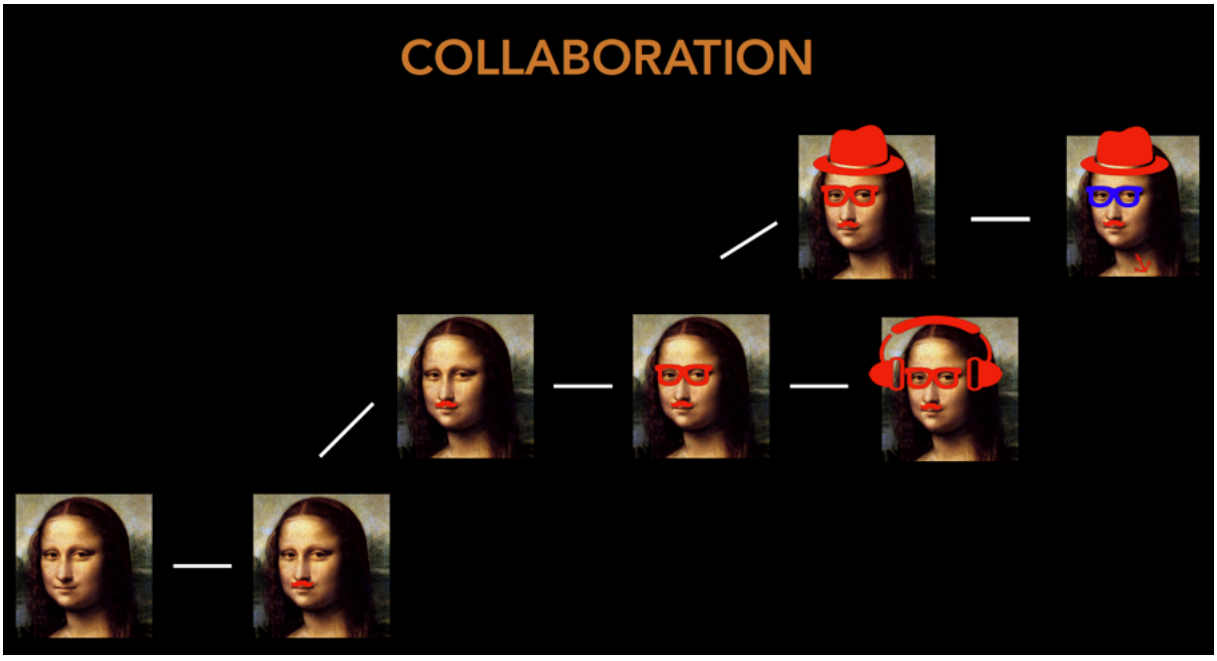

Figure 9: GitMusic – Tree view of a collaboration

[27] https://github.com

The Use Case is the everyday practice of studio musicians working together in a worldwide network, creating mashups or creating remixes.

Figure 10: GitMusic – Use Case

Roadmap planning

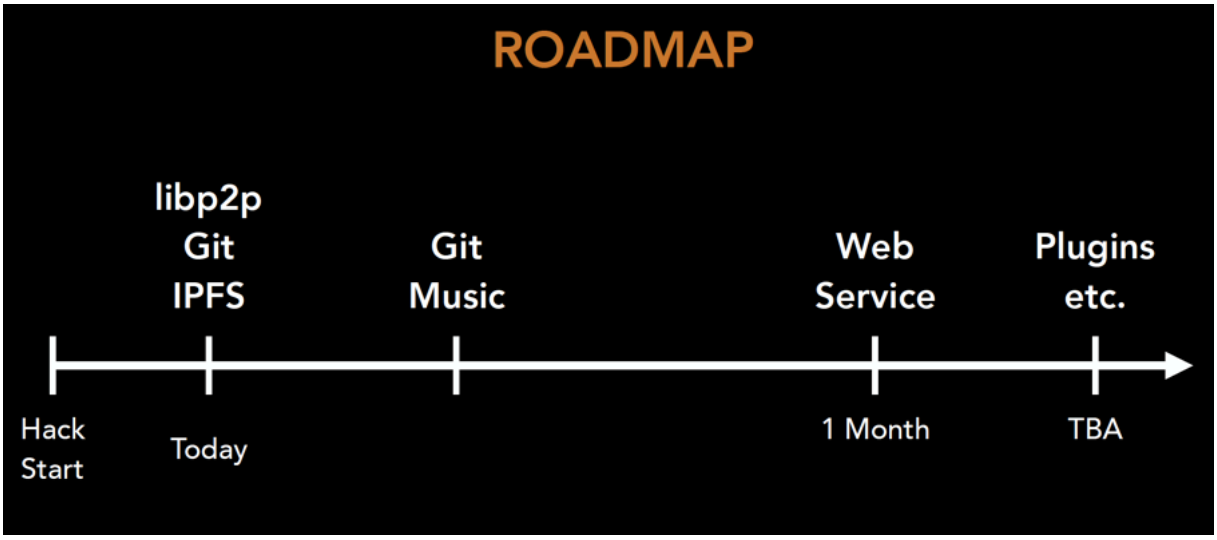

Figure 11: GitMusic – Roadmap

The solution can be outlined as follows:

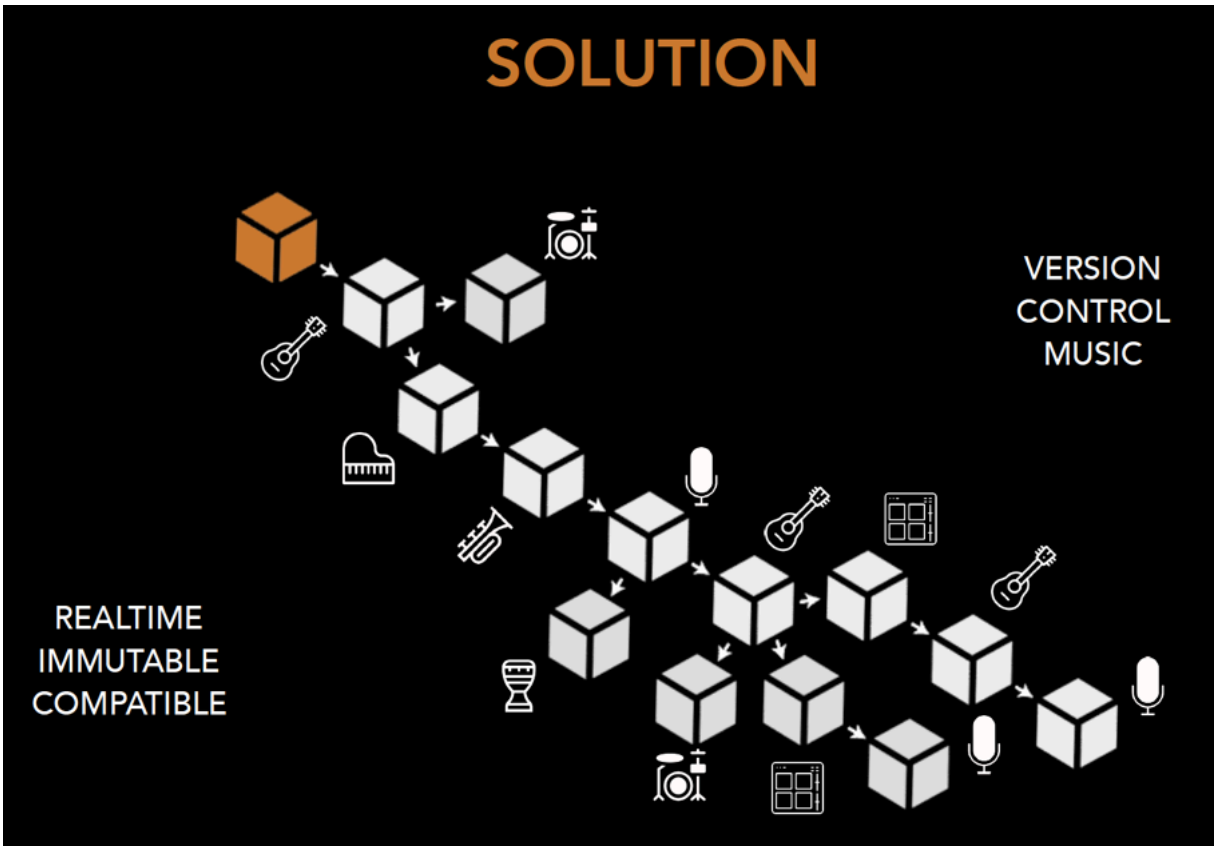

Figure 12: GitMusic – Tree view of the solution

5.1.3 Project “Artelligence”

- Winner of the 3rd prize ("Hot & New Award").
- Team size: five persons.

Subject

Based on Challenge 5, the task was to identify a suitable image for a given musical work automatically.

Problem

The majority of musicians is not established, or they belong to the group of so-called *DIY* (do it yourself) artists. Most of them do not have the time, skill, or budget to implement design tasks for releases. On the other hand, artwork and design offer options to stand out from the crowd. What is needed is a way to find unique artwork for the music.

Solution

The idea is to help independent DIY musicians create cover artwork for their releases. The team uses a GAN model ("GANgogh")[28] to create images that fall into a particular stylistic category or genre such as "rock", "classical", or "jazz".

The prototypical Web UI offers a pre-selection of (standard) images that have been selected based on a genre, making work easier for users. Therefore, the team uses a second neural network, trained on the cover artworks from the Discogs[29] database. It determines the class (genre) of the images and places them in preselection folders that users can browse and use as inspiration for further designs.

[28] https://towardsdatascience.com/gangogh-creating-art-with-gans-8d087d8f74a1
[29] https://www.discogs.com

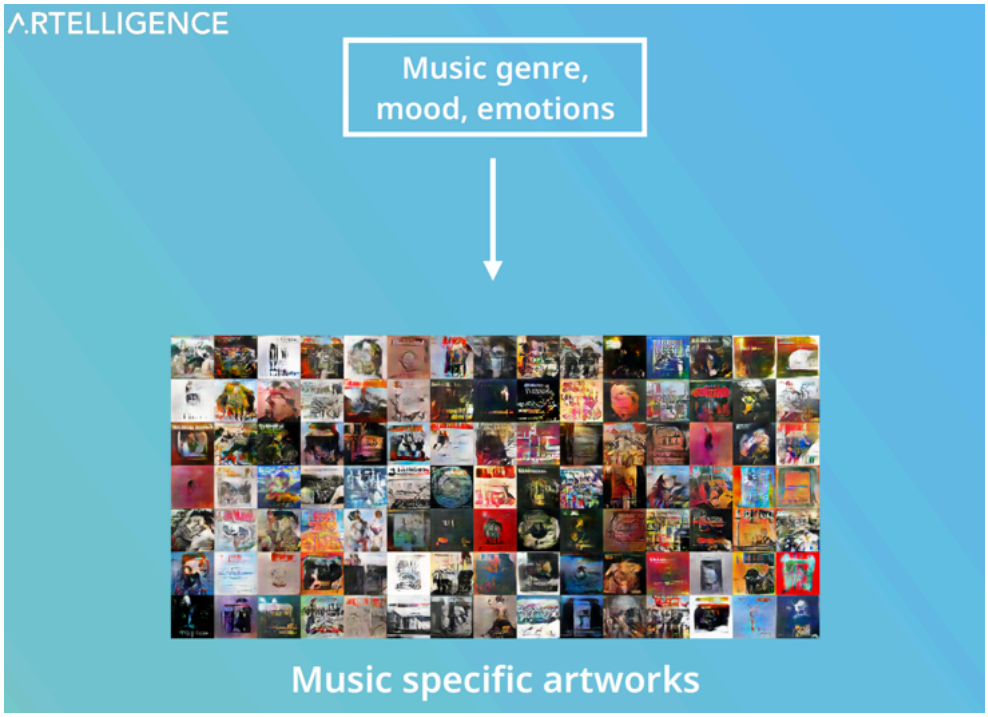

Figure 13: Artelligence – Schematic representation using original cover images

The first step

As a starting point for a selection, users upload an audio file. The genre of the contained song is extracted from integrated databases or an intelligent audio analysis in combination with a descriptive text. For the work during the Blockathon, The team applied interfaces to databases, since due to the limited timeframe there was no acceptable alternative.

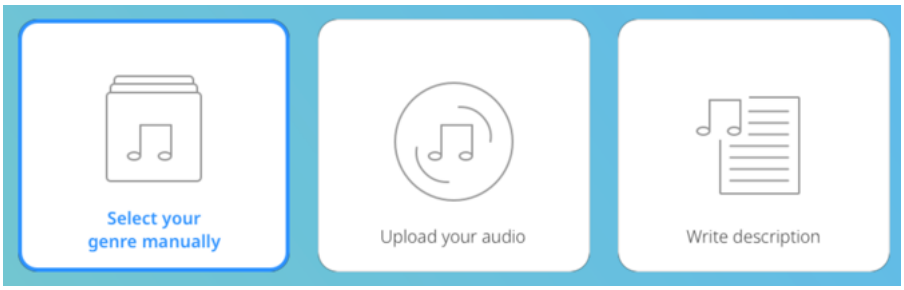

Figure 14: Artelligence – Procedure

Image selection

Two options are available to keep the effort to a minimum:

- the automatic selection of a single image using Artificial Intelligence methods;
- the creation of an image using AI from a large number of others (forming a collage).

Selection of a single image based on the classification

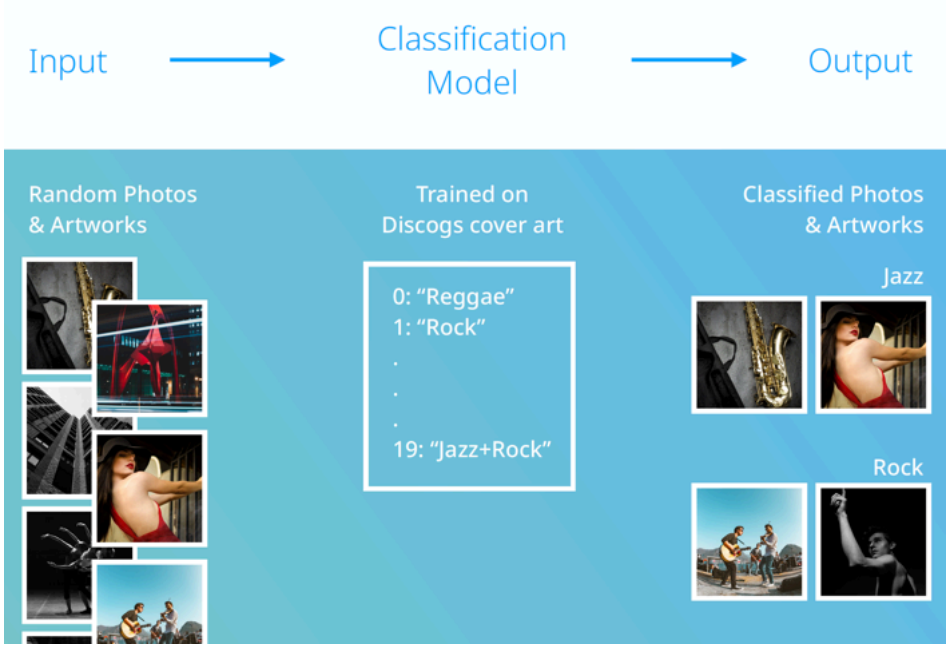

Figure 15: Artelligence – Schematic representation using example images

Create a collage from classified images

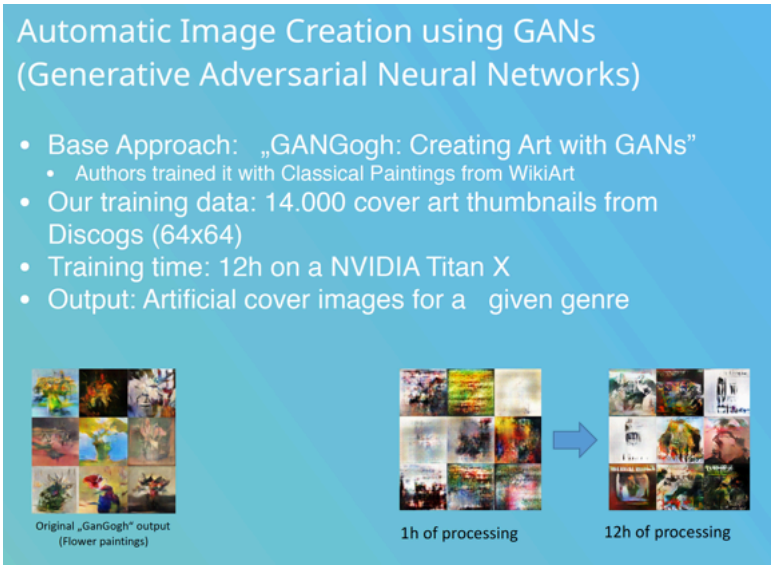

Figure 16: Artelligence – Process of classification and collage generation

User survey

As part of an online survey of potential users, the team asked the question "What is the biggest challenge if your artwork is for music?" The most frequent answers were as follows:

- "to exactly match the mood of the music";
- "to find an idea that represents the published title well";
- "to be in harmony with the musical theme";
- "to reflect the image of the artists and capture the mood of the song";
- "to tailor it to the target audience".

Further extracts of the survey:

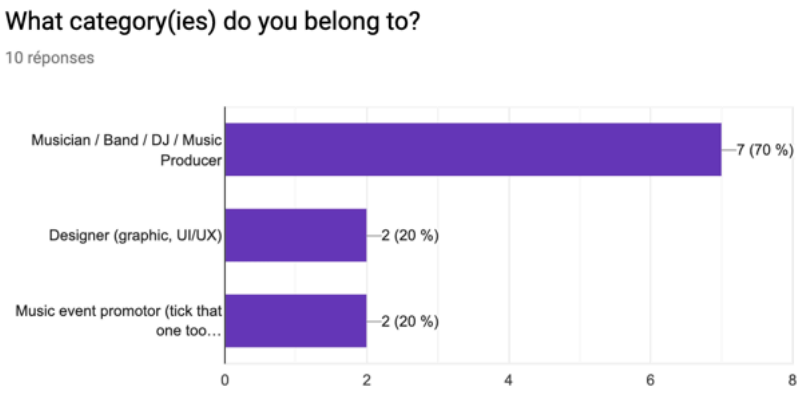

Figure 17: Artelligence (survey) – What category(ies) do you belong to?

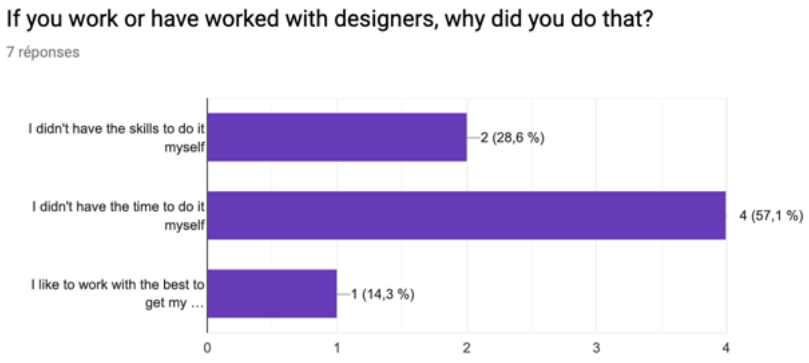

Figure 18: Artelligence (survey) – If you work or have worked with designers, why did you do that?

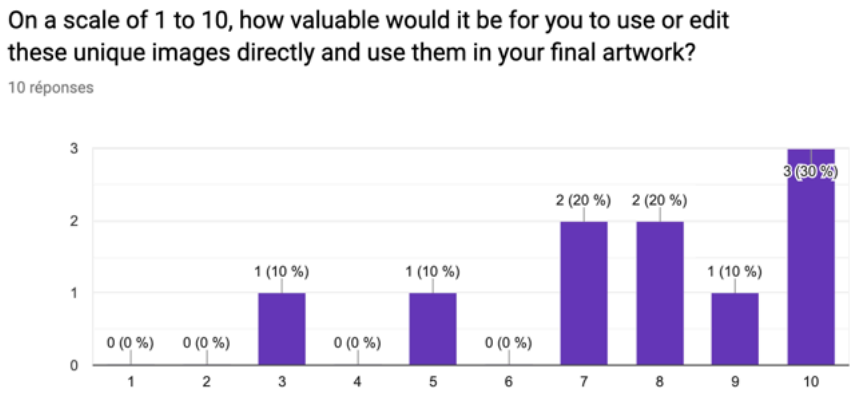

Figure 19: Artelligence (survey) – On a scale of 1 to 10, how valuable would it be for you to use or edit these unique images directly and use them in your final artwork?

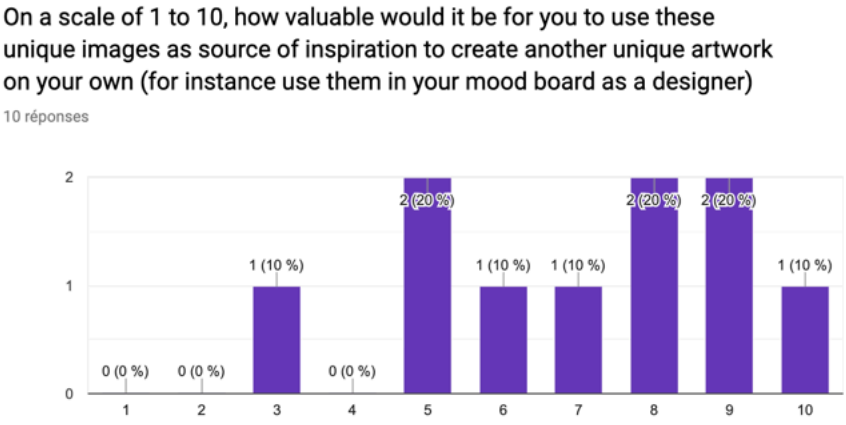

Figure 20: Artelligence (survey) – On a scale of 1 to 10, how valuable would it be for you to use these unique images as a source for inspiration to create another unique artwork on your own?

Competition

Statistics (2018):

- 156,000 new releases[30]
- 455,000 registered designers[31]

Besides, stock photography offers abundant selections; both in the private, semi-professional and professional sector. However, the enormous competition is only relative

[30] https://www.goldmansachs.com/insights/pages/infographics/music-streaming/
[31] https://www.ibisworld.com/industry-trends/global-industry-reports/business-activities/graphic-designers.html

when considering the costs. Also, significant factors in the competition are music-specific usability, quality, and effort of the selection.

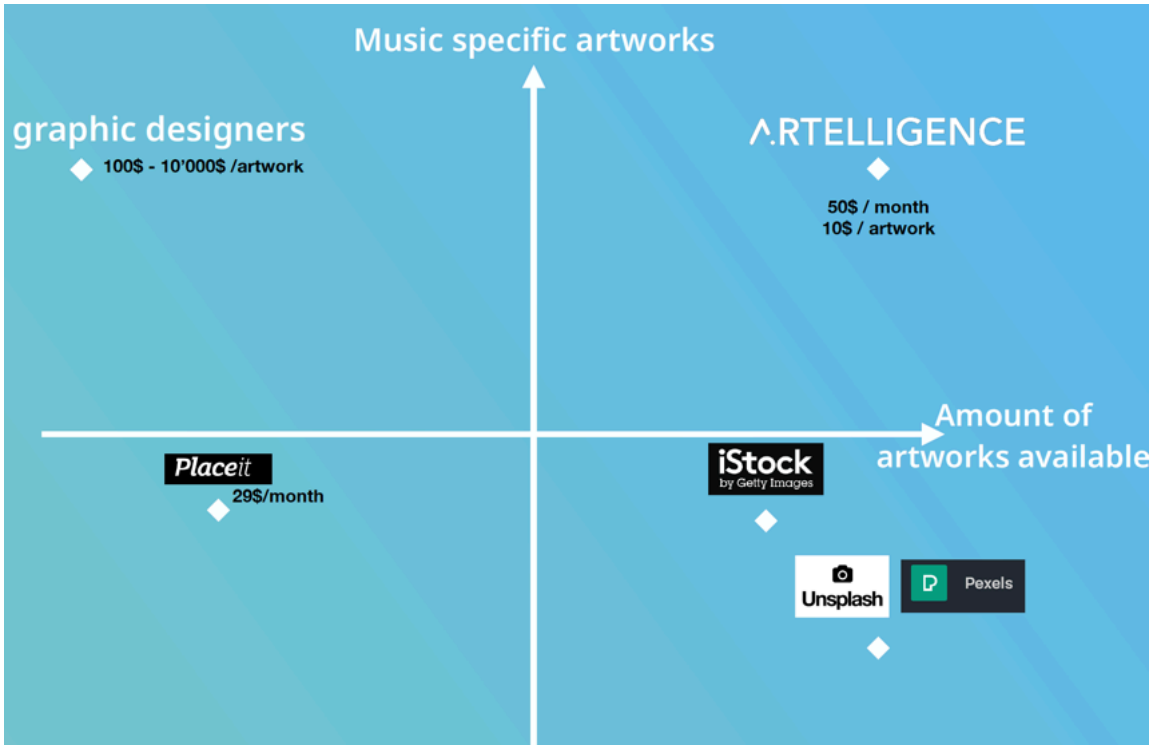

Figure 21: Artelligence – Positioning of Artelligence in comparison to its competitors

Revenue and expenses

Figure 22: Artelligence – Cost and revenue development

5.1.4 Project “MusicQuora”

- Team size: two persons

Subject

The project "MusicQuora" is dedicated to Challenge 11, the identification and definition of new business models for independent artists.

Problem

Private music lessons are relatively expensive, at least for average earners. The costs are about 25 € per hour. On the other hand, the Internet offers standard lessons online. However, this offer is not personal and does not respond to individual needs.

Solution

Within an online community, individual questions can be asked and answered, and it is possible to teach techniques. Nevertheless, the price can be kept low.

Workflow

1. The user selects Messenger service;
2. fills his or her account with 10 €;
3. he or she asks, "How does one play this passage?";
4. pays 50 cents to ask the question;
5. receives an answer from the YouTuber community.

The community is built up and strengthened by the mutual, personal advice of YouTubers to followers and vice versa.

Unique Selling Proposition

MusicQuora is a *crowd*-driven platform to learn music by providing content on demand.

Further benefits and incentives for the users, who can be response seekers and responders, are participation and representation with a profile page in the community, as well as evaluation for given responses.

Figure 23: MusicQuora – Screenshot / Prestige

Roadmap

The platform is to be expanded for various instruments. Further, development is possible in order to integrate highly talented musicians worldwide. The aim is for the platform to be able to exist within itself and to support itself financially.

5.1.5 Project “DATAfy”

- Team size: five persons.

The "DATAfy" project presented below shows an option for enriching metadata. It is based on Challenge 11 and represents the basis for a business model that expands the economic opportunities for musicians.

Problem

It is relevant for music creators to know where the works they have composed or recorded are performed or reproduced. This information can then be used by creators to better understand their fans.

However, for that it is indispensable that the usage of the musical work is first correctly identified. Only then the usage can be remunerated and the information where the music is played can be used.

Another interest of music creators is the desire to work with likeminded colleagues.

Solution

"DATAfy" is a collaborative platform for music creators where users contribute metadata to musical works and benefit from entering additional information.

One main benefit for the user is the aggregation of real-time charts of their works based on online uses.

Additionally, “DATAfy” offers users to find suitable partners for new music projects.

“DATAfy” is the trusted platform for metadata.

Target audience

The target group on the creative side is broad: All participants involved in the creation of musical works like lyricists, composers or publishers.

Also, it addresses music listeners and fans.

Approach

The essential layer is the database of the rights managing service provider. However, the available data can always be completed and improved.

Music creators hence contribute to the data pool by being able to add data to the already existing metadata in the pool. The manual input and effort, split among the creators as the best possible data source, allows a high quality and completeness of the metadata with relatively low manual effort.

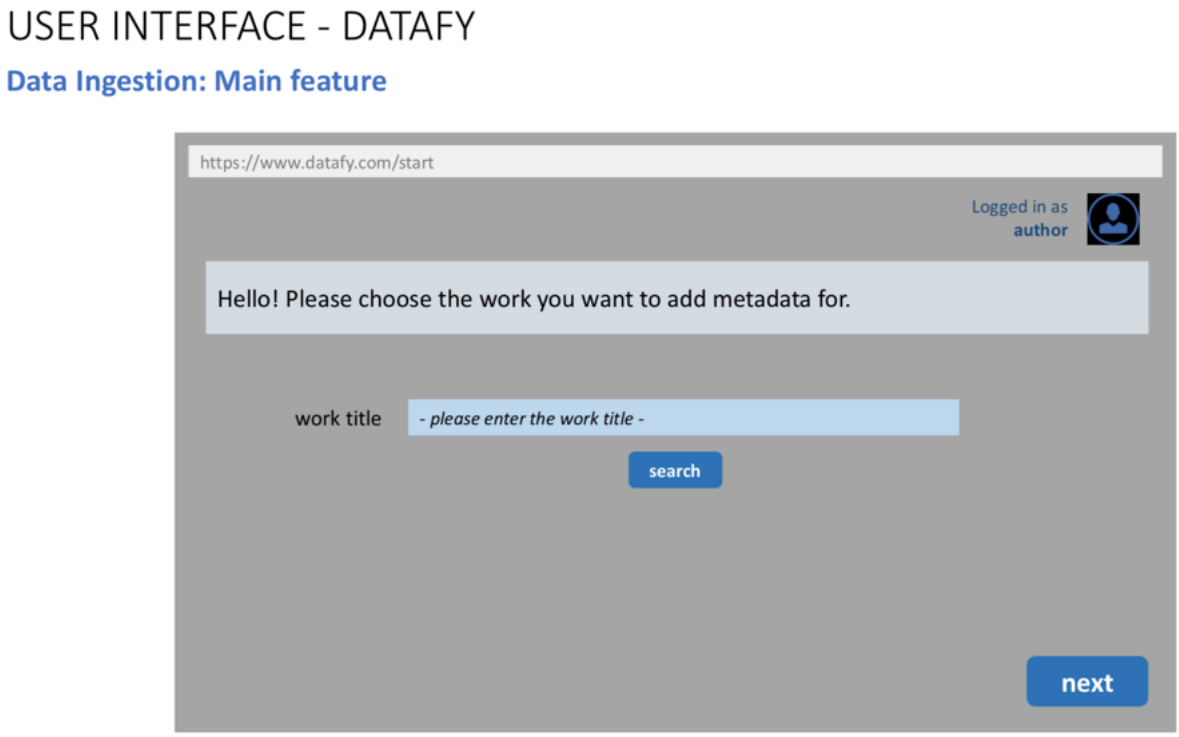

Figure 24: DATAfy – Data ingestion (search)

USER INTERFACE

Data Ingestion: Main feature

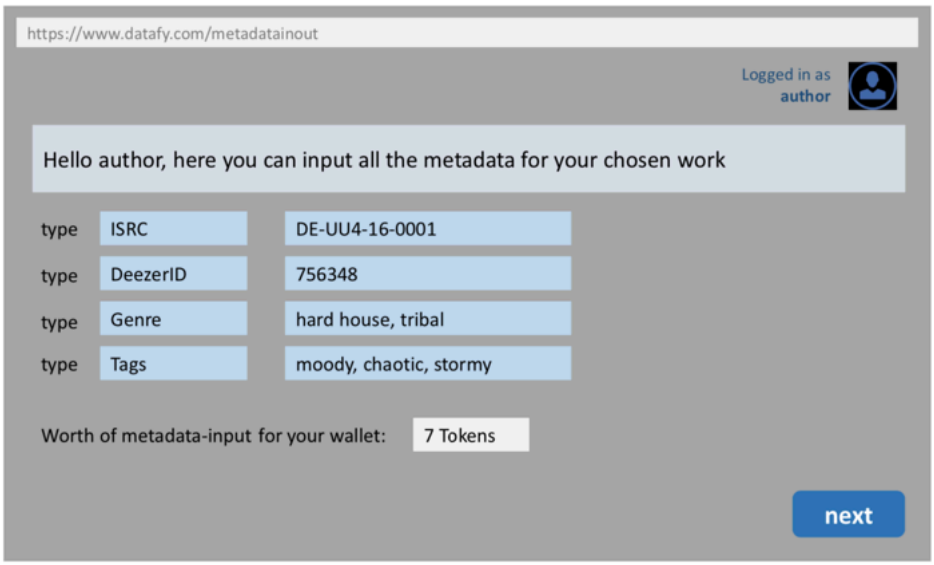

Figure 25: DATAfy – Data ingestion (main data)

As an incentive, authors receive tokens for entering the data for the wallet of their accounts. Besides, the additional and corrected data will make it easier to identify their works so that royalties can be sent to the correct person more quickly.

USER INTERFACE

Statistics for online uses

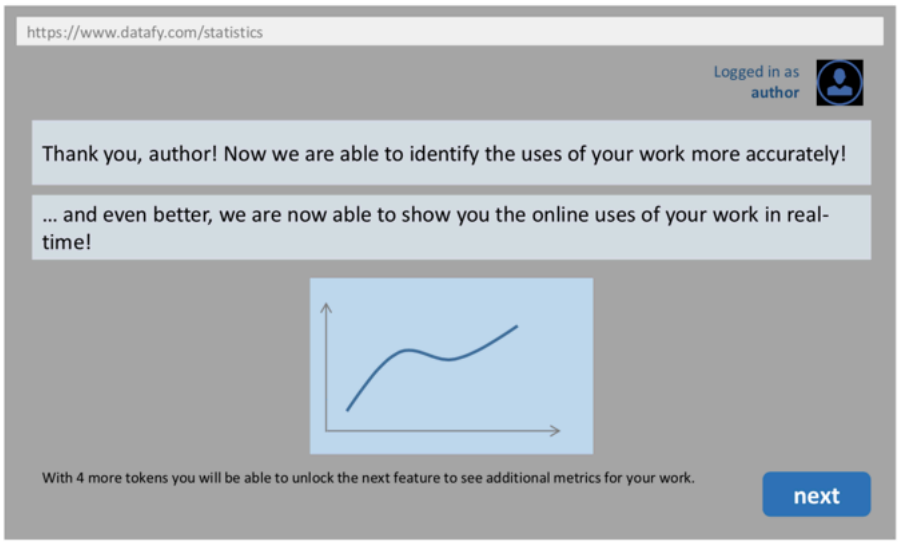

Figure 26: DATAfy – Statistics and analytics

With sufficient data, DATAfy can generate analytical data such as regional charts. If authors have collected a sufficient amount in their *wallet*, they will receive further benefits, such as additional analysis results.

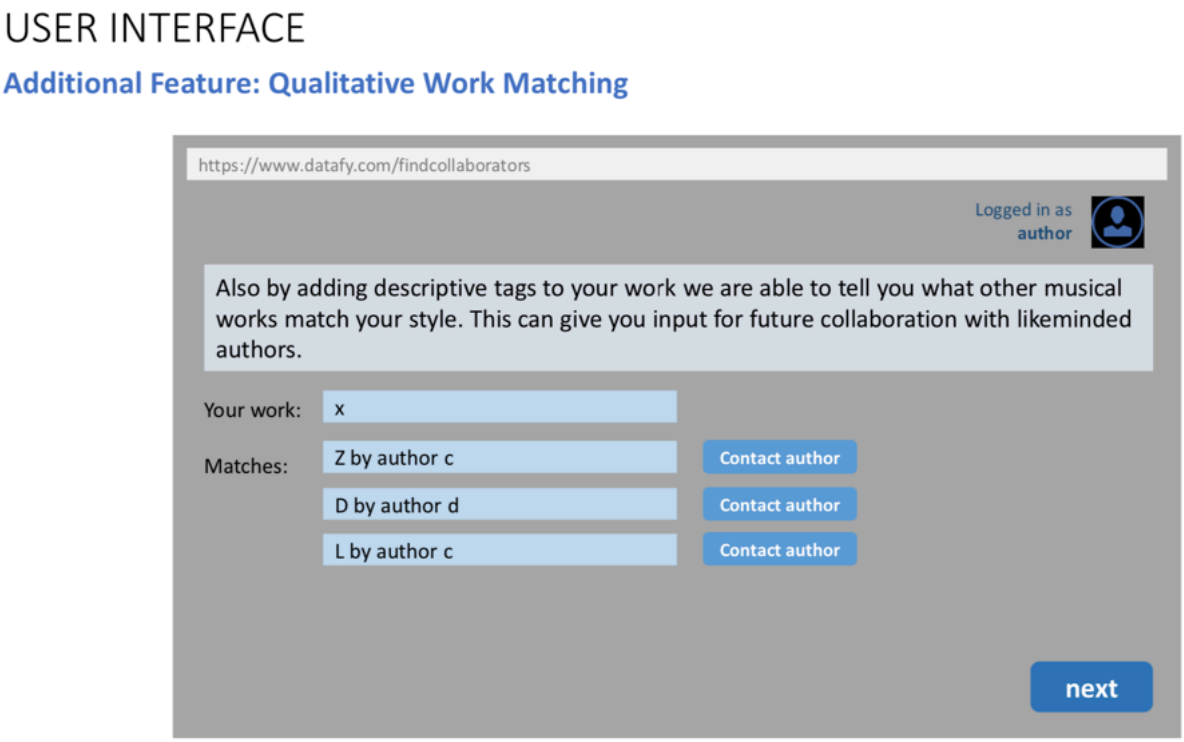

Figure 27: DATAfy – Qualitative work matching

The data set can be extended to describe works qualitatively and to match them with other works and authors on this basis. Thus, it is possible to propose authors colleagues for possible collaborations.

Advantages for the use of a blockchain architecture

On the one hand, the tokens used as incentives are valuable for activating further features. On the other hand, users can prove that they have made and implemented the changes. Conversely, the entry of false data is verifiable and financial transactions can be traced.

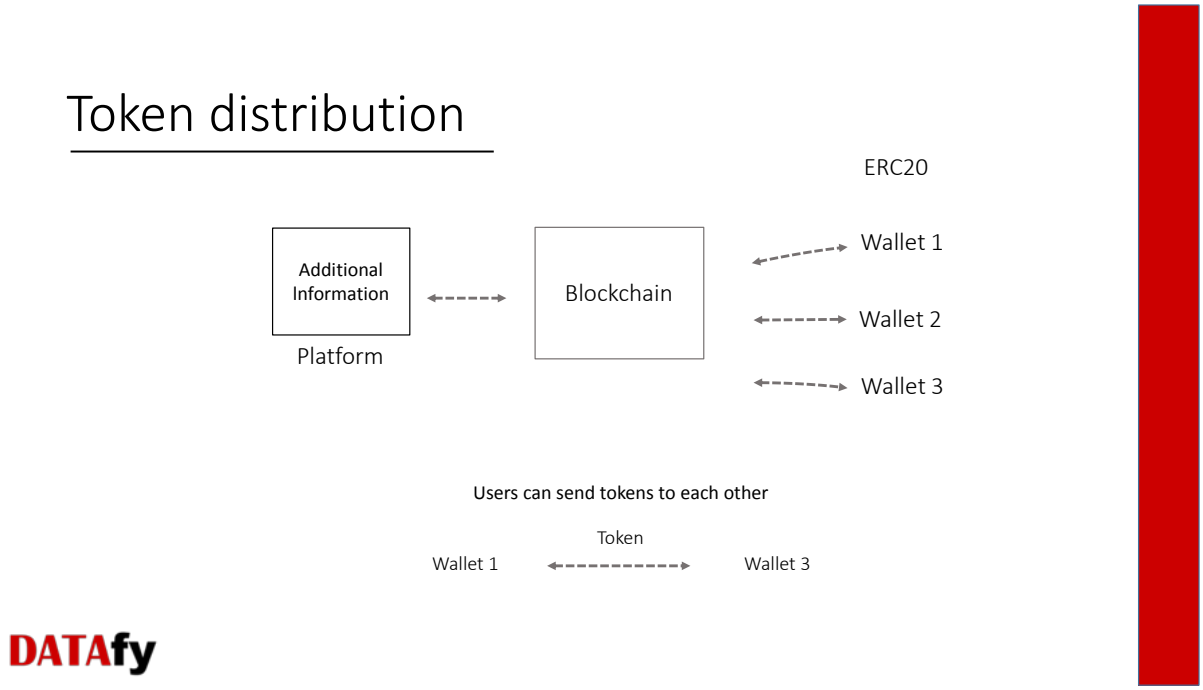

Figure 28: DATAfy – Token distribution

Non-authors

Analogous to wikis, music users (fans) can also be integrated to add further data. At the same time, if necessary, registration for this user group can be restricted or controlled by the author. Earning tokens for proven data entries might as well be an indicator to increase the value of a "reliability badge".

5.1.6 Project “VibeFuse”

- Team size: three persons

Subject

The goal of the "VibeFuse" project is to improve the metadata workflow and avoid errors. It is related to Challenges 9 and 10.

Problem

The emergence of false metadata is due to communication errors.

It is often the producers who have to record notes, which provide information about the royalties shares between composers, musicians and lyricists. This information is passed on to third parties for use in the distribution and exploitation chain.

However, this secondary activity distracts them from their actual tasks as a director and coordinator of the creative process of composition and recording. When composers, in the middle of a recording session, must tell their IPI number, the risk of losing the mood and interrupting the creative flow is high.

Nevertheless, the apparent secondary activity is essential for the financial survival of the composers and the other participants.

Lösung

A new approach is needed: "Make metadata fun again."

VibeFuse is an A&R tool. Its job is to manage metadata throughout the entire recording process, from song demo to distribution via digital service providers.

This task requires a VST plugin[32] as part of the recording process with Digital Audio Workstations (DAWs) in a project file. All parties involved, including A&R, producers, composers and musicians, submit their information to the VibeFuse VST plugin.

Everyone involved in the recording process can "check in" to a recording session by using a mobile app, and later validate their participation when the recording is handed over to the label or client.

A project cannot be released for distribution unless all participants have confirmed their contribution.

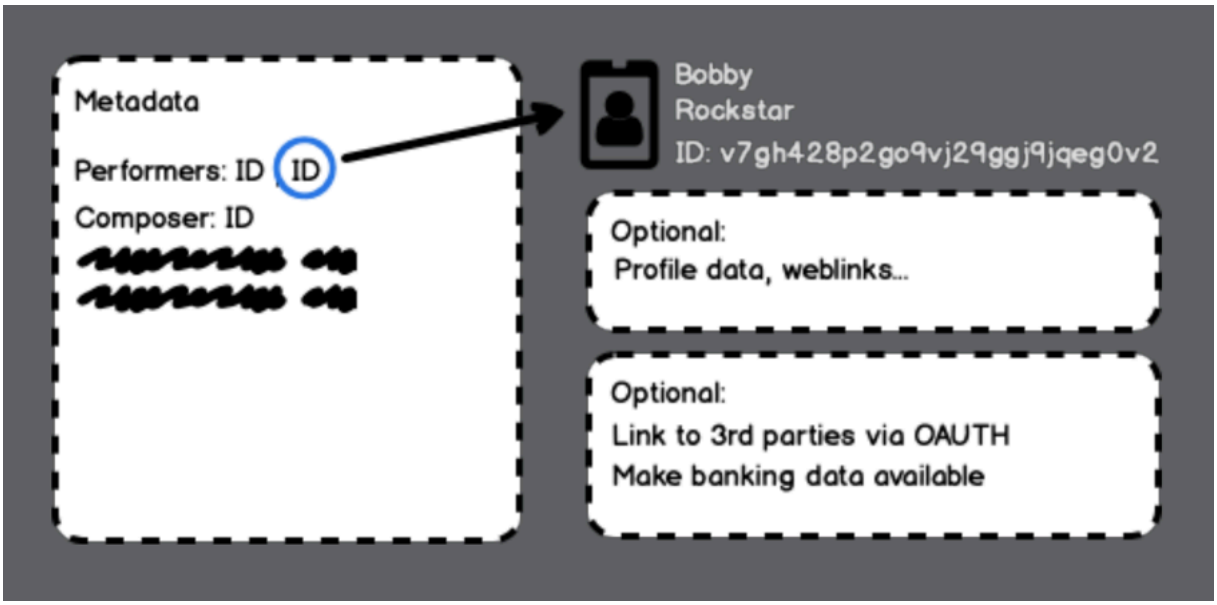

Figure 29: VibeFuse – Unique IDs as part of a profile page

Universally unique IDs are required for the participants. A profile page for participants is optionally possible. Integrations via OAuth and for bank accounts are also possible as optional enhancements.

[32] *VST* Plugin translates to *Virtual Studio Technology* Plugin. It is a software module that is used as part of the music production process with Digital Audio Workstations (DAW). VST Plugins can take a wide variety of roles from mastering over effect processors to synthesizer and other sound modules.

Figure 30: VibeFuse – Account information and data validation

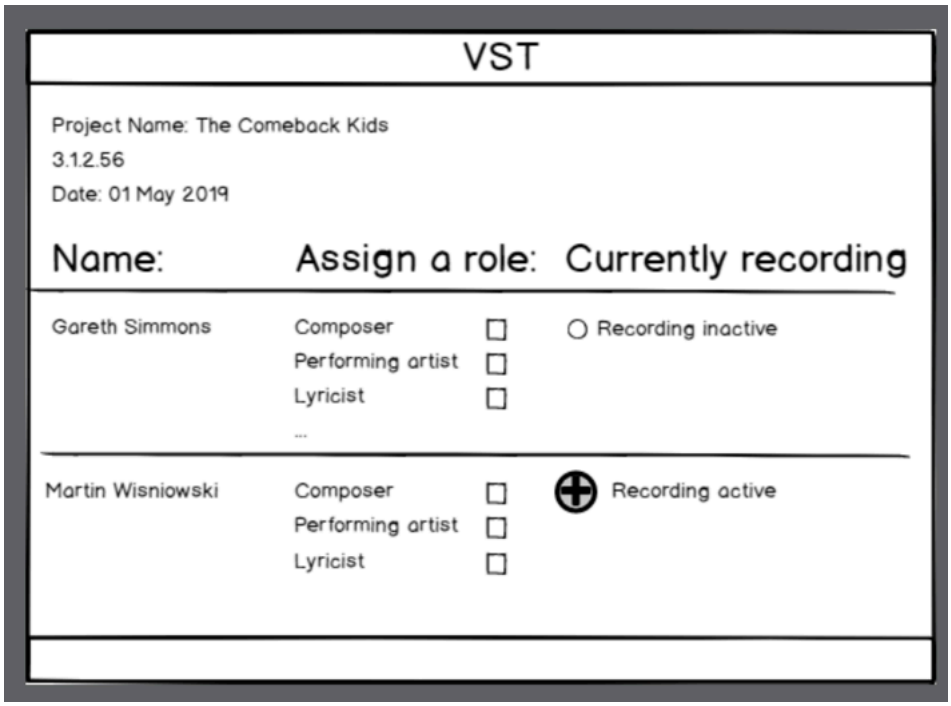

Figure 31: VibeFuse – VST Plugin

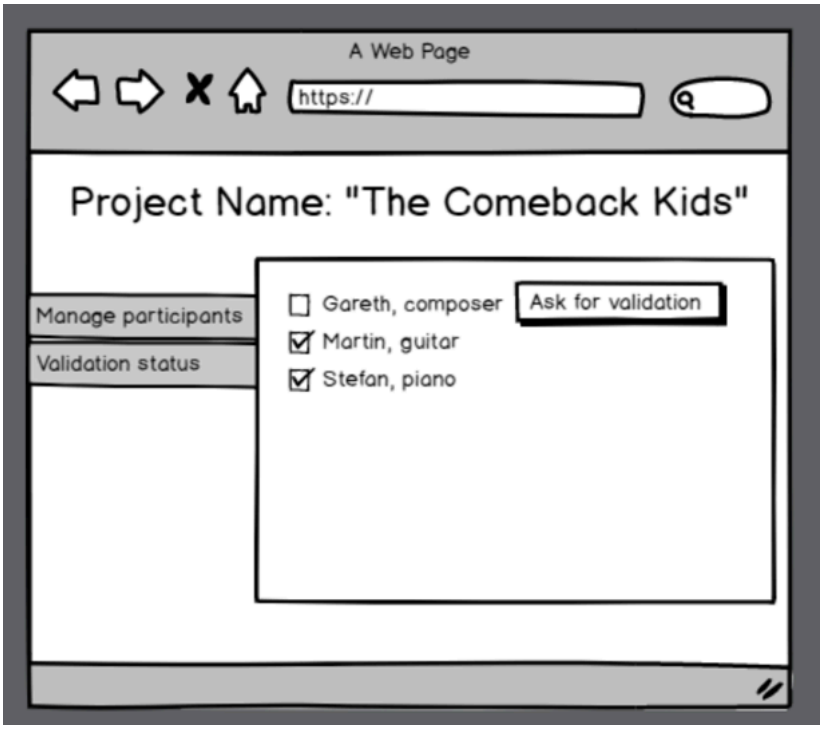

Figure 32: VibeFuse – Project page

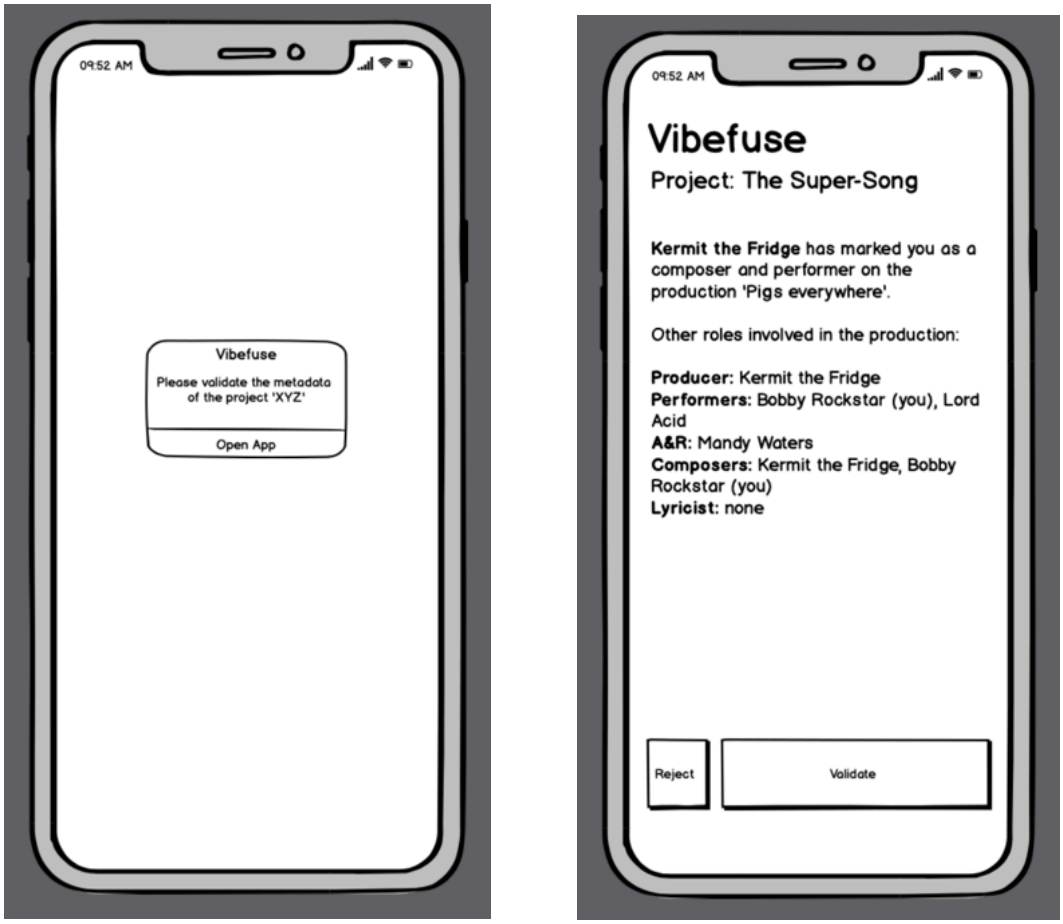

Figure 33: VibeFuse – Validation of project data

Benefits

- The labels and publishers involved in the registration of rights with a collecting society have validated data entries.
- Artists are motivated to install and use the app; they rely on it.
- The data is generated and stored in a secure way, comparable to a banking app.
- Users only have to enter their data once and can then use it for all projects.

Photo by Beatriz Montilla Buena (bmontillab [at] gmail.com)

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6 Analysis

6.1 Achieved goals and positive experiences

6.1.1 French-German cooperation

Concerning French supporters, mentors and jurors, the implementation of the concept was successful. The event featured as supporting partners Sacem as the French collecting society, Le Bureau Export as a vital networking partner, and Musicovery and the Allez Hop Summit as media partners. Besides, Marie Gauthier (Freelance Full Stack Developer / CTO, Resonate / Developer, MOD Devices) joined us as a mentor and Xavier Costaz (Director Innovations and Partnerships, Sacem) in the role of a mentor and juror.

Photo by Nadja Eminoğlu-Leuci (nadjaleuci [at] gmail.com)

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Nevertheless, three potential (German) French supporters could not be won over. While its obligations prevented one company, another failed to provide feedback, and a third did not show interest.

The cooperation between Sacem and GEMA within one team is to be emphasised, as the international coordination of the cooperation of both collecting societies with a relatively short lead time within the daily business represents a challenge, especially considering the commitment of three participants on both sides.

6.1.2 Promoting communication between music and technology

The primary objective, together with the Franco-German cooperation, of promoting and consolidating communication between the music world and the technological domain, has been fully achieved and exceeded expectations.

The challenge of bringing participants from different backgrounds together in teams and having solutions worked out together with the experience of different perspectives and expertise has been successfully mastered. The feedback expressed by participants to the project leaders usually focused on two points: the newly gained, deep insight into the hitherto unconscious complexity of the music industry and the positive experience of complementing one's work with team members from a different background.

The successful communication between music and technology is particularly essential because the misunderstanding between music and technology plays an essential role in many debates in the cultural economy that determine the public. [33]

6.1.3 Sustainability of the results

At least four of the six teams in the competition will pursue their projects; three of them are about to prepare applications for funding or participation in accelerator pitches. Sustainability based on a single Blockathon has clearly been achieved. There is an intention

[33] See also the article "Tuning the Music Ecosystem's Transition" by Wolfgang Senges of 11 May 2019 (http://bit.ly/tuning-music-ecosystem).

to support the artists; whether implementation, in the long run, will be achieved remains to be seen.

Besides, the results of the participating teams have given rise to a new project based on the concept of the Blockathon and the goal of networking ecosystem participants in music and those from digital technology. Wolfgang Senges, the project manager responsible for the content concept of the Blockathon, plans an irregular series of events called "music x tech" to connect and document various projects. What they have in common is the intersection of music and technology; subgoals are to be developed, pursued and documented modularly with the support of partners in an experimental and open framework.

Photo by Nadja Eminoğlu-Leuci (nadjaleuci [at] gmail.com)
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6.1.4 International visibility

The Blockathon achieved international visibility with more than 50 participants and a roster of 34 partners from eleven countries. The presentation of the results of the Blockathon during the c/o pop Convention increased international visibility, in particular by the presence of the Consul General of France, Dr Olivia Berkeley-Christmann, and Minister Prof. Dr

Andreas Pinkwart, both of whom the organisers would like to thank for their support and engagement. Also, the organisers express their thanks towards Ralph H. Christoph, Karla König and Johanna Breuckmann for the opportunity to present the results at the c/o pop Convention.

6.1.5 Support within the music and cultural industries

Out of 52 potential companies, associations and other organisations contacted, 32 joined the Blockathon in support. Four companies intended to cooperate but had to cancel due to lack of resources. Four other companies did not see a basis for participation, and twelve did not reply to the invitations. Due to lack of time, it was not possible to follow-up the lack of reactions or contact other potential supporters.

Three Lightning Talks from *Board of Music*[34], *Jamahook*[35] and the *Hamburg Kreativ Gesellschaft*[36] completed the programme of the Blockathon.

The presentations provided an introduction to the music industry and its topics, and the presentation of the *Hamburg Kreativ Gesellschaft* on the *Music WorX Accelerator*[37] gave an outlook on a possible further development of the team projects.

The general response from supporters was extremely positive.

6.1.6 Organisation and Motivation

The mood, motivation and concentration of the participants were excellent; the feedback was excellent. Approximately 90 % of the participants would like to participate in other similar events.[38]

[34] https://www.boardofmusic.de
[35] https://www.jamahook.com
[36] https://kreativgesellschaft.org
[37] https://kreativgesellschaft.org/innovation/music-worx/
[38] It is based on an online-survey regarding feedback, but participation in the survey was less than 20% with ten out of 53 participants. With regard to participation in further events, however, all 53 participants had responded positively to the wish to participate again in a final, open round of voting.

6.2 Aspects worthy of improvement

6.2.1 French-German concept

Concerning the Franco-German concept, there only a few connections to the neighbouring country. The challenge was underestimated by the organisers, especially during the concept planning. It would have been a better approach to integrate a French team member right from the start.

Furthermore, it appears that the partial reimbursement of travel expenses was too low or the cost of travel too high for participants to consider travelling from France.

6.2.2 Registration process

The application and recruitment of participants must start earlier, and participation must be more predictable and reliable for applicants and organisers. Communication with registered participants turned out to be difficult in the run-up to the event; participation was uncertain in most cases.

It seems better to agree on participation with a selection of already known persons at an early stage. At least, the organiser has to be sure about a minimum number of persons to show up. At the same time, requested programming challenges should be discussed in advance. The benefit is that reliable candidates can advertise for the event; also, a sufficient number of attendees is assured.

The registration mode must exclude the option of ordering multiple tickets to one name or email address. Otherwise, there are uncertainties regarding participation: Has the participant not been able to decide for one role (developer, musician etc.) and therefore ordered two tickets, or was an additional ticket ordered for a second person?

6.2.3 Innovation

In order to fully meet the demand for innovation, it may be necessary to modularise an event and plan several phases. The actual development of ideas can be part of a pre-event. Implementation of the more mature idea as a prototype can take place in a second phase.

Alternatively, a preliminary event to introduce the topic may be held. It allows for higher demands on participants for the second event and gives potential participants a more accurate idea.

6.2.4 Partner management

Here, too, it is more appropriate to make contact earlier in order to give partners more room for planning.

6.2.5 Gender balance

The requirement for a balanced gender distribution was not met. With seven female participants, the percentage of women involved was only slightly higher than 13%. Earlier and targeted advertising, as well as a personal approach, are necessary. Also, it makes sense to have a gender-specific mix of people already at the concept development stage.

At further events, the development of higher participation of other sexes must be targeted. Specific hackathon concept challenges could, for example, be devoted to the task of how to achieve this goal.

6.2.6 Organisation and concept

From an organisational point of view, increased use of templates (emails, partner information, participant communication, and more) should be considered in order to reduce the effort. Furthermore, frictions in website creation, maintenance, advertising and ticket management must be avoided, as this promotes information gaps within the team.

For all positions, including mentors and jurors, but also for positions in the event organisation such as accreditation, replacement appointments must be planned.

For mentoring, it might be useful to assign a coordinating mentor to each team. Regular visits to the teams by mentors or fixed breaks for questions are also helpful. The presence of mentors at the wrong (and unanticipated) time is not very helpful for teams and somewhat disturbing.

Besides, the attribution of multiple functions to one person does not support participants. Members of the organisation team – in particular, the project lead – cannot act as mentor or jury member at the same time as it is detrimental to the benefit for participants. Mentors and jurors must exclusively support the participants.

6.2.7 Appraisal

An open feedback round should be an integral part of the process in order to capture opinions, criticism and suggestions for improvement from the participants. The representatives of the Hamburg Kreativ Gesellschaft have improvised this aspect and recorded it as part of their Lightning Talk. The audience welcomed it with high and intensive participation and showed the necessity to include it as a regular part of the programme.

Photo by Beatriz Montilla Buena (bmontillab [at] gmail.com)
under a CC-BY-ND 4.0 licence (https://creativecommons.org/licenses/by-nd/4.0/deed.en)

An online feedback survey, on the other hand, was only answered by 20% of the participants. Its participants hinted towards some critical issues; it remains worth considering how an online survey can achieve more extensive participation.

6.2.8 Documentation

As expected in the planning phase, the time required for documentation proved to be relatively high. However, a neutral view in the presentation would be better. One possible solution is to cooperate with universities whose students can accompany an event and create the documentation as part of a seminar paper.

7 Conclusion

The "Blockathon de la Musique" has shown that mediation between people from the creative industries and technology is not only necessary, but it is possible without compulsion. More than that, all participants – participants and partners – were highly motivated and were able to make use of the opportunities offered.

Of course, the idea of international cooperation is positive, but it requires a different approach. The Blockathon shows that national communities may be less interlinked and intergrown than one would like them to be.

In order to extend the already proven sustainability of an individual event and to comply with the wishes of all participants, a further concept must be considered. The aim should not necessarily be regularity, but rather the establishment of a platform as a c factor for the promotion and further development of innovative concepts.

8 Appendix

8.1 Funding partners, supporters and executing partners

8.1.1 Funding partners and initiators

8.1.1.1 Ministry of Economics, Innovation, Digitisation and Energy

Ministerium für Wirtschaft, Innovation, Digitalisierung und Energie des Landes Nordrhein-Westfalen

The North Rhine-Westphalian Ministry of Economics, Innovation, Digitisation and Energy supports and promotes the creative industry with its approximately 300,000 employees. The Ministry finances the competence centre CREATIVE.NRW as a service centre for the creatives in the state. Funds from the European Regional Development Fund (EFRE) and state funds are available for the development of the creative industries in North Rhine-Westphalia. The Ministry considers the creative sector a cross-section industry with high innovation potential, also and especially for the success of the digital change.

Contact: https://www.wirtschaft.nrw/pressekontakt

https://www.wirtschaft.nrw

8.1.1.2 The Consulate General of the French Republic in Düsseldorf

Liberté • Égalité • Fraternité
RÉPUBLIQUE FRANÇAISE
CONSULAT GENERAL DE FRANCE A DUSSELDORF

Politics, business (Businessfrance) and culture (Institut Français) belong to the core business of the Consulate General and are always treated within the framework of German-French relations. In line with the Aachen Treaty of 22 January 2019, it aims at promoting and convergence of the economies and societies of both countries. Bearing this in mind, the Consulate General is happy to provide moral support to such kind of initiatives and cooperates with local institutions to bring the French culture closer to the German citizens.

Contact: info@consulfrance-dusseldorf.org

https://de.ambafrance.org/-Dusseldorf-

8.1.2 Executing partners

8.1.2.1 hack.institute

hack.institute is a Cologne-based digital consulting agency. We support companies in increasing their visibility among potential employees, providing an impetus for their products and processes or benefiting internally from new methods and technologies. We offer individual hackathons and workshop formats such as design sprints and use the expertise of our community.

Contact: info [at] hack.institute

https://hack.institute

8.1.2.2 ContentSphere

Since 2008, Wolfgang Senges has been offering MusicTech consulting services as an independent entrepreneur under the name ContentSphere. He is the co-founder of the Blockchain and Metadata Working Group of the German music industry and critical observer of blockchain approaches. His roots lie in machine learning, and he has ten years of experience in metadata generation and processing projects. In the context of his activities in the music business, he worked with artists such as Imogen Heap, Marillion, Martin Atkins, Amanda Palmer and Ingrid Chavez.

Contact: wolfgang.senges [at] contentsphere.de

https://www.contentsphere.de

8.1.3 Supportive corporations andassociations (in alphabetical order)

8.1.3.1 Alissia Music

Alissia is a music streaming start-up headquartered in Munich, Germany, and founded in September 2017 by Bosco Bellinghausen (CEO).

With the "Music Journey" technology, based on the use of artificial intelligence, Alissia offers a new form of streaming. The user is offered a highly personalised musical experience that directly takes into account parameters such as personal mood and situation. Payments and private data are managed and processed in a peer-to-peer (P2P) system based on blockchain technology. Communication and interaction between creative people, the music industry (labels, publishers, collecting societies) and consumers will be greatly simplified.

Contact: info [at] alissia.io

https://alissia.io

8.1.3.2 Allez Hop Summit

Being the first and by now only one of its kind, Allez Hop is organised by STARTUP Mannheim, the French Embassy in Germany and the French Ministry of Culture in Paris. It aims to strengthen the French-German exchange of entrepreneurs within the cultural and creative industries as well as the facilitation of market entry for German and French start-ups in the respective market. Furthermore, it shall raise awareness for a more intense French-German cooperation within the fields of start-ups, innovation and culture and creative industries along with the launch of tangible cooperation projects. The first edition of Allez Hop! focused on Digital Futures in Culture: How does digitisation affect the culture and creative industries in general? How can start-ups be key innovation drivers on the intersection of cultural and creative sectors and digitisation? These and more topics were discussed on panels, in workshops, keynotes and round tables at Allez Hop! 2019.

Contact: info [at] startup-mannheim.de

https://www.allezhop.eu

8.1.3.3 Bitfury Surround

BITFURY | Surround

Empowering the music and entertainment industry globally through infrastructure that is trustworthy, transparent and fully interoperable.

We are building the first open and shared ecosystem for the entertainment business.

Contact: contact [at] surround.com

https://surround.com

8.1.3.4 BOARDOFMUSIC and musikunterricht.de

BOARDOFMUSIC

BOARDOFMUSIC is the open community for musicians and bands of various styles.

Our site is not only a contact point for musicians but also fans and music lovers. Musicians can find support from other creative people in the search for band members, cooperation partners, rehearsal rooms or additional information.

For those interested in music, BOARDOFMUSIC offers music reviews and stories about current topics around their favourite genres.

MUSIKUNTERRICHT.DE

On our sister portal MUSIKUNTERRICHT.DE, we also cover everything about music lessons, instruments and music theory. Also, musicians and bands can be found for engagements depending on the event and style.

Contact: kontakt [at] boardofmusic.de

https://www.boardofmusic.de

Contact: kontakt [at] musikunterricht.de

https://www.musikunterricht.de

8.1.3.5 c/o pop (Cologne on pop)

The c/o pop (Cologne on pop), launched at the end of 2003, was designed from the outset as a dual event consisting of a festival and an industry event and is organised annually by cologne on pop GmbH. The c/o pop Festival programmatically covers urban, experimental, alternative and electronic forms of pop music. The c/o pop Convention focuses on themes from the music industry, the digital media industry, electronic media and marketing strategies.

The founders come from the Cologne culture and creative industries. From its beginnings, the c/o pop concept focused on the direct involvement of local and regional participants from the music industry in the city of Cologne and NRW. The other pillar on which the overall c/o pop structure relies is the promotion of young talent. The event has always complied with this principle with a self-commitment: every year at least 50% of the programme consists of young German artists.

The parallel industry event c/o pop Convention brings together national and international trade visitors to discuss the latest developments in the music industry under the central aspect of digital transformation. The c/o pop Convention is a congress with various network formats that promotes exchange between the individual players in the music industry and other content industries at regional, national and ultimately international level. The main focus here is on activating the interfaces between the music industry and the film, TV, creative and advertising industries.

Contact: info [at] c-o-pop.de

https://c-o-pop.de/convention/

8.1.3.6 CREATIVE.NRW

CREATIVE.NRW is the network of creative people in NRW and, on behalf of the North Rhine-Westphalian Ministry of Economics, Innovation, Digitisation and Energy, is the state's competence centre for the self-employed, companies, institutions and municipalities.

The interdisciplinary team with knowledge and experience in the cultural and creative industries and the areas of strategy, consulting and communication make the creative actors and their achievements in politics and business visible, networks them with and among each other and anchors their great potential as economic innovation drivers and socio-political idea generators across industries. CREATIVE.NRW is financed by funds from the European Regional Development Fund and state funds.

Contact: info [at] creative.nrw.de

https://www.creative.nrw.de

8.1.3.7 Fraunhofer IDMT

The Fraunhofer Institute for Digital Media Technology IDMT is doing applied research in the field of audio-visual media. The Institute is known as a competent partner of the industry when it comes to developing groundbreaking technologies for the digital media domain. Together with its contracting partners, Fraunhofer IDMT develops cutting-edge solutions consistently designed to meet user requirements and expectations. At its headquarters in Ilmenau and its branch lab in Oldenburg, Fraunhofer IDMT employs over one-hundred people working on the Institute's research portfolio.

Contact: https://www.idmt.fraunhofer.de/en/contact.html

https://www.idmt.fraunhofer.de

8.1.3.8 Future Music Camp

The Future Music Camp is a conference format that focuses on exciting future topics of the music industry and in which lectures, talks, showcases, discussions and sessions can be held. On the one hand, pioneering thinkers will lecture on innovative topics, and on the other hand, current issues will be presented and discussed in sessions organised by the participants.

The Future Music Camp has two goals: Firstly, exciting topics from the present and future of the music and creative industries will be presented and discussed, on the one hand with

concrete, practical relevance, but on the other hand, there will also be room for ideas that are currently more of an inspiration. Secondly, the FMC is about networking. At the FMC, established experts from the industry meet start-ups, founders, students and people interested in music.

The Future Music Camp has always played an innovative and forward-looking role. It is one of the reasons why the FMC, the first BarCamp in the music industry, was launched in 2009. Right at the beginning, the interaction should lead to a higher exchange with the audience and not just one-sided lectures. Due to the Barcamp character, the FMC was able to benefit from all participants and not only from the invited experts.

Contact: steffen.geldner [at] popakademie.de

https://www.futuremusiccamp.de

8.1.3.9 GEMA

Composers and lyricists – the authors of musical works – as well as music publishers are united under GEMA's umbrella. GEMA, a collective management organisation, manages remuneration claims and entitlements of its members at a global level, wherever their copyright-protected musical works are used. At the same time, it is active in numerous funding projects for a diverse musical culture. It stands up and campaigns on behalf of its members in the political arena to ensure copyright is appreciated in future; it also contributes to increasing society's awareness for the value of creative undertakings. It is not just some 70,000+ GEMA members that benefit from GEMA's activities; in fact, nearly two million rights owners from all over the world also enjoy these benefits by virtue of representation agreements GEMA has concluded with collective management organisations from other countries.

Contact: https://www.gema.de/kontakt/

https://www.gema.de

8.1.3.10 Hamburg Creative Society

More knowledge, space, financing and innovation for Hamburg's creative minds – this is the mission to which Hamburg Kreativ Gesellschaft, an institution of the Free and Hanseatic City of Hamburg, is committed. Since our founding in 2010, we see ourselves as a central point of contact for all players in Hamburg's creative industries. In addition to workshops, lectures and networking events, we also offer individual consulting, coaching, crowdfunding and assistance in financing and finding suitable workspaces for authors, filmmakers, musicians, visual and performing artists, architects, designers, game developers and all other professional groups from the eleven submarkets of the creative industries. Some of our offers and events expressly aim at students of creative courses of study.

Meeting eye-to-eye creates space for new perspectives, visionary thinking and innovative approaches. That is why we continuously develop new offers in our Cross Innovation Hub with which we specifically encourage creative and other industries to engage in exchanging ideas. At our hackathons, business minds code with creative artists, in our bar camps, employees from large corporations engage in dialogue with creative freelancers, and in our work shadowing programme, bank executives and design experts look over each other's shoulders. In our Cross Innovation Hub, we develop new solutions for an increasingly complex world of life and work.

Contact: info [at] kreativgesellschaft.org

https://kreativgesellschaft.org

8.1.3.11 I-D Media AG

I-D Media AG is an independent, owner-managed digital agency based in Cologne. We are specialists in enterprise content management systems such as OpenText Web Site Management FirstSpirit and Sitecore. We use Magento for setting up web shops. Since 1988, I-D Media has been serving well-known international clients. Together with reliable partners, we operate as a full-service digital agency in the I-D Media Group.

Contact: contact [at] idmedia.com

https://www.idmedia.de

8.1.3.12 JAAK

At JAAK, we are building a blockchain network that will allow the music and media industries to collaborate on a global view of content ownership and rights.

Common infrastructure enables a new approach: simplifying content licensing on the web, unlocking a world of new content experiences, and revealing previously untapped opportunities for the content industries.

Contact: yo [at] jaak.io

https://jaak.io

8.1.3.13 jamahook

Jamahook is a new innovative technology audio company that creates bound-breaking algorithms and AI in audio music recognition, analysis and recommendation of loops, with the concept of bringing together sounds that match. With the approach of "sound finds sound" Jamahook is at the forefront of democratizing the music creation process.

Our target group are professional music producers and established artists as well as amateurs on the search for more creativity, productivity or simply for more fun. We develop technologies to foster the creative process, discover artists and open up music creation to a wider audience. We democratize music creation on a higher level.

Our technology partners are Fraunhofer IDMT, the inventors of the MP3 audio format. The sound-matching algorithm and automated audio annotation tool are embedded in an online portal that can be used by anyone interested in making music, and with our API and VST Plug-in we are offering our unique services to audio software companies, DAW's and loop libraries. Individual use cases, according to the needs of the business partner, are evaluated and implemented.

Jamahook has the only sound-matching algorithm on the market and acts as the interface between audio content and music end product.

Contact: support [at] jamahook.com

https://www.jamahook.com

8.1.3.14 Le Bureau Export

Created in 1993, Le Bureau Export is a non-profit professional organisation with the aim of developing music *Made in France* all around the world.

For over 25 years, Le Bureau Export has worked hand-in-hand with French music industry professionals to develop the international careers of their artists, supporting hundreds of *Made in France* artists every year.

With a home office in Paris and a network of four satellite offices in Berlin, London, New York, and São Paulo, Le Bureau Export's team is in constant interaction with both French and international professionals, offering their expertise to help take Made in France music worldwide.

In 2019, Le Bureau Export has 600 professional-members using its services. More than 500 projects have benefited from its support – advice, networking, logistical support, promotional and financial support and more.

Le Bureau Export is a member of *European Music Exporters Exchange* (EMEE).

Contact: contact [at] lebureauexport.fr

https://www.lebureauexport.fr

8.1.3.15 melodrive

We're a team of PhDs and researchers with extensive industry experience in AI, audio, music technology and video games.

We love working on groundbreaking projects – like building Melodrive Indie, our AI engine that automatically generates music for video games in real-time. However, our range of expertise means we can adapt to virtually any business.

We only choose promising projects at innovative companies looking to revolutionise their industries.

Contact: enquiries [at] melodrive.com

https://melodrive.com

8.1.3.16 Membran Group

Membran was established in 1969 in Hamburg, Germany as a music retailer. Hamburg is still our home, but since then we have expanded worldwide. We now provide end-to-end services to our artists and labels including both physical and digital distribution, CD and vinyl manufacturing, logistics and warehousing, marketing, promotion, and an array of label services, all on a global scale. Artists that have signed to, or worked with Membran have been nominated for numerous awards across all genres, including 8 Grammy nominations in 2017 alone. We have a passionate team of people working with us around the world who love music and take pride in building relationships with our artists and labels and making the most success of each release we manage.

Contact: http://www.membran.net/info/#enquiries

http://www.membran.net

8.1.3.17 MOD Devices

MOD Devices' founder, Gianfranco Ceccolini had a dream: having a multi-effects pedal that would never run out of effects, did not need a computer to be brought on the stage and could withstand the scrutiny of audiophiles everywhere. He set out to design a digital pedal that would provide more creative freedom and be more practical for live playing.

With the help of free software developers, the MOD ecosystem came to life, combining analogue-digital hybrid hardware, an intuitive graphical interface, a Plugin Store and the Pedalboard sharing platform. After an initial product launch in Brazil that led to a successful Kickstarter campaign for the MOD Duo in 2014, MOD Devices is now based in Germany and has assembled an experienced and talented international team.

Contact: https://www.moddevices.com/contact

https://www.moddevices.com

8.1.3.18 Music Pool Berlin

Music Pool Berlin is the central place to go for musicians and people working in the music business, living and working in Berlin. The consultations and training offered by expert professionals and key players in the music scene will supply musicians with information and experience, professional development, as well as network opportunities direct from within the scene. The goal is to help each musician with tools and knowledge to be better equipped to make a living in the current music business. Music Pool Berlin is a cooperation project by all2gethernow (http://all2gethernow.de/) and Clubcommission (http://www.clubcommission.de/).

Contact: https://musicpoolberlin.net/en/contact

https://musicpoolberlin.net/en/

8.1.3.19 Musicovery

Musicovery is a high quality and comprehensive music recommendation engine, very easy to integrate through its API.

It provides four types of services:

- descriptive metadata on artists and tracks (genres, moods, era, geographic, acoustics descriptors and more);

- recommendations and playlists, personalised in real-time;
- web-services to provide specific content (recommendation of live concerts, recommendation of playlists, YouTube channels and more);
- advice on data analysis, algorithms, recommendation optimisation, metadata sourcing and music UX design.

With more than ten years of experiments on how to provide intuitive, rich and smart radios, how to make sense of behavioural data and produce accurate, descriptive metadata on music content, Musicovery is in a unique position to provide a comprehensive recommendation engine. It generates any kind of recommendations and playlists: from a mood, a song, an artist, a subgenre, a theme, a place, or for a specific listener.

Musicovery measures the quality of recommendations and playlists with an analytic tool that optimises recommendations and playlists to each listener.

Recommendations and playlist are provided through an API, very easy to integrate, especially for prototyping new innovative UX.

Contact: b2b [at] musicovery.com
http://b2b.musicovery.com

8.1.3.20 Federal association music technology Germany registered association.

The Federal Association of Music Technology Germany "MusicTech Germany" represents the common interests of hardware, software and service providers in the field of music-technology in Germany. The members of MusicTech Germany are as diverse as the industry itself. Our members are start-ups and corporates, artists and makers, event organisers and curators, developers and designers, manufacturers and service providers, as well as business, science and research experts.

Our goal is the promotion and further development of a powerful and internationally competitive music-technology industry in and outside of Germany within a joint organisation in an association. As syndicate of this industry, we target to increase the corresponding regional and national value creation beyond the

traditional music ecosystem and to extend the network with national and international industry representatives and participants. We want to create the best possible infrastructure for start-ups and creative people to foster innovation through collaborations.

Contact: info [at] music-tech.de

http://www.music-tech.de/en/

8.1.3.21 Digital Sales Services (DSS)

The Digital Sales Service (DSS) is an individually adaptable service for distributors and labels from the digital entertainment industry. The core is the standardisation and normalisation of original billing data from the download and streaming area. With over 150 implemented download, streaming and cloud shops, the DSS is the ideal tool for preparing digital sales reports.

The development of the DSS took place in cooperation with the Leverkusen-based de_zwei_drei GmbH, which has been responsible for the technical support of the DSS since its launch in 2010. The service includes a qualitative review of download and streaming sales reports. The different formats are standardised for easier further processing. The continually changing data formats of download shops and streaming providers are being adapted.

Individual, detailed error and correction reports are generated automatically, and article master data is added. PHONONET is successfully operating the innovative service for the digital business of major companies, indie distributors and e-book distributors. The 150 shops integrated to date are continually being followed by more.

Contact: Jonas Böker / jboeker [at] phononet.de

https://www.phononet.de/produkte/dss-digital-sales-service/

8.1.3.22 RepertoireConnector (RepCon)

The Repertoire Connector helps the music industry to enforce their rights to tracks easily. It connects the PHONONET databases of the MPN, DigiAS and eMedia Catalog with data stocks of the labels. Thus, the Repertoire

Connector offers a unique metadata catalogue that makes collaboration much easier for labels and collecting societies.

Labels can manage their metadata and control the transfer of data to collecting societies. Feedback from the collecting societies can be processed systematically; no further software is required for communication. Collecting societies receive standardised data from a single source.

Contact: David Hoga / dhoga [at] phononet.de

https://www.phononet.de/produkte/repertoire-connector/

8.1.3.23 PopRat Saarland

The PopRat Saarland is a *wild bunch of* musicians, artists, publishers, authors, producers, concert organisers, gallery owners, music journalists, agency managers, label heads, studio owners, club owners, gamers, fantasists, filmmakers, dancers and more; it is a powerful creative network.

The PopRat celebrates all facets of pop culture. With his networking and project work he draws attention to the fact that the impact and radiance of pop culture serves the Saarland and that pop culture draws the attention of young people to the Saarland. Pop culture lighthouses attract young and creative people to Saarland and can also bind them here if these lighthouses are clustered and strategically promoted with common sense. This is what the PopRat is committed to with its ideas and its members.

Contact: https://www.poprat-saarland.de/kontakt/

https://www.poprat-saarland.de

8.1.3.24 Resonate

Resonate is building a new music economy based on fairness, transparency and cooperation. Resonate is rewiring the music industry.

For listeners, Resonate involves owning something of real value in a digital economy. It's also about resisting the urge to treat music as nothing more than audio wallpaper. It is about rediscovering and engaging music as art made by real humans.

Pay for what you play — it's cheaper.

For artists, this means owning their work and owning their networks. Resonate is about fairness and control; we allow creators to set the terms on which to distribute their art.

For industry, we are rewiring terms of business, transforming an industry that is currently based on exclusivity and inequity into one based on openness, transparency, and collaboration.

For everyone, this is about co-owning a platform. We think that this one-member, one-vote system gives everyone a voice, and it crucially supports the community.

For all the right reasons. This is the mission. This is our purpose.

Contact: https://resonate.is/contact-us/
https://resonate.iss

8.1.3.25 SACEM

The Society of Authors, Composers and Publishers of Music (SACEM) aims to represent and defend its members' interests with a view to promoting musical creation in all its forms (from contemporary music to jazz, rap, hip-hop, French chanson, film music, music for video, etc.) along with other repertoires (humour, poetry, dubbing, subtitling, etc.). Its key mission is to collect royalties and distribute them to authors, composers and publishers whose works are disseminated or reproduced. A private organisation, Sacem, is a non-profit entity managed by creators and publishers of music elected to its Board of Directors.

It has 164,840 members, including 20,012 creators from outside France (3,830 new members in 2017) and represents over 121 million works from the global repertoire.

In 2017, Sacem distributed royalties to 300,000 authors, composers and publishers worldwide for more than 2.4 million works.

Contact: service.de.presse [at] sacem.fr

https://www.sacem.fr/en

8.1.3.26 Safe Creative

Safe Creative is a company offering since 2007 technological systems for the generation and management of copyrights evidence in the most innovative, efficient and advanced way.

The project which has the support of tens of thousands of creators, companies and institutions around the world, has become habitual interlocutor and reference point regarding policies and other aspects of copyright issues.

Thanks to the extensive experience of having performed millions of registrations made, a dedicated and experienced team and a permanent interaction with users of the platform, Safe Creative is a living project that adapts and anticipates the necessary changes to meet the challenges of copyright in both digital and analogue environments.

Contact: https://www.safecreative.org/contact

https://www.safecreative.org

8.1.3.27 Supermarket Berlin

SUPERMARKT was founded in 2010 by Ela Kagel, David Farine and Zsolt Szentirmai as a platform for digital culture, collaborative economies and new forms of work. SUPERMARKT found its first home base in an abandoned grocery store in Berlin-Wedding in the year 2011. For years later, the team moved on to the current SUPERMARKT location at Mehringplatz in Berlin-Kreuzberg. This new location is a site for workshops, conferences, community gatherings and collaborative work.

SUPERMARKT's program increasingly focuses on the intersection of technology, money and society. The Free Culture Incubator program, which was developed in conjunction with the Transmediale Festival for Arts and Digital Culture, was the starting point for an ongoing

exploration of the price and value of freelance creative work and the increasing financialisation of our culture.

The conference series WORKAROUND has put a highlight on new forms of work and self-organisation of freelancers and artists. The workshop series Arts & Commons triggered a widespread debate on emerging financial technologies, peer to peer-economies and digital networking within the arts.

SUPERMARKT is an independent project space. If you are interested in collaborating with us or if you are planning an event which fits our programme, please get in touch.

Contact: info [at] supermarkt-berlin.net

https://supermarkt-berlin.net/en/

8.1.3.28 tamanguu

tamanguu helps you to be top of mind of your most important contacts. Relationship building with more productivity, efficiency and quality.

tamanguu is the solution:

- for all those who want to take their business relationships and networking to a new level;
- for those who want to make their relationship management more productive and efficient;
- for all those who have a vast network but lose focus and overview;
- for those who don't have much time for networking, but at the same time know how important a strong network is for their business.

Contact: info [at] tamanguu.de

https://www.tamanguu.com

8.1.3.29 Technoport SA

Technoport® Ltd. was set up back in June 2012 as the result of the merger between the former Technoport®, a technology-oriented business incubator launched by the Public Research Center Henri Tudor back in 1998, and Ecostart I and II, business support infrastructures developed since 2004 by the Ministry of the Economy and Foreign Trade.

The global mission of Technoport® is to help and support individuals and small teams to validate and bridge their ideas to success through three platforms:

- the technology-oriented business incubator;
- the coworking;
- the fab lab.

Through these platforms, Technoport® aims to achieve its goal to foster creativity and innovative activities in Luxembourg by combining tailored-made services with networks and communities of doers, infrastructures and an adequate professional business environment.

Contact: http://technoport.lu/online/www/function/accessmap/ENG/index.html
http://technoport.lu

8.1.3.30 ThoughtWorks Cologne

We are a software company and a community of passionate, purpose-led individuals. We think disruptively to deliver technology to address our clients' toughest challenges, all while seeking to revolutionise the IT industry and create positive social change.

Contact: https://www.thoughtworks.com/contact-us
https://www.thoughtworks.com

8.1.3.31 University of Leipzig

Our university is one of the oldest in Europe. Numerous personalities of world renown have taught or studied here. Important impulses for the development of science came again and again from Leipzig. Today, as a member of the German U15 association, we are one of Germany's largest, research-strong and medically leading universities.

As a cosmopolitan, modern full university, we offer over 150 courses of study ranging from natural sciences, law and medicine to numerous humanities and social sciences. We combine our research strengths in the three strategic research fields "Changing Orders in a Globalised World", "Intelligent Methods and Materials" and "Sustainable Foundations for Life and Health".

In addition to the existing research activities of the faculties, the scientific orientation of the University Computer Center (URZ) was strengthened. With a focus on data management and software integration, semantic technologies and big data, the development of IT-based services as well as the integration of complex IT structures is researched in close cooperation with natural sciences, humanities, social sciences and cultural sciences.

The researchers organised within the research and development department have successfully carried out numerous collaborative research projects in various technical focal points and sectors. One focus is on research projects in the music industry, where the projects "Art-E-fact", "SynchMatch" as well as "muwistar" have given the opportunity to acquire extensive prior knowledge, which has been presented in numerous publications and implemented in practical prototypes.

Contact:

Dr. Stephan Klingner (stephan.klingner [at] uni-leipzig.de) and
Frank Schumacher (fs [at] informatik.uni-leipzig.de)

https://uni-leipzig.de
https://www.urz.uni-leipzig.de/fue/

8.2 List of figures