



## **Enhancing and Re-Purposing TV Content for Trans-Vector Engagement**

### **Deliverable 5.1 Requirements for Content Owner Use Case Version 1.0**



**DOCUMENT INFORMATION**

<b>Delivery Type</b>	Report
<b>Deliverable Number</b>	5.1
<b>Deliverable Title</b>	Requirements for Content Owner Use Case
<b>Due Date</b>	M10
<b>Submission Date</b>	31 October 2018
<b>Work Package</b>	WP5
<b>Partners</b>	NISV, RBB, GENISTAT
<b>Author(s)</b>	Lizzy Komen, NISV
<b>Reviewer(s)</b>	Arno Scharl, WLT
<b>Keywords</b>	user requirements, content owner use cases, professional users, professional user personas, user interviews
<b>Dissemination Level</b>	PU
<b>Project Coordinator</b>	Vrije Universiteit Amsterdam De Boelelaan 1081 , 1081 HV, Amsterdam, The Netherlands
<b>Contact Details</b>	Coordinator: Prof Lora Aroyo ( <a href="mailto:lora.aroyo@vu.nl">lora.aroyo@vu.nl</a> )  R&D Manager: Dr Lyndon Nixon ( <a href="mailto:lyndon.nixon@modultech.eu">lyndon.nixon@modultech.eu</a> )  Innovation Manager: Bea Knecht ( <a href="mailto:bea@zattoo.com">bea@zattoo.com</a> )

## Revisions

Version	Date	Author	Changes
0.1	02.10.2018	Lizzy Komen (NISV)	Table of Contents
0.2	03.10.2018	Lizzy Komen (NISV)	Personas, methodology, introduction
0.5	10.10.2018	Lizzy Komen (NISV), Miggi Zwicklbauer (RBB), Basil Philipp (ZATTOO)	Interviews
0.6	13.10.2018	Lizzy Komen (NISV)	List of initial requirements
0.7	15.10.2018	Lizzy Komen (NISV)	Updated personas
0.7	25.10.2018	Arno Scharl (WLT)	QA review
0.8	26.10.2018	Lizzy Komen (NISV), Miggi Zwicklbauer (RBB), Willy Lamm (RBB)	Survey results
1.0	29.10.2018	Lizzy Komen (NISV)	Final requirements and conclusion

## Statement of Originality

This deliverable contains original unpublished work except where clearly indicated otherwise. Acknowledgement of previously published material and of the work of others has been made through appropriate citation, quotation or both.

This deliverable reflects only the authors' views and the European Union is not liable for any use that might be made of information contained therein.

## TABLE OF CONTENTS

<b>EXECUTIVE SUMMARY</b>	<b>6</b>
<b>1. Introduction</b>	<b>7</b>
<b>2. Approach and Methodology</b>	<b>7</b>
<b>3. Personas prior to user testing &amp; interviews</b>	<b>9</b>
3.1 Target Groups	9
3.2 Personas	9
Broadcast editor	11
Heritage professional editor	11
Media professional editor	12
Sales Manager for broadcaster	12
<b>4. User Requirements prior to user testing &amp; interviews</b>	<b>12</b>
<b>5. Professional User testing</b>	<b>17</b>
5.1 Interviews with Media and Heritage Professionals	17
5.1.1. RBB	18
5.1.1.1.RBB editorial departments	18
Interview #1 Website and news channel	18
Interview #2 Media research	19
Interview #3 Online Services and Online Coordination	19
Conclusion	19
5.1.2. ZATTOO	19
Interview #1 - Performance Advertiser	20
Conclusion	20
5.1.3.NISV	20
5.1.3.1. Media and Heritage Professionals at NISV	20
Interview #1 - Deputy Editor in Chief	20
Interview #2 - Content Director	21
Interview #3 - Curator	21
Conclusion	22
5.1.3.2. Media Professionals in the Netherlands	22
Interview #1 - Video Editor at commercial broadcaster	22
Interview #2 - Coordinator new media projects at public broadcaster	22

Interview #3 - Head of digital of niche video platforms	23
Interview #4 - Independent storyteller	24
Conclusion	25
5.2 Survey for professional users	26
5.2.1. Survey results	26
General questions about the working environment	26
Publishing and Monitoring Content Online	26
Creating Video Summaries for Online Content	29
Identifying trending topics for creating posts for online platforms	30
Making recommendations for relevant content	32
Editorial meetings	32
Conclusion	33
<b>6. Personas after user testing and interviews</b>	<b>34</b>
6.1 Broadcast Editor	36
6.2 Heritage Professional Editor	37
6.3 Coordinator new media projects at a broadcaster	38
6.4 Online Marketing Manager	39
<b>7. Final requirements</b>	<b>40</b>
<b>8. Conclusion and Outlook</b>	<b>41</b>
<b>9. Annex 1 - ReTV Storyboards</b>	<b>42</b>

## EXECUTIVE SUMMARY

This deliverable presents the process of the definition of the requirements for the Content Owner Use Case. It describes the creation of the relevant ReTV Content Owner target groups, persona types and personas. It also describes the four scenarios from the Content Owner perspective and defines their technical requirements. To validate the initial requirements the partners conducted interviews and sent out a survey.

Requirement results are reported in tables to provide a more efficient overview for technical partners (WP1-4).

## 1 INTRODUCTION

This deliverable is linked to the task 5.1, which aims to gather requirements of content owners, media organisations and other professional stakeholders. Selected experts from RBB, ZATTOO and NISV were involved in the definition of initial requirements for the content owner use case. Besides requirements for *data visualizations* and *reporting* (e.g. which audience to reach, which content to promote better on certain vectors), the content owning partners have collected requirements that go beyond these two areas and also performed interviews and user surveys. The requirements are documented in an online shared environment (Airtable). The content partners then grouped the requirements around four main scenarios.

Task 5.1 also describes that the experts will be engaged to assess the potential of the trans-vector publishing, identifying current technical and social barriers and assessing the willingness of organizations to take up a novel platform to support the automation of this fundamental process. Feedback is communicated into WPs 1-4 to direct their technical preparations of the Trans Vector Platform (TVP) to assure that ReTV addresses the needs of content owners.

The document starts with an explanation on the approach and methodology, followed by the presentation of the foreseen user profiles (personas) (including target groups of the content partners) and user requirements *before* and *after* the user testing and interviews with the content owners.

## 2 APPROACH AND METHODOLOGY

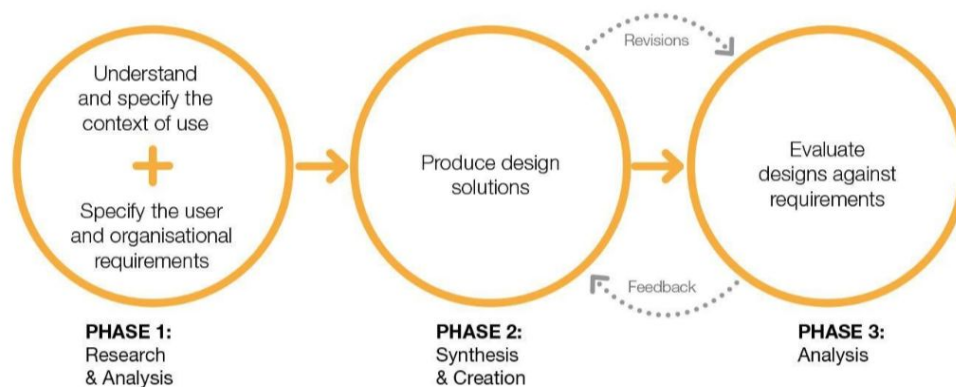
The experts from RBB, ZATTOO and NISV have worked together to collect requirements through collaborative elicitation sessions. Both user and organisational requirements were gathered from the content owner partners in the project (RBB, ZATTOO, NISV) as well as from the media and heritage professionals in the field.

For the creation and definition of requirements for the Content Owner Use Case, we undertook the following steps:

- Compare the ReTV content owner target group with content partners' existing target groups
- Create persona types
- Create personas for each persona type
- Set up requirements from content owner perspective for each scenario
- Set up interviews with media and heritage professionals
- Set up survey for content owner
- Analyze the outcome of interviews
- Analyze the outcome of the survey
- Update persona types and requirements after interviews and survey
- Update requirements

- Feedback and report results to WP1-4

The project makes use of the User-Centered Design methodology (Figure 1) that requires developers and designers to analyze and predict how users are likely to use the TVP prototypes and to test the validity of their assumptions with regard to user behavior in real world tests. The first phase is to understand the context of use. ReTV invests ample time for the team to get to know the community and its needs: interviews, self-documentation, and user observations within the community. We are currently in phase 1. Further details on the User-Centered Design are described in D8.3 -Innovation Plan (M10).



*Figure 1: User-Centered Design approach pursued by ReTV (O'Grady, 2008)*

For the creation of the personas we used the DIY (Development Impact and You) Toolkit<sup>1</sup>. Furthermore, interviews were selected as the most appropriate data collection method to provide deep insights into the opinions and behaviours of the users. Finally, a survey for content owners was set up to gather further input on the behaviour and needs of content owners.

<sup>1</sup> <https://diytoolkit.org/tools/personas/>



### **3 PERSONAS PRIOR TO USER TESTING & INTERVIEWS**

#### **3.1 TARGET GROUPS**

A target group is a particular group of people that a product or advertisement intends to reach. For ReTV, we first reviewed existing content partner target groups, considering the perspectives of a public broadcaster (RBB), a media archive/museum (NISV) and a streaming TV platform (Zattoo).

##### **RBB**

The target group of RBB as a public broadcaster is the broadcast editor for TV and radio. Some of the RBB employees also have a major role in the social media activities of the different editorial department.

Since the new Telemedien-Staatsvertrag (July 2018), the online services of ARD and ZDF have to focus on video and audio in future. RBB as part of the ARD is also involved into these changes of the contract and ReTV could facilitate the production of online video content for all vectors.

##### **NISV**

The Netherlands Institute for Sound and Vision has various target groups, from creative industries, researchers, teachers and students to museum visitors. For the ReTV content owner use case, the media professional and heritage professional groups are relevant as they are the ones that generally deal with the curation and editorial decision regarding the content.

##### **ZATTOO**

Zattoo has two main target groups. The first one is the users that use Zattoo to watch TV content. They generate revenue by either paying for a subscription or by the ads they see when switching channels. The second target group is advertisers who want to use Zattoo to show their ads in between channel switches.

##### **ReTV Target Group**

The target groups of the content owners are similar in that they all deal with conveying a message to their audience through storytelling and the use of content. The ReTV professional target audiences are on the one hand the media and heritage professionals (more specifically the broadcasters and media archives) who edit and publish (video) content to their audiences (online/onsite) and on the other hand the online streaming platforms and the advertisers that use them to reach their customers.

#### **3.2 PERSONAS**

The ReTV Professional personas were defined in workpackage discussions and completed in a creative workshop in Potsdam in July 2018 with RBB, NISV, ZATTOO and MODUL. The content partners defined personas for four different users (Image 1):

1. Broadcast editor

The broadcast editor is a team player who is looking for interesting topics and content to highlight to users. She/he does this through both written editorials and promoting existing video content produced by the broadcaster. The editor takes part in weekly editorial meetings to plan ahead the topics. He/she mainly works on a PC, rather than a mobile device.

## 2. Heritage professional editor

The heritage professional editor is someone who works in the cultural heritage sector and often deals with video content, either archival or newly produced video content. To reach audiences, topics and content are selected and published online and/or onsite (e.g. in an exhibition space). This persona often works at the marketing and communication department, and also deals with analytics. The content is enriched with expert contextual information. A calendar is used and discussed in the editorial meeting, both for short- and long-term topics. He/she mainly works on a PC, rather than a mobile device.

## 3. Media Professional editor

The Media Professional editor is someone who work at a media company or as an independent content producer. He/she mainly produces content for publication online but also makes use of other, existing content for contextual information (e.g. YouTube, Vimeo). He/she mainly works on a PC, rather than a mobile device.

## 4. Sales manager for broadcaster

The sales manager for a broadcaster is someone who directs a sales team and who drives measurable outcomes for brand advertisers via the broadcast channels. He/she provides ad solutions and leverages innovations and insights to find, attract and engage intended audiences. He/she offers opportunities for advertisers to showcase their products via video. He/she mainly works on a PC, rather than a mobile device.



*Image 1: the four personas types before user testing*

The personas were defined after the elaboration of the target groups, so that the results were incorporated into the creation of the content owner personas. For each persona, we used the DIY<sup>2</sup> scheme to visualize their key characteristics:

- Name, age, sex
- Interests
- Personality
- Needs
- Social environment
- Skills
- Reasons not to engage
- Reasons to engage

### Broadcast editor



### Heritage professional editor



<sup>2</sup> <https://diytoolkit.org/tools/personas/>

### Media professional editor

	Michael, 34 Years, Male		REASONS TO ENGAGE	
	INTERESTS News , Media	PERSONALITY Creative, Independent, Driven	Reach larger audience; Returns seems relevant to parameters; Able to save & order sets of results	
			REASONS NOT TO ENGAGE Expensive; Rights statement unclear; Too slow	
	SKILLS Tech Savvy:High	NEEDS Acknowledged, Empowerment	SOCIAL ENVIRONMENT Hilversum based; living together	

### Sales Manager for broadcaster

	Heung-Min, 37 Years, Male		REASONS TO ENGAGE	
	INTERESTS Sports	PERSONALITY Driven, Self confident, Informed, Opportunistic	Sell inventory that is not measured and therefore not paid for; Better analytics; Quality of user experience is guaranteed	
			REASONS NOT TO ENGAGE Cannibalism of existing sales; Too complicated to explain to clients; Too small volume	
	SKILLS Tech Savvy: Middle, High on strategic level, Networking	NEEDS Visibility, Money €	SOCIAL ENVIRONMENT After-work drinks Trade fairs	

## 4 USER REQUIREMENTS PRIOR TO USER TESTING & INTERVIEWS

In the early stages of the project, the content owner partners defined user requirements based on their needs. The initial list of requirements from this exercise is shown below in the Table 1 (the below table does not yet contain prioritisation, for the final requirements list please see Section 7). The partners also drew up storyboards, to visualise the main user scenarios. A storyboard presents in three visual steps what the scenarios is about. The next step is to create mock-ups, which will include more detailed steps in each scenario. The storyboards can be found in Annex 1 of this document.

The partners grouped the requirements according to **four** main **ReTV scenarios** (please also see section 4 in D6.1 for additional scenario descriptions) :

- Once the relevant content has been created, the **Content Wizard** will allow the editorial team to publish the content to different vectors automatically. The



Content Wizard will optimise the time, target and content of each post as to maximise engagement or any other chosen focus metric.

- Blurring the lines between online and linear TV, the **Content sWitch** will allow broadcasters to designate areas of their program that can be personalised when consumed on demand. For example, trailers for tonight's evening program are adapted, or switched out, with the program previews that are most relevant for each user. The Content sWitch can also be used to control Dynamic Ad Insertion engines, giving them more fine grained information on the content, and thus making the ads more relevant and the user experience less jarring.
- A **Topics Compass** will make it possible to see at a glance which content is popular with viewers on what vector, allowing editorial teams to quickly decide which topics to focus on.
- For content published on broadcaster's apps and websites, **4u2** will recommend relevant content to viewers. By drawing on the technologies used in the Content Wizard, it will be able to understand content much more deeply than existing recommendation engines and therefore offer better results.

Requirement	Description	Use Case
Automatically generated subtitles for Video Summaries	Subtitles have to be automatically generated for the Video Summaries, based on the length of the Video	4u2, Content Wizard
Automatic generated Video Summaries in different lengths	Different Social Media Platforms need different lengths Video Summaries	Content Wizard
Edit automatic generated Video Summary	The editor is able to edit a automatic generated Video Summary. This also includes: Background Audio, Subtitles, Editors can change the position and style of subtitles	4u2, Content Wizard
Automatic generated Teaser	Depends on the content. Teaser can include: Video Summary, link to article, link to social media, link to other editorial departments articles, link to Mediathek, download .ics	4u2, Content Wizard
Personalized Teaser	Broadcaster can offer personalised teasers for: Vector, IP (location), Daytime, trending topics (- Age   not at rbb), (- Male/Female   not at rbb), Favourite topics, In case of TV: Show context	4u2
Configure the logic for personalised content	Content owners want to be able to decide which parts of the content can be replaced.	Content sWitch

Measure the impressions of different versions of content and the user reaction to them	Content owners want to know how viewers react to personalised pieces of content. For example we want to know if users that saw version B of a trailer were more likely to then actually watch the movie than those who got version A. NISV: -click and browse behavior of users, including duration of visit, scroll % of page, bounce rate, click throughs	Content sWitch
Measure the impressions of different versions of an ad and the user reaction to them	Content owners want to know how often an ad was shown. If there are multiple versions of the same and, they also want to know which one lead to the lowest drop-off percentage.	Content sWitch
Text suggestions	Text suggestions along with the automatic generated video summary, which can be used for posting/sharing on different platforms	Content Wizard, Video Summaries
Optimisation	Optimise content for re-publication, based on the analytics	Content Wizard
Reorganisation of Video Summaries, regarding the outcome of user statistics	When a video always gets the same exit point the TVP will reorganises the outcome to a new video summary	Content sWitch, Content Wizard
Reorganisation of a Video Summary, depending on user comments	Use user comments on social media to analyze the video and rebuild the summary if necessary - also includes comments on shared videos	Topics Compass, Content Wizard, 4u2, Content Wizard
Non-linear videos	Support for non-linear videos	Content sWitch
Daily Summary	Receive or create a daily summary	Content sWitch, Video Summaries
Target Group optimized Video summary	Optimized video summary for target group	Content Wizard, 4u2,

Automatic categorisation of content	<ul style="list-style-type: none"> <li>- fine-grained, automatically detected categories.</li> <li>- ReTV would look at the content and decide that this is about "Global Warming", "Middle East", "China" etc.</li> <li>- Similar to how WLT detects stories, we could also do this in video</li> <li>- Important input for the personalisation aspects, but also really useful for search</li> <li>- Keeps professional users from having to tag everything by hand</li> <li>- Interesting for advertisers to target certain topics</li> </ul>	Content sWitch, 4u2
Subtitles "baked" into Video Summaries or provided as separated file (i.e. SRT)	<p>Video summaries need subtitles to be published on social media:</p> <ol style="list-style-type: none"> <li>1. "baked"/"burned" into the video summary</li> <li>2. provided as a separated file (i.e. SRT, type depends on the respective platform)</li> </ol>	Content Wizard
"this could interest you as well" Recommendations	<p>Recommendations can be made by an editor:</p> <ul style="list-style-type: none"> <li>- For a trending topic</li> <li>- For posting time</li> <li>- For Topics for editorial pieces that may include one or more videos</li> </ul>	4u2, Content Wizard
CMS Plugin	Build a ReTV Plugin for different CMS (Adobe AEM)	4u2
Automatic generated thumbnails	Video /Video Summary needs a thumbnail	Content Wizard, 4u2
Live Analytics	Being able to analyse analytics live	4u2, Topics Compass
Trending topics	<p>Visualisation of: RBB intern, competitors, regional (Berlin, Brandenburg), national, international</p> <p>For NISV: -from data sources (e.g. Twitter, news sites, wikipedia), national, international</p>	Topics Compass, Content Wizard
Scheduling	<p>The editor can pre-plan a post with the SMPT.</p> <p>The Tool recommends the best posting time, based on different metrics</p>	Content Wizard

Configure the dynamic ad insertion logic	Content owners want to be able to configure rules that govern the dynamic ad insertion.	Content sWitch
Publish content to different vectors (see also Requirement #9)	Publish video summaries to different vectors: Instagram, Facebook, etc	Content Wizard
Generate transcript for videos using off the shelf technologies	Being able to generate transcript for videos using off the shelf technologies	Content Wizard
User statistics	real time user statistic for videos: views, playing time, skip, mute/unmute, volume, exit point	Topics Compass
Trailer replacement	Replacing trailers	Content sWitch
Visualized Manuscripts	Visualizing Manuscripts	Content Wizard
Search	The editor should be able to search for: trending topics, specific content, Video Summaries	4u2, Content Wizard, Topics Compass
Lists	The list should be a result of a request (e.g. search)	Topics Compass, Content Wizard, 4u2
Notifications	When a new Video Summary was generated, and in the social media planning tool	Content Wizard
Share	Share Videos/Video Summaries on Social Media Platform	Content Wizard, Topics Compass,
Add/ delete items	Editors could have the possibility to manipulate the generated teaser by add or delete a items	4u2, Content Wizard
Change/ save	Editors should be able to change the order of a list and save it - i.e. manual override	4u2, Content Wizard
Creation of Collections	Editor should be able to compare >2 content items to each other: facebook, twitter, website. Mediathek/OTT platform, Instagram	Topics Compass
Login	editor gets an editorial department specific login	Topics Compass
Registration for Dashboard	Registration including information of editorial department	Topics Compass



User Roles	The user could have different roles like "Starter", "Editor", "Pro", "Expert", "Admin"	4u2, Topics Compass, Content Wizard
Play Video/ Video Summary	The user is able to play, pause, ffw, fbw and stop the Video / Video Summary	Topics Compass, 4u2, Content Wizard
Fullscreen/ Minimize Video/ Video Summary	The user is able to play the Video/ Video Summary in fullscreen mode, and minimize it	4u2, Topics Compass, Content Wizard
secure tag	Videos and Video Summaries need a tag "secure", so that the editor knows that he has the rights to use this Video. E.g. in Germany you often do have only 7 days the licence for 3rd party material.	4u2, Content Wizard,
editing text suggestions	being able to edit the text suggestions with video summary	Content Wizard
Select original URL of video	A tickbox that allows the editor to keep the original URL to the video for posting	Content Wizard
Manually edit transcripts	Edit transcripts manually	Content Wizard
Linking the original video URL with the Summaries URL	Being able to link to the original videos used in the videos summaries	Content Wizard

*Table 1: Content owner requirements before user testing*

## 5 PROFESSIONAL USER TESTING

The aim of the first professional user tests was to validate the previously defined requirements with real professional users. For this purpose the content partners conducted a survey and interviewed the four main user groups, including media professionals (broadcaster, coordinator new media projects, independent storyteller), heritage professionals (media archive) and an advertiser.

### 5.1 INTERVIEWS WITH MEDIA AND HERITAGE PROFESSIONALS

To better understand the current workflows of media and heritage professionals, individual interviews were held with selected individuals. The goal was to (1) get a better understanding of the target group and update the persona profiles accordingly, (2) capture general user

needs and challenges they encounter and (3) get initial feedback on the ReTV scenarios. These interviews were a necessary step to discern how the ReTV solutions could fill in the gap that exists between the needs of professionals and the tools currently available to them.

This chapter firstly shows the individual interviews done by RBB, NISV and ZATTOO, followed by the results from the survey. At this stage, all partners conducted informal interviews within their organisations to get a general overview of ReTV application in different departments within media organisations. NISV followed these with further in-depth interviews with media professionals from different backgrounds to get insights into their specific workflows and needs.

### 5.1.1 RBB

#### 5.1.1.1 RBB editorial departments

Before the ReTV scenarios were finalised, RBB interviewed internally four departments about the possible scenarios in the project. These departments are the website and news channel team, the media research, the online services and online coordination.

The interviews were conducted to help shape the ReTV scenarios. This point is particularly important with regard to the Topics Compass: It was initially presented to the interviewees as a tool that could potentially offer both social media monitoring and social media listening. The focus of the Topics Compass answers is mainly on monitoring.

In the course of the task, the partners decided for various reasons (e.g. technical feasibility, current market situation) to concentrate on social media listening. With listening we mean the aggregation of (often millions) of postings to learn about the public debate on a certain topic, person or brand. However, the technical partners will look at extending the monitoring aspect in their current work on collecting more social media engagement metrics, and normalizing them across platforms. Monitoring is a key part of the workflow of a social media manager – you create an idea, formulate, publish and then monitor the impact that this one posting (or series of postings) has. This is very much reliant of the REST APIs of the social media platforms, since you have to access engagement metrics multiple times.

#### Interview #1 Website and news channel

The team of rbb|24 was mostly interested in two scenarios: the **Content Wizard** and **4u2**.

**Topics Compass** was also identified as a tool that could help them to get a quick overview of which topics move their target groups in the various social media channels.

The Content Wizard, especially the video summary tool, would be a useful addition to their workflow. However, they are concerned with its application regarding the use of third-party content. In most cases, RBB is allowed to show their own content for seven days. The tool should be able to identify that this content cannot be used for the summaries (or only during the 7 day period). A special tag for such time-restricted secure content could be very helpful.

The 4u2 is also a scenario which could be very interesting for their website. Currently recommendations on the website are coming directly from the CMS and are created manually.

## Interview #2 Media research

The most relevant scenario for the media research team was the **Topics Compass** idea. Currently the media research team is using a complex system called AT Internet. Because of the lack of personnel, the team cannot deliver high-quality processed (social media activity) results and reports to the editorial teams in a timely manner. The editorial departments need to wait for up to six weeks to get feedback on their work on the web, in social media and via broadcast. The **Topics Compass** could help the team immediately see an overview of their audience's online activity and guide the RBB editorial department in content decisions.

## Interview #3 Online Services and Online Coordination

Most relevant scenarios for the online services and online coordination were the **Topics Compass** and the **Content Wizard**. Both feel that six weeks for information regarding their online activities are simply too long. Direct feedback coming from a tool like the Topics Compass would be helpful in all editorial departments and could improve their work a lot. Also a real time monitoring function could be interesting.

## Conclusion

All RBB departments are very interested in the idea of the Topics Compass. This tool would help to improve the daily work in the online teams. Especially the gap could be closed between the publication of content and a detailed summary of results. But the departments were afraid to see the summary of editorial results of all the RBB departments, because of internal issues that could come up between them.

The trending topics feature combined with a notification could be very useful for the rbb|24 team. This could be an extra channel to get news when they happened.

An automatic generated video summary feature sounds interesting, but they have doubts if the tool can produce useful content, so a video editor mode is needed.

### 5.1.2 ZATTOO

Zattoo redistributes the linear TV signal of broadcasters. This signal contains advertisements that advertising agencies have booked on behalf of their clients. When booking ads in the linear stream, Zattoo and OTT in general is not a factor for those agencies. They consider its share as too small. Estimates put the share of OTT content at about 5% of the total market in Switzerland.

While Zattoo is too small to get a special role in the planning of large linear campaigns, there are advertising agencies that focus on performance campaigns i.e. online campaigns that are automatically improved and specifically targeted. For those agencies Zattoo has always been of interest, as it allows them to programmatically book advertisement between channel switches.

We interviewed the founding partner of a Swiss performance marketing agency, on his views on programmatic advertising in a TV context.

### **Interview #1 - Performance Advertiser**

Interviewee, male, is responsible for creating online campaigns across multiple vectors for advertisers who want to reach their customers. The size of the companies varies a lot, as well as the goals that they have. They for example work with small companies launching new products and with large companies that want to improve their brand recognition.

There are different advertising contexts. When using a search engine users are obviously searching for something specific. Linear TV ads are consumed in a much more laid-back, passive way as they are just part of the content that is consumed. Depending on the goal that their clients want to reach, one type of ad is better than the other.

The possibility to Dynamically Inserted Ads (DAI), ads that are injected into the linear TV stream on Zattoo, would be a promising solution to what Zattoo can offer to its clients. It would be a mix of both worlds, being targeted like an online ad, but reaching the end user in a more relaxed TV setting.

There is also a distinction between types of ads with regard to how much the content is optimised. Targeted search ads are usually very simple, basically just describing the product in a sentence. Since the end user is looking for something, the message can be short and to the point. When they run video campaigns on YouTube and Zattoo, they usually have about four versions of the same video. They run all the versions for one day, and then only keep the best performing one for the remaining campaign duration. Being able to have the best version of a video chosen automatically could be a great improvement in performance.

### **Conclusion**

The ReTV partners believe that the automatic adaptation of ads could be of great value, especially when those ads are then inserted into the linear TV stream with the use of DAI. This would bring personalised advertisement into the context of linear TV advertising, effectively offering users and advertisers the best of both worlds.

### **5.1.3 NISV**

#### **5.1.3.1 Media and Heritage Professionals at NISV**

In addition to the interviews with the media professionals in the Netherlands, three interviews were conducted with people working at NISV who take part in the editorial board. NISV is the media archive for the public broadcasting TV & radio and also has a museum open to the general public. Therefore the users are both Media and Cultural Heritage experts. The interviewees were all asked the same central question: “How would your ideal editorial department look like?”.

### **Interview #1 - Deputy Editor in Chief**

Interviewee, male, is responsible for programming both online and onsite and content development. For an ideal editorial board three things need to be brought together: people with knowledge of audiences and needs, and the production and content side. Connecting the

archival content with content outside is one of the challenges. Ideally, they would like to reuse editorials for different purposes, like the different online platforms or onsite. They use a calendar for planning content. Onsite video content around a current topic could be presented to the audience, with additional context information. Getting recommendations for topics would also be considered a valuable feature.

### **Interview #2 - Content Director**

Interviewee, female, is working on directing the content that is used and presented within the museum context (onsite or outside the building). In an ideal editorial board, it would be useful to have a more automated way to find and use relevant content from archival and external sources that can illustrate the stories presented to the public. However, the public should also feel that they can co-create this story and that it's not static. NISV is currently designing their new museum for which they have determined five themes to cluster stories, five human needs where media have/had impact now and then: making contact, staying informed, playing, storytelling, buying and selling. They would like to use content from their own archive, but also from other (online) sources, e.g. YouTube or other archives. For topics they will look at what is happening in the media, not only in current topics but also looking at longer trends, or putting things into perspective, e.g. how story plots are used and reused over time, the elements of a game, or how commercial and how ideological advertisements use the same tools for influencing choices.

Media content/heritage differs from traditional specialist museum collections/content, because its relevance is partly based on the reach of audience and the impact on society, apart from quality, craft in the making, etc. Therefore media in particular cannot work without crowd-curating and crowd-collecting. Tools to manage that process are warmly welcomed.

### **Interview #3 - Curator**

Interviewee, male, is a curator for the media landscape, making visible the past, current and future of media to audiences (e.g. online or in the museum). His ideal editorial department would have a constant output, based on a shared vision. Another thing is to make use of existing research for different outputs and media, e.g. an exhibition or an online publication (transmedia storytelling). Topics can come from of an external influence (e.g. anniversary of 100 years radio), a research project or a current event. He prefers more the long tail content and providing context, e.g. making clear what the role of media is. To see trending topics would be interesting, especially to get new insights on topics. An editorial department normally provides edited content, but the ambition is to offer more material to the user, e.g. through a selection tool. Editorial tool would be useful for e.g. clustering content around topics or themes. Plus personalisation for the user. Ideally, we would be able to connect the online offering to what is offered in a museum context.

When talking about repurposing of content, citation is also used often e.g. in journalism or science. This could also be an interesting use case where video content is used in programmes or articles. Finding fragments that could be used in productions under citation right.

## Conclusion

From the three interviews, the following needs can be summarized:

- Being able to connect archival content to external content (both online and from other archives/museums)
- Publishing editorials on different platforms, both onsite and online
- Automated way of finding relevant content to illustrate stories
- Personalisation of content for the user (through e.g. a selection tool)
- A tool to cluster content around topics or themes
- Recommendations for topics based on media outputs/trends

As NISV is both a media archive and museum, the solutions in ReTV could be used for both the online publishing as well as onsite offering of video content to users.

### 5.1.3.2 Media Professionals in the Netherlands

To get a better understanding of the wishes and profile of the media professional, four interview were conducted with people that work in the media industry in the Netherlands. Interviewees were selected from different roles and backgrounds in order to get a good representation of this group.

#### Interview #1 - Video Editor at commercial broadcaster

Interviewee, male, works as a video editor at a Dutch national commercial broadcaster. His job mainly consists of editing end products that he receives from the traffic department using the AVID software. Subtitling is outsourced. The digital department uses the video files that he edits to create 8 different types of formats for different platforms, e.g. mobile phone, laptop, tv, flatscreen. He doesn't have any experience himself with the publication or production of content.

The content that he edits is published on the broadcaster's channels via different service providers (e.g. Ziggo, KPN), and also via paid subscription platforms. He also is involved in rating the content for different age groups. He doesn't feel that he's missing any functions in his current workflow. The four scenarios of ReTV do not seem relevant to him but he thinks it would be more applicable for the news media or digital departments.

#### Interview #2 - Coordinator new media projects at public broadcaster

Interviewee, female, works as the coordinator of new media projects for a public broadcaster, or head of digital. She is responsible for all web applications/websites/portals for this broadcaster and is interested in finding innovative solutions. She is interested to see how the new emerging technologies (e.g. smart speakers) could be used in her organisation. The editorial team which is responsible for publishing content is located in a different department. They are supported by the new media team who built CMS systems for diverse content (text, images, audio, inc. podcasts and video) that is published on web applications. Currently, they use three different systems: TYPO3, APC (PHP based mainframe) for the platforms and Wordpress for events. It would be more convenient to move content more centrally on one

platform. However, when developing interactives, a central platform doesn't always allow the functionalities they need. They outsource mainly the design of the sites.

Workflow for publication is done by the editorial department. They need to use the content database of the public broadcasting company and use their player. Web only is also going to be integrated in the systems. In their department they mainly develop tools for others. Sometimes they use other tools to pilot things - e.g., Limecraft,<sup>3</sup> a tool for transcribing web only content (audio to text).

**Topics Compass** would be most relevant for the editorial department. E.g. for the platform where they show longreads based on relevant topics (e.g. science, culture, history) and also use archival video content from NISV to illustrate this. **4U2** scenario would also be relevant for the editors to get better recommendations of content to publish alongside articles. The **Content Wizard** is also useful for editors. For this it's important to know what the quality is/will be of the video summaries or text summaries. An editor should have a final review of the summaries. The **Content sWitch** is more relevant for the content platform owners. However, it would be good to be able to determine for certain video content if it should be supported by a commercial or not. When an end user is on an editorial site, e.g. Focus<sup>4</sup>, reading a longread, the user would be interrupted by a commercial when watching a supporting video. There should be an option to disable commercials on these types of editorial sites, or allow users to skip the commercial.

In general, they would be interested in a better and automated way to publish content on the web, especially since more and more web only content is produced. The difference between a broadcaster and a media archive, is that the media archives always store the end product. The broadcaster also still has the raw footage of the production to work with.

To decide whether to use ReTV solution they would like to know the quality and ease of use. The costs would be decided by other parts of the organisation.

### Interview #3 - Head of digital of niche video platforms

Interviewee, male with a background in online marketing, is responsible for all the technology of the platform and he helps to build and launch new subscription based branded video channels. As for media content they exploit different niches (e.g. horror, thriller, stand up comedy), for which they buy content abroad like films, depending on the user need. They also create local productions, including snippets, trailers. There are different platforms, from niche content with subscription model, to advertising platform for linear TV.

Current workflow for publication is that content is delivered or produced by them. They use a custom build CMS where content can be added on a FTP, or content is pulled from DVD, usb, etc. Content is described and transcoded in the right format and a backup is made.

Transcoding is done automatically, but they do not yet use video intelligence services such as topic detection. They create snippets from videos by select beginning and end point and an automatic new ID is then added. Still are created automatically, but the quality of choosing

---

<sup>3</sup> <http://www.limecraft.com/>

<sup>4</sup> <https://www.ntr.nl/Focus/>



stills by a video editor is still better. They do not use speech or video recognition software, as it is quite expensive to use (40c per minute).

They are quite a young company so all the tools that they use are quite useful still. The software for video back end was purchased. Things that would be useful in our future workflow is topic detection, to help to create better metadata for the videos. Transcription and speech recognition would also be useful. They currently use an open source tool for adding subtitles. They have a lot of user data, so recommendation and prediction models are relevant for them.

**Topics Compass** would be relevant, especially determining topic detection and finding relevant content for publication. This would be interesting for our inhouse content scheduler/editor who determines what content is shown on which channel, also for communication planning. Their content has a longer life cycle than news, but they do look at topics in the future like anniversaries/holidays. They also use online advertisement with short video content to draw people to the platforms. A promo editor is (manually) analyzing how the video content is performing on social media, e.g. the video trailers that are posted on Facebook (amount of views/clicks). This knowledge is used to create new trailers that shows certain scenes that perform well on social media or on the platforms. If the **Content Wizard** could create automatic summaries or trailers based on how previous content did on the web, that would be very useful. With **4U2** it would be more useful if a relevant text would be offered alongside the video. Recommendations are very relevant, but they have not yet integrated this yet. With regards (**Content sWitch**) they are looking at how they can make them relevant to the content, e.g. by making branded content together with the selling party. For instance by creating interactive advertisements by showing a pop up in a video. Biggest challenge with advertisement is that for the CPM price<sup>5</sup> you can hardly create video content. In case a service is provided which can link relevant ads to related content that would be useful.

In general a tool that is missing is for recommendation and providing good metadata, also being able to compare how recommended videos are performing for different audiences.

To decide if we would use the ReTV solutions, the following things are important to know: integration (SAAS, custom build), price, how many other people are using it and what organisations are involved, what is the service contract, what is the business model (per user, per calculation, etc?), is there a lock in and how easy is it to migrate if necessary, being able to see use cases that are similar to ours, who manages the data, performance issues (especially recommendation should be real time), where do you store data and how much does this cost?

#### Interview #4 - Independent storyteller

Interviewee, male, produces interactive, multi-media productions, like websites or VR. Mostly online including social media channels. The audience is more millennial audience and +50 for history topics. For media content he uses all types of content from archival videos, animations, pictures to text. The workflows are different every time, depending on the desired outcome,

---

<sup>5</sup> [https://en.wikipedia.org/wiki/Cost\\_per\\_mille](https://en.wikipedia.org/wiki/Cost_per_mille)



e.g. a websites built with Wordpress. For editing he uses Adobe Premiere, for animation he uses After Effects, Photoshop and Illustrator for graphic design, for wireframes he creates sketches of UI and UX, to create decks for presentations he uses KeyNote.

For posting and planning posts on social media he uses later for instagram, Buffer for Twitter, YouTube, Vimeo and Facebook already have planning tools.

Missing in his current workflow is a good subtitling tool, e.g. the subtitling function in Premiere is not good enough. Especially when working with different languages and the design of srt files. What would be very useful is the option to scrub through the video with a mouseover to see the keyframes.

The **Topics Compass** would not be relevant for me at the moment, unless there is an assignment where they want use these functionalities. For the **Content Wizard** it would be useful to get a compilation video on the topics that I'm looking for, to get a very visual cross-section of what's available and then being able to go back to the original video. I would still like to be the one to edit the video that I produce. Recommendation (**4U2**) are relevant, but there is not anything comparable that he uses. When publishing an article it would be handy to use the written text to put this in a system and get recommended videos back for the editorial. **Content sWitch** would not be relevant in my workflow.

Another tool that would be handy in his workflow is when he can easily integrate videos from a URL from streaming services or archival material. The extra information he needs to decide to use ReTV solutions are prize, workflow and integration with existing programmes.

## Conclusion

From the four interviews it is clear that most interviewees see value in three scenarios that were presented (Content Wizard, 4U2, Topics Compass), with a special focus on:

- Automation of current content publication processes, planning and analysis of content (engagement) would help in their current workflow
- Automated video summaries, also based on how previous videos performed on the web
- Better recommendations for relevant content both for the end user and for the editor making a selection of video content
- Editor should be able to make a final check of a video summary before publication
- Getting a visual overview of topics is relevant, including suggestions for related video content for publication.
- The solutions should be easy to use and be able to integrate with existing programmes and environments (without a lock in), it should deliver high quality results and pricing should be clear.

The solutions of ReTV would best fit with organisations that either own or produce content and have an editorial team. The Content sWitch scenario seemed the least relevant to these interviewees, as they either don't deal with advertisements or have their own ad solution.

## **5.2 SURVEY FOR PROFESSIONAL USERS**

Besides the interviews, the content partners also conducted a survey with professional users (please see D6.1 for the end-user survey results). The survey has been set up in a way to collect general input on current workflows and tools used, followed by questions related to the four use case scenarios. Inputs were then used to update and validate the final requirements.

The survey link has been shared with a selected amount of people from RBB and NISV, as well as external professional users. These users are people working at a broadcaster or a media archive and who are generally involved in the editorial and marketing and communication tasks using video/TV content.

### **5.2.1 Survey results**

In total ten responses were received through the survey. 7 respondents currently work at a broadcaster and 3 at a media archive.

#### **General questions about the working environment**

Most respondents are editors (50%), followed by marketing and communication specialist, social media editor and project and innovations manager. The majority of respondents most frequently use a desktop computer (70%) and smartphone (80%) at work, followed by laptop and tablet (both 40%). The most used browsers are Mozilla Firefox (60%) and Google Chrome (50%).

#### **Publishing and Monitoring Content Online**

The organisations publish content on the following online platforms:

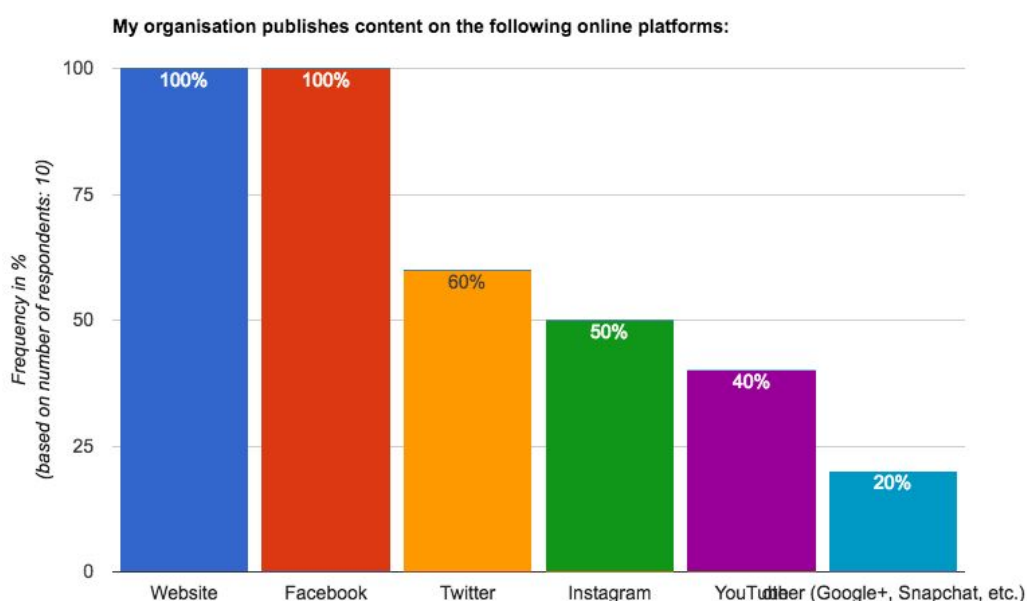


Figure 2: Publishing Platform / Vector

The following table shows the frequency of the publication of content online. Facebook is the most frequently used platform, followed by websites and Twitter.

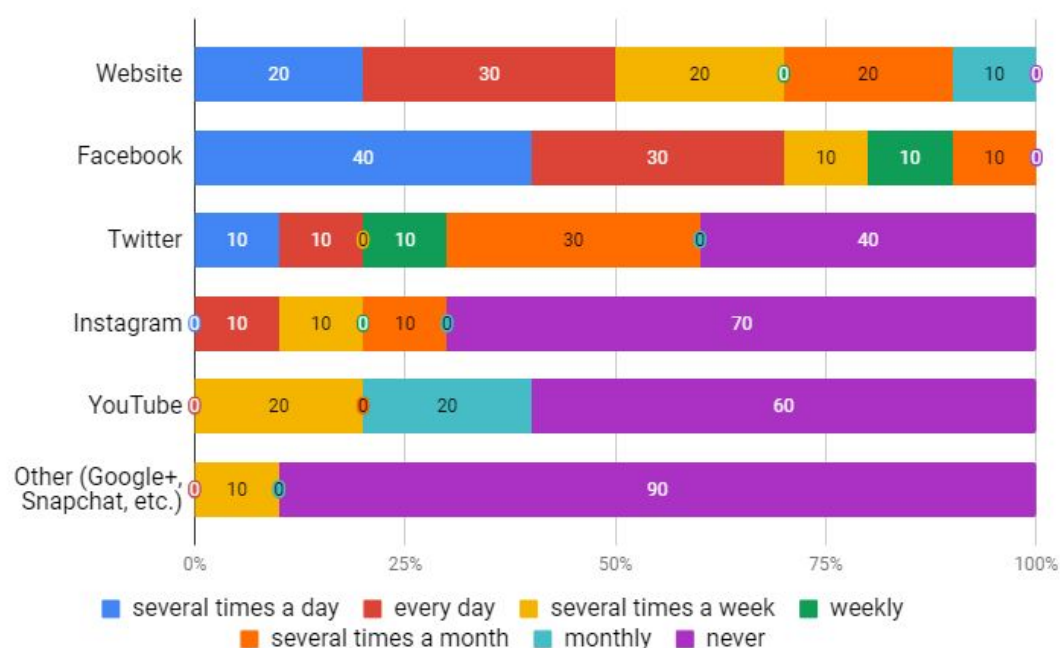


Figure 3: frequency of publishing videos on online platforms

We presented some statements to understand how frequently what type of video content is produced and published online. The majority completely and mostly agree that videos are produced with sound and subtitles for specific online platforms. They mostly publish them simultaneously with text description and manually created thumbnails. The majority of respondents (70%) would publish more videos if the preparation process for different platforms was automated. A small number (30%) also present their content in a museum or exhibition space. The clustering of videos around specific topics is rated generally useful by 70%.

All respondents (100%) monitor the impact of their online activities. When asked about the tools they use for this, the majority (70%) uses tools provided by existing platforms (Facebook Insights, Twitter Analytics, Google Analytics, etc.) and few (20%) use third party tools (CrowdTangle, etc.). A quick and easy evaluation/analysis overview of results is important to all and the majority (80%) wishes to have this accessible in one central place. Half of the respondents agree that the current tools are understandable and easy to use.

When asked what percentage of all content published on online platforms is video, we see that the majority of survey participants do not publish any video content on Twitter (40%), Instagram (70%), YouTube (60%), Google+, Snapchat, etc. (90%). However, all of the participants publish 25% or more video content via Facebook (Figure 4).

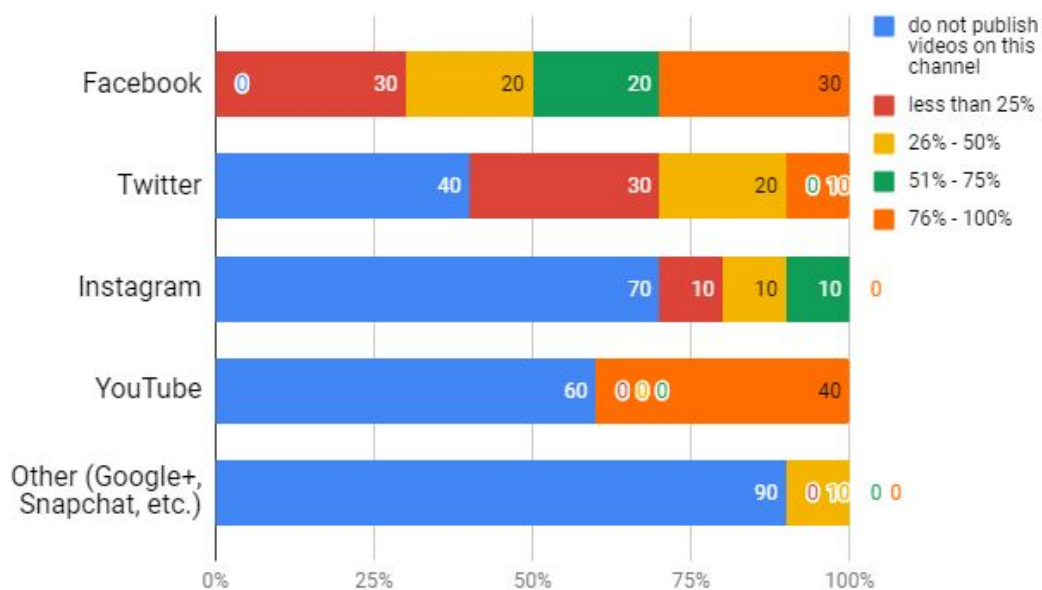


Figure 4: percentage of total video published on online platforms

We asked the respondents about a possible planning tool for publishing content online (figure 5), which is linked to the use case for the Content Wizard. The most useful features are the secure tag, automatic text descriptions of video material and defining user roles in a management dashboard:

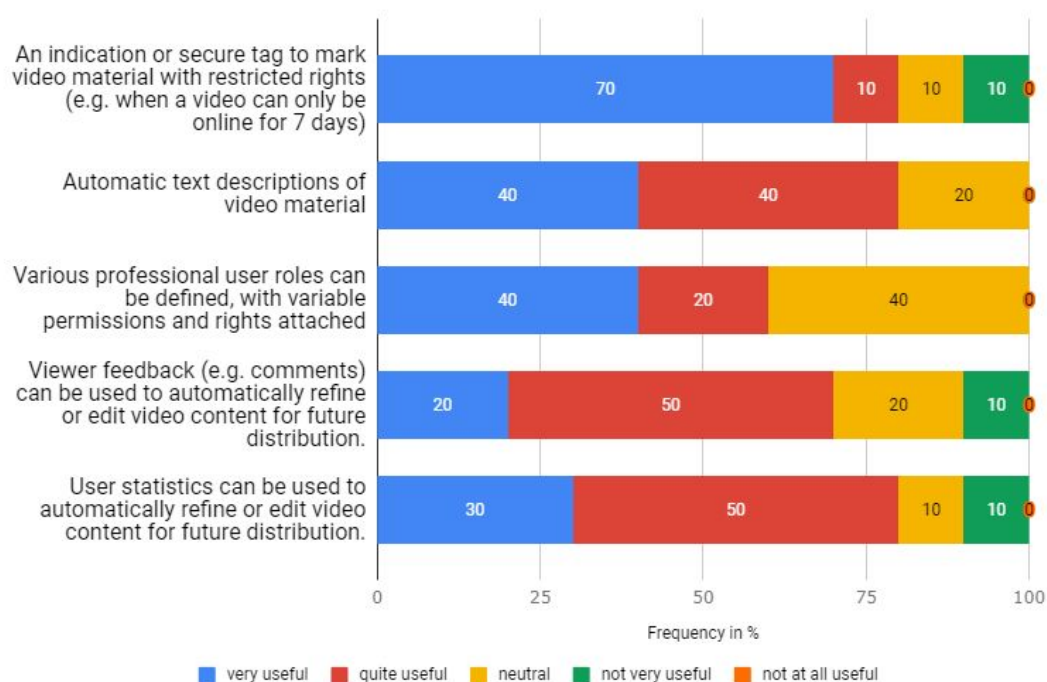


Figure 5: Ratings for a possible planning tool for publishing content online.

## Creating Video Summaries for Online Content

The following table shows the responses for a possible video summary tool:

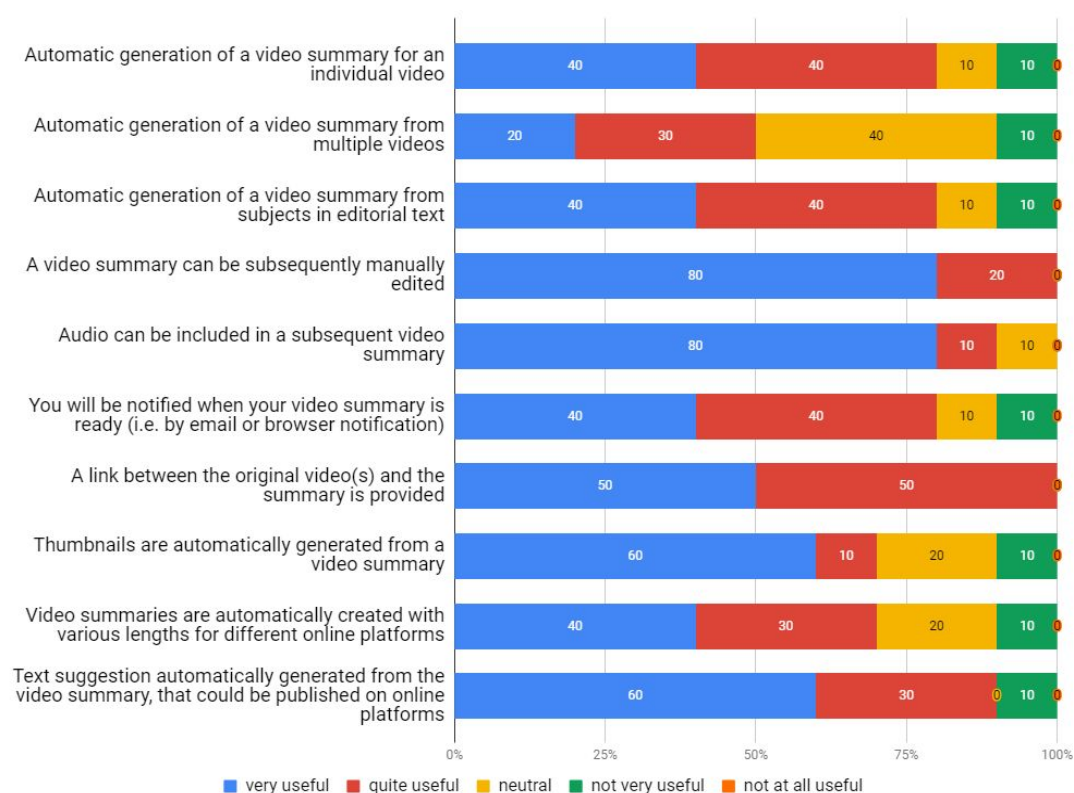


Figure 6: ratings for a possible video summary tool

It can be said that most features are rated positively for the video summaries tool. The most useful rated is that a video summary can be manually edited and that audio can be included in a subsequent video summary.

## Identifying trending topics for creating posts for online platforms

For the question about how they choose topics for publishing posts, the following table shows a wide range of inputs. Most frequently topics come from editorial staff and social media:

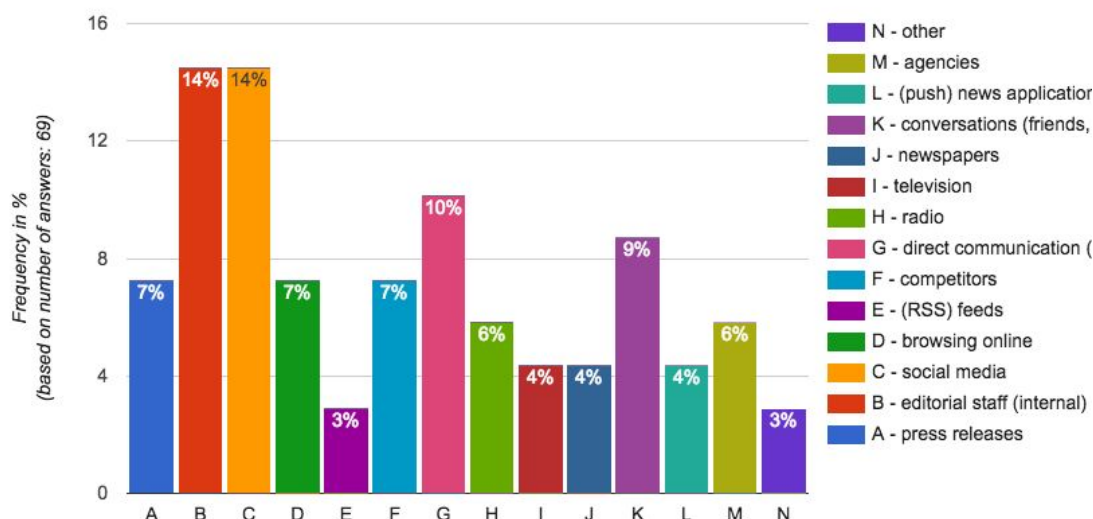


Figure 7: choosing topics for publishing posts on online platforms

Functions of a possible tool for determining trending topics are rated as follows:

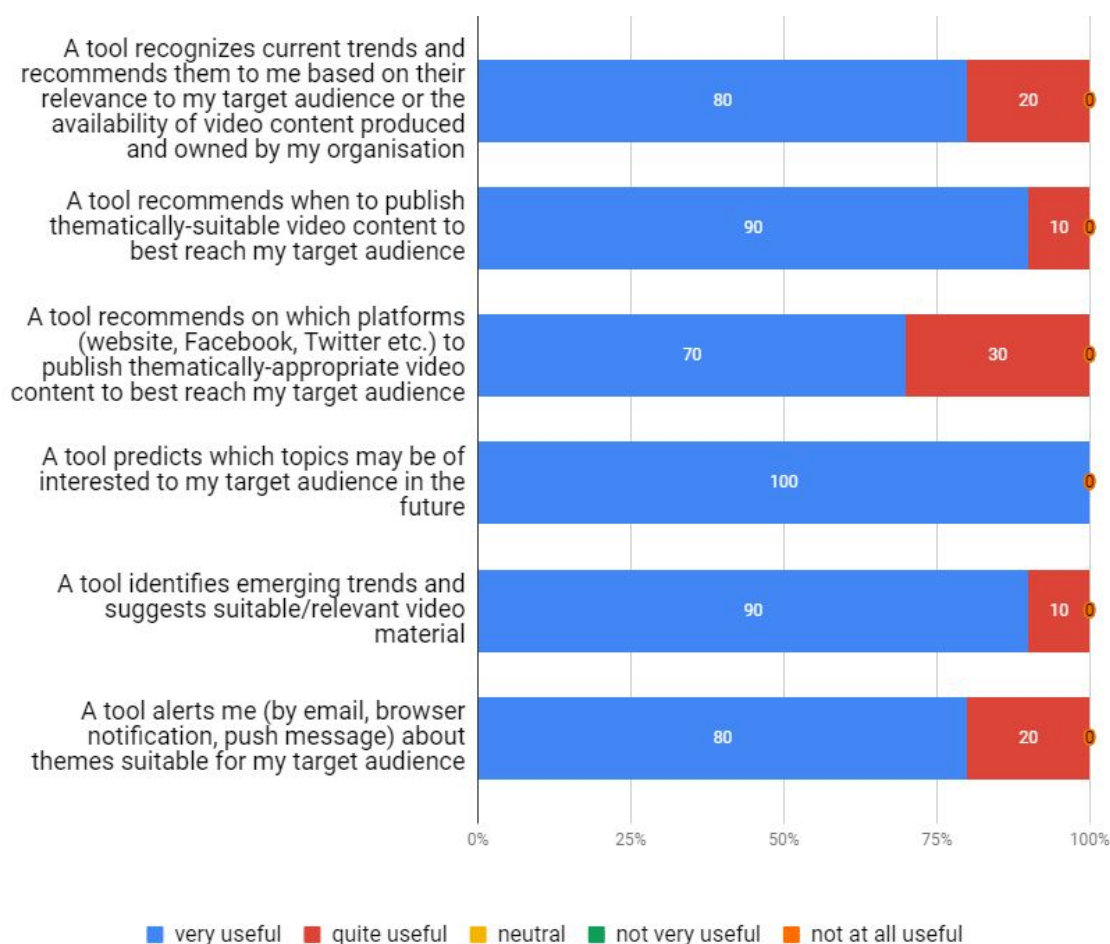


Figure 8: Functions of a possible tool for determining trending topics



All of the functions were rated very useful to quite useful by the respondents.

## Making recommendations for relevant content

When asked to rate the following statement: ‘Content published on online platforms is enhanced with recommended video content (‘You might also be interested in....’)' there was divide in useful (30%) and quite useful (20%) against not at all useful (40%).

Regarding recommendations, the respondents highly rated the recommendation list including video content and that this list includes video previews.

A tool which creates automatic recommendations for content was generally rated to be very useful to quite useful. Being able to link this to social media channels and other articles is rated high, as well as linking to external content and being able to edit automatically generated recommendations and targeting individualized recommendations based on e.g. IP, time of day:

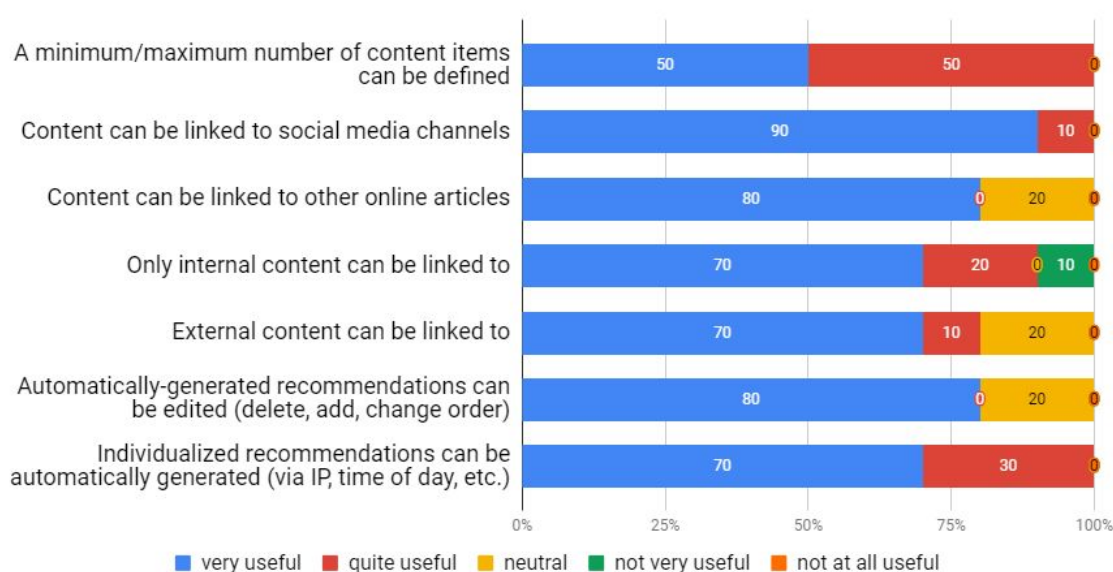


Figure 9: ratings for a tool which creates automatic recommendations for content

## Editorial meetings

The majority of editorial teams meet on average several times a day (20%), daily (30%) to several times a week (30%). Finally, the respondents were asked to rate the following statements which give insight into their current editorial meetings and activities:



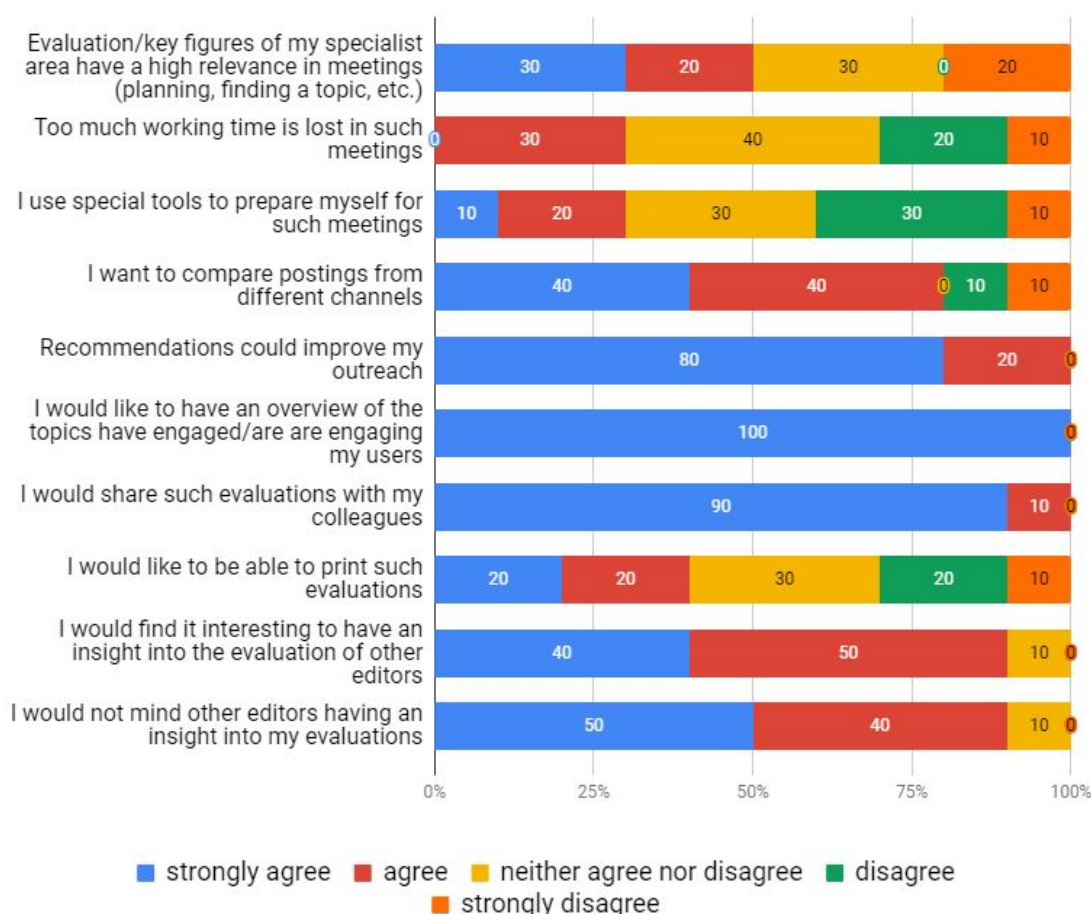


Figure 10: ratings of statements about current editorial meetings and activities

The responses show that recommendations could help the majority of staff with their outreach and that they are interested in getting an overview of topics that their users are engaging with.

## Conclusion

Some general conclusions can be made looking at the survey results:

General remarks:

- survey participants work with a variety of devices (desktop computers and laptops, smartphones, tablets) and browsers therefore they are looking for solutions that would be compatible and easy to use on all of them.

Publishing and monitoring content online:

- respondents indicate the need for workflows that would make publishing content online more efficient.
- a lot of their current workflows rely on manual processes which prevent them from publishing more content across vectors, especially since most of the respondents need to consider many elements - different formats for different platforms, subtitles, thumbnails and text descriptions.

- all of the respondents use tools to monitor their online activities but their responses indicate that the current workflows could be improved. Having an overview of all their online activities online in one central place would be a useful solution.
- survey participants primarily use Facebook and YouTube to publish video content, whereas other platforms are used considerably less. This is an indication that tools for simplifying video publishing across multiple platforms are needed.
- Content Wizard solutions that would help to automate the publishing workflow and refine it according to the monitored users activities would be a very useful addition.

Video summaries:

- the proposed functions for the video summaries tools have been highly rated. In particular, survey participants responded positively to solutions that allow them to combine automated processes with manual editing when needed.

Identifying trending topics for creating posts for online platforms:

- survey participants gather ideas for online posts from a wide range of sources - posts on the web, different (social) media channels, as well as through communication with other people.
- all of the survey participants are interested in a tool that would help them identify trends and find content for their target audiences.

Making recommendations for relevant content:

- the majority of respondents show interest in linking their content to different relevant sources - other in-house content, social media, online articles, etc.
- the possibility to automatically identify individualised recommendations for relevant content is rated as a very useful solution.

Editorial meetings:

- the majority of respondents agree that a lot of time is lost in editorial meetings and their responses indicate that evaluation of online activities currently do not play a major role during them. However, survey participants have indicated that such evaluations would be very useful.

## 6 PERSONAS AFTER USER TESTING AND INTERVIEWS

Before conducting end user tests, personas were divided into four categories (Section 3.2):

1. Broadcast editor
2. Heritage professional editor
3. Media professional editor
4. Sales Manager for a broadcaster

As a result of the user testing (interviews and survey), it was found that the broadcast editor and the media professional editor showed many similarities. The broadcast editor is in fact a media professional. To have a more specific persona to represent someone who is responsible for the tools and services that might be used by an editorial department to improve their workflow, we changed the media professional persona to **Coordinator of new media projects at a broadcaster**.

The persona description for the Sales Manager at a broadcaster could be interpreted as a person who works for a broadcaster, which is usually not the case. They rather work for an ad agency. Therefore, we changed this persona to **Online Marketing Manager**

From the survey results we discovered that most respondents use both a desktop and mobile device in their daily work. Therefore, we should keep in mind that the applications should also be mobile friendly.

The final persona groups are:

#### **1. Broadcast editor**

From the outcome of the end user testing, the persona type description will not be changed:

The broadcast editor is a team-player who is looking for interesting topics and content to highlight to users. She/he does this through both written editorials and promoting existing video content produced by the broadcaster. The editor takes part in weekly editorial meetings to plan ahead the topics.

#### **2. Heritage professional editor**

From the interviews with the professional users, we discovered that the heritage professional editor is involved with content publication not just via social media channels but that the ambition is to re-use content and topics for both online channels and onsite experiences (in case there is a physical exhibition space). The editor works with both archival content and external sources.

#### **3. Coordinator of new media projects at a broadcaster**

The coordinator of new media projects at a broadcaster is someone who is responsible for the tools and services that are used by an editorial department at a broadcaster to improve their workflow. He/she has knowledge of existing solutions that can be used by the editorial department, or coordinates the development of specific tools or platforms where needed.

#### **4. Online Marketing Manager**

The online marketing manager who drives measurable outcomes for brand advertisers online. He/she provides ad solutions and leverages innovations and insights to find, attract and engage intended audiences. He/she offers opportunities for advertisers to showcase their products via video. He/she works for an advertising agency, that might be fully digital or offer both digital and traditional advertising solutions for example by combining TV ads with online ads on Zattoo.

## 6.1 BROADCAST EDITOR



## 6.2 HERITAGE PROFESSIONAL EDITOR



**Simon, 27 Years, Male**

Heritage professional editor

### INTERESTS

Singing , Music/Media

### PERSONALITY

Creative ; Teamplayer

### REASONS NOT TO ENGAGE

Not **integrated** with internal and external platforms; No **shared** workspace; Not **intuitive**

### NEEDS

Stability; Work/ Life Balance

### SOCIAL ENVIRONMENT

Single, City, living in a shared flat

### REASONS TO ENGAGE

Make publishing more **efficient** (online/onsite; See **impact** of work; Well explained **benefits**

### SKILLS

Tech Savvy: **Medium**; Social

### 6.3 COORDINATOR NEW MEDIA PROJECTS AT A BROADCASTER



**Michael, 34 Years, Male**  
Coordinator new media projects at a broadcaster

**INTERESTS**  
News, Media. Tech

**PERSONALITY**  
Creative; Teamplayer

**REASONS NOT TO ENGAGE**  
Expensive; Lockin; Too slow

**NEEDS**  
Acknowledged,  
Empowerment

**SOCIAL ENVIRONMENT**  
City, living together

**REASONS TO ENGAGE**  
Increased efficiency; Ease of  
integration/use; High Quality output

**SKILLS**  
Tech Savvy: High



## 6.4 ONLINE MARKETING MANAGER



**Heung-Min, 37 Years, Male**

Online Marketing Manager

**INTERESTS**  
Sports

**PERSONALITY**  
Driven, Self confident,  
Informed, Opportunistic

**REASONS NOT TO ENGAGE**  
Too expensive; Too complicated to set up and integrate into existing workflow; ; Too complicated to explain to clients; Too small volume

**NEEDS**  
Visibility, Money €

**SOCIAL ENVIRONMENT**  
After-work drinks  
Trade fairs

**REASONS TO ENGAGE**  
; Higher impact of ads; Lower costs or effort; Better **analytics**;

**SKILLS**  
Tech Savvy: **Middle, High** on strategic level,  
Networking

## 7 FINAL REQUIREMENTS

For the final content owner use case, we added requirements for the persona **Coordinator new media projects at a broadcaster** and also redefined the priorities of each requirement regarding the outcomes of the user testing interviews and survey. Some new requirements have been added to the list, namely the requirement for a chatbot and prioritisations for sharing have been updated. We also added the content owner type to the final requirement list.

The requirements list is ordered accordingly:

First, we listed the requirements that only fit one Use Case, then we listed the requirements that fit two of the Use Cases, then three of the Use Cases and at last, we listed the requirements that handle all four content owner Use Cases.

Nr.	Requirement	Use Case	Description	User	Priority
1	Personalized Teaser	4U2	Teasers could be personalized for: Vector, IP (location), Daytime, trending topics (- Age   not at rbb), (- Male/Female   not at rbb), Favourite topics, In case of TV: Show context	Broadcaster editor	MEDIUM
2	CMS Plugin	4U2	Build a ReTV Plugin for different CMS (Adobe AEM)	Broadcaster editor, Heritage professional editor, online sales manager, coordinator new media projects	HIGH
3	Registration for Dashboard	Topics Compass	Registration including information of editorial department	Broadcaster editor, Heritage professional editor, online sales manager, coordinator new media projects	HIGH
4	Creation of Collections	Topics Compass	Editor should be able to compare >2 content items to each other: facebook, twitter, website. Mediathek/OTT platform, Instagram	Broadcaster editor, Heritage professional editor	MEDIUM
5	Login	Topics Compass	Editor gets an editorial department specific login	Broadcaster editor, Heritage professional editor, online sales manager, coordinator new media projects	HIGH
6	User statistics	Topics Compass	Real time user statistic for videos: views, playing time, skip, mute/unmute, volume, exit point	Broadcaster editor, Heritage professional editor, online sales manager	HIGH
7	Configure the dynamic ad insertion logic	Content sWitch	Content owners want to be able to configure rules that govern the dynamic ad insertion.	Broadcaster editor, Heritage professional editor	HIGH
8	Trailer replacement	Content sWitch	- for online / Mediathek - can be done in live TV stream using DAI: We could, for example, create a personal trailer for a show that is available on replay	Broadcaster editor	HIGH



9	Configure the logic for personalised content	Content sWitch	Content owners want to be able to decide which parts of the content can be replaced.	Broadcaster editor, Heritage professional editor	HIGH
10	Measure the impressions of different versions of content and the user reaction to them	Content sWitch	Content owners want to know how viewers react to personalised pieces of content. For example, we want to know if users that saw version B of a trailer were more likely to then actually watch the movie than those who got version A. NISV: -click and browse behavior of users, including duration of visit, scroll % of page, bounce rate, click throughs	Broadcaster editor, Heritage professional editor, online sales manager	MEDIUM
11	Measure the impressions of different versions of an ad and the user reaction to them	Content sWitch	Content owners want to know how often an ad was shown. If there are multiple versions of the same ad, they also want to know which one leads to the lowest drop-off percentage.	Broadcaster editor, Heritage professional editor, online sales manager	MEDIUM
12	Automatic generated Video Summaries in different lengths	Content Wizard	Different Social Media Platforms need different lengths of Video Summaries	Broadcaster editor, Heritage professional editor	MEDIUM
13	Automatic generated versions of an advertisement in different lengths	Content Wizard	Finding the optimal version of an ad would reduce costs to reach a certain audience.	Broadcaster editor, Heritage professional editor	MEDIUM
14	Subtitles "baked" into Video Summaries or provided as separated file (i.e. SRT)	Content Wizard	Video summaries need subtitles to be published on social media: 1. "baked"/"burned" into the video summary 2. provided as a separated file (i.e. SRT, type depends on the respective platform)	Broadcaster editor, Heritage professional editor	HIGH
15	Text suggestions	Content Wizard	Text suggestions along with the automatic generated video summary, which can be used for posting/sharing on different platforms	Broadcaster editor, Heritage professional editor	MEDIUM
16	Optimisation	Content Wizard	Optimise content for re-publication, based on the analytics	Broadcaster editor, Heritage professional editor	HIGH

17	editing text suggestions	Content Wizard	being able to edit the text suggestions with video summary	Broadcaster editor, Heritage professional editor	MEDIUM
18	Select original URL of video	Content Wizard	A tickbox that allows the editor to keep the original URL to the video for posting	Broadcaster editor, Heritage professional editor	LOW
19	Manually edit transcripts	Content Wizard	Edit transcripts manually	Broadcaster editor, Heritage professional editor	HIGH
20	Linking the original video URL with the Summaries URL	Content Wizard	Being able to link to the original videos used in the videos summaries	Broadcaster editor, Heritage professional editor	
21	Scheduling	Content Wizard	The editor can pre-plan a post with the SMPT. The Tool recommends the best posting time, based on different metrics	Broadcaster editor, Heritage professional editor	MEDIUM
22	Visualized Manuscripts	Content Wizard	- from RAW Material - helps for manual cutting - helps for video summaries	Broadcaster editor, Heritage professional editor	MEDIUM
23	Publish content to different vectors (see also Requirement #9)	Content Wizard	Publish video summaries to different vectors: -Instagram -Facebook -etc	Broadcaster editor, Heritage professional editor	HIGH
24	Generate transcript for videos using off the shelf technologies	Content Wizard	Being able to generate transcript for videos using off the shelf technologies	Broadcaster editor, Heritage professional editor	HIGH
25	Notifications	Content Wizard	When a new Video Summary was generated, and in the social media planning tool	Broadcaster editor, Heritage professional editor	LOW
26	Share	Content Wizard	Share Videos/Video Summaries on Social Media Platform	Broadcaster editor, Heritage professional editor	LOW
27	Trending topics	Topics Compass	Visualisation of: RBB intern, competitors, regional (Berlin, Brandenburg), national, international	Broadcaster editor, Heritage professional editor	HIGH
		Content Wizard	For NISV: -from data sources (e.g. Twitter, news sites, Wikipedia), national, international		

28	Reorganisation of Video Summaries, regarding the outcome of user statistics	Content sWitch	When a video always gets the same exit point the TVP will reorganises the outcome to a new video summary	Broadcaster editor, Heritage professional editor	HIGH
		Content Wizard			
29	Daily Summary	Content sWitch	Video summary based on personal interests	Broadcaster editor, Heritage professional editor	MEDIUM
		Content Wizard			
30	Non-linear videos	Content sWitch	Objects are tagged in a video to further content	Broadcaster editor, Heritage professional editor	MEDIUM
		4U2			
31	Automatic categorisation of content	Content sWitch	<p>Fine-grained, automatically detected categories.</p> <ul style="list-style-type: none"> <li>- ReTV would look at the content and decide that this is about "Global Warming", "Middle East", "China" etc.</li> <li>- Similar to how WLT detects stories, we could also do this in video</li> <li>- Important input for the personalisation aspects, but also really useful for search</li> <li>- Keeps professional users from having to tag everything by hand</li> <li>- Interesting for advertisers to target certain topics</li> </ul>	Broadcaster editor, Heritage professional editor, online sales manager	HIGH
		4U2			
32	User Roles	Topics compass	The user could have different roles like "Starter", "Editor", "Pro", "Expert", "Admin"	Broadcaster editor, Heritage professional editor, online sales manager, coordinator new media projects	LOW
		4U2			
33	Live analytics	Topics compass	<ul style="list-style-type: none"> <li>- Combined with website analytics</li> <li>- click paths</li> <li>- which content works best/worst? And for whom?</li> <li>- summary</li> <li>- details</li> <li>- average viewing time of video</li> <li>- hotspots on video</li> </ul>	Broadcaster editor, Heritage professional editor, online sales manager	MEDIUM
		4U2			

34	Play Video/ Video Summary	Topics compass 4U2	The user is able to play, pause, ffw, fbw and stop the Video / Video Summary	Broadcaster editor, Heritage professional editor	HIGH
35	Fullscreen/ Minimize Video/ Video Summary	Topics compass 4U2	The user is able to play the Video/ Video Summary in fullscreen mode, and minimize it	Broadcaster editor, Heritage professional editor	LOW
36	Automatic generated thumbnails	Content Wizard 4U2	Video /Video Summary needs an automatically generated thumbnail	Broadcaster editor, Heritage professional editor	HIGH
37	"this could interest you as well" Recommendations	Content Wizard 4U2	Recommended video content for editor on: - For a trending topic - For posting time - For Topics for editorial pieces that may include one or more videos (e.g. recommendation based on what's in the archive and what is trending)	Broadcaster editor, Heritage professional editor	MEDIUM
38	Automatically generated subtitles for Video Summaries	Content Wizard 4U2	Subtitles can be automatically generated for the Video Summaries, based on the length of the Video	Broadcaster editor, Heritage professional editor	HIGH
39	Edit automatic generated Video Summary	Content Wizard 4U2	The editor is able to edit an automatically generated Video Summary. This also includes: - Background Audio - Subtitles - Editors can change the position and style of subtitles	Broadcaster editor, Heritage professional editor	HIGH
40	Automatic generated Teaser	Content Wizard 4U2	Depends on the content. Teaser can include: - Video Summary - link to article - link to social media - link to other editorial departments articles - link to Mediathek - download .ics	Broadcaster editor, Heritage professional editor	HIGH
41	Add/ delete items	Content Wizard	Editors could have the possibility to manipulate the generated teaser by add or delete a items	Broadcaster editor, Heritage professional editor	MEDIUM

		4U2			
42	Change/ save	Content Wizard	Editors should be able to change the order of a list and save it - i.e. manual override	Broadcaster editor, Heritage professional editor	MEDIUM
		4U2			
43	Secure tag	Content Wizard	Videos and Video Summaries need a time-based secure tag, so that the editor knows that he has the rights to use this Video. E.g. in Germany you often do have only 7 days the licence for 3rd party material.	Broadcaster editor, Heritage professional editor	HIGH
		4U2			
44	Target Group optimized Video summary	Content Wizard	- video summary can be different for each target group - i.e. young radio station Fritz needs a different video as news formats like rbb24	Broadcaster editor, Heritage professional editor, online sales manager	HIGH
		4U2			
45	I can choose chatbots as a distribution vector	Content Wizard	As a content owner, I can choose to have my content pushed to chatbot vectors	Broadcaster editor, Heritage professional editor	HIGH
		4U2			
46	Reorganisation of a Video Summary, depending on user comments	Content Wizard	Use user comments on social media to analyze the video and rebuild the summary if necessary	Broadcaster editor	MEDIUM
		4U2			
		Topics Compass	- also includes comments on shared videos		
47	Search	Content Wizard	The editor should be able to search for:	Broadcaster editor, Heritage professional editor	MEDIUM
		4U2	- trending topics		
		Topics Compass	- specific content		
			- Video Summaries		
48	Lists	Content Wizard		Broadcaster editor, Heritage professional editor	MEDIUM
			The list should be a result of a request (e.g. search)		
		Topics Compass			

## 8 CONCLUSION AND OUTLOOK

This Deliverable provides an overview of the ReTV professional focus groups, resulting in four personas for the content owner use case. The ReTV content partners drafted initial requirements and drew up storyboards for the different scenarios. Thanks to one-on-one interviews with professional users and a survey, the ReTV partners collected valuable input for the final requirements for the content owner use case. These requirements are provided as input for the technical workpackages 1-4. The personas for the Content Owner Use Case have also been updated based on the input from the user testing.

The final requirements list contains 48 ranked by priority, scenario and user category.

The next steps will be to build prototypes of the scenarios in conjunction with the technical work packages and validate results of the use cases. It was jointly decided with technical partners that the Content Wizard and Topics Compass scenarios will be developed first.

The validation of the 'Engagement Monitoring Prototype' will be done in tasks 5.2 and 5.3, and will be reported in D5.2 "First validation of Engagement Monitoring Prototype" (M20) and D5.3 "Second validation of Engagement Monitoring Prototype (M36)".

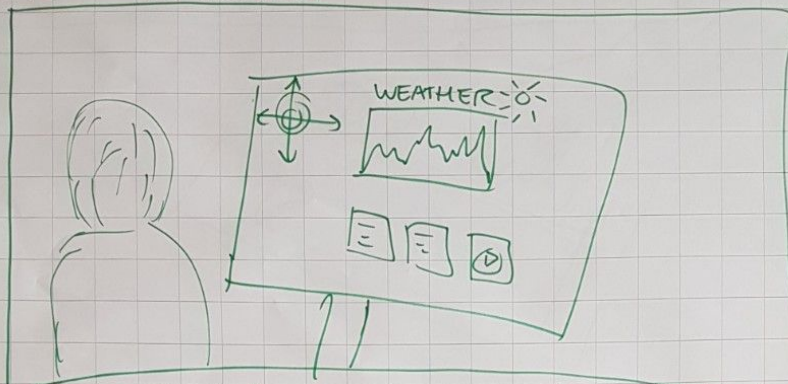
## **ReTV Storyboards**

The content partners created storyboards during a creative workshop in Potsdam, July 2018. The storyboards help to visualise the main user scenarios. The storyboards present in three visual steps what the scenarios is about. They are ordered by user scenario: Content Wizard, 4U2 and Topics Compass. The Content sWitch storyboard is part of the consumer use case.

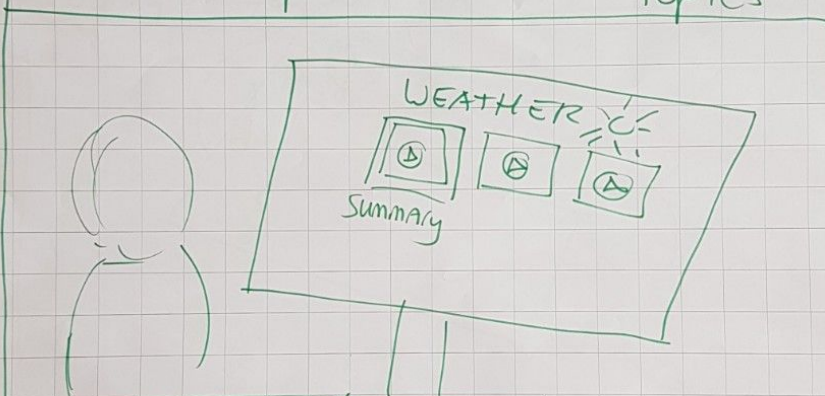


# Content Wizard

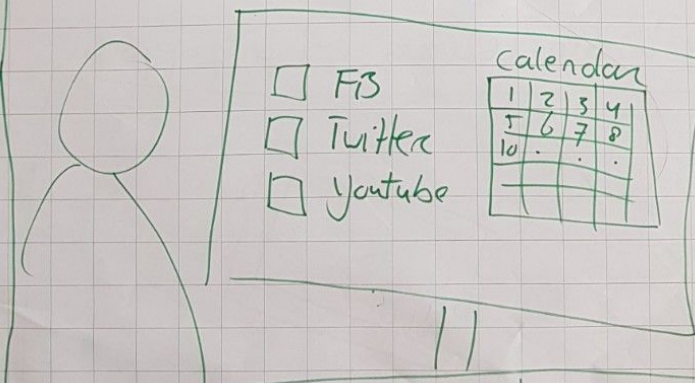
Heritage prof. editor



Sees what topics are relevant on ~~Content~~ Compass Topics



Selects topic and chooses relevant content incl. summaries



Schedule to publish on social media



Content Wizard

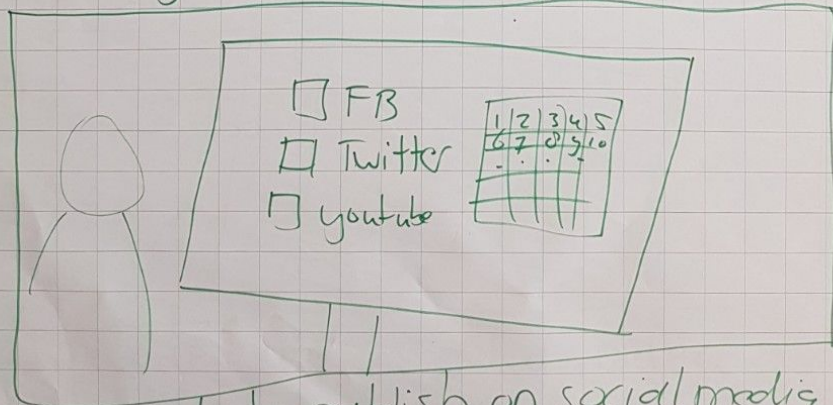
Broadcast Editor



TRENDING topic notification pops up



Creating video summaries of recommended videos



SCHEDULE to publish on social media

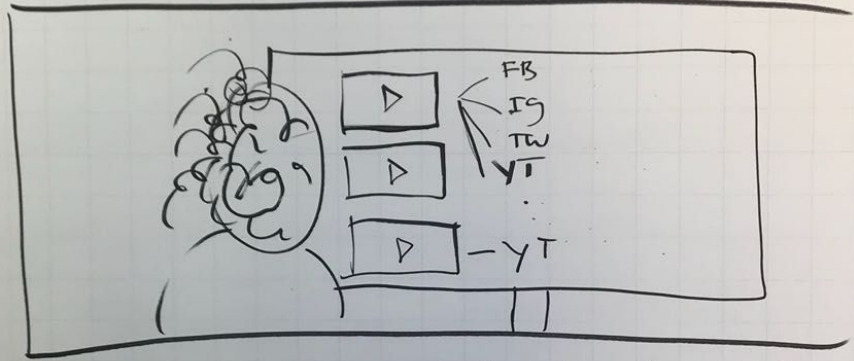
quantore

CONTENT  
WIZARD

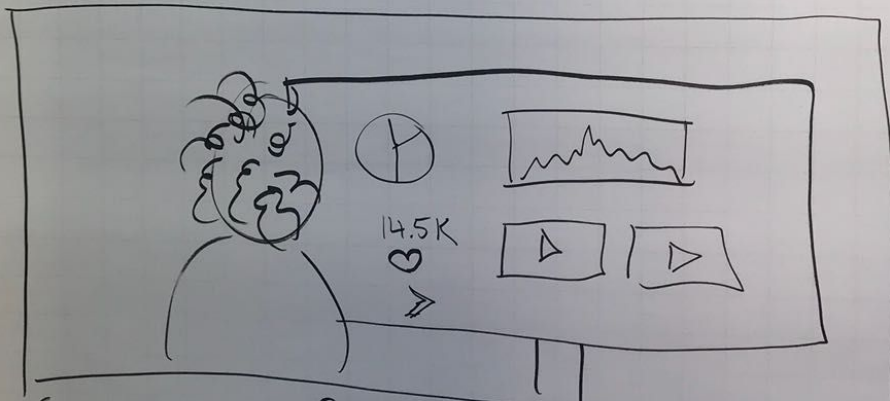
Broadcast  
editor



She sees summaries AND raw footage on ice cream TOPICS AND makes editorial decisions



AFTER REVIEWING video's, she has them automatically scheduled across vectors



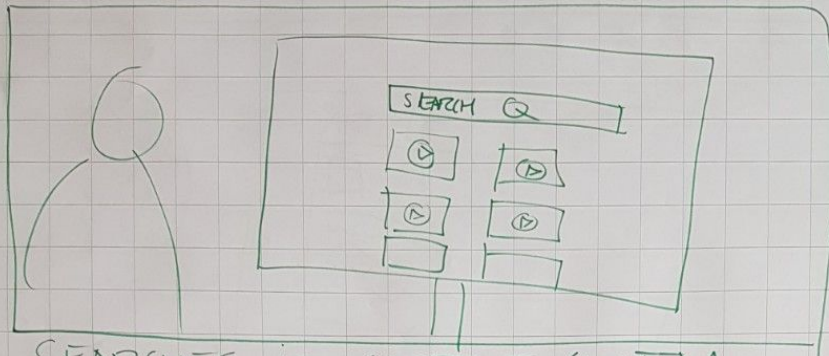
Compares performance of the content  
ACROSS VECTORS

BRANKEN

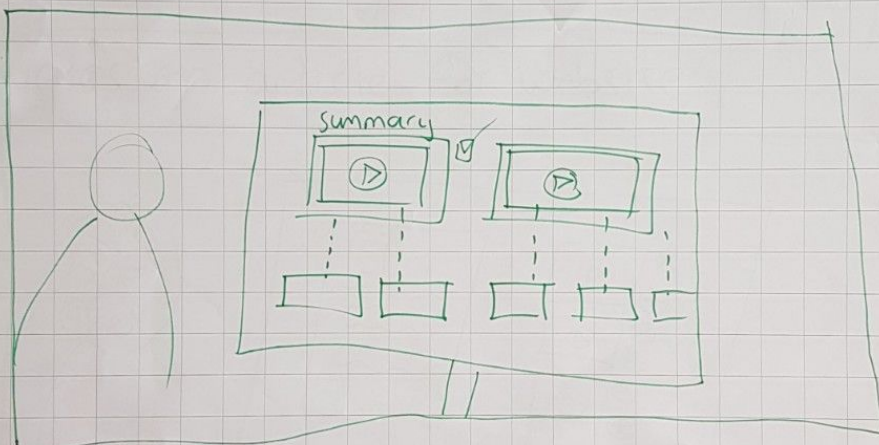


Content Wizard

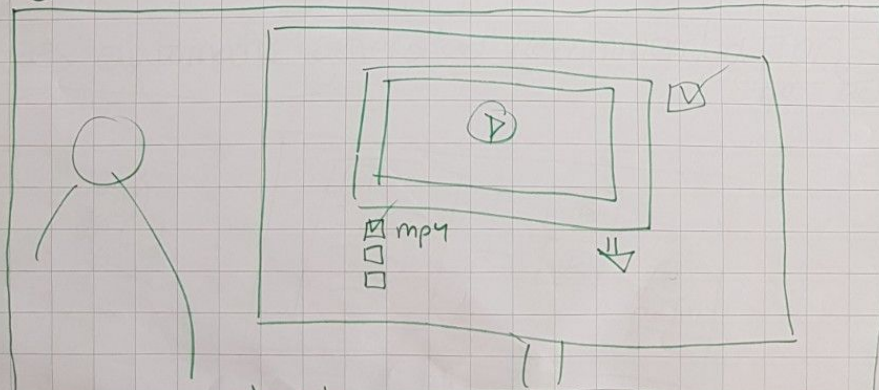
Media Professionals



SEARCHES in content system



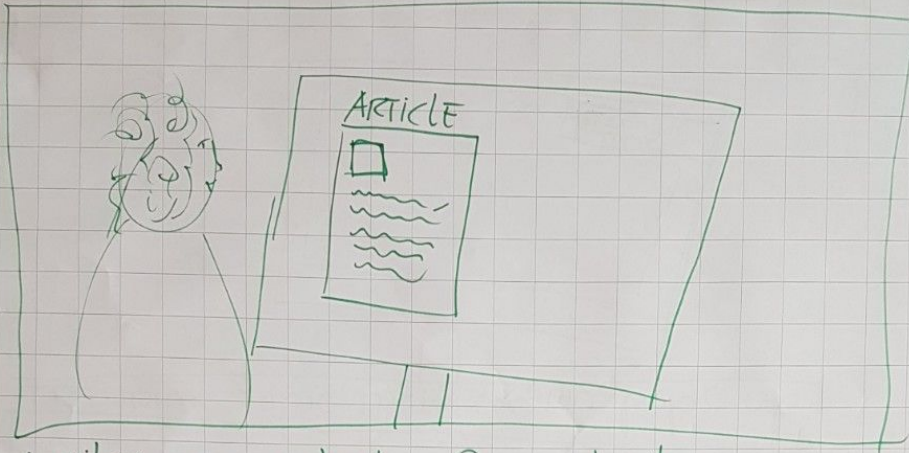
GETS summaries, sees original videos



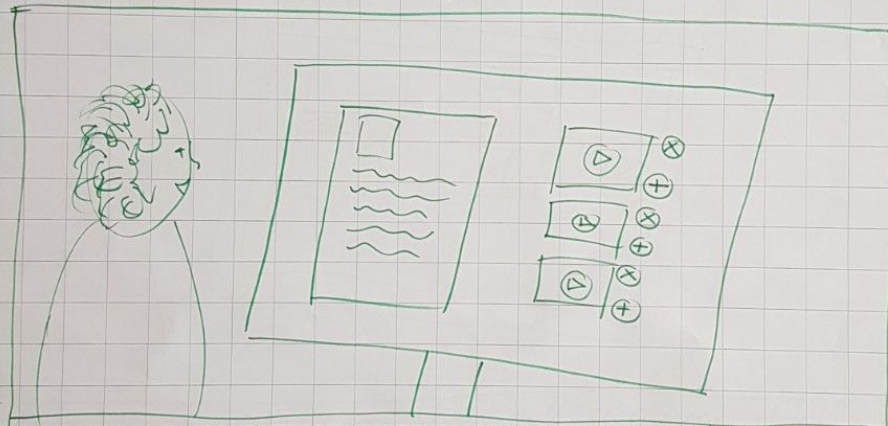
Download the summary for production

4U2

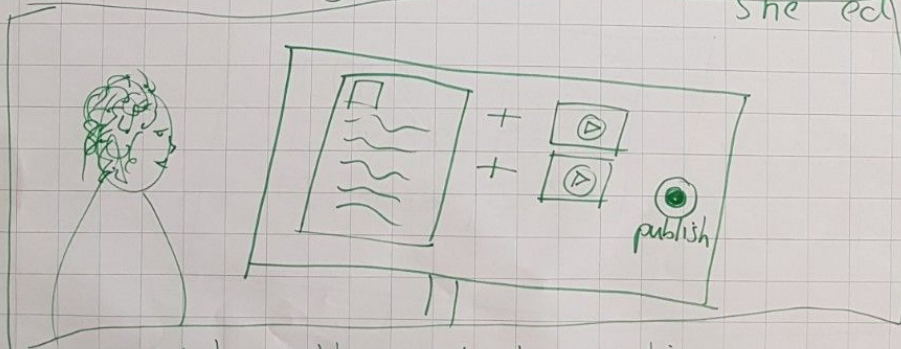
## Broadcast Editor



writes an article for website



sees automatic generated recommendations that she edit



she publishes the article on line



Topic  
Compass

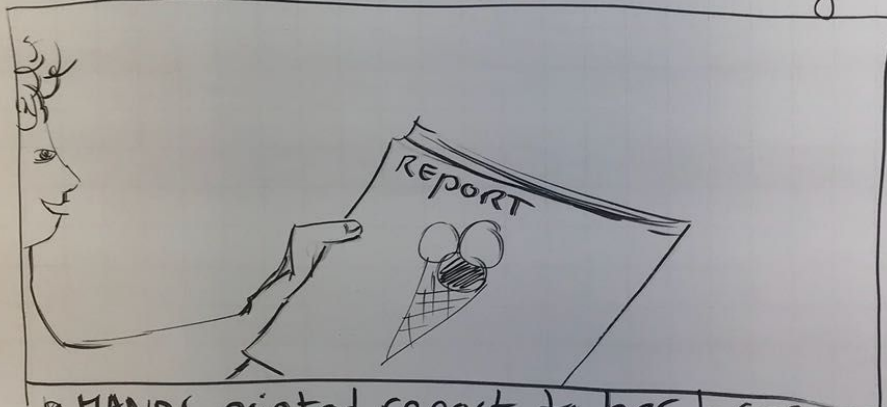
Broadcast  
editor



Hurray! no meetings, let's see what topics are trending!



She sees that ice cream is trending



✿ HANDS printed report to her boss

FRANKEN