

# The Co-Creation Space: Supporting Asynchronous Conversation Dynamics in Remote Participatory Art

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English 

# TRACTION PROJECT:

## Opera Co-creation for Social Good



INVOLVE CITIZENS  
IN OPERA  
CO-CREATION  
PROCESS



EMPOWER SOCIAL  
TRANSFORMATION  
WITH LOW-INCOME  
COMMUNITIES



CREATE IMPACT ON  
OPERA THROUGH  
PARTICIPATORY DIGITAL  
TECHNOLOGY

# COMMUNITY TRIALS



Liceu **2015** Opera  
Barcelona

*People with disabilities,  
students, people with a  
migrant experience,  
former sex workers,  
residents of Raval*



*Young prisoners, family  
members, former  
inmates, guards,  
residents of Leiria,  
justice ministry officials*



*Irish speakers living in  
remote areas, teenagers in  
rural communities, adults  
in Tallaght and South  
Dublin*

# PROJECT TIMELINE



YEAR 1

YEAR 2

YEAR 3

# REQUIREMENT GATHERING



# 3 FOCUS GROUPS WITH 12 OPERA TRIAL LEADERS

BOOKLET PROBE (CONTEXT MAPPING) → FOCUS GROUP → THEMATIC ANALYSIS

## Task 3: Future Opera

(E.g., Community opera, co-creation in Opera, Immersive Opera)

### Authentic mass collaboration in the creation process of community opera

How can a large group of individuals meaningfully contribute to a composing/writing process? Traditionally done by one person?

Mass data representation could be one approach, but there may be others.

[https://www.ted.com/talks/david\\_mccandless\\_the\\_beauty\\_of\\_data\\_visualization?referrer=playlist-art\\_from\\_data&language=en#t-1077589](https://www.ted.com/talks/david_mccandless_the_beauty_of_data_visualization?referrer=playlist-art_from_data&language=en#t-1077589)

Idea 1

### Interactive Gamification

Compelling artistic approaches to interactivity in opera. Exploiting mechanics to gamify an operatic experience and develop an artistic idea.

Inspiration from video games with mechanics that aid narrative.

E.g. Jonathan Blow's 'Braid'



Idea 2



# OVERVIEW OF REQUIREMENTS

Code Type	Requirements
Interface	<i>Simple/intuitive interface; onboarding, Standardized tags; Feedback (commenting and tagging); Password protected user profiles; Edit profile settings after onboarding; Content moderation; Privacy settings; Mobile/Desktop Support</i>
Media	<i>Playback support for HD audio and video; Adaptable video quality for device/bandwidth context; Image previews; Transcode video files into CCS video format; Upload and store standard image and video files and 360° videos; 360° video player; Store, upload, and visualize 3D models; Timestamped media reactions; Screenshot support.</i>
Accessibility	<i>Caption overlays for videos; Subtitles/descriptions (edit offline, download, upload); W3C Compliance; Multi language translation; Offline interface that syncs with online database; Admin permissions</i>
Summary	<i>Public-facing co-creation summary timeline; Post notifications; Post thread timeline; Daily digest; Calendar schedule.</i>

**Support Divergent Elements of Co-creation:** Leaders wanted to **archive workshop materials, share different phases of co-creation**, and needed a space to support **education goals** and **cross-fertilization** activities. Supporting uncertain timelines was likewise important.

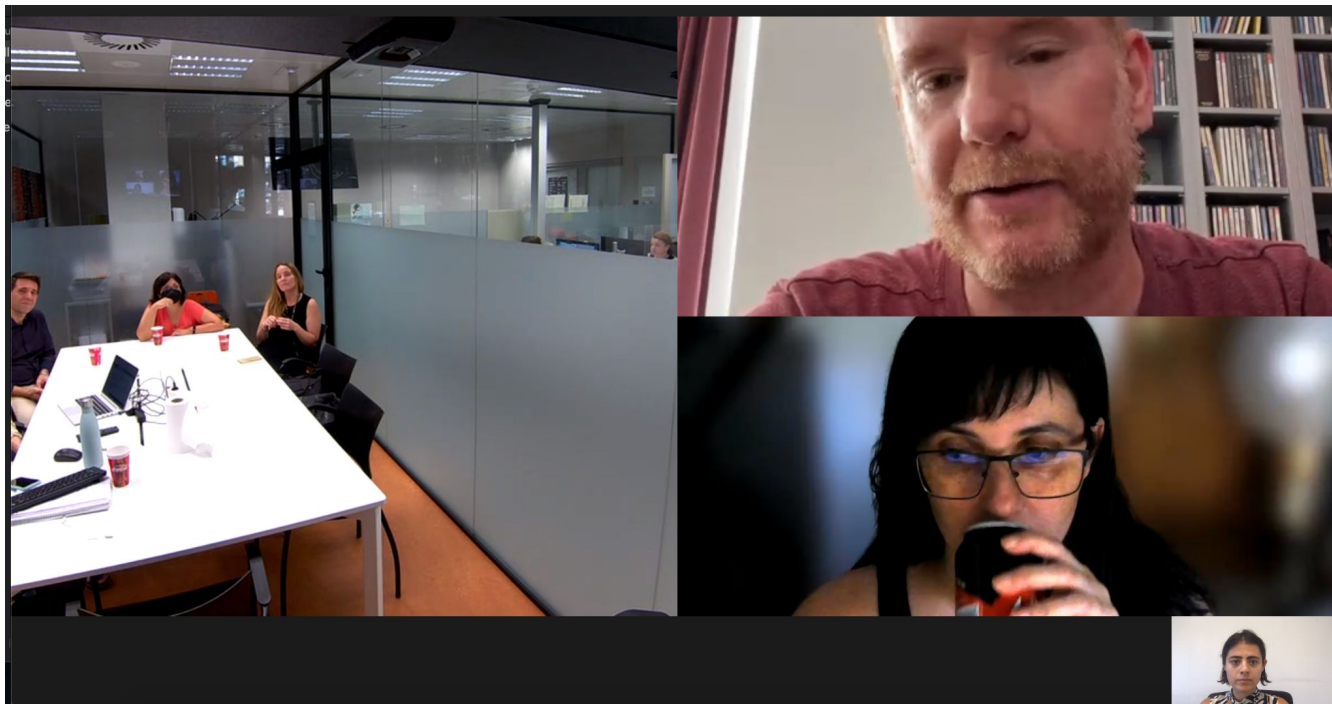
**Building Relationships :** Helping participants connect remotely was important for **building trust and community relationships**. We found that dignified communication created lasting impact.

**Technology Flexibility:** Community participants had **limited technology access**, and relied on mobile experiences rather than expensive computers. In complement to this, participants required an **interface with minimal learning**, and access to content in a **variety of languages**, as well as the ability to subtitle and translate text.

**High-Quality Audio:** Leaders wanted to **maximize audio quality** to feel the physical sensation of the singers.

# USER CENTERED PROCESS

USER PERSONAS → USE CASES → STORYBOARDS → WIREFRAMES





# PERSONA EXAMPLES

**Elena**

**AGE:** 50  
**OCCUPATION:** User of the occupational center, participant of the Creativity Workshop  
**LOCATION:** She lives in Barcelona with her mother

**LANGUAGES, COMMUNICATION SKILLS**

- Catalan and Spanish although with difficulty speaking
- User of SAAC (alternative system to increase communication)

**MOTIVATIONS**

- Elena is very motivated too, and open-minded woman who is interested in living new experiences

**RELATION WITH OPERA**

- She went once to the opera in a guided visit many years ago. She never saw an opera

**EXPECTATIONS WITH THE PROJECT**


- Be able to relate to the environment
- Improved self-esteem
- Self-government

**OTHER RELEVANT USER CHARACTERISTICS**

- Interested in using technologies and use them in his daily live
- Technology user as support for communication and as a work tool.

**TECHNOLOGY**

- Familiarity with VR headsets:  none  a lot
- Familiarity with Social Networks:  none  a lot
- Familiarity with social video sharing:  none  a lot
- Familiarity with mobile devices:  none  a lot
- Familiarity with desktop devices:  none  a lot
- Openness to use technology:  none  a lot
- Interest in using technology:  none  a lot



**Judit**

**AGE:** 22  
**OCCUPATION:** Student of 4th Degree in Massana School  
**LOCATION:** Barcelona and surroundings

**LANGUAGES, COMMUNICATION SKILLS**

- Catalan, Spanish and English

**MOTIVATIONS**

- Very motivated because she's a digital native who had interacted with digital technology since the early stages of childhood
- Happy to use of methodologies based on contact with the creators of Sinia and the observation and experimentation of the realities that shape its specific context.

**EXPECTATIONS WITH THE PROJECT**

- Find new ways to express herself through artistic creations.

**RELATION WITH OPERA**

- Non a Regular opera user
- She went once to the Liceu to see Puccini's opera Tugendot through the social tickets for young people "Liceu Under 35".

**OTHER RELEVANT USER CHARACTERISTICS**

- Judit already had previous experience in projects developed in specific social contexts and from real experiences.
- She has a remarkable knowledge and mastery of their

**TECHNOLOGY**

- Familiarity with VR headsets:  none  a lot
- Familiarity with Social Networks:  none  a lot
- Familiarity with social video sharing:  none  a lot
- Familiarity with mobile devices:  none  a lot
- Familiarity with desktop devices:  none  a lot
- Openness to use technology:  none  a lot
- Interest in using technology:  none  a lot



**Oriol**

**AGE:** 44  
**OCCUPATION:** User of the occupational center, participant of the Creativity Workshop  
**LOCATION:** Assisted living flat in Barcelona for people with disabilities

**LANGUAGES, COMMUNICATION SKILLS**

- He understands Catalan and Spanish but with no speaking
- User of SAAC (alternative system to increase communication)

**MOTIVATIONS**

- Oriol is very motivated and anxious to participate in something he never did before

**RELATION WITH OPERA**

- Regular opera user
- He assists as a spectator at the Liceu through the social program Apropa Cultura

**EXPECTATIONS WITH THE PROJECT**

- Find new ways to express himself through artistic creations.

**OTHER RELEVANT USER CHARACTERISTICS**

- Interested in using technologies and use them in his daily live
- Technology user as support for communication and as a work tool.
- Oriol is a person with cerebral palsy, with several physical limitations but with his own abilities.

**TECHNOLOGY**

- Familiarity with VR headsets:  none  a lot
- Familiarity with Social Networks:  none  a lot
- Familiarity with social video sharing:  none  a lot
- Familiarity with mobile devices:  none  a lot
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- Interest in using technology:  none  a lot



**Bridgid Ó Flaitheartaigh**

**AGE:** 50  
**OCCUPATION:** Manual Work – Farming and knitting  
**LOCATION:** Inis Meáin (Rural)  
**ROLE:** Community Participant

**MOTIVATIONS**

- She wants to keep activity alive in the island
- She wants to invest in and maintain the local heritage and identity of the island
- She wants to ensure there are valuable experiences for the children in the local area to engage with

**RELATION WITH OPERA**

- Minimum relationship with the theatre and the opera. No knowledge of INO

**EXPECTATIONS FOR THE PROJECT**

- Very motivated to see the outcome.
- She is proud to be a part of it and have her community represented as she has been part of the process

**OTHER RELEVANT USER CHARACTERISTICS**


- She uses technology to connect with the world outside the island but is not a high level user
- She is nervous of VR – thinks she might feel nauseous

**TECHNOLOGY**

- Familiarity with VR headsets:  none  a lot
- Familiarity with Social Networks:  none  a lot
- Familiarity with social video sharing:  none  a lot
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**LANGUAGE**

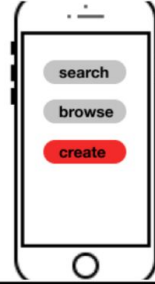
Irish / Gaelige



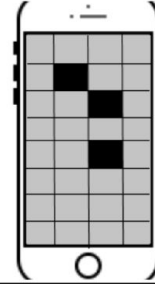
# STORYBOARD EXAMPLES



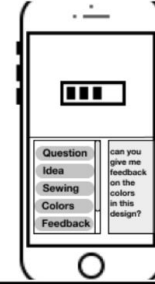
DONA artist records video of sewing, asking questions about the technique



They open the mediavault app and click on "create" content



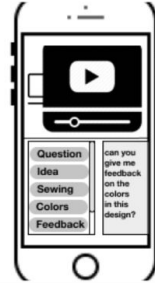
They Select Images and videos in the popup screen to upload to the App



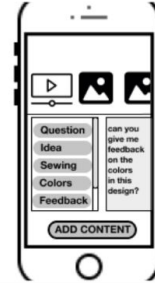
Add predefined tags + summary while waiting for content to upload



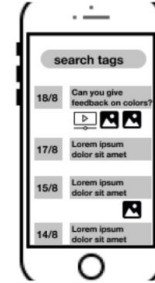
They click on the video to preview



Preview Video as as popup, then exit out of the popup

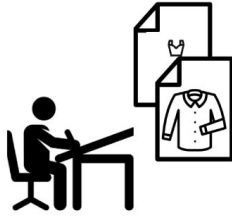


They click "Add Content" when they are satisfied with videos

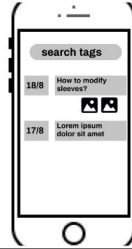


Content and summary are added to timeline as a most recent post

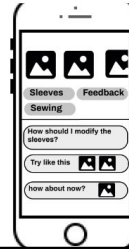
# STORYBOARD EXAMPLES



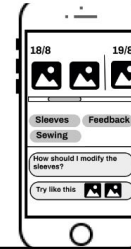
Student Creates sketches of a new costume



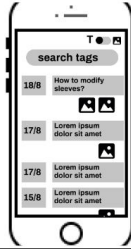
Question gets posted to costume thread with images of the sketches



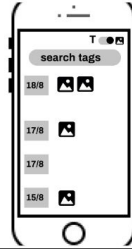
Back and forth responses to the post



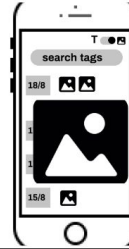
Above the post, images form a scrollable timeline with post dates



Costume thread can toggle between a "text" view and "visual timeline" view

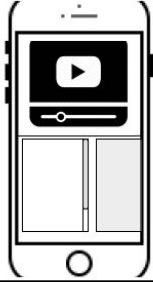


User toggles to the timeline view to previews of timeline images

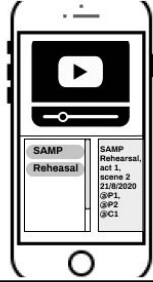


User can scroll over icon to get popup of the full image

# STORYBOARD EXAMPLES



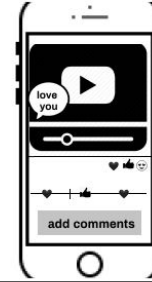
A new video of a SAMP rehearsal is posted online



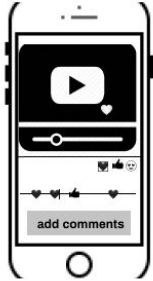
A SAMP facilitator tags everyone in the video, and adds relevant tags



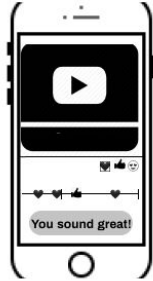
Mother receives notification that her son was tagged in a video



She watches rehearsal, and sees a comment pop up at a timestamp

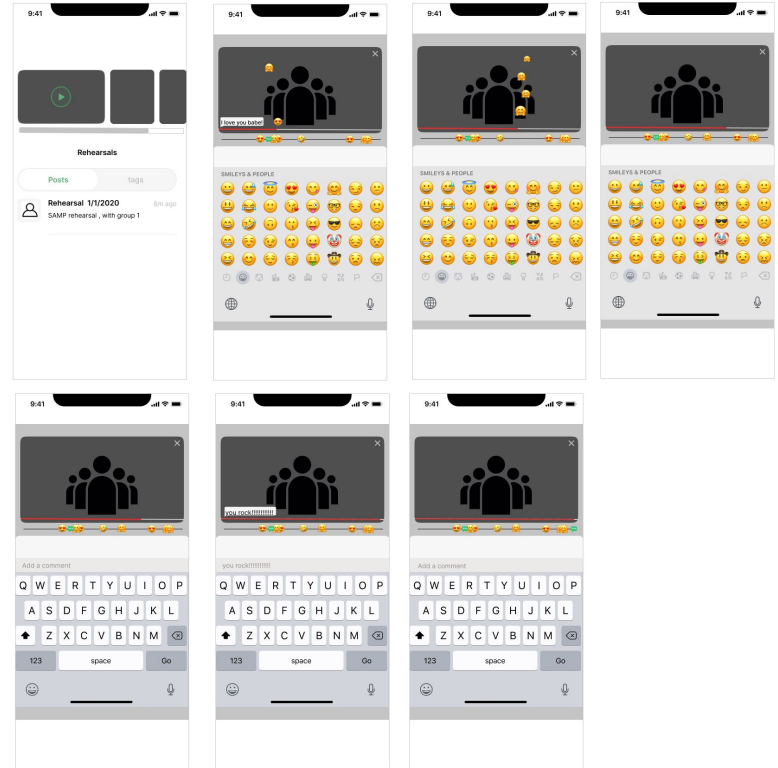
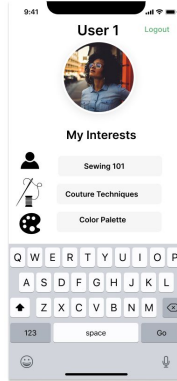
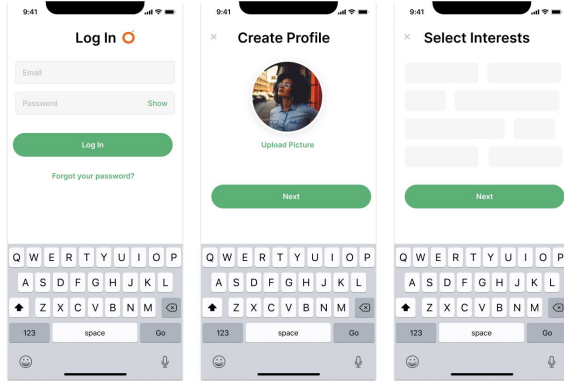
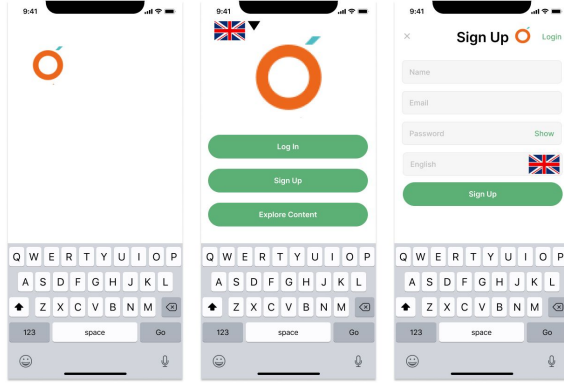


when she sees her son, she adds a heart emoji - it floats on the screen and gets added to the timeline

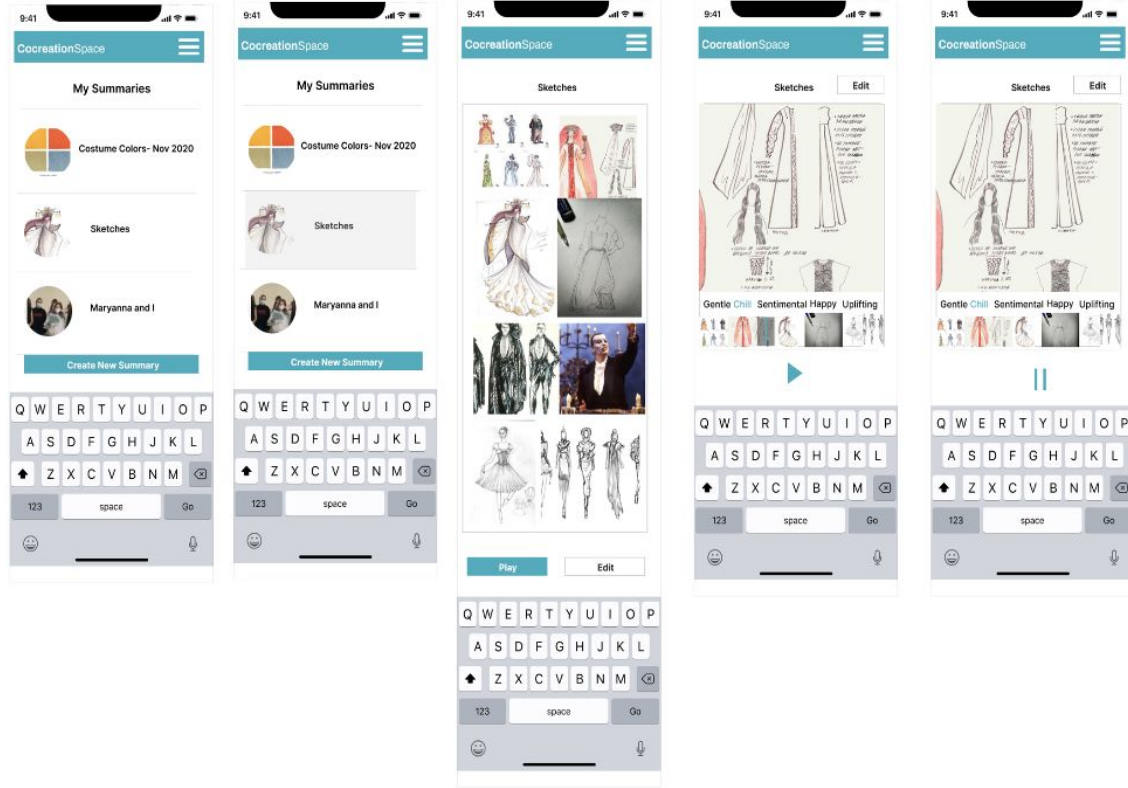


When the video is over, she adds a comment, which is represented at the end of the timeline, and shown below the video

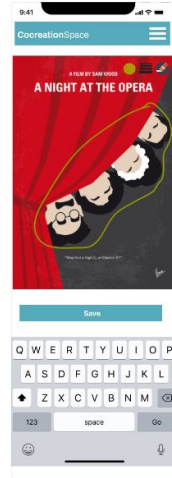
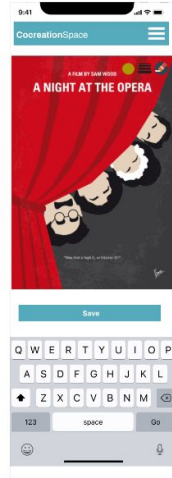
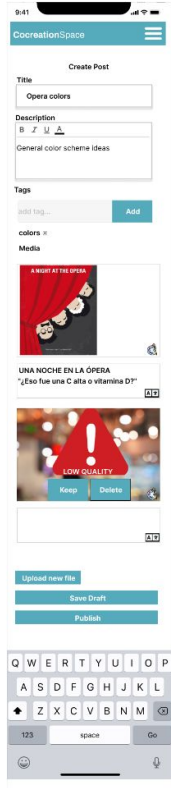
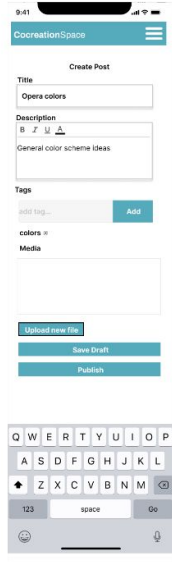
# WIREFRAME EXAMPLES



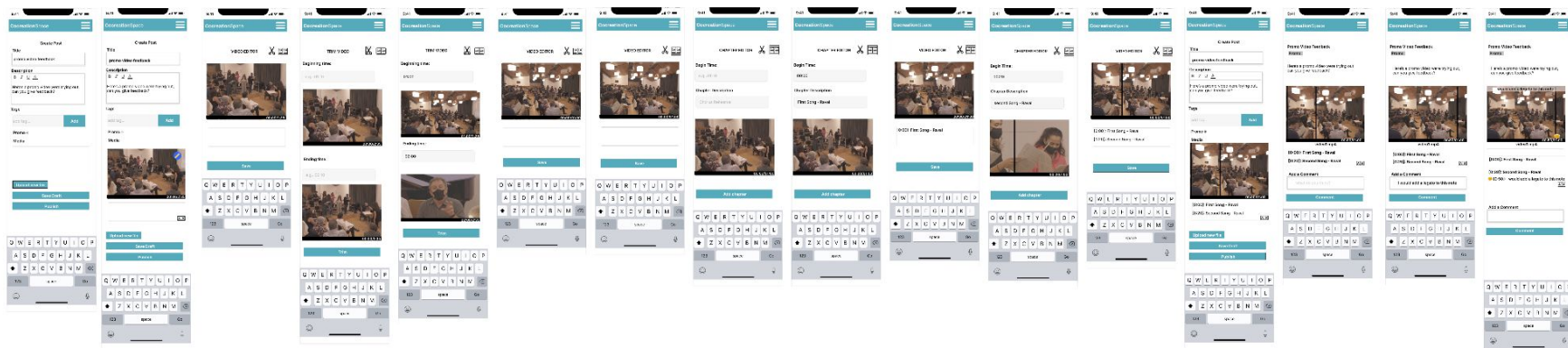
# WIREFRAME EXAMPLES



# WIREFRAME EXAMPLES



# WIREFRAME EXAMPLES






# 5 CODESIGN SESSIONS (YEAR 2)

Audio Editing

**Arazaral for Music Generation 2020** 3/4/2021 12:08:01 AM in *INO*

The electronic piece I created out of the workshops with Music Generation before Christmas! Commissioned by INO.



The screenshot shows an audio editing interface with a green waveform on the left and a black waveform on the right. A red circle highlights a specific point in the audio, with a callout box containing the text "the sax has a wrong note here". The interface includes a play button, a progress bar, and a volume icon. The video player shows a duration of 00:22 and 1 view.

to inform about changing speed of the audio

studio audio, not simply audio

to mark different specifics moments of the audio

to have the possibility to work without wi-fi

pop up figures, making comments of the audio in a pop up

the sax has a wrong note here

1 views

# USABILITY STUDY

**SCENARIO:** You are working with a team member from [SINIA/MASSANA] on a poster for the branding representation of the opera. You are responsible for drawing the visual representation, and your partner is responsible for designing the layout of the text.

- 1) CREATE ACCOUNT & SELECT INTERESTS
- 2) RESPOND TO A COMMENT
- 3) CREATE NEW POST
- 4) PREVIEW TEXT/VISUAL TIMELINE
- 5) COMMENT ON VIDEO WITH EMOJIS AND TEXT

Think aloud protocol + survey questions + post-study interview

**Metrics:** Task success, errors, efficiency, SUS and SEQ



# USABILITY FINDINGS

Table 4. Average SEQ responses by task for the two participant groups.

Participants	Task1	Task 2	Task 3	Task 4	Task 5
Creatives	3	3.5	4.5	5.5	2
Students	5	5.6	6.4	5	4.4

**Usability:** Participants described the CCS as “**well thought-out tool**”; “**fast, easy to use**” and “simple...[because] it [focuses] on the co-creation process”. As well as helping to “share ideas, or to stay up-to-date with other people’s work,” they saw it as an archival “**black box**’...when people do not agree...they can just go back to the post and see what they decided back in the day”

**Social and Temporal Affordances:** Participants were motivated by the social affordances of the tool, **connection to another** during co-creation, and **asynchronous feedback**, both for **mentorship** as well as for **collaborative co-creation processes**. Participants were able to see “the different steps of the creative process” and **follow “the evolution of the work.”**

**Supporting Reflection and Discussion:** The CCS focused on simplicity, so a **challenge was understand what features were central to reflection and discussion**. Some participants extra media processing and scheduling features, but existing tools support these processes. A challenge was understanding how the value of the CCS fit within the creative app ecosystem.

# THE CO-CREATION SPACE

A PRIVATE SOCIAL MEDIA FOR REMOTE PARTICIPATORY ART.



# OPEN PILOT TRIALS



OUT OF THE  
ORDINARY  
AS AN HGNÁCH



MATERIALS CO-CREATION:  
INO COMPOSITION WORKSHOP

Liceu  
2022



Opera  
Barcelona  
2023



La gata perduda

ARNAU TORDERA I & VICTORIA SZPUNBERG  
ÒPERA COMUNITÀRIA DE NOVA CREACIÓ PRODUÏDA PEL LICEU

PERFORMANCE CO-CREATION:  
LICEU OPERA CHORUS

# COMPOSITION WORKSHOP

## (12 week pilot, 13 participants)

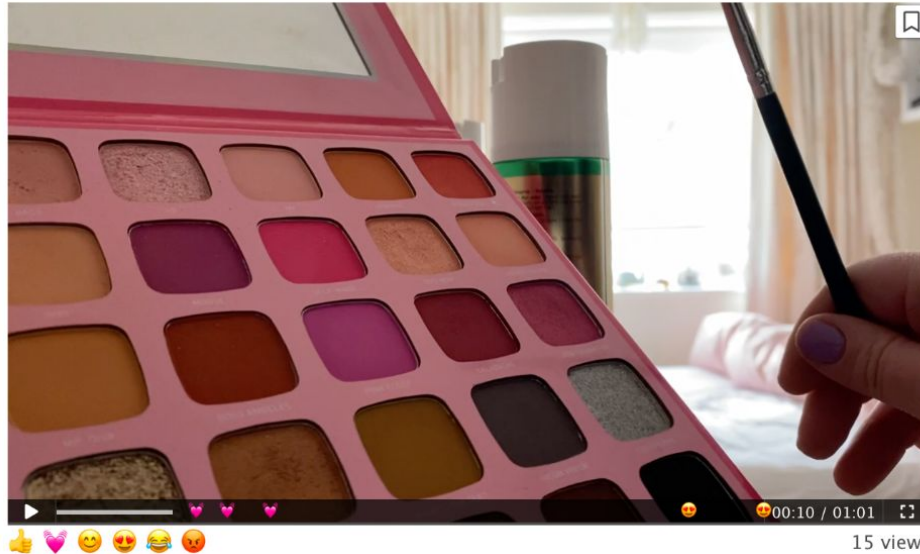


**Morning Routine** ☆ 19/04/2021 18:59:04 in *INO Workshop 3*

compositionworkshops bodyandvoice civictheatercompweek2

Carad84

My trusted makeup! Recorded in layers on Garage band and then videos after, That's why the videos aren't in sync :)



15 views

Morning Routine.mp4

# OPERA CHORUS

## (43 week pilot, 206 participants)



Irene  
Calvis

**Roda de Premsa La gata perduda** ☆ 28/09/2022 15:26:19 in *LICEU Cors*

rdp

Estimades i estimats,

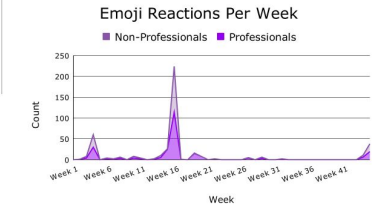
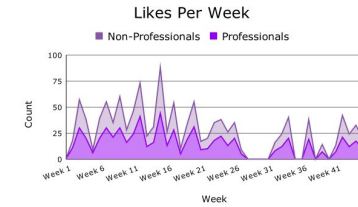
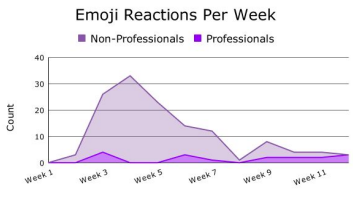
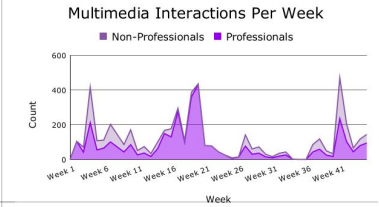
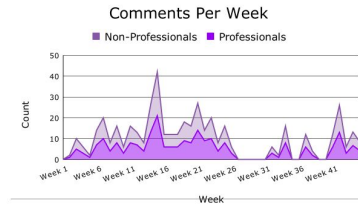
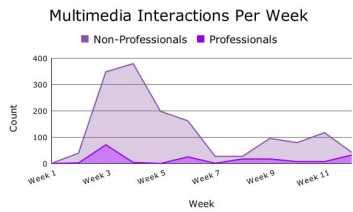
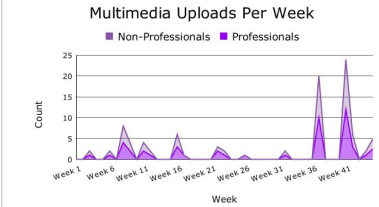
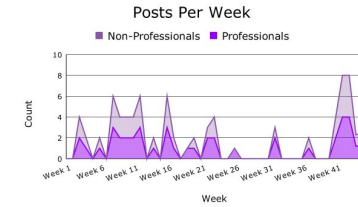
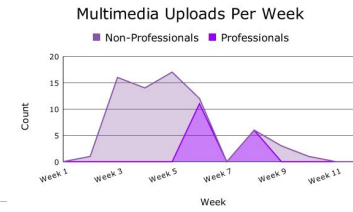
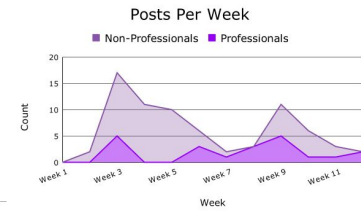
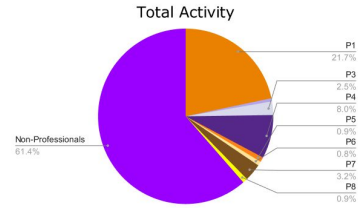
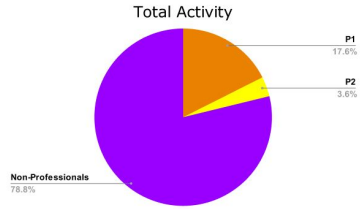
El proper divendres 30 de setembre a les 12h tindrà lloc la Roda de Premsa de La gata perduda, al Foyer del Liceu. A l'acte comptarem amb Arnau Tordera I, compositor; Victòria Szpunberg, dramaturga; Ricard Soler Mallol, director d'escena; Alfons Reverté, director musical; Cristina Colomer, coordinadora de cors; Montse Amenós, figurinista; Óscar Esteban, director Fundació Tot Raval; Núria Casanovas, gerent de Dona Kolors; Yacine Diop, membre de Top Manta; Àlex Chang, cantaire de Musicals' Choir; Pilar Garcia, cantaire de TrencaCors; Víctor Garcia de Gomar (director artístic Gran Teatre del Liceu) i Valentí Oviedo (director general del Liceu).  
esteu convidades i convidats a assistir, a partir de les 11:40h per C/Sant Pau.

MOLTES GRÀCIES!



# IRISH COMPOSITION WORKSHOP

# SPANISH OPERA CHORUS





# TEXT CONTENT ANALYSIS

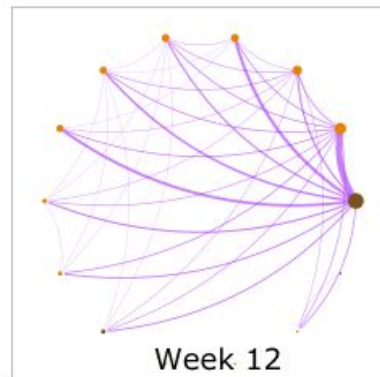
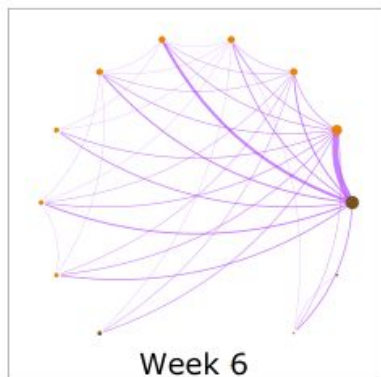
Category	Code Name	Description
Technology	CCS Usability/Use	<i>Comments on the interface or interactions with the tool.</i>
Technology	General Technology	<i>Talking about technology in general.</i>
Focus on Media	Sharing/Explanation of Materials	<i>Sharing/explanation of materials, referring to specific moments.</i>
Focus on Media	Art Process	<i>Discussing art process, including the ideas about materials, resources or techniques. Includes reflection on how to improve or edit work, and asking/offering assistance about media.</i>
Focus on Media	Synthesis	<i>Discussing synthesis process. Includes planning next steps with media, integrating/synthesizing media in the next step of co-creation, or synthesizing materials to use externally.</i>
Co-creation	Co-creation Process	<i>High-level reflections on the co-creation process. Includes thinking about successful/unsuccessful moments of the process, next steps, or ways to improve it.</i>
Co-creation	Excitement/Thanks	<i>Emotional response to process, including being excited or thankful for work being done, or for participating.</i>
Co-creation	Reflections on in-Person Events	<i>Discussion or emotional responses to an event.</i>
Co-creation	Coordination	<i>Discussion about coordination or planning.</i>
Social Media	Sharing Social Media	<i>Sharing media about events, rehearsals, performances, or informal gatherings.</i>
Social Media	Responding to Social Media	<i>Responding specifically to media about the social experience. This is different than reflecting on in-person events, because of the focus on the media.</i>
Miscellaneous	Personal communication	<i>Comments unrelated to co-creation, such holiday greetings or discussion about life.</i>

# IRISH COMPOSITION WORKSHOP

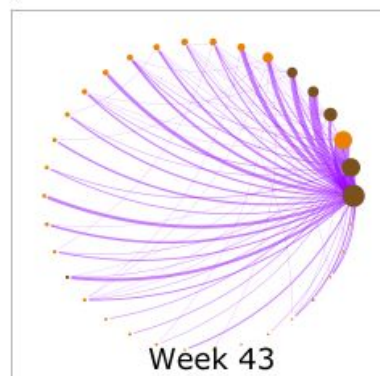
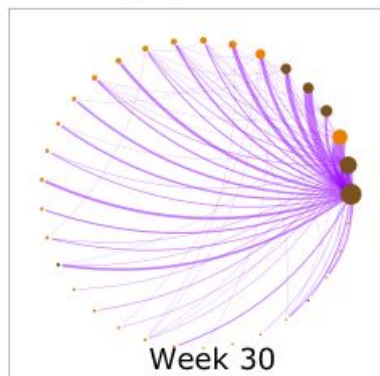
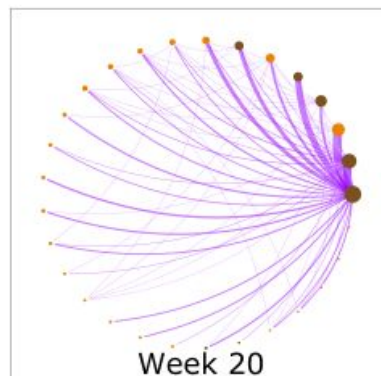
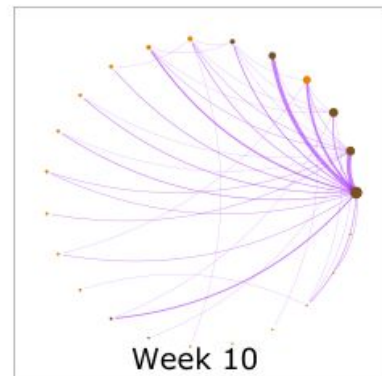
# SPANISH OPERA CHORUS



## Network of Interactions (Irish Pilot)



## Network of Interactions (Spanish Pilot)



# POST-PILOT FOCUS GROUPS

**Composition Workshop:** Participants completed a **sequence of creative tasks**. Users felt that they were all “in the same room.” The CCS “opened up a new world for creative expression that we didn’t expect.”

**Opera Chorus:** Spanish participants used the CCS to **disseminate** music files, **broadcast** information, and **share** social media about the opera. They felt the tool was redundant because they already had existing tools to do this.

**Lesson 1:** Interaction visibility affects interaction **feedback loop**

**Lesson 2:** Clarity of explicitly defined **interaction goals** affects tool value

**Lesson 3:** With **existing user groups**, you must understand **what other tools** they are using

**Lesson 4:** Hard to compare **face-to-face vs. fully online** experiences

# ARTISTIC CO-CREATION NEEDS BASED ON ACTIVITIES, SOCIAL STRUCTURE, & SIZE

**Flexible Space Segmentation:** Irish participants liked the simplicity of the text timeline, whereas Spanish participants had trouble finding files, and wanted **clearly marked sections to separate technical from informal media**. Artistic co-creation tools should support flexible space segmentation that allows communities to **segment posts into distinct channels**.

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**Direct and Indirect Communication Channels:** Spanish participants wanted different types of communication channels that **differentiated official notifications from informal messages**. They also wanted a reading comprehension checker that participants read what was sent to them. For emotional experiences, they want indirect ways to express emotions, such as a **how-are-you-feeling rating system**.

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**Consider Features in Context of Existing App Ecosystem:** Tensions exist between **desire for privacy** for discussion about co-creation process, vs. **connection with existing social tools**. Users were also **biased by visual aesthetics** of existing tools that did not fit co-creation goals.

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# Technology, opera, and some amazing experiences :)

