TROMPA

TROMPA: Towards Richer Online Music Public-domain Archives

Deliverable 6.2

Planning for the execution of pilots in real life settings

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Executive Summary

The TROMPA project aims to make public-domain music resources accessible to a broad audience of musical users: scholars, orchestras, instrument players, choir singers and music enthusiasts. To serve this broad audience, respecting requirements and interests per audience group, while at the same time making use of common procedures, infrastructure and user engagement opportunities in the necessary digital enrichment steps, such that the enrichment pipeline can be more sustainable, the project is built to have two parallel overall lines of interest. Focusing on ultimate usage, WP2 and WP6 focus on end users and their requirements with regard to user-facing prototypes; focusing on scalability, WP3 and WP4 focus on automated content processing and user-in-the-loop engagement opportunities, respectively, with WP5 identifying common infrastructural components to be shared across use cases, thus forming the bridge between WP2/6 and WP3/4.

In the first year of TROMPA, first progress was made in all work packages, initial requirements per use case were articulated in D2.1, and feedback on first mock-ups has been reported in D6.1. By the end of the second year of TROMPA (M24), within WP6, actual user-facing experiments should be run within each use case. The current deliverable articulates the road towards realizing this, also taking into account feedback that was given by the project reviewers during the first TROMPA review meeting in M14 of the project.

The deliverable focuses both on general planning and common interests, as well as on the main goals, first year achievements, and second year plans with action points for each individual use case.

As for general planning and common interests, three main directions are identified. First of all, with the Contributor Environment (CE) now available, and partners being able to import data into it, best practices need to be set on ontological guidelines, such that procedures for data population can be followed unambiguously. Secondly, connections need to be made between plans and models for crowd engagement and human-in-the-loop feedback tasks, as developed under WP4, and the actual audiences within the use cases. For this, narratives are being developed per use case, that can indicate how the use case can stimulate its audience members to become crowd contributors. Finally, while privacy considerations on user data are known, and first guidelines have been set up towards maintaining privacy, no actual user data has been imported into the CE yet. Within each use case, further investigation will be done into any potential use case specific protection and privacy requirements, such that the corresponding authentication and protection mechanisms that will be implemented will take this into account.

The main interest in the music scholars use case is to have TROMPA technology enable fully digital scholarly investigations of musical resources, offering linked and aligned musical data for conventional study or for computational analysis. This interest is not so much geared towards a new user-facing proposition, but more so towards enabling functionality that can facilitate individual scholarly study workflows. With the TROMPA Digital Score Edition now available, the scholars use case will focus on scholar-specific requirements for annotations of digital scores, as well as the digitization of existing annotations (e.g. conductor annotations in orchestral scores, also linking this use case to the orchestras use case). Furthermore, effort will be conducting to improving the

accessibility of digital musicological research objects with Music Information Retrieval (MIR) technologies and functionality (e.g. 'find similar' queries), taking 16th-century Renaissance music as a first focus of repertoire.

The main interest in the orchestras use case is to have TROMPA technology enable the establishment of a repository of public domain scores and orchestral parts in true digital form, including an application to access these. The scores should be viewable in custom ways, enrichable and printable for use by musicians, music scholars, Kenner und Liebhaber. Effort will focus on further understanding annotation and digitization needs of musicians interacting with orchestral scores; this will not only include the professional audience of consortium partner RCO, but also amateur orchestra players, thus significantly broadening the potential audience reach for this use case.

The main interest in the instrument players use case is to have TROMPA technology enabling an artificial rehearsal companion to players and ensembles, from advanced amateur/student to professional levels. Effort will focus on further improving and refining existing prototypes on note- and structural element-level alignment between scores and recordings. Furthermore, naturalistic rehearsal data will be acquired, and further workshops will be conducted to better understand the needs of rehearsing musicians. Finally, as with the music scholars use case, integration opportunities for MIR technology (in particular, audio-to-score alignment, visualization, retrieval) with the rehearsal companion will be researched.

The main interest in the choir singers use case is to have TROMPA support choir singers during individual practice. The prototype developed during the first year of the project (including score visualization, voice selection, and an audio demo of synthetic choir singing) will be further refined, integration with the TROMPA CE will be performed, a new dataset of singers will be recorded, and outreach opportunities towards public choral events and the Petrucci Music Library (IMSLP) will be investigated.

Finally, the main interest of the music enthusiasts use case is to investigate how data about emotions and context can be used to better support daily music listening activities. To this end, at first, an emotion annotation prototype will be developed and tested, both in Spain (in conjunction with public (citizen) science outreach events) and The Netherlands (in collaboration with CDR), thus having outreach towards a broad and international audience of music enthusiasts. Following this prototype, routes will be investigated into prototypes that will assist users in communicating about emotions, with the assistance of music.

Version Log		
#	Date	Description
v0.1	June 30, 2019	Initial version submitted for internal review
v0.2	September 29, 2019	Revised version after internal review and adjustments following the first project review
v1.0	September 30, 2019	Final version submitted to EU

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1. Introduction

The TROMPA project aims to make public-domain music resources accessible to a broad audience of musical users: scholars, orchestras, instrument players, choir singers and music enthusiasts. To serve this broad audience, respecting requirements and interests per audience group, while at the same time making use of common procedures, infrastructure and user engagement opportunities in the necessary digital enrichment steps, such that the enrichment pipeline can be more sustainable, the project is built to have two parallel overall lines of interest. Focusing on ultimate usage, WP2 and WP6 focus on end users and their requirements with regard to user-facing prototypes; focusing on scalability, WP3 and WP4 focus on automated content processing and user-in-the-loop engagement opportunities, respectively, with WP5 identifying common infrastructural components to be shared across use cases, thus forming the bridge between WP2/6 and WP3/4.

In the first year of TROMPA, first progress was made in all work packages, initial requirements per use case were articulated in D2.1, and feedback on first mock-ups has been reported in D6.1. By the end of the second year of TROMPA (M24), within WP6, actual user-facing experiments should be run within each use case.

To allow for this to be executed smoothly, this document outlines the planning steps towards M24 to realize these experiments. Chapter 2 will discuss general planning and common interests, being of relevance to all the use cases, while Chapter 3 will zoom in to the planning for the music scholars use case, Chapter 4 to that of the orchestras use case, Chapter 5 to that of the instrument players use case, Chapter 6 to that of the choir singers use case, and Chapter 7 to that of the music enthusiast use case. In all use case specific chapters, the same outline will be followed, in which we first will summarize the progress made in the first year of TROMPA, then describe the plans for the second year of TROMPA, followed by a list of concrete action points, involved parties, and a timeline of expected completion.

Originally, this document was due in M14 of the project, but an extension to M17 has been granted. This was due to the first project review having taken place in M14 of the project too; as a consequence, following reviewer feedback, some initial plans had been adjusted. In comparison to the earlier planning, care has been taken to synchronize common work over multiple use cases (for example, the scholars and orchestra use case have similar interest with regard to scores that can be annotated; within the scholars use case, the interest is more strongly on functionality than a user-facing interface, while for orchestra musicians, this interface would be more important). Furthermore, more consideration has been put into ways to not only involve professional audiences, which e.g. is exemplified under the orchestras use case, which now also will involve members of amateur student orchestras.

2. General planning and common interests

Following the early requirements and user stories from WP2 (as reported in D2.1), and the feedback received so far from user-representative partners and prospective users (as reported in D6.1), next steps need to be performed now towards the piloting of concrete prototypes relating to the use cases. In year 1 of the project, these prototypes should have shown to be of concrete potential interest for audiences in the use cases; in year 2, we now will work on further refinement, as well as integration with insights from WP3 and WP4, and infrastructural components from WP5.

Generally speaking, the overall planning is as follows:

- By M18, requirements and user stories should be finalized for all use cases (D2.2). Technical success criteria should also be defined by then (D2.3), so it is clear how integration of components and knowledge can be performed and assessed in the pilots to be run. This marks the **second milestone** of the project, as detailed in the Technical Annex to the TROMPA Description of Action, Table 3.2d.
- By M24, each use case delivers a write-up of presently working and running prototyping actions (D6.3-6.7 v1). By that time, evaluation with users should start. This marks the **third milestone** of the project.
- By M27, a mid-term evaluation will be reported on (D6.8), allowing for a next iteration on the prototyping actions.
- By M34, the **fourth milestone** of the project will be reached. Here, it will formally be reported how insights from the mid-term evaluation led to new iterations over the pilots (D6.3-6.7 v2).
- By M36, the final, **fifth milestone** of the project will be reached, and final evaluation results will be published in D6.9.

Each of the use cases have their own, dedicated audiences. While we have considerable outreach potential through Associated Partners (AP) and the Advisory Board (AB), in the first year, we deliberately chose to restrict to local audiences first. In the second year, **clear propositions including incentivisation and sustainable engagement strategies** should be established (see D4.3-2, to be delivered in M18), such that the larger audience reach can indeed be fostered, and a true user community can be built.

In the coming chapters, plans will be outlined for each of the use cases. In the remainder of this chapter, several common interest points will be highlighted.

2.1. Establishment of ontological guidelines

Following the delivery of D5.1, the Data Infrastructure of the Contributor Environment (CE), the CE should now concretely be populated. In doing this, the consortium identified the need to establish **ontological guidelines**, to ensure that the interpretation of the data model is consistent across use cases.

In the M12-M18 period, the user representative partner in each use case will be required to start importing concrete data relevant to the use case into the CE, and identify any ontologically related questions in doing this. The discussion will be monitored by the Data Officer of TROMPA. As a consequence, ontological guidelines will be published by M18 of the project.

2.2. Engagement of the crowd community

The intention of TROMPA is to bridge human and machine computation. Beyond traditional contributors to human computation, who are either specialized experts (who are scarce and expensive) or microtask crowdworkers (who are a large but unknown audience, who may not reliably perform or return), the TROMPA vision is that end-users of applications enriched through TROMPA technologies can be engaged to support the human computation steps too.

Within WP4, a first proposal for modeling human annotators with compatibility to users in all possible use cases has been made in D4.2; next to this, a TROMPA model is being established for incentivisation of crowds following the principles of the most relevant motivation theories from social sciences, namely the Expectancy theory and Self-Determination theory in D4.3-1. Now, in M12-24, steps have to be taken to connect these to WP3, WP5 and WP6.

Considering the connection to WP6, a more concrete articulation is needed of **how to get the various user audiences in the pilots to contribute their insights in an engaging and sustainable way**.

To this end, by M18 of the project, each use case representative is required to propose a **narrative** of how their intended user audience can be engaged to contribute. For example, a choral singer wishing to rehearse with a synthesized choir may be asked to assist building a rehearsal score first.

The narratives will be connected to proper incentivization mechanisms as reported under D4.3, and mock-ups will be designed and tested to integrate crowd contribution steps within each of the user-facing pilots in proper ways. First implementations and integrations of these crowd engagement mechanisms should be available in the M24 versions of use case specific prototypes.

2.3. Privacy and authentication

The current version of the CE does not yet have user authentication implemented. Both in light of future licensing opportunities, as well as privacy-related concerns (e.g. people practising music may be willing to share practice-related knowledge, but no personally identifiable details of their own practice runs), this will need to be addressed. Generally, the outline for this protection is addressed in both D1.5 (POPD - Requirement No. 5) and D8.4 (Data Management Plan). Within each use case, any use case specific privacy and authentication mechanisms should be mapped by M24 (meaning these also should be attention points in any forthcoming user workshops), such that concrete, TROMPA-wide implementations of the necessary mechanisms can be made in time.

3. Music scholars

The main interest in the music scholars use case is to have TROMPA technology enable fully digital scholarly investigations of musical resources, offering linked and aligned musical data for conventional study or for computational analysis.

3.1. Steps performed in year 1

With the interest of the music scholars mostly being geared towards further support of dedicated, individual study workflows, in year 1, it was decided that no user-facing pilot would be developed and run under this use case. Instead, the scholars case would rather focus on contributing requirements, refinements, data and ontological insights with relation to scholarly research objects, making use of existing TROMPA resources and affordances.

An essential step towards being able to treat digital scholarly objects is the capability to represent and process annotations of the score, coming from various sources (e.g. different public-domain editions of the score, and commentaries, etc., by different people who interacted with the score). The role of the Digital Score Edition component in TROMPA (D5.2) is to facilitate this as a general component, as this functionality will also be useful in other use cases, and beyond scholarly purposes (e.g. to represent annotations made by performers of a work).

While the Digital Score Edition (DSE) component was delayed within the project in year 1, a first version now has been delivered that can be used, integrated and further refined in relation to planned prototyping actions.

3.2. Main focus points towards M24

In the second year of the project, the effort of the scholars will have two main directions:

1. Increase the understanding of requirements for scholarly digital annotations and editions, with the 4th symphony of Gustav Mahler as example case.
2. Contribute data and enable scholarly music access and discovery functionality, connecting the TROMPA ecosystem with Early Music resources, which have been under long-time investigation at GOLD.

With regard to the first topic, a digital (Finale) score of the Mahler 4 symphony already has been made available by RCO; however, this score was manually digitized in the traditional fashion (a single person entering all information from a physical score), and it does not include performance annotations (such as a conductor's markings). However, such annotations do exist; as one example, the Netherlands Music Institute holds a score with annotations by conductor Willem Mengelberg. These annotations (as well as the connection between the annotations and actual musical performance) are of interest to scholars, performers and enthusiasts alike.

With regard to the second topic, 16th century Renaissance works will be imported into the TROMPA Contributor Environment, requirements for studying these works in truly digital fashion will be gathered and used to refine data models and the digital score edition component of WP5. Furthermore, efforts will be undertaken to enable access and discovery of the Renaissance repertoire in a TROMPA-compatible way, considering possible OMR resource imperfections, making use of content-based indexing by applying Music Information Retrieval processing techniques, and recording search workflows and provenance.

3.3. Actions, involved parties and timeline

Mahler 4

Action	**Involved parties**	**To be completed in**
Transform the existing Mahler 4 Finale score to the MEI format	MDW	Fall 2019
Obtain the Mengelberg score from the Netherlands Music Institute	RCO	Summer 2019
Have Mahler experts (e.g. Dr Paul Banks) study the Mengelberg score, give input on how to digitize and use the Mengelberg annotations, and suggest what multimodal resources should be linked to a score like this.	GOLD	Fall 2019
Propose digital scholarly edition functionality on the Mahler 4 symphony in a working prototype	Partners in the Music Scholars and Orchestra use cases (GOLD, RCO, TUD, VD)	Spring 2020 (M24 milestone)
Test the Mahler 4 digital scholarly edition with scholars	GOLD	Spring 2020

Renaissance repertoire

Action	**Involved parties**	**To be completed in**
Import Renaissance repertoire into the CE	GOLD	Winter 2019
Clarify requirements on Renaissance repertoire as scholarly study object	GOLD	Winter 2019

Testable ‘find similar’ functionality	GOLD	Spring 2020

For this use case, no investment in dedicated hardware (e.g. tablets) will be needed.

4. Orchestras

The main interest in the orchestras use case is to have TROMPA technology enable the establishment of a repository of public domain scores and orchestral parts in true digital form, including an application to access these. The scores should be viewable in custom ways, enrichable and printable for use by musicians, music scholars, Kenner und Liebhaber.

3.1. Steps performed in year 1

As described in D6.1, first usability tests on score-navigating and score-annotating functionalities have already been performed on mock-ups. The shown mock-ups with relation to navigation through a score library scored well in terms of usability. At the same time, some usability issues still exist with regard to annotation interaction opportunities by musicians, and the interpretation of an 'edition'. Within TROMPA, we do not seek to create a new interactive score editor, but rather want to create better data models and interaction opportunities for score annotations by any person interacting with a musical score. This will allow for a user to see a musical score in enriched ways, by being able to trigger custom views and annotated perspectives.

3.2. Main focus points towards M24

In M12-24, next steps need to be made, and a move has to be made from mock-ups to an actual application. This requires the availability and integration of several CE components (digital score edition, annotation tools), and the availability of concrete scores in a proper CE-compatible format (which also will be considered within other use cases, including the scholars and instrument player use cases).

The M24 version of the score application for orchestra musicians will therefore integrate the necessary WP5 components, fix major UX issues as identified under D6.1, and include a preliminary digital scholarly edition of the Mahler 4 symphony, in relation to advancements to be made under the music scholars use case. This also will allow for the CE to be populated with more and more realistic repertoire data.

In parallel with interactions with professional orchestra members from the RCO, contacts have been established with amateur student symphony orchestras in The Netherlands. This is very useful to the TROMPA project: it allows for the establishment of a larger engaged orchestra community, that is more dependent on the availability of playable digital scores, and that is digitally minded. Workshops will be held with this target group to understand their needs and interests with regard to digital accessibility and annotation functionality. Furthermore, this audience group will be the first target group in experimenting with human-in-the-loop feedback opportunities on digital scores, thus connecting crowdsourcing tasks as developed within WP4 to the orchestra use case.

3.3. Actions, involved parties and timeline

Action	**Involved parties**	**To be completed in**
Transform the existing Mahler 4 Finale score to the MEI format	MDW	Fall 2019
Populate CE with symphonic data	RCO, TUD, VD	Winter 2019
Workshop with amateur student orchestra members: repertoire and annotation needs	TUD	Winter 2019
Propose integration of human annotation to apply post-correction on scores	TUD	Spring 2020
Usability workshops with orchestra members (professional and amateurs)	TUD, RCO	Spring 2020

For this use case, presently, no investment in dedicated hardware will be needed; tablets already have been available for tablet interface testing.

5. Instrument players

The main interest in the instrument players use case is to have TROMPA technology enabling an artificial rehearsal companion to players and ensembles, from advanced amateur/student to professional levels.

5.1. Steps performed in year 1

In the first year of TROMPA, MDW, the lead user partner for the instrument use case, led the development of the TROMPA data model, selected and streamlined ontologies of relevance, and implemented linked data structures. As such, TROMPA is ready to handle data relevant to instrument players in year 2.

As a first step in interacting with tangible data, several Beethoven pieces and a piece by Clara Schumann (Romanze ohne Opuszahl in a minor) were encoded and hand-corrected in the MEI format, and entered into the CE. As a consequence, demo performances from the Beethoven competition were matched to relevant Beethoven scores, and on the occasion of Clara Schumann's 200th anniversary, a public demo involving note-level alignment on Clara Schumann's Romanze was released at https://trompa.mdw.ac.at.

Presently facilitated functionality involves score display (MEI rendered through Verovio), interactive page turning, selection and display of video content, selection and display of structural elements in the MEI file (sections and note heads) with display and media playback jumping to the appropriate position, and real-time score following (note highlighting and automated page turns) during media playback.

5.2. Main focus points towards M24

In M12–24, the main challenges and focus points will be:

- To further refine user requirements with musician audiences, especially with regard to annotation opportunities, and derived knowledge that a musician would want to share and consume. To this end, further user workshops will be conducted. Insights on annotation requirements will further refine the TROMPA data model.
- To acquire and include more naturalistic rehearsal data. To this end, musicians will be recruited at the mdw.
- To integrate feature extraction and visualization technology into the use case. This will be done by building upon the TROMPA processing library, which is a CE component under WP5.
- To integrate performance-to-score alignment within the CE in order to automate the process for large-scale use.
- To further include score retrieval mechanisms, and coordinate questions of alignment of resources and timelines. This closely connects with questions under study for the scholars and orchestras use cases.

3.3. Actions, involved parties and timeline

Action	**Involved parties**	**To be completed in**
Workshop on annotation requirements	MDW	Fall 2019
Acquisition of rehearsal data	MDW	Winter 2019
Testable retrieval and visualization	MDW	Spring 2020

For these tasks, no specific additional hardware is foreseen at this point.

6. Choir singers

The main interest in the choir singers use case is to have TROMPA support choir singers during individual practice.

6.1 Steps performed in year 1

During the first year, an initial but important task carried out was the organization of workshop with an expert group of singers in a collaboration between UPF and VL. The workshop allowed to evaluate and refine the first version of the pilot mock-up and wireframes and to confirm the defined requirements for the pilot.

A first version of the prototype was also developed in the first year, and the results presented in the first Review Meeting in Barcelona (June 25th). This prototype already showed score visualization with voice selection, as well as an audio demo of synthetic choir singing with an initial voice model in Catalan and Spanish.

For the new dataset of singers being recorded in Fall 2019, a number of pre-production activities were carried out: expert consultation, contacting and checking availability of professional and amateur choirs in Barcelona, selection of repertoire to be recorded, and schedule planning with 16 singers.

6.2. Main focus points towards M24

After this, towards M24, the functionality and data will be integrated with the CE, and choir singing models as developed in T3.3 will be included as well. In initial integration and data population efforts, partners in the choir singers use case already encountered several ontological questions with regard to interpretation of the TROMPA data model, so towards M18, these partners will also take initiative in supporting the establishment of the Ontological Guidelines.

In terms of growing larger user audiences, two opportunities are under discussion:

- Making the choral singing technology visible at a choral event. In Fall 2019, a concrete proposition will be prepared, with which the European Choral Association (an Associated Partner of TROMPA) will be contacted in October 2019. It will then be investigated to what extent collaboration would be possible with an upcoming large international choral event, such as Europa Cantat junior (Summer 2020) or the Europa Cantat festival (Summer 2021).
- Synthesizing parts for inclusion in the IMSLP Petrucci music library, which is an Associated Partner of TROMPA as well. Through partner PN, the IMSLP will be contacted to discuss concrete possibilities.

6.3. Actions, involved parties and timeline

Action	**Involved parties**	**To be completed in**
Choir Recording Sessions (16 professional singers)	VL / UPF / Cor Francesc Valls (BCN)	October 2019
Choir Dataset Preparation. Audio, score editing and Annotation of the Choir recordings	VL	Fall 2019
Train new voice models with the Multi-lingual Choir Dataset, and synthesize initial demo examples	VL	December 2019
Integration of automatic performance assessment from audio analysis.	VL / UPF	December 2019
Preparation of audio demos of existing scores in public repositories (IMLSP)	VL / PN	January 2020
Integration of the new Choir Synthesis engine in the use-case prototype, and Contributor Environment	VL	Spring 2020 (M24 milestone)
Workshop with expert singers to validate the use-case prototype	UPF / VL	Spring 2020 (M24 milestone)

For this use case, no investment in dedicated hardware (e.g. tablets) was needed in the first year. For the seconds Workshop, the participants will be requested to use tablets. In this case, we will consider renting options.

7. Music enthusiasts

The main interest of the music enthusiasts use case is to investigate how data about emotions and context can be used to better support daily music listening activities.

7.1 Steps performed in year 1

Under D6.1, different possibilities for end-user applications were investigated in year 1 by UPF-TIDE and PN. After the exploration done in Y1, considering the internal discussions between TROMPA partners and the review meeting, it was decided that in Year 2 the Music Enthusiasts case will be mainly focused on the research topic focused on music, emotions and contextual data, in which UPF-TIDE and CDR will be the main responsible partners. This will integrate emotional tagging and links to contextual non-musical resources (which are under study in WP3). Pilots will be done in Spain and The Netherlands.

7.1 Main focus points towards M24

Based on the D6.1 insights, a new design has been developed over the summer for this application, by M18 a first working demo will be available. The new proposal called “Emotion annotation in music” is presented as an evolved product of previous proposals following the analysis of the workshop performed in May 2019 and adjusting the requirements to the community needs. Likewise, new features have been included, and the first design has been simplified to be focused in annotations associated to emotions. Learning activities categories have been discarded for this version since workshop analysis probed to be a challenge to train or provide concrete information to the users for recognizing and selecting the suitable learning activity category, leaving the possibility for adding this feature in future versions of the use case.

In order to reduce the complexity of the use case and to generate a scalable product that can generate value for TROMPA purposes, this proposal introduces an Emotion recognition training with music tool. This approach follows a citizen science approach in which researchers (Music Information Retrieval and Social and Emotional Learning) benefit from volunteers contributions, while volunteers gain knowledge and understanding about emotion recognition. The goal of this pilot is to train students to detect emotions in music. This tool aims to develop student self-awareness and social awareness competencies via improving student abilities to notice emotions in music and communicate about them:

- Abilities to identify and distinguish emotions
- Abilities to talk about emotions
- Abilities to understand emotions such as their objective (e.g. circumplex model) versus subjective components (e.g. accumulated personal experiences).

Furthermore, users will be able to practice and share the acquired knowledge, providing their own annotations and exploring other users annotations. The interaction of the users with the platform will support research in the field of Music Information Retrieval (generated data will allow the analysis of agreement, etc.) as well as in the field of Social and Emotional Learning (design principles

of the platform will provide insights for learning designers to integrate and develop SEL core competencies).

7.3 Actions, involved parties and timeline

In terms of growing larger user audiences, the following pilots are planned for Y2:

Action	**Involved parties**	**To be completed in**
Spanish pilot - workshops organized in the context of the following events in real life settings: (1) Maker Faire (https://barcelona.makerfaire.com/en/home/, October 2019), (2) Science week (https://setmanaciencia.fundaciorecerca.cat/, November 2019), (3) Escolab (http://escolab.bcn.cat/ , different activities during 2019-2020), (4) YOMO (www.mwcyomo.com), February 2020.	UPF	2019-2020
Integration of CDR Muziekweb catalogue	UPF and CDR	End 2019
Dutch pilot - the application will be integrated in https://www.muziekweb.eu/en/ (by M18), UPF-TIDE and CDR will prepare a public launch of the application (M20) to engage the muziekweb community to use it.	UPF and CDR	End 2019 - 2020

At present, no investments are needed into dedicated hardware; the pilots above will be run on regular computers.

The music enthusiasts audience is the broadest and largest audience within TROMPA. As such, it has been more challenging to narrow down than other use cases, and beyond the current focus on music emotions, several partners within TROMPA indicated interest in other possible routes to explore, including possible exploitation opportunities.

For the time being, the main focus and effort for this use case will go to the music emotion pilot scenario as described in this section. The exploration of further applications by partners will need to be compliant with ethical and technical integration guidelines of the project, as well as the main prioritized timeline as indicated above.

7. Conclusion

In this deliverable, we have outlined both the shared and use case specific roadmaps that will allow us to have user-facing pilots ready by M24 of TROMPA. Each use case will report on pilot progress in the forthcoming D6.2-6.7. Consequently, by M24, user tests should start running, such that in M27, intermediate progress can be reported in D6.8 (Mid-term evaluation).