

**МІНІСТЕРСТВО ОСВІТИ І НАУКИ УКРАЇНИ
ЗАПОРІЗЬКИЙ НАЦІОНАЛЬНИЙ УНІВЕРСИТЕТ
ІНЖЕНЕРНИЙ НАВЧАЛЬНО-НАУКОВИЙ
ІНСТИТУТ ім. Ю.М. ПОТЕБНІ**

Кафедра інформаційної економіки, підприємництва та фінансів
(повна назва кафедри)

Кваліфікаційна робота
другий (магістерський)
(рівень вищої освіти)

на тему: **Управління проектом розробки інтернет магазину цифрових товарів
для рекламного бізнесу**

Виконав: студент 2 курсу, групи 8.0512-іе
Спеціальності 051 Економіка
(код і назва спеціальності)

спеціалізації _____
(код і назва спеціалізації)

освітньої програми Інформаційна економіка
(назва освітньої програми)

П.В. Кириченко
(ініціали та прізвище)

Керівник професор кафедри інформаційної
економіки, підприємництва та фінансів, професор,
д.е.н. Глущевський В.В.

(посада, вчене звання, науковий ступінь, прізвище та ініціали)

Рецензент _____

(посада, вчене звання, науковий ступінь, прізвище та ініціали)

Запоріжжя
2023

**МІНІСТЕРСТВО ОСВІТИ І НАУКИ УКРАЇНИ
ЗАПОРІЗЬКИЙ НАЦІОНАЛЬНИЙ УНІВЕРСИТЕТ
ІНЖЕНЕРНИЙ НАВЧАЛЬНО-НАУКОВИЙ
ІНСТИТУТ ім. Ю.М. ПОТЕБНІ**

Кафедра інформаційної економіки, підприємництва та фінансів

Рівень вищої освіти другий (магістерський)

Спеціальність 051 Економіка

(код та назва)

Освітня програма Інформаційна економіка

ЗАТВЕРДЖУЮ

Завідувач кафедри інформаційної економіки, підприємництва та фінансів, д-р екон. наук, проф.

Шапуров О.О..

(підпис)

“ ____ ” _____ 202_ р.

**З А В Д А Н Н Я
НА КВАЛІФІКАЦІЙНУ РОБОТУ СТУДЕНТОВІ**

Кириченку Павлу Валерійовичу

(прізвище, ім'я, по батькові)

Тема роботи (проекту) Управління проектом розробки інтернет магазину цифрових товарів для рекламного бізнесу

керівник роботи Глушевський В'ячеслав Валентинович, д-р екон. наук., професор

(прізвище, ім'я, по батькові, науковий ступінь, вчене звання)

затверджені наказом ЗНУ від «09» жовтня 2023 року № 1579-с

Строк подання студентом роботи дата згідно графіку захисту

Вихідні дані до роботи: відкрита статистика ринку відеоматеріалів, який обслуговує косметичні бренди; результати аналізу відкритих і комерційних існуючих платформ стокового відео для індустрії краси.

Зміст розрахунково-пояснювальної записки (перелік питань, які потрібно розробити) 1. Економічні основи створення інтернет-магазину цифрових товарів. 2. Аналіз функціоналу цифрових і веб-технологій для створення онлайн платформ. 3. Цінова та фінансова моделі інтернет-магазину цифрових товарів на прикладі відео контенту. 4. Розробка функціоналу та пошукових алгоритмів для інтернет-магазину цифрових товарів.

Перелік графічного матеріалу (з точним зазначенням обов'язкових креслень): Стейкхолдери та команда проекту створення онлайн платформи. Фінансова модель інтернет магазину відеоконтенту. Діаграма Ганта (календарна реалізація проекту). Функціональні обмеження та технічні завдання проекту. Результати реалізації проекту.

5 Консультанти розділів роботи

Розділ	Прізвище, ініціали та посада консультанта	Підпис, дата	
		завдання видав	завдання прийняв
1	Глушчевський В.В., професор кафедри інформаційної економіки, підприємництва та фінансів		
2	Глушчевський В.В., професор кафедри інформаційної економіки, підприємництва та фінансів		
3	Глушчевський В.В., професор кафедри інформаційної економіки, підприємництва та фінансів		

Дата видачі завдання _____

КАЛЕНДАРНИЙ ПЛАН

№	Назва етапів кваліфікаційної роботи	Строк виконання етапів роботи	Примітка
1.	Розробка плану роботи.	10.10.23	
2.	Збір вихідних даних.	17.10.23	
3.	Обробка теоретичних джерел.	31.10.23	
4.	Розробка першого і другого розділів.	08.11.23	
5.	Розробка третього розділу.	22.11.23	
6.	Оформлення і нормоконтроль кваліфікаційної роботи.	30.11.23	
7.	Захист кваліфікаційної роботи.	14.12.23	

Студент _____ П.В. Кириченко
(підпис) (ініціали та прізвище)

Керівник роботи _____ В.В.Глушчевський
(підпис) (ініціали та прізвище)

Нормоконтроль пройдено

Нормоконтролер _____ О.О. Шапуров
(підпис) (ініціали та прізвище)

РЕФЕРАТ

Кириченко П.В. Кваліфікаційна робота магістра «Управління проектом розробки інтернет магазину цифрових товарів для рекламного бізнесу»: 62 с., 33 рис., 1 табл., 29 джерел.

Ключові слова: ВІДЕОМАТЕРІАЛИ, ІНТЕРНЕТ-МАГАЗИН, КОСМЕТИЧНА РЕКЛАМА, ЛІЦЕНЗУВАННЯ КОНТЕНТУ, МОДЕЛЬ, ЦИФРОВІ ТОВАРИ.

Кваліфікаційна робота для здобуття ступеня вищої освіти магістр за спеціальністю 051 Економіка, науковий керівник В.В. Глущевський. Запорізький національний університет. Інженерний навчально-науковий інститут ім. Ю.М. Потебні. Кафедра інформаційної економіки, підприємництва та фінансів, 2023.

Мета магістерської роботи – на основі результатів аналізу існуючих інтернет-магазинів відеоматеріалів розробити індивідуальну комерційну онлайн-платформу для сфери індустрії краси, функціонал якої містить унікальні алгоритми пошуку, пакетне завантаження вмісту та покращену взаємодію з користувачем.

Вирішено типову проблему інтернет-магазинів щодо ефективності та швидкості пошуку, ліцензування та завантаження комерційного відеоматеріалу для маркетингових програм у сфері індустрії краси. Розроблений інтернет магазин «BBROLL» задовольняє потреби підприємців із догляду за шкірою та менеджерів соціальних мереж у косметичних компаніях. Розроблена торгова площадка bbroll.com є ілюстративним прикладом і демонстрацією практичного застосування онлайн-платформи та відповідних цифрових товарів для вирішення окресленої проблеми.

ЗМІСТ

ЗАВДАННЯ НА КВАЛІФІКАЦІЙНУ РОБОТУ	2
РЕФЕРАТ	4
ВСТУП	8
РОЗДІЛ 1 АНАЛІЗ ТА ІНІЦІАЦІЯ ПРОЕКТУ РОЗРОБКИ ІНТЕРНЕТ МАГАЗИНУ ЦИФРОВИХ ТОВАРІВ	9
1.1 Аналіз онлайн ринку відеоматеріалів для рекламного бізнесу	9
1.2 Ініціювання проекту: функціональні та технічні обмеження	16
1.3 Цінова та фінансова модель інтернет магазину цифрових товарів	23
Висновки до розділу 1	28
РОЗДІЛ 2 РОЗРОБКА ФУНКЦІОНАЛУ ТА ПОШУКОВИХ АЛГОРИТМІВ ДЛЯ ІНТЕРНЕТ МАГАЗИНУ ЦИФРОВИХ ТОВАРІВ	29
2.1 Розробка макету головної сторінки інтернет магазину цифрових товарів	29
2.2 Моделювання результатів пошуку: дизайн, функціонал, фільтри	36
2.3 Візуалізація історії завантажень користувача	41
Висновки до розділу 2	45
РОЗДІЛ 3 УПРАВЛІННЯ ВІДЕО КОНТЕНТОМ ІНТЕРНЕТ МАГАЗИНУ «BBROLL»	47
3.1 Управління завантаженням вмісту та атрибуцією інтернет магазину	47
3.2 Управління взаємодією з користувачем: карта шляху клієнта	51
Висновки до розділу 3	59
ВИСНОВКИ	60
СПИСОК ВИКОРИСТАНИХ ДЖЕРЕЛ	61

ABSTRACT

Pavlo Kyrychenko. Master's qualifying paper «Managing a project for developing an online marketplace of digital goods for advertising businesses»: 62 pages, 33 figures, 1 table, 29 references.

Keywords: CONTENT LICENSING, COSMETICS COMMERCIAL, DIGITAL ASSETS, MODEL, ONLINE MARKETPLACE, STOCK FOOTAGE.

Master's thesis for the attainment of a master's degree in the field of specialization 051 - Economics. Thesis advisor: V. Glushchevsky, Zaporizhzhya National University, Engineering Education and Scientific Institute named after Y.M. Potebni, Department of Information Economics, Entrepreneurship, and Finance, 2023.

The thesis addresses the persistent challenge of efficient and swift search, licensing, and downloading commercial video footage for marketing applications within the beauty industry. It specifically caters to the needs of skin care entrepreneurs and social media managers in cosmetic production companies. The development of the bbroil.com marketplace serves as an illustrative case study, demonstrating the practical application of the platform to solve this issue.

TABLE OF CONTENTS

ABSTRACT	2
INTRODUCTION	8
CHAPTER 1 ANALYSIS AND INITIATION OF THE INTERNET STORE DIGITAL GOODS DEVELOPMENT PROJECT	9
1.1 Analysis of the stock video market for advertising business	9
1.2 Project initiation: functional and technical limitations	16
1.3 Pricing and financial model of online store of digital goods	23
Conclusions to the chapter 1	28
CHAPTER 2 DEVELOPMENT OF FUNCTIONALITY AND SEARCH ALGORITHMS FOR THE INTERNET STORE OF DIGITAL GOODS	29
2.1 Development of the layout of key pages of the online store of digital goods	29
2.2 Modeling search results: design, functionality, filters	36
2.3 Visualization of user downloads history	41
Conclusions to the chapter 2	45
CHAPTER 3 MANAGEMENT OF THE VIDEO CONTENT OF THE ONLINE STORE "BBROLL"	47
3.1 Management of content upload and attribution of the online store	47
3.2 User Interaction Management: Customer Journey Map	51
Conclusions to the chapter 3	59
CONCLUSIONS	60
REFERENCES	61

INTRODUCTION

In recent years, digital and web technologies have revolutionized the beauty industry, particularly in the realm of marketing and advertising. As more consumers turn to online channels to research and purchase products, beauty brands must adapt their strategies to effectively reach and engage their target audience in the digital space. One of the most effective ways to do this is through the use of high-quality video content that showcases their products in a visually stunning and engaging way. This has led to the emergence of a new type of online marketplace: the stock footage marketplace, which provides a vast selection of video clips that can be licensed and used in various marketing campaigns. This diploma project focuses on the development of a stock footage marketplace that caters specifically to beauty brands, providing them with a one-stop-shop for high-quality, on-brand video content. Through the use of digital and web technologies, this marketplace aims to transform the way beauty brands create and distribute their marketing content, making it more accessible, affordable, and effective than ever before.

Object of Study - Stock Footage Market and Platforms for Creative Content in the Beauty Industry.

Subject of Investigation - The Development and Implementation of a Customized Stock Footage Platform for the Beauty Industry.

Goal of Study - To Analyze the Limitations of Existing Stock Footage Platforms and Develop a Customized Solution that Addresses Specific Needs in the Beauty Industry, focusing on Unique Search Algorithms, Batch Content Uploading, and Enhanced User Experience.

CHAPTER 1

ANALYSIS AND INITIATION OF THE INTERNET STORE DIGITAL GOODS DEVELOPMENT PROJECT

1.1 Analysis of the stock video market for advertising business

Nature of Business. BBRoll - it is an online marketplace where beauty industry representatives can find, license and download video footage for their commercials. It is an organized database of video clips, which is fully described, keyworded and attributed for easy search through [2].

Main goal of the BBRoll platform is a fast delivery of relevant high quality video content to SMM managers, video editors, marketing departments and others who work in the skin care manufacturing and beauty industry.

The platform offers such main services:

- Online footage database with its own search engine, which helps to find exact video clips by typing a certain request in the search bar.
- Licensing of video footage.
- Instant download of video footage.

Footage licensing service is the main income source of the business. Users pay for the right to use video footage from the BBRoll database in their commercial videos.

Users get those rights by direct interaction with the website without any contact with the live manager or sales department needed. They get the pdf license document.

BBRoll provides its services on an on-demand and subscription basis, so users can find video clips and buy them on-by-one as well as buy unlimited access to the whole database and download as many clips per month as needed for their projects.

As mentioned earlier, the business is niched down to beauty and skin care area of interest, so the main focus and main target audiences are:

- Beauty brands SMM and content managers.
- Skin care and cosmetic manufacturers.
- Video Production companies and marketing agencies specialized on beauty and skin care advertisements.

Why will that be sold? The production of commercial videos is a hard, expensive and time-consuming process. Average 30 sec commercial video costs \$10 000 to produce and it includes 17-18 shots [3]. But some of those shots may be replaced with BBRoll's pre-created non exclusive footage with the price as low as \$10. In this case production saves up to \$545 per every shot. And if all needed shots for the commercial will be taken from our base, the cost of that project will be dropped significantly, from \$10 000 to \$180.

Why is it profitable for us then?

Yes, we also pay a lot to produce every single footage, but non-exclusivity is the game changer. We are able to sell this clip as many times as we want, so selling it for \$47 for 50+ times covers all our production expenses and makes us up to 30% on top. So we turned the exclusive service to a standard, scalable product [4], changing the business model significantly from the video production company to an online marketplace.

Market Analysis. There are over 20 stock agencies that provide stock footage in the market [5]. These agencies compete based on the size of their portfolios, pricing, and, notably, exclusive content. For instance, Shutterstock and Pond5 (see Figure 1.1., 1.3.), the latter recently acquired by Shutterstock, boast extensive portfolios with over 20 million video clips each. Adobe Stock (see Figure 1.2.) has the most extensive creative community, serving as both suppliers and buyers of content. Getty Images, while having higher prices, offers exclusive content similar to Shutterstock, making it available only on their platform. Additionally, numerous smaller stock agencies with portfolios of around 1 million clips sell at lower prices or provide unlimited access through monthly subscriptions.

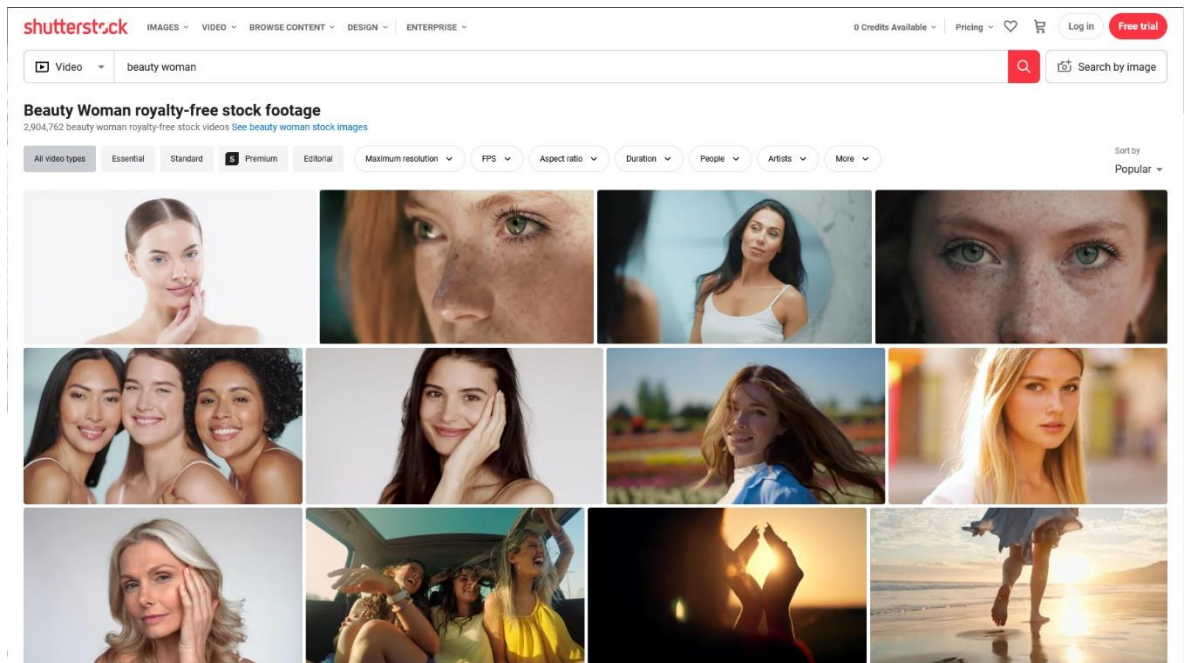


Figure 1.1 – Competitor’s search page - Shutterstock

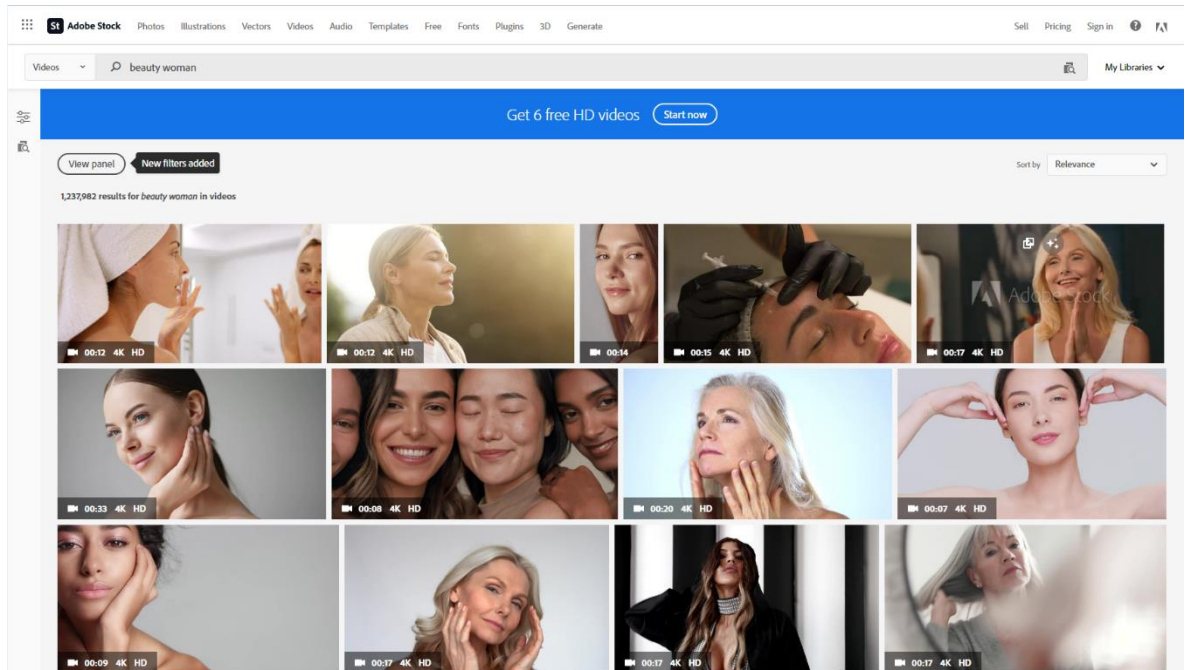


Figure 1.2 – Competitor’s search page - Adobe Stock

All these agencies share a commonality - they provide footage across various industries, accepting a wide array of contributors' work to cover diverse topics. This diversity, however, poses challenges for users in sifting through a multitude of clips. Moreover, assembling a series of footage with seamless transitions in terms of color, lighting, and quality proves to be a daunting task.

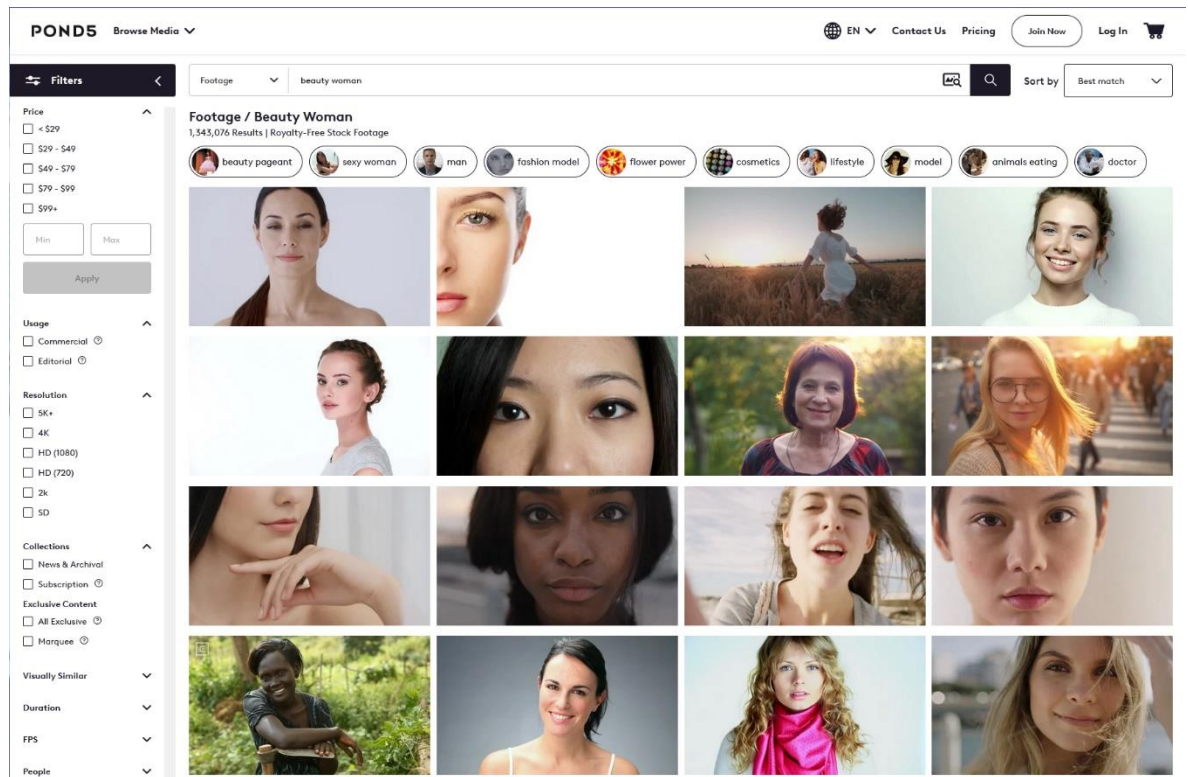


Figure 1.3 – Competitor’s search page - Pond5

In contrast, BBRoll is specialized exclusively for those in or working for the beauty industry. This niche focus makes the BBRoll footage base exceptionally valuable for this specific industry and offers several advantages. While it may not cater to the "I want it all" market, it is sufficient to generate six figures. So, here are the main reasons for users to choose BBRoll:

Database size. In contrast to the extensive and often overwhelming options offered by major stock footage platforms, BBRoll distinguishes itself as a specialized database tailored for beauty brands in the advertising industry. Searching through millions of videos on other platforms can be like finding a needle in a haystack. Conversely, BBRoll concentrates on curating a compact yet precise footage database, featuring meticulously filmed content exclusively dedicated to skincare, haircare, cosmetics, and beauty brands. This focused approach enables BBRoll to deliver more relevant content to its niche audience.

Search engine. On traditional platforms, finding the right footage requires video editing and searching skills. First of all users must understand the timeline of the video ad

and then search for every separate part (footage) considering its exact description [6]. For example if a user needs a video footage for face cream he is going to search for very precise footage “woman applying cream on her face” and then “woman who gently touches her face representing the result” and so on. Or search for a wide query “beauty woman” and then list hundreds of pages to find needed video if it exists. BBRoll features a unique search system. While you can still type specific queries like "woman applying cream on her face," there's a simpler method. Users can just type "cream commercial," and we'll provide all the necessary footage for a cosmetic cream video ad. You can then easily refine your search by using filters – it's that straightforward.

That’s because traditional platform’s search engines rely on user click-through rates and generic keywords when BBRoll’s database is intelligently tagged with indexed terms providing a deep understanding of the content within each footage.

Search filters. Stock agencies offering footage across various topics often filter results based on a limited set of parameters like Resolution, Length, Price, and FPS. Unfortunately, these parameters don't contribute much to topic-specific searches, except perhaps for the Number of people. BBRoll takes a different approach with its focused footage topics, providing users with more effective and tailored search filters. These include Footage category (semantic shot type), Background color, Shot type, Type of lighting, Age of model, and more, specifically crafted for beauty commercials.

This customized approach significantly streamlines the creative process, enabling users to effortlessly discover perfectly matched shots for their projects. Take the example of a cream commercial: by entering the term in the search bar and selecting parameters like Background Color (see Figure 1.4.-1.6), Type of lighting, and Shot type (shot size), users receive a precise list of footage that aligns with the desired style for their sequence.

Moreover, users can refine their search by choosing a category, such as "application and usage," to access footage of a woman applying cream on her face against a specific background, with women of a particular age and even skin color. To find the next shot for the same commercial, a simple switch of the category from "application and usage" to

"result representation" or "product itself" yields precisely what is needed to complete the video ad sequence.

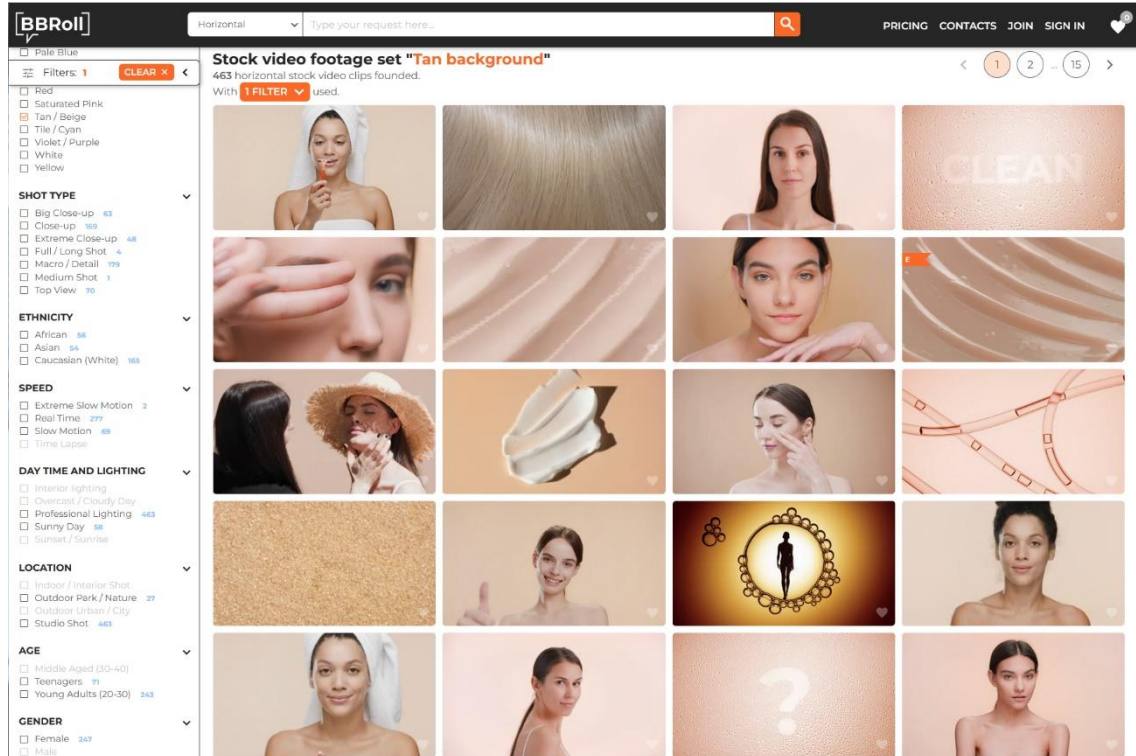


Figure 1.4 – Example of grouping search results by color style, beige background

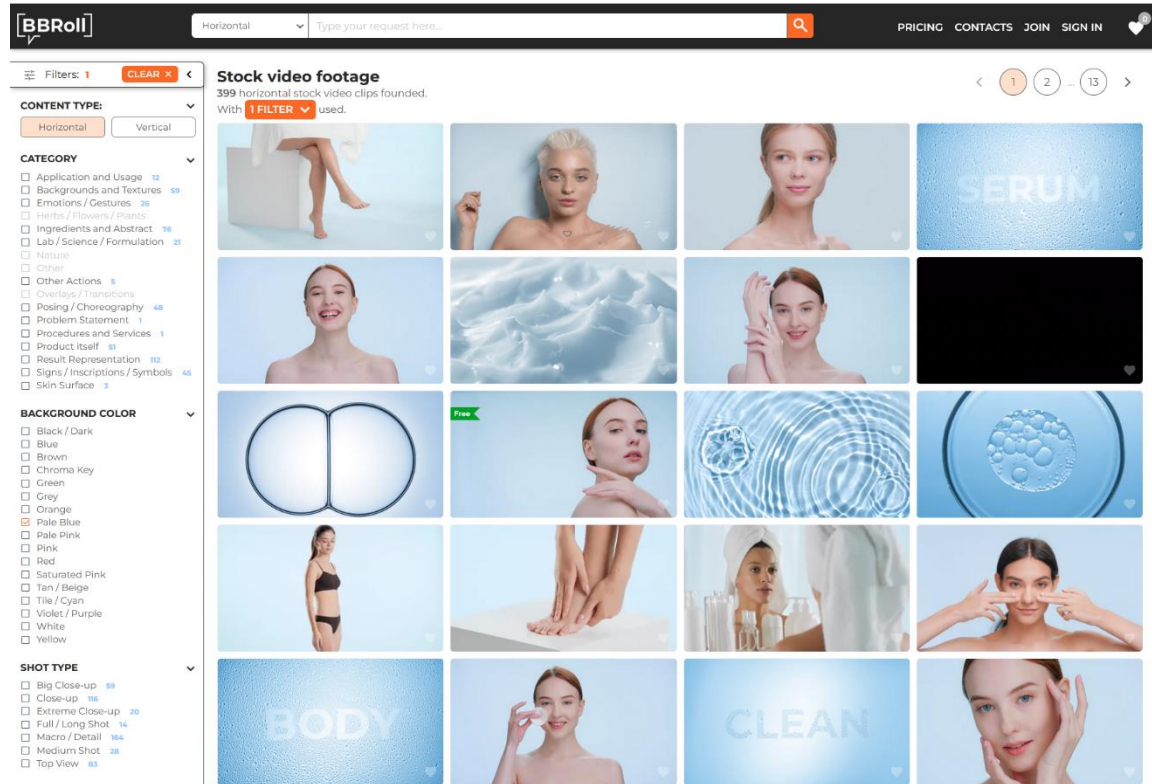


Figure 1.5 – Example of grouping search results by color style, blue background

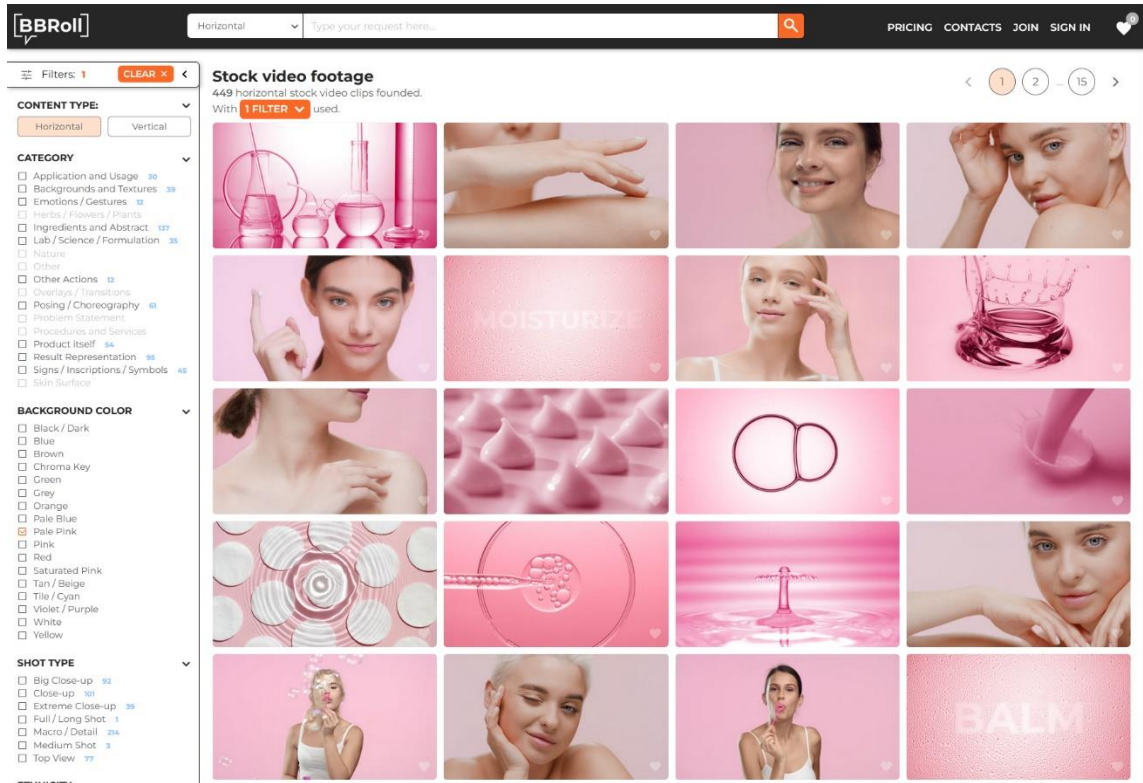


Figure 1.6 – Example of grouping search results by color style, pink background

Footage Quality. One of BBRoll's standout features is its commitment to standardized quality. Every clip undergoes a rigorous process of color correction, adheres to specific camera and lens usage, and maintains consistent quality. It does not mean that there's better quality ever, but it means that all the footage, especially inside of the batch, are typically filmed with the same camera, same lenses and same lighting. This standardization guarantees that when users compile multiple clips onto a single timeline, they seamlessly complement each other, eliminating the hassle of adjusting for different styles and tones.

In the vast red ocean of the stock video market [7], BBRoll has captured its niche, providing a tailored solution that simplifies the lives of its target audience. While other platforms navigate an expansive sea of generic parameters, BBRoll's specialized approach, featuring a narrow footage topic base and intuitive search filters, ensures a seamless creative process for users in the beauty industry. By offering a unique and efficient system, BBRoll not only distinguishes itself in the crowded stock footage

landscape but also enhances the user experience, making it the go-to resource for those seeking precision and relevance in their creative endeavors within the beauty realm.

In summary, with over 20 stock agencies, competition revolves around portfolio size, pricing structures, and the exclusive content. Noteworthy platforms like Shutterstock, Pond5, Adobe Stock, and Getty Images boast extensive portfolios, catering to a broad spectrum of industries. However, this diversity poses challenges for users seeking niche-specific footage with seamless transitions.

Unlike its counterparts, BBRoll distinguishes itself through a focused database curated for skincare, haircare, cosmetics, and beauty brands. In the vast expanse of the stock video market, BBRoll stands out as a beacon of efficiency and precision. Its unique approach, navigating the challenges of generic parameters with a narrow footage topic base and intuitive search filters, positions it as a useful and meaningful resource for those in the beauty industry.

1.2 Project initiation: functional and technical limitations

Project name: MVP (minimum viable product) of Stock Footage Marketplace.

Client: BBRoll Inc. (serving various consumers and suppliers of creative content in the beauty industry).

Developing an online store integrated with a footage database. The platform should be capable of showcasing video previews, provide secure payment processing, automated content downloads and licensing. Additionally, an internal search engine which is necessary for efficient user navigation.

Functional requirements:

- Organized database of videos: The website will have a well-organized database of video footage, with each video tagged and categorized by type, style, and keywords for easy search and retrieval.

- Secure server for storage of footage: The website will be hosted on a secure server that provides ample storage for video files, with adequate backups and data redundancy to ensure data integrity.
- Search engine: The website will have a powerful search engine that allows users to find the footage they need by keyword, category, and other criteria.
- Preview content: Users will be able to preview each video before purchase to ensure that it meets their needs.
- Payment processing: The website will have a secure payment processing system that accepts major credit cards and payment methods such as PayPal and Stripe.
- Automatic download: Once payment is confirmed, the system will automatically initiate a download of the purchased video to the user's account or email.
- License generation: Upon successful payment, the website will automatically generate a license for the downloaded footage, including usage terms and restrictions.

Technical Requirements:

- Web Hosting: The website will require a reliable and secure web hosting service with ample storage and bandwidth to handle high traffic volume.
- Content Management System (CMS): The website will have an in-built CMS which provides a user-friendly interface for managing the database of videos, user accounts, payment processing, and licensing.
- Video Encoding and Compression: All videos will be encoded and compressed to ensure optimal quality and fast download times, while minimizing storage requirements and bandwidth usage.
- Payment Gateway Integration: The website will integrate with a payment gateway service such as PayPal or Stripe to securely process transactions and manage payment data.
- Security Features: The website will implement several security features, including SSL encryption, firewall protection, and regular security audits and updates.

Project Limitations:

- Given the bootstrapped nature of the business where financing is a key factor, adopting a Lean development approach is imperative [1].
- Deadline of the project: Must develop the MVP within a year, necessitating a continuous and effective pipeline for project implementation (development) while considering the challenges of unstable and dropping financing.

Project success definition:

- MVP Completion: The MVP should be developed within the defined terms and be prepared for marketing and a test launch.
- Stable Functionality: All required functionality must be developed and operate reliably.
- User-Centric Design: The website's design and user experience should enable smooth navigation, ensuring users can move seamlessly from their initial visit to downloading items without the need for support contact.

Project stakeholders. In the dynamic landscape of our project, a diverse array of stakeholders plays integral roles in shaping its success. From the strategic execution by Advertising Agencies and Video Production Companies within the skincare and beauty industry to the nimble aspirations of Small Beauty Brands and Cosmetic Startups seeking efficient promotional solutions, each stakeholder group brings unique perspectives and needs. Freelance Content Creators and Social Media Managers contribute their expertise in content creation and management for beauty businesses, while Creative Content Contributors add a distinctive touch, providing high-quality content available for sale on a royalty basis. This eclectic mix of stakeholders forms a collaborative tapestry, propelling the project towards innovation and excellence:

- Advertising Agencies and Video Production Companies: Involved in the execution of projects for the skincare and beauty industry.
- Small Beauty Brands and Cosmetic Startups: Seeking quick, easy, and cost-effective promotional content solutions.

- Freelance Content Creators and SMM Managers: Engaged in content creation or social media management for beauty businesses.
- Creative Content Contributors: Individuals providing high-quality content and interested in selling it on a royalty basis.

Project Pipeline. This chapter outlines the project pipeline for creating an online marketplace dedicated to beauty stock videos. Success hinges on a meticulously planned sequence of tasks. The formation of a capable team, both in-house and external, is crucial for successful implementation. Assembling this multidisciplinary team strategically leverages the unique skills of each member. The Project Manager takes a pivotal role in coordinating tasks and determining key website functions. The chapter ends with a Gantt chart (see Figure 1.7), visually representing the project timeline and responsibilities assigned to each unit [9].

Project pipeline (task list):

1. Define Core Website Functions: Outline a comprehensive list of essential website functions.
2. Website Design and UX Texts Development: Develop design elements for key pages:
 - Search results page.
 - Item.
 - Main Landing page.
 - User’s downloads page.
 - Pricing page.
 - Checkout page.
 - Legal documents pages.
 - Back-end Pages (e.g., content upload, pricing setup, orders, UX texts, interaction emails, recent content, search sets).
3. Content Preparation: Gather an initial batch of content (5000 footage) adhering to established standards for skincare and hair care.

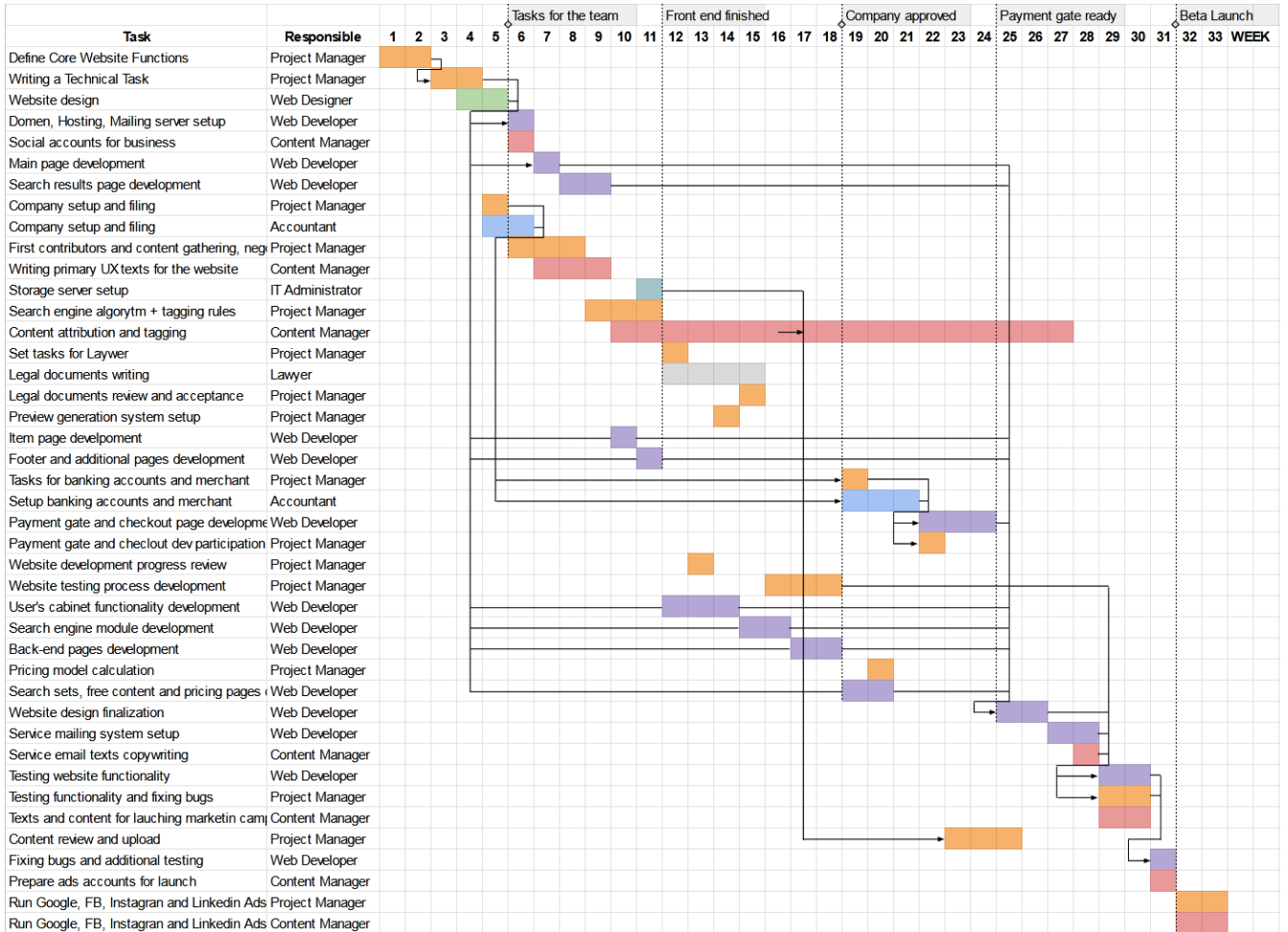


Figure 1.7 – Gantt diagram of the project

4. Hosting and Storage Server Setup: Configure hosting and set up the storage server [10].
5. Search Engine and Filters Development: Develop an efficient search engine and search filters [11].
6. Content Attribution: Attribute content based on search engine and filter rules.
7. Preview Generation Process: Develop a preview-generation process using tools like ffmpeg and generate content previews [12].
8. Content Upload: Upload content and previews to the server.
9. Legal Documents and User Agreements: Draft necessary legal documents and user agreements.

10. **Mailing System Setup:** Set up a mailing system, create dialogs, and establish hospitable service emails for user interaction and better UX. [13].
11. **Pricing Strategy:** Formulate pricing strategy and offers.
12. **Payment Gateway Setup:** Configure payment gateways, considering international taxation rules [14].
13. **Test Model Creation:** Assemble all elements of the website for the initial test model .
14. **Finalize Website Design:** Complete website design, necessary scripts, CSS, and elements based on the customer's journey map.
15. **Statistics Page:** This page is designed to gather valuable feedback regarding the usage of the website. It serves as a comprehensive tool for assessing user engagement. **Functionality.**
16. **Testing:** Thoroughly test website functionality to ensure a seamless user experience [15].

Moving forward, the next critical phase involves meticulous planning to assemble the ideal team for the successful implementation of the project. This strategic step aims to bring together individuals with diverse skill sets, each contributing uniquely to the project's objectives.

Team Members Needed for Successful Project Implementation.

Core (In-house) Team (3 persons):

- **Project Manager:** Responsible for overseeing the entire project, communicating with and assigning tasks to internal and external team members. Additionally, responsible for determining main website functions, core algorithms, content gathering, and project finance.
- **Web Developer:** Tasked with writing code for the full functionality of the website using Php, JavaScript, and CSS. Also responsible for creating internal documentation and code comments.

- Content Manager: Responsible for developing thesaurus base for the search engine, content tagging, and uploading.

Extended (Freelance) Team (5 persons):

- Copywriter: Responsible for crafting engaging and informative texts for the website.

- Web Designer: In charge of webpage design and composition of user-friendly elements for a seamless UX.

- Lawyer: Responsible for drafting all legal documents regulating relationships between the company, website users, and contributors.

- IT Administrator: Responsible for FTP server and hosting setup, ensuring digital security.

- Certified Public Accountant (CPA): Responsible for managing budgeting, financial forecasting, and comprehensive financial reporting to align with project objectives. Additionally, oversees the preparation of annual reports, ensuring accuracy and compliance with regulatory requirements. Manages business registrations, facilitating effective communication with the registered agent, and is responsible for the efficient management of banking accounts, overseeing transactions.

In assembling the project team, I've meticulously curated a group of individuals, each playing a pivotal role in the successful implementation of the project. The Core (In-house) Team, comprising a strategic Project Manager, adept Web Developer, and a meticulous Content Attribution Manager, forms the project's backbone. Their combined expertise ensures the realization of essential functionalities and a cohesive project vision. Complementing this core, our Extended (Freelance) Team introduces specialized skills - from the creative finesse of a Copywriter and Web Designer to the legal acumen of a Lawyer and the technical proficiency of an IT Administrator. The pivotal role of a Certified Public Accountant (CPA) ensures the project's financial health, aligning budgeting and reporting with project objectives. Together, this diverse ensemble of professionals marks the cornerstone of our project's strength and prospects for success.

To oversee the project's workflow, I have developed a Gantt chart (see Figure 1.7.) encompassing each phase of project implementation and the corresponding responsible units. The diagram is organized on a weekly scale, providing a comprehensive overview of the project's 33-week timeline.

In conclusion, this chapter meticulously outlines the comprehensive task list and project pipeline for the development of our dedicated beauty stock video marketplace. The carefully curated team, consisting of both core in-house members and extended freelance specialists, underscores our commitment to assembling a diverse skill set crucial for project success. Each team member's unique expertise contributes to specific aspects of the project, ensuring a holistic approach to its implementation. The visual roadmap provided by the Gantt chart (see Figure 1.7.) serves as a dynamic tool, illustrating the project timeline and delineating responsibilities. As we move forward, this well-defined plan and skilled team position us for a successful and efficient execution of the online marketplace.

1.3. Pricing and financial model of online store of digital goods

The average market price for downloading a single footage ranges from \$45 to \$75 [16]. Offering a 20% discount for bulk purchases of 5-10 clips encourages user engagement. However, smaller stock footage agencies provide subscription models starting at \$35 per month with annual contracts [17], totaling at least \$455 for an annual subscription with monthly payments.

Considering the average Customer Acquisition Cost (CAC) in this niche is \$15-\$25, we've determined that selling products individually is not a strategic approach. Instead, we aim to enhance user engagement and loyalty by offering lower pricing through an unlimited subscription model. To maintain transparency and customer trust, we opt for a straightforward annual subscription with upfront payment, ensuring a consistent income stream and a guaranteed Lifetime Value (LTV) based on annual user subscriptions.

Given the nature of our digital product, our primary focus is maximizing LTV, providing clients with content at an exceptionally low price when they utilize our service regularly.

Taking into account average market numbers (CAC: \$20, Annual Subscription: \$447, Expected Contributor Royalties: 35% of sale), our financial calculations indicate that profitability is achieved after acquiring 500 subscribers. Our target is to reach 1000 annual subscribers, a realistic goal in the global market (see Table 1.1).

Upon achieving our client target, our next strategic move involves progressively enriching our footage database with exclusive content. This approach positions us not only as providers of an innovative platform and a user-friendly search engine but also as a source for exclusive content, reinforcing our competitive edge in the market where users can access unique footage solely through our platform.

At the same time, we've retained the option for users to purchase single or 5-clip download packs for trial purposes. However, these options only cover Customer Acquisition Cost (CAC) twice, don't guarantee retention, and are primarily offered to provide clients with the opportunity to experience our service, promoting annual subscription option as a win-win for us and for customers.

In summary, the platform's business model demonstrates profitability upon surpassing the milestone of 500 subscribers, with further increases in subscribers directly correlating to increased business profit. Given the expansive market with over 10,000 cosmetic businesses and startups globally and overall growing market of stock video [18] the goal of capturing 10%, or 1,000 subscribers, from this market appears not only realistic but also a feasible achievement. The scalability of the platform, combined with a vast market, positions it for sustained growth and financial success.

Table 1.1 – Financial modeling of business

STARTUP COSTS (and One-time Expenses)	\$
Domain, Hosting and Dedicated server setup	1500
CPA and Registered agent consultation, Lawyer consultations	600
Meetups and negotiations with the team	1000
Company registration (setup)	3500
Initial marketing costs	1000
Upfront payment for authors for bringing first 5000 test clips	5000
	12600
OPERATING EXPENSES	\$/year
Domain, Hosting and Dedicated server monthly payment	2820
Annual business license fees	800
Annual Accounting report	1200
Banking maintenance fee	480
Payment Gate to Banking account withdrawal fee	180
Web developer monthly salary	30000
Project manager's salary	36000
Content attribution manager's salary	18000
	89480
VARIABLE COSTS (Expenses per sale)	% of sale or \$
Contributor's Fee (Sale royalty)	35%
Transactional Fee	2.50%
Sales tax or VAT in case abroad sale 10-20% in average 15%	15%
Customer acquisition cost (marketing / affiliate, etc..)	20
FINANCIAL MODELING:	
Number of paid annual subscribers	500
LTV (lifetime value)	447
Customer Acquisition Expenses	10000
Annual Revenue (income we have over the year)	223500
Net Revenue (Except Sales tax or VAT and transactional fees)	185226
Contributor's Royalties (% of revenue paid to content contributors)	64829
Net Sales Revenue (Net Revenue excluding royalties)	120397
Gross Profit	110397
Net Profit	8317
Incom Margin %	3.72

Choosing the Website Development Platform. There are numerous 'buy and go' Content Management Systems (CMS) available [8], including Wix, Squarespace, Shopify, Woocommerce and more. Additionally, there are ready-made WordPress templates tailored for online marketplaces.

After a comprehensive analysis for our specific needs, we discovered that some essential functions could not be achieved with these platforms. What sets us apart from other stock agencies is an exclusive search algorithm, which is not attainable with standard WordPress or Shopify plugins.

There's also the absence of an easy batch uploading solution in these templates. While bulk uploading of products is possible, there's a limitation — the information is only stored in the internal product base. To ensure Search Engine Optimization (SEO) optimization, you'd need to upload them twice through two different plugins.

Despite the convenience and time-saving benefits of using these platforms, we have decided to build our website from scratch. This approach ensures the inclusion of all necessary functionalities without unnecessary extras. Building from scratch is the only way we can achieve our two key functions: a unique search engine and the ability for bulk content uploading simultaneously in two bases - Internal search and SEO databases.

Legal Documents. It is important to have legal documents on a website that sells video footage.

Firstly, legal documents such as a Privacy Policy, Terms and Conditions, and Disclaimer provide crucial information to customers about how their personal data is being collected, used, and protected on the website [19]. This can help to build trust and credibility with users, as they will have confidence that we are handling their data responsibly.

Secondly, those legal documents may help to establish clear guidelines for the use of video footage. For example, your Terms and Conditions can outline the permitted uses of the footage, as well as any restrictions or limitations. This can help to protect

intellectual property rights of content contributors, and us as a website owners and prevent unauthorized use or distribution of your content.

Lastly, having legal documents on the website can help to protect the business from legal disputes or liability issues. By clearly outlining your policies and terms of use, we can minimize the risk of misunderstandings or disagreements with customers, and mitigate the potential for legal disputes. In the event that a dispute does arise, those legal documents can serve as evidence to support our position and protect this business from liability.

In summary, including legal documents on the BBRoll website that sells video footage is essential to protect your customers' privacy, establish clear guidelines for the use of the content, and mitigate the potential for legal disputes or liability issues.

List of legal documents, necessary for successful interaction between the platform, it's contributors and users:

- Terms of Use: Determines the primary rules for using the platform and applies to all visitors.
- Privacy Policy: Outlines how user data is collected, used, and protected on the platform.
- Cookie Policy: Describes the use of cookies on the platform, including their purpose and how users can manage them.
- Terms of Service: Regulates all terms and rules of interaction between a registered user and the platform, including responsibilities and limitations.
- Contributor Agreement: Governs the cooperation between content contributors (suppliers) and the platform. Covers terms, rules, and royalty agreements.
- License Agreement: Outlines the rules for the usage of purchased content, specifying rights and restrictions for the user.

Conclusions to Chapter 1

In conclusion, the inclusion of crucial legal documents, such as Privacy Policy, Terms and Conditions, and Disclaimer, on the BBRoll website is paramount for several reasons. Firstly, these documents play a pivotal role in building trust with users by transparently communicating how their personal data is handled responsibly. Secondly, they establish clear guidelines for the use of video footage, safeguarding the intellectual property rights of contributors and preventing unauthorized distribution. Lastly, these legal documents serve as a protective shield, minimizing the risk of legal disputes and providing evidence to support the platform's position in case of disagreements. In essence, the comprehensive list of necessary legal documents ensures the protection of customers' privacy, sets guidelines for content usage, and safeguards against potential legal challenges or liability issues, fostering a secure and trustworthy environment for all stakeholders involved.

CHAPTER 2

DEVELOPMENT OF FUNCTIONALITY AND SEARCH ALGORITHMS FOR THE INTERNET STORE OF DIGITAL GOODS

This chapter delineates the systematic creation of the website, elucidating each step and element involved in the process [20]. Consideration for required functionality guides our progression as we develop modules and key pages of the platform. The sequence of this development aligns with the order detailed in the Gantt Diagram expounded in Chapter 1 (see Figure 1.7).

Each section initiates with a technical task for the element, culminating with visual representations of the completed components, including pages and modules. The test task and design phase outlines the anticipated appearance of the page and elucidates its core functionalities. Remarkably, the final results often surpass the initially planned user experience (UX) parameters, exhibiting heightened usability.

Our exploration encompasses the layout of the main page, the search results page and filters, the search engine module, the pricing and item page, the user's cabinet downloads history page, and supplementary elements such as the header and footer, which persist across all pages. Additionally, we will examine key elements on the main page, such as search sets, Q&A, choice of the week, free content, and the contact form.

To facilitate licensing services for clients, the platform's key functions encompass the landing page, a search engine, the search results page, an item page enabling downloads with a purchase option, and a user's downloads page that chronicles purchase history and licensing information.

2.1 Development of the layout of key pages of the online store of digital goods

Technical Task: Main Page (Landing Page) Design and functionality. The main page is intended to function as a compelling landing page, providing users with a clear

understanding of our services, offerings, and how we can assist them. Key elements to be incorporated include a search bar for user convenience, a background video for visual engagement, a succinct business description, features facilitating user search (such as search sets or curated collections), transparent pricing information, a Q&A section, and a user-friendly contact form. Additionally it may contain some other footage representation, for example recently uploaded videos. Reference the provided image for guidance on the style and design of these elements on the main page, ensuring a cohesive and visually appealing user experience.

On the search bar and at the top of the website, it is imperative to provide users with the option to choose between finding horizontal or vertical videos. Additionally, explanatory texts, links to legal documents, and social links should be seamlessly incorporated.

The option to sign up or sign in should be easily accessible on every page, ensuring a smooth user experience across the entire website, including the main page.

A valuable addition is the "Try for Free" option, featuring several enticing footage selections available for free download after user registration. This not only encourages user engagement but also allows for the collection of user emails, facilitating future marketing communications [21].

The main page layout starts at week 7 and takes 1 week to implement, according to Gantt diagram (see Figure 1.7).

The main page design concept is created in a graphic editor to visually depict the page's appearance, illustrate the arrangement of its key elements, and showcase their relative positioning (see Figure 2.1-2.5).

At the top of the main page, we feature an autoplaying video showcasing captivating clips, accompanied by a convenient search bar, allowing users instant access to explore the extensive database. Additionally, quick links to the Pricing page, contact information, and user sign-in are strategically placed for easy navigation.

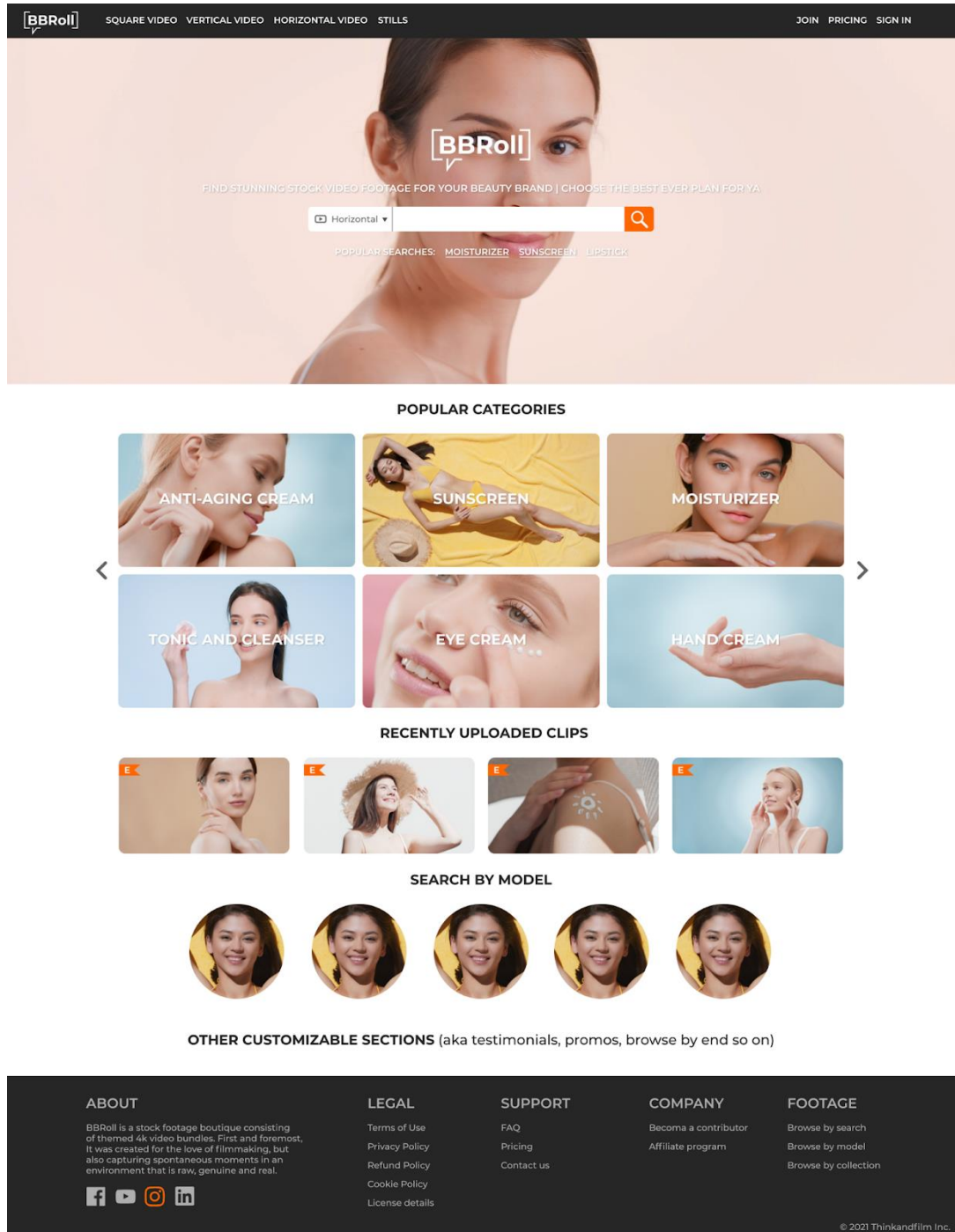
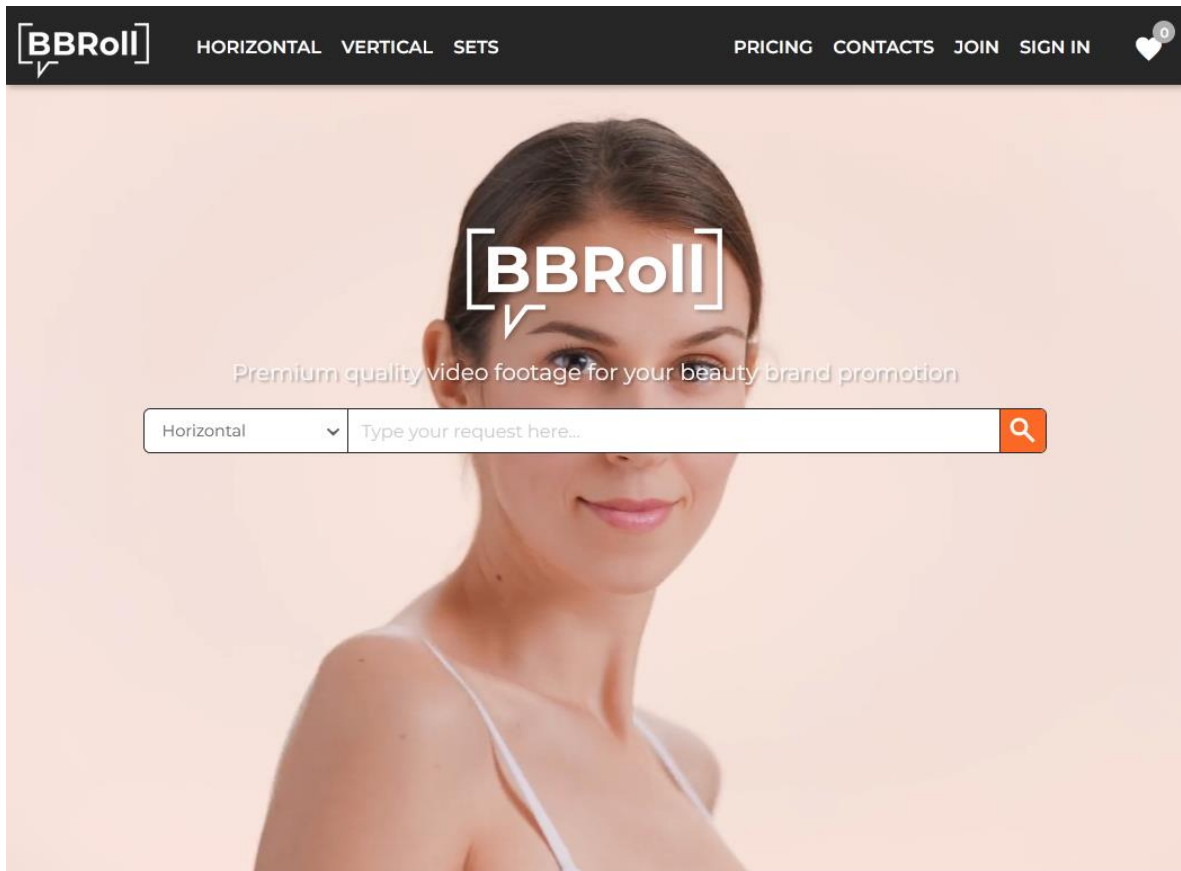


Figure 2.1 – Main page design and arrangement of elements

As the user scrolls down, he will encounter a dedicated section featuring 'Search Sets.' These are curated collections of footage designed to guide users in combining search results for their specific needs. Numerous sets are available, each representing clip collections categorized by shot type, such as background, abstract liquids, and background colors like tan or black. Additionally, sets include thematic collections related to products

like sunscreen and cream, as well as topics such as leg care and face care, providing a comprehensive resource for tailored content exploration.



WELL, HELLO!

Welcome to BBRoll - stock video platform for beauty brands, skin care entrepreneurs and cosmetic manufacturers.

We provide high quality, ready-made video content which will help to promote your cosmetic products and visualize your concepts.

Join us today and get fresh ideas for your marketing campaign, download free footage samples and make engaging video ads for your business. Let's create something beautiful together!

HOW TO USE

Find the perfect footage for your project using the search bar or browsing our search sets. To ensure that it's a good fit, download a preview before making your purchase.

Select the clip pack option that best suits your needs. We offer single packs, as well as 5 and 15 clip packs, which allow you to download 1, 5, or 15 footage files, respectively.

Use your download credits to license and download the content you need. Simply choose the footage you want, click the download button, and provide your licensee information.

Figure 2.2 – Main page screenshot: header and search bar

Under the 'Search Sets' section, we present the 'Choice of the Week,' highlighting the most popular footage with the highest Click-Through Rate (CTR) from the previous week. This section provides an extra spotlight on selected footage, expanding the promotion of additional items from our database. As we onboard additional contributors,

this section will transition to 'Recent Uploads,' featuring clips uploaded in the past week. This ensures a continuous influx of fresh videos every week, maintaining a dynamic and evolving content showcase.

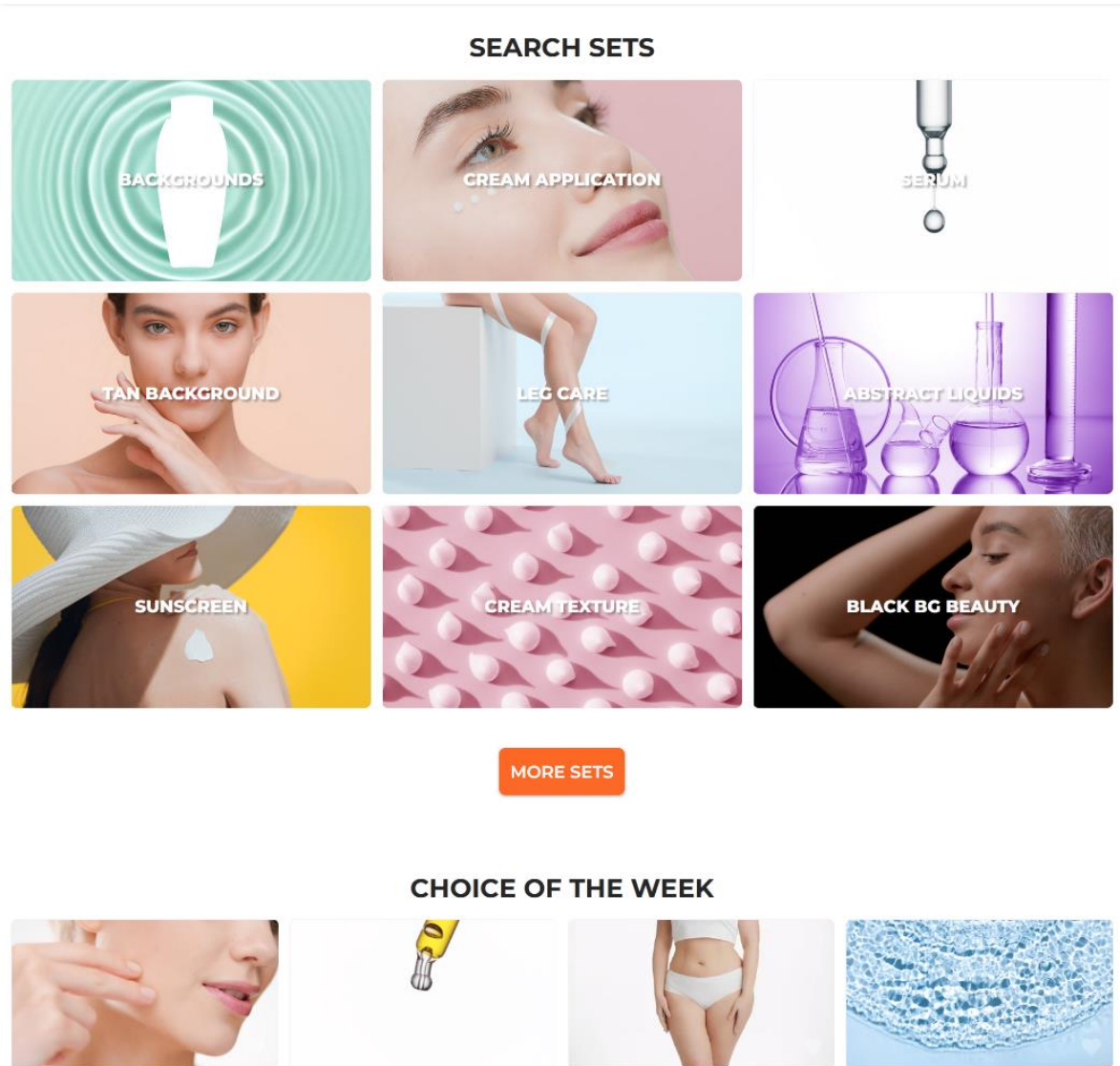


Figure 2.3 – Main page screenshot: search sets and choice of the week sections

The next step is to introduce a 'Search by Models' section instead of this module, which will be implemented once our database has accumulated a sufficient number of models to showcase. Currently, the 'Search by Models' feature is already implemented and available from the filters panel.

The Pricing module presents users with various purchase options for acquiring footage on the website. It offers four choices, allowing users to buy a single download, a bundle of 5 or 15 clips, or opt for an annual subscription with upfront payment, providing unlimited downloads. Each option includes a switch at the top, enabling users to select the desired resolution for the clips - HD for High Definition or Ultra HD for UHD versions if available for the specific footage.

PRICING

Get a better price with clip packs by paying upfront for more than one footage!

Resolution	Option	Price	Per Unit
HD <input checked="" type="checkbox"/> 4K <input type="checkbox"/>	Single Clip HD	\$47	\$47 per clip
HD <input checked="" type="checkbox"/> 4K <input type="checkbox"/>	5 Clips HD	\$235 \$77 <small>* save with pack</small>	\$15.4 per clip
HD <input checked="" type="checkbox"/> 4K <input type="checkbox"/>	15 Clips HD	\$705 \$97 <small>* save with pack</small>	\$6.46 per clip
HD <input checked="" type="checkbox"/> 4K <input type="checkbox"/>	Unlimited HD	\$447/year	\$37 per month

Q&A CORNER

- HOW DO I CREATE AN ACCOUNT AT BBROLL? ∨
- WHAT EXACTLY IS A CLIP PACK? ∨
- HOW TO ADD DOWNLOAD CREDITS TO MY ACCOUNT? ∨
- HOW TO APPLY MY PROMO CODE? ↑ ∨

Figure 2.4 –Main page screenshot: Pricing and Q&A section

Furthermore, each pricing element is accompanied by clear descriptions outlining the benefits users will receive. This includes simplified understanding of their purchase, approximate savings compared to buying individual clips separately, and the average cost per clip download. This approach aims to enhance user clarity and transparency regarding the value they are receiving for their payment.

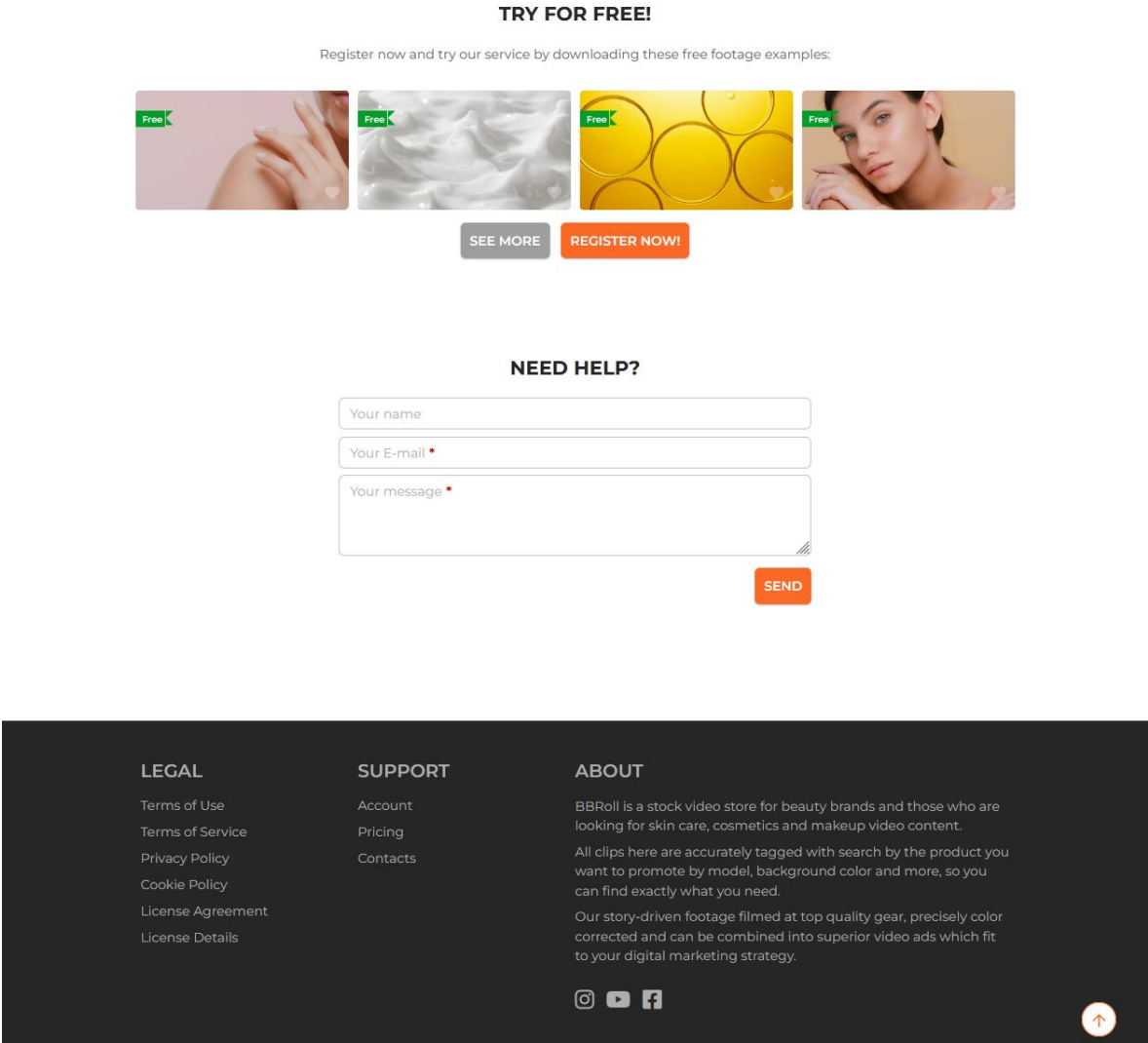


Figure 2.5 –Main page screenshot: Trial, Contact form and footer

The Q&A section serves as a time-saving resource by addressing commonly asked questions regarding user interaction with the platform. This curated section is designed to provide users with swift access to valuable information, streamlining their experience and enabling them to find quick solutions to common queries. The content manager assumes

responsibility for composing the texts during the 22nd week of progress (refer to Figure 1.7). Therefore, the initial version of the main page, developed by the web developer, includes fields intended for the insertion of these texts, to be completed by the 22nd week.

The main page now encompasses all essential elements, providing visitors with a comprehensive understanding of the platform's purpose, problem-solving capabilities, offered products, and associated pricing. It strategically showcases a diverse range of footage examples through the search sets and the "Choice of the Week" section. Additionally, the inclusion of doubt-reducing features, such as the Q&A to improve customer experience, reduce doubts and customer care costs [22], as well as "Try for Free" sections, allows users to download real footage examples before making a purchase (see Figure 2.5).

To ensure user convenience, a standard footage section is consistently positioned at the bottom of every webpage. This section offers swift access to essential resources, including legal documents, support links, and social media connections, enhancing the overall user experience.

2.2 Modeling search results: design, functionality, filters

The user query is intelligently processed by splitting it into keywords, which are then cross-referenced with the thesaurus base (see Figure 2.6). If matches are found, the system retrieves the corresponding index terms and searches the clip database accordingly. The clips that align with the search criteria are then displayed on the page. To optimize efficiency, a core query is crafted using SQL, supplemented with text-splitting and combining functions in PHP. This approach maintains the SQL query's brevity without compromising on additional conditions. It will take 2 weeks (see Fig. 1.7).

BBRoll SQUARE VIDEO VERTICAL VIDEO HORIZONTAL VIDEO STILLS JOIN PRICING SIGN IN

Filters Clear all Horizontal Anti aging cream Sort by: Best match

CONTENT TYPE:
 Horizontal Square
 Vertical Stills

CATEGORIES:
 Beauty portraits
 Body parts
 Face parts
 Hands
 Impact / effect
 Ingredients / abstract
 Product itself
 Application and usage
 Backgrounds
 Overlays
 Nature
 City
 Beauty tools & accessories

NUMBER OF PEOPLE:
 Without People
 One Person
 2 People
 3+ People

ETHNICITY:
 Asian
 Black
 Caucasian / White
 Latin
 Middle Eastern / Indian
 Mixed

GENDER:
 Male
 Female
 Other

AGE:
 Babies and kids
 Teenagers
 Young adult (20-30)
 Middle aged (30-40)
 Middle age (40-55)
 55+

SPEED:
 Real time
 Slow motion up to 3 times
 Extreme slow motion
 Time lapse
 Stop motion animation

BG COLOR / LOCATION:
 Studio
 Indoors
 Outdoors urban/city
 Outdoors nature

DAYTIME / LIGHTING:
 Sunny Day
 Overcast/Cloudy Day
 Sunset/Sunrise
 Night
 Professional Lighting

SHOT TYPE:
 Close-up
 Medium Shot
 Wide shot
 Macro

Anti aging cream | stock video content
 1287 horizontal video clips of anti aging cream founded

+beauty portraits +ingredients +backgrounds and textures +application +body parts +face parts +natural ingredients +overlays

2018 Young blonde woman applying cream on her hand...
 2018 Young blonde woman applying cream on her hand...

NEXT < 1 >

ABOUT
 BBRoll is a stock footage boutique consisting of themed 4k video bundles. First and foremost, it was created for the love of filmmaking, but also capturing spontaneous moments in an environment that is raw, genuine and real.

LEGAL
 Terms of Use
 Privacy Policy
 Refund Policy
 Cookie Policy
 License details

SUPPORT
 FAQ
 Pricing
 Contact us

COMPANY
 Become a contributor
 Affiliate program

FOOTAGE
 Browse by search
 Browse by model
 Browse by collection

© 2021 Thinkandfilm Inc.

Figure 2.6 –Search results page Design and Arrangement of elements

Search results are presented as a grid of still preview frames, each initiating a video preview upon hover. A single page accommodates up to 40 clips; if results exceed this limit, pagination appears in the top and bottom corners of the page on the right side.

Crucially, the page retains the search bar at the top, allowing users to seamlessly initiate new queries. Upon entering a query, users are directed to the search results page.

On the left side of the page, a filter section empowers users to refine search results by multiple parameters, including Category, Background Color, Shot Type, Ethnicity, Lighting Type, Age Group, Race, and Number of People. Each parameter includes a counter indicating the number of clips available for a selected condition.

Consistent with the main page, a header features links for sign-up, contacts, and pricing. A standard footer incorporates essential links, contributing to a cohesive user experience.

The search results page layout, filters and search engine code starts at week 9 and takes 2 weeks to implement, according to Gantt diagram (see Figure 1.7).

Search engine and results page final layout. The search engine operates on a straightforward algorithm, initially breaking down the user query into various word combinations. It then expands these combinations by fetching index terms from the thesaurus base. Subsequently, the engine constructs a comprehensive SQL query encapsulating all potential combinations within the footage database (see Figure 2.7) [23]. The result is a list of clip IDs, forming the basis for the displayed search results. This process ensures a systematic and efficient approach to matching user queries with relevant clips.

Once the SQL request is formulated, it retrieves a compilation of all matching video footage from the database, presenting them collectively on the search results page. Leveraging the additional attributes associated with each clip, users can further refine their search results by applying additional search filters based on these attributes. This feature enhances the precision and granularity of the search process, allowing users to pinpoint the most relevant video footage to meet their specific criteria (see Figure 2.8).


```

<?php
// User's query from the search bar
$userQuery = "woman applies cream";

// Split the query into individual words
$keywords = explode(' ', $userQuery);

// Generate all combinations of keywords
$combinations = getKeywordCombinations($keywords);

// Build SQL query
$sql = buildSqlQuery($combinations);

// Execute the SQL query (use appropriate database connection)
// $result = mysqli_query($your_db_connection, $sql);

// Process the result (use appropriate processing logic)
// while ($row = mysqli_fetch_assoc($result)) {
//     echo $row['clip_id'] . '<br>';
// }

// Function to generate all combinations of keywords
function getKeywordCombinations($keywords) {
    $combinations = [[]];
    foreach ($keywords as $keyword) {
        foreach ($combinations as $combination) {
            $combinations[] = array_merge([$keyword], $combination);
        }
    }
    return $combinations;
}

// Function to build the final SQL query
function buildSqlQuery($combinations) {
    $sql = "SELECT clip_id FROM your_spreadsheet WHERE ";
    $conditions = [];

    foreach ($combinations as $combination) {
        $orConditions = [];
        foreach ($combination as $keyword) {
            $orConditions[] = "tags LIKE '%$keyword%'";
        }
        $conditions[] = '(' . implode(' AND ', $orConditions) . ')';
    }

    $sql .= implode(' OR ', $conditions);
    return $sql;
}
?>

```

Figure 2.7 –Primary php code of search engine module

As an illustration, here is a screenshot of a completed search results page on the website, featuring all implemented elements. The page body showcases reviews of clips retrieved from the database, aligning with the specified tags. Positioned on the left side is a filter section, providing users with the option to fine-tune their search parameters. In this particular example, the search bar was utilized with the query "anti-acne," and the results were further narrowed down by selecting specific background colors.

In the subsequent screenshot (see Figure 2.9), we explore another query, "apply cream." This request retrieves footage capturing the process of applying cosmetic cream, introducing additional filters not visible in the previous image. With more than 40 clips as a result, pagination has been incorporated, as indicated in the right corner of the page body, to navigate through multiple pages of search results.

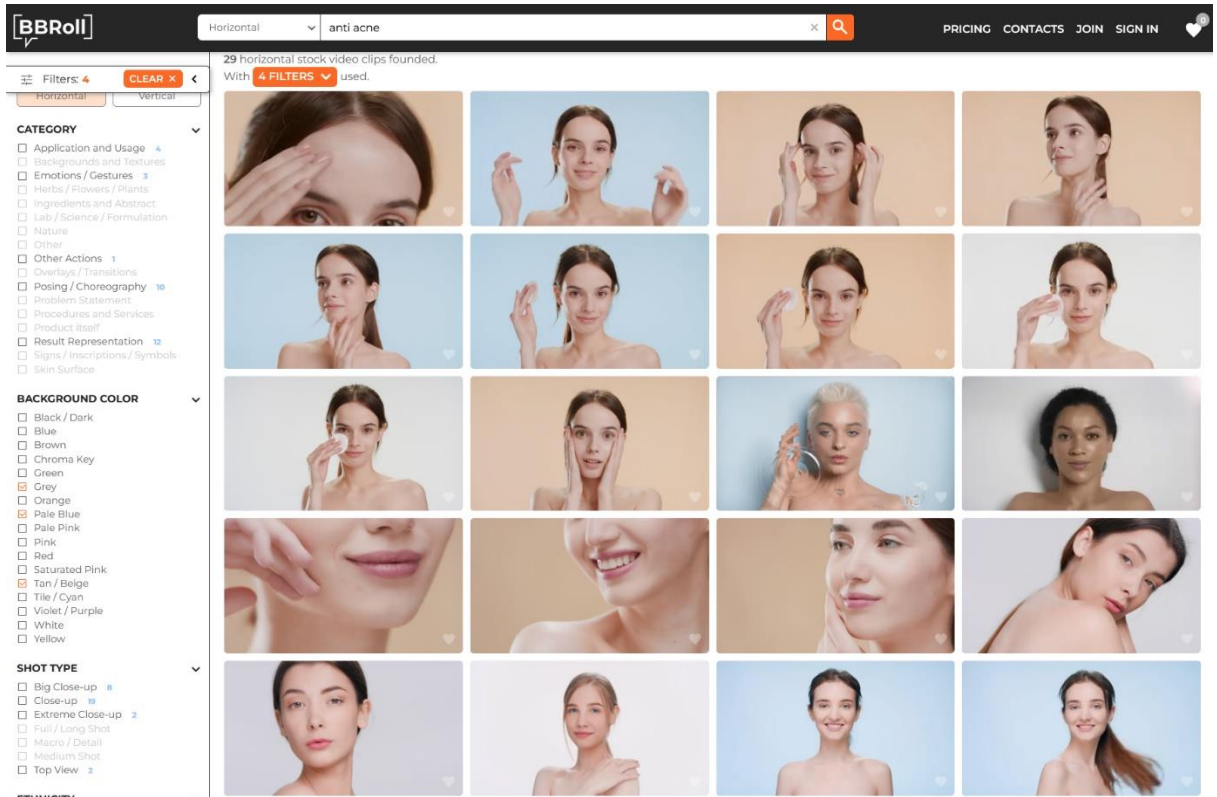


Figure 2.8 –Search results page screenshot

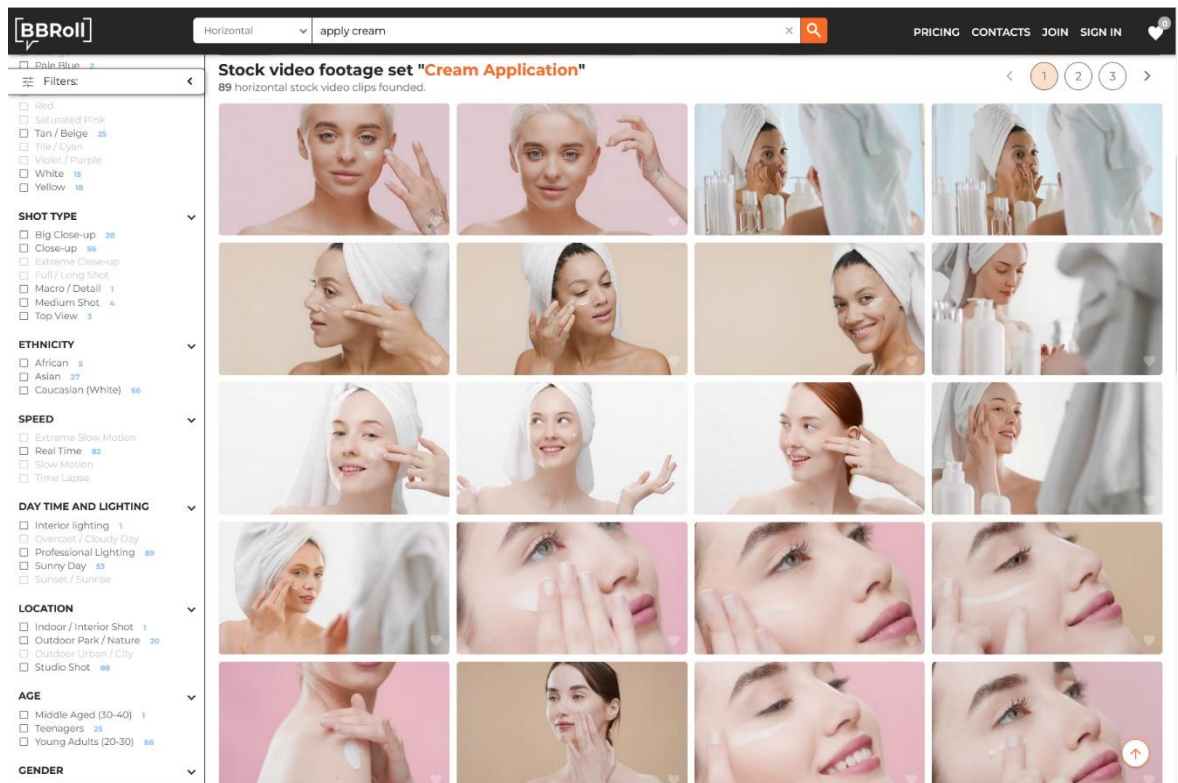


Figure 2.9 –Search results page screenshot

The search bar is seamlessly integrated into the search results page, offering users the convenience of initiating immediate follow-up searches. Positioned in the header, it aligns effortlessly with other essential options such as the pricing page, contact us, and sign-in buttons, ensuring swift and accessible navigation.

Consistency is maintained throughout the website, with the footer on the search results page mirroring that of the main page. This uniform footer persists across all pages, providing users with a familiar and cohesive experience [24].

2.3 Visualization of user downloads history

Item Page. The primary objective of the item page is to feature a notably larger video preview of the item with the player to view it, furnish additional technical details about the footage, and facilitate easy access to item downloads. Here's the conceptual layout (see Figure 2.10).

In order to optimize the available space and enhance the user experience, we've incorporated two supplementary sections on the item page. The first is the "Related Footage", displaying clips with a similar style from the same collection. The second is the "Same Model Clips," providing users with swift access to other clips featuring the same model. Furthermore, at the bottom of the item page, a list of index terms associated with the current clip is presented. Users can click on any index term to initiate an advanced search based on the selected tag (see Figure 2.11). The item page layout starts at week 10 and takes 1 week to implement, according to Gantt diagram (see Figure 1.7).

To elevate the user experience, we've implemented a feature to maintain a comprehensive history of purchases and downloads within the user's personal cabinet (see Figure 2.12). Accessible through signing in with the registered email and password, this panel provides users with a centralized hub to conveniently manage their licensed items. Within the cabinet, users can seamlessly download previously licensed items, monitor the

remaining download allowances on their account, update licenses as needed, and obtain downloadable PDF versions of their licenses [25].

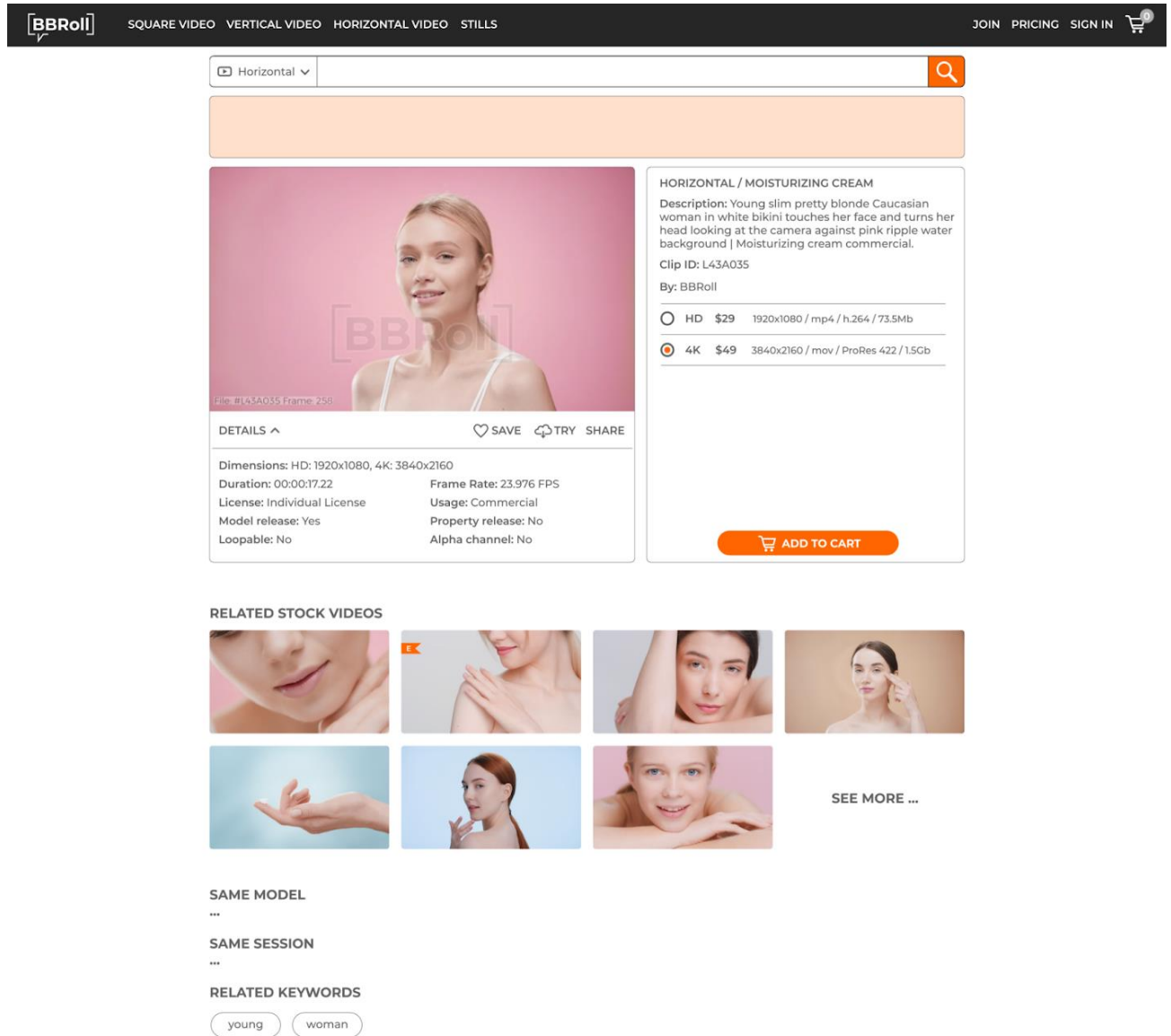



Figure 2.10 –Item page design and layout

The downloads page layout starts at week 12 and together with user’s cabinet functionality takes 3 weeks to implement, according to Gantt diagram (see Figure 1.7).

[BBRoll] Horizontal Type your request here... PRICING CONTACTS ACCOUNT



BEAUTY CONCEPT STOCK VIDEO FOOTAGE
MACRO BUBBLE WITH WOMAN'S SILHOUETTE INSIDE ON PURPLE BACKGROUND

Silhouette of fit woman raising her arms over the head inside big macro liquid bubble with joined smaller bubbles on purple radial ramp background | abstract fragrance commercial concept

Clip ID: A001H0LB3D015
By: Pavel_dp
Licence: [Standard BBRoll license included](#)

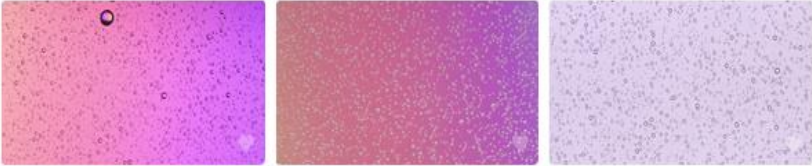
DETAILS SAVE TRY SHARE

Alpha Channel: No	Loopable: No
Model Released: Yes	Property Released: No
ClipDuration: 7.6s	FPS: 25
Exclusive: No	Codec: Apple ProRes 422

4K \$67 3840x2160 | ProRes.mov | h.264.mp4
HD 1920x1080 | ProRes.mov | h.264.mp4


SAVE WITH PACK

RELATED VIDEOS / VIOLET / PURPLE



SEE MORE...

SAME MODEL / HORIZONTAL VIDEO



SEE MORE...

RELATED KEYWORDS

liquid bubbles bubble macro abstract flow woman cosmetic purple protection silhouette
skin care body care moisturizing skincare hydration cleansing turning hyaluronic acid big bubble
small bubble connected water balance join violet purple background skin moisturizing hydrated
transparent bubble purple bubble hair care composing full shot woman silhouette raising arms antiperspirant
deodorant fragrance

Figure 2.11 –The Item page screenshot

All previously downloaded items are showcased in this section, presented in a list format accompanied by small previews for swift and efficient navigation (see Figure 2.13). Additionally, subscription plan details are incorporated, providing information on the remaining item downloads for users who have purchased a clip pack-based plan. Each element in the spreadsheet includes the date of purchase, Item ID, its resolution, type of license, and expiration date.

DOWNLOADS







Date	Order	Item	Version	Contributor	License	Download
Jun 24, 2022	#228 pack	 A001U0L8CA07ID	4K		Standard	mov mp4 Hash date: Sep 13, 2022
Jun 24, 2022	#228 pack	 A001V0M5AA054	4K		Standard	mov mp4 Hash date: Sep 13, 2022
Jun 21, 2022	#230 pack	 A001H0J2HC054	HD		Standard	mov mp4 Hash date: Sep 1, 2022
Jun 21, 2022	#230 pack	 A001H0GA1C014	HD		Standard	mov mp4 Hash date: Sep 1, 2022
Jun 24, 2022	#228 pack	 A001H0L68C184	4K		Standard	mov mp4 Hash date: Sep 13, 2022
Jun 21, 2022	#230 pack	 A001H0M2LA082A	HD		Standard	mov mp4 Hash date: Sep 1, 2022

Figure 2.12 –Layout and Functionality of User’s Download Page

MY PURCHASES

YOUR SUBSCRIPTION PLAN(S)
#698-1: UNLIMITED HD
Next billing date: October 5, 2024 CANCEL

BY ORDERS BY ITEMS











ORDER	DATE	ITEM	SIZE	LICENSE	PRICE	STATUS
▼ #698-1 Subscr	Oct 5, 2023	 Unlimited HD Unlimited prepaid credits for licensing HD footage	HD		\$447 Invoice	Active till Oct 5, 2024 Auto-Renew: on
	Oct 5, 2023 Subscr Order #698	 A001HOL43A274 1920x1080 ProRes.mov h.264.mp4	HD	Standard ⓘ Download pdf		Expired: Oct 19, 2023 Reactivate links
	Oct 5, 2023 Subscr Order #698	 A001HOL43A274 1920x1080 ProRes.mov h.264.mp4	HD	Standard ⓘ Download pdf		Expired: Oct 19, 2023 Reactivate links
	Oct 5, 2023 Subscr Order #698	 A001HOL68C341 1920x1080 ProRes.mov h.264.mp4	HD	Standard ⓘ Download pdf		Expired: Oct 19, 2023 Reactivate links
	Oct 5, 2023 Subscr Order #698	 A001HOL44B233 1920x1080 ProRes.mov h.264.mp4	HD	Standard ⓘ Download pdf		Expired: Oct 19, 2023 Reactivate links
	Oct 6, 2023 Subscr Order #698	 A001HOL44B223 1920x1080 ProRes.mov h.264.mp4	HD	Standard ⓘ Download pdf		Expired: Oct 20, 2023 Reactivate links
	Oct 6, 2023 Subscr Order #698	 A001HOM82A054A 1920x1080 ProRes.mov h.264.mp4	HD	Standard ⓘ Download pdf		Expired: Oct 20, 2023 Reactivate links
	Oct 7, 2023 Subscr Order #698	 A001HOL43A259 1920x1080 ProRes.mov h.264.mp4	HD	Standard ⓘ Download pdf		Expired: Oct 21, 2023 Reactivate links
	Oct 7, 2023 Subscr Order #698	 A001HOL44B236 1920x1080 ProRes.mov h.264.mp4	HD	Standard ⓘ Download pdf		Expired: Oct 21, 2023 Reactivate links
	Oct 7, 2023 Subscr Order #698	 A001HOL68C337 1920x1080 ProRes.mov h.264.mp4	HD	Standard ⓘ Download pdf		Expired: Oct 21, 2023 Reactivate links

Figure 2.13 –Screenshot of User’s downloads page layout

Conclusions to Chapter 2

In this chapter, we have crafted all the pages necessary for the platform's seamless functionality. As illustrated in the Gantt diagram presented in Chapter 1 (refer to Figure 1.7), the majority of the direct tasks within this chapter were assigned to the web developer. The tasks of the project manager, accountant, lawyer, and content manager ran in parallel, aligning with the main project pipeline.

The project manager played a pivotal role in steering the project, engaging with each participant alternately and assigning tasks accordingly. The content manager dedicated a significant portion of their time to crafting content descriptions, recognizing the substantial workload critical for the proper functioning of the search engine.

The lawyer and accountant contributed to the project on a periodic basis, addressing their specific responsibilities within a 3 to 4-week timeframe.

Key milestones included comprehensive meetings with all core participants to outline tasks, finish of development key front pages, the incorporation of the company and a critical step for payment reception, and the launch of the beta version of the platform.

The finalization of the project, spanning weeks 29 to 31, involved rigorous testing of the entire platform and the resolution of any identified bugs. Following successful testing, the launch week marked the inaugural presentation of the platform to the world.

The Gantt diagram served as an indispensable tool for meticulous planning, enabling the orderly arrangement and distribution of tasks among the participants at the appropriate times. It facilitated effective control of the project pipeline, allowing for the establishment of deadlines for each stage of platform development and ensuring the seamless transition from one phase to the next with all necessary elements in place.

CHAPTER 3

MANAGEMENT OF THE VIDEO CONTENT OF THE ONLINE STORE "BBROLL"

In this chapter, we will present a comprehensive customer journey map that delineates the user's progression from visiting the landing page and searching for the required footage to the stages of purchasing, licensing, and downloading content. Furthermore, the customer's journey extends beyond these steps, encompassing the examination of download history, the review of PDF licenses, and the potential for re-downloading files for future projects.

As it was mentioned in Chapter 1, contributors are pivotal stakeholders in the project. These authors create content and contribute it to BBRoll for sale, when consumers purchase licenses to use it. Our exploration of the user journey map initiates with this distinct audience. Subsequently, once the content is uploaded to the platform, we will delve into the user's experience as content consumers.

3.1 Management of content upload and attribution of the online store

Contributors upload their content through FTP (see Figure 3.1). Files are transferred to the server, triggering an automatic preview generation algorithm driven by ffmpeg. The server identifies newly uploaded files and executes specific ffmpeg commands, producing small and medium watermarked video previews, as well as still previews for each uploaded file.

These files serve as a rapid preview option for users on the search page (via hover) and on the item page (in a larger video size). Users can also download these watermarked files to assess their suitability for their projects. However, initially, the preview files are utilized by the Content Manager, who employs a tool created with Google Sheets (see Figure 3.2, 3.3). Subsequently, this data is uploaded to the search engine database.

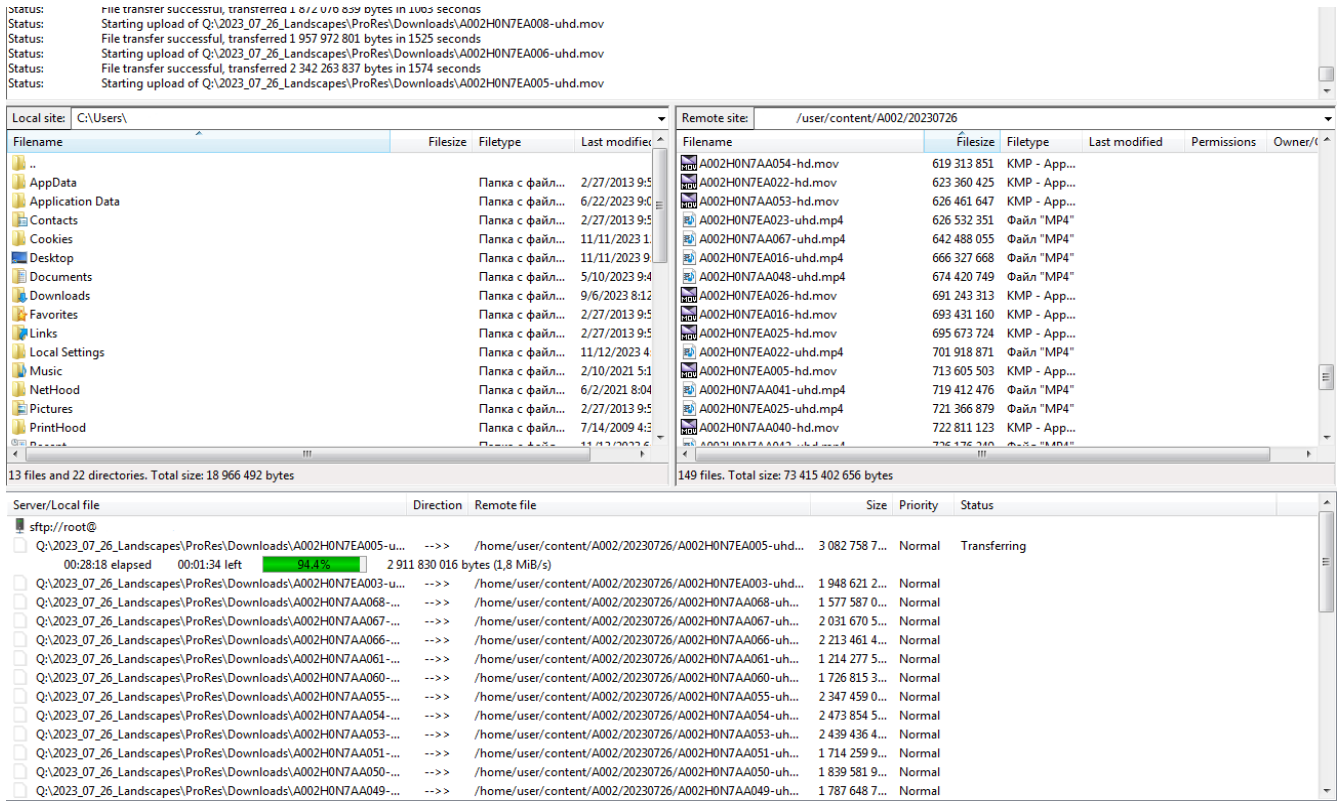


Figure 3.1 –Content uploading via FTP

Once the files have been uploaded to the server and all previews are generated, the Content Manager assumes the responsibility of adding essential details to each uploaded footage. This includes providing a Title (up to 64 symbols), a Description (up to 200 symbols), up to 50 Keywords, and pertinent Attributes. As outlined in the Gantt Diagram (see Figure 1.7), a substantial portion of the content manager's time is dedicated to this descriptive task. To streamline this process, the Content Manager utilizes a dedicated Google Sheets document designed specifically for crafting these descriptions (see Figure 3.2).


A	B	C	D	E
	640x360			
	FILE:	https://bbroll.com/content/A001/20211129/previews/A001HOLBTA191-640x360.mp4		ROW 2205
	TITLE: 61	African woman with bare shoulders stretches cheeks and smiles	add single keyword:	
	DESCRIPTION: 182	Beautiful African American young slim woman with black curly hair and bare shoulders stretches her cheeks and smiles wide for the camera on beige background Skin stretching concept		
	KEYWORDS: 49	cheeks, stretch skin, stretch cheeks, skin stretching, face, face care, smooth face, smooth skin, touch face, joy, enjoy, joyful woman, skincare model, beauty model, female model, slim, woman, African American, black hair, curly hair, beautiful, young, bare shoulders, skincare, any preference, beige background, beauty portrait, horizontal, close-up, studio shot, face care concept, skincare concept, nourishing concept, moisturizing concept, nourishing commercial, moisturizing commercial, moisturizer commercial, soft skin, healthy skin, elastic skin, anti aging concept, anti wrinkles concept, skin renewal, skin protection, flawless face, flawless skin, smile, smile wide, woman		
	Attributes	Main attribute (Главный/основной атрибут)	Additional 1	Additional 2
	SubCategory	Result Representation		
	Ethnicity	African		
	NumberOfPeople	1		
	Gender	Female		
	Age	Young Adults (20-30)		
	Location	Studio Shot		
	BackgroundColor	Tan / Beige		
	DayTimeAndLighting	Professional Lighting		
	ShotType	Close-up		
	ContentType	h		

Figure 3.2 –Content description form made in Google Sheets

Within this document's workspace, there are provisions for a quick picture preview, a link to the video preview, and fields for entering the Title, Description, Keywords, along with the option to add Attributes using dropdown lists populated with indexed attributes. This is a temporarily created tool which we intend to also integrate into the platform after the Market Fit stage [26].

This form saves every described item into a spreadsheet, which then will be added into a BBRoll website database through .csv export-import.

Author	Filename	FolderName	Title	Description	Keywords	Ethnicity	NumberOfPeople	Gender	Age	Location	BackgroundColor	MainColors	DayTimeAndLighting	ShotType	Spec	ZipDuration
A001	A001HOL23C18	20210219	Young dark-haired woman app	Close-up beauty portrait of you sun care, young, woman, young		Caucasian (W)	1	Female	Young Adults (2 Studio Shot)	Yellow	0	Professional Lighting, 5 Close-up	Real Tir	10.84		
A001	A001HOL23C125	20210219	Brunette woman in a big white	Close-up beauty portrait of you sun care, young, woman, young		Caucasian (W)	1	Female	Young Adults (2 Studio Shot)	Yellow	0	Professional Lighting, 5 Close-up	Real Tir	14.85		
A001	A001HOL23C126	20210219	Woman in a big white hat app	Close-up beauty portrait of you sun care, young, woman, young		Caucasian (W)	1	Female	Young Adults (2 Studio Shot)	Yellow	0	Professional Lighting, 5 Close-up	Real Tir	14.26		
A001	A001HOL23C127	20210219	Woman in a big white hat app	Young attractive dark-haired w sun care, put on, sunscreen, face		Caucasian (W)	1	Female	Young Adults (2 Studio Shot)	Yellow	0	Professional Lighting, 5 Close-up	Real Tir	12.64		
A001	A001HOL23C139	20210219	Woman with sunscreen on her	Close-up beauty portrait of you sun care, young, woman, young		Caucasian (W)	1	Female	Young Adults (2 Studio Shot)	Yellow	0	Professional Lighting, 5 Big Close-up	Real Tir	10.72		
A001	A001HOL23C141	20210219	Young woman with sun cream	Close-up beauty portrait of you sun care, young, woman, young		Caucasian (W)	1	Female	Young Adults (2 Studio Shot)	Yellow	0	Professional Lighting, 5 Big Close-up	Real Tir	9.88		
A001	A001HOL23C142	20210219	Happy young woman with spf	Close-up beauty portrait of you sun care, young, woman, young		Caucasian (W)	1	Female	Young Adults (2 Studio Shot)	Yellow	0	Professional Lighting, 5 Big Close-up	Real Tir	12.26		
A001	A001HOL23C153	20210219	Woman with sunblock on her c	Young gorgeous Brunette Cau sun care, young, woman, young		Caucasian (W)	1	Female	Young Adults (2 Studio Shot)	Yellow	0	Professional Lighting, 5 Close-up	Real Tir	11.43		
A001	A001HOL23C161	20210219	Woman with sunscreen on che	Young slim brown-haired wom sun care, young, woman, young		Caucasian (W)	1	Female	Young Adults (2 Studio Shot)	Yellow	0	Professional Lighting, 5 Close-up	Real Tir	23.98		
A001	A001HOL23C164	20210219	Woman in a white hat thoroug	Young slim woman in a big wh sun care, young, woman, young		Caucasian (W)	1	Female	Young Adults (2 Studio Shot)	Yellow	0	Professional Lighting, 5 Big Close-up	Real Tir	00:03:30		
A001	A001HOL23C169	20210219	Pretty woman in a big hat cov	Young pretty European womer sun care, unwanted, sun, cover		Caucasian (W)	1	Female	Young Adults (2 Studio Shot)	Tan / Beige	0	Professional Lighting, 5 Close-up	Real Tir	8.34		
A001	A001HOL23C174	20210219	Makeup artist making up fema	Brunette woman puts makeup sun care, make-up, artist, make		Caucasian (W)	2	Female	Young Adults (2 Studio Shot)	Tan / Beige	0	Professional Lighting, 5 Close-up	Real Tir	21.06		
A001	A001HOL23C182	20210219	The sun comes out and Europe	The sun comes out and young sun care, young, good-looking		Caucasian (W)	1	Female	Young Adults (2 Studio Shot)	Tan / Beige	0	Professional Lighting, 5 Close-up	Real Tir	13.56		
A001	A001HOL23C191	20210219	Woman covers face from the su	Young gorgeous European woi sun care, young, gorgeous, un		Caucasian (W)	1	Female	Young Adults (2 Studio Shot)	Tan / Beige	0	Professional Lighting, 5 Close-up	Real Tir	12.38		
A001	A001HOL23C192	20210219	Girl in hat enjoys the sun look	Young pretty European girl wit sun care, young, pretty, girl, Euro		Caucasian (W)	1	Female	Young Adults (2 Studio Shot)	Tan / Beige	0	Professional Lighting, 5 Close-up	Real Tir	9.47		
A001	A001HOL23C194	20210219	Woman puts makeup on femal	Brunette woman puts makeup sun care, young, Brunette, wor		Caucasian (W)	2	Female	Young Adults (2 Studio Shot)	Tan / Beige	0	Professional Lighting, 5 Close-up	Real Tir	20.56		
A001	A001HOL23C199	20210219	Woman in a hat enjoys the sun	Young good-looking dark-hair sun care, strokes, shoulder, you		Caucasian (W)	1	Female	Young Adults (2 Studio Shot)	Tan / Beige	0	Professional Lighting, 5 Close-up	Real Tir	14.38		
A001	A001HOL23C206	20210219	Young gorgeous Caucasian woi	Close-up beauty portrait of you sun care, young, woman, young		Caucasian (W)	1	Female	Young Adults (2 Studio Shot)	Tan / Beige	0	Professional Lighting, 5 Close-up	Real Tir	8.01		
A001	A001HOL23C207	20210219	Young attractive European wor	Young attractive European woi sun care, young, woman, young		Caucasian (W)	1	Female	Young Adults (2 Studio Shot)	Tan / Beige	0	Professional Lighting, 5 Close-up	Real Tir	13.01		
A001	A001HOL23C208	20210219	Woman puts makeup on femal	Dark-haired woman puts make sun care, young, dark-haired, v		Caucasian (W)	2	Female	Young Adults (2 Studio Shot)	Tan / Beige	0	Professional Lighting, 5 Close-up	Real Tir	16.35		
A001	A001HOL23C211	20210219	Young woman in a hat turns a	Young good-looking European sun care, young, woman, young		Caucasian (W)	1	Female	Young Adults (2 Studio Shot)	Tan / Beige	0	Professional Lighting, 5 Close-up	Real Tir	11.68		
A001	A001HOL23C213	20210219	Woman turns around touchin	Young gorgeous Brunette Eurc sun care, young, woman, young		Caucasian (W)	1	Female	Young Adults (2 Studio Shot)	Tan / Beige	0	Professional Lighting, 5 Close-up	Real Tir	11.38		
A001	A001HOL23C227	20210219	Woman in big white hat turns	Young attractive European woi sun care, young, woman, young		Caucasian (W)	1	Female	Young Adults (2 Studio Shot)	White, Grey	0	Professional Lighting, 5 Close-up	Real Tir	9.05		
A001	A001HOL23C231	20210219	Young woman in a hat blows a	Young pretty brown-haired Eui sun care, young, woman, Europ		Caucasian (W)	1	Female	Young Adults (2 Studio Shot)	White, Grey	0	Professional Lighting, 5 Close-up	Real Tir	12.47		
A001	A001HOL23C235	20210219	Woman in a white hat enjoys t	Young good-looking European sun care, young woman, Europ		Caucasian (W)	1	Female	Young Adults (2 Studio Shot)	White, Grey	0	Professional Lighting, 5 Close-up	Real Tir	10.18		
A001	A001HOL23C249	20210219	Woman in straw hat turns to th	Young gorgeous European dar sun care, woman, young, Europ		Caucasian (W)	1	Female	Young Adults (2 Studio Shot)	White, Grey	0	Professional Lighting, 5 Close-up	Real Tir	9.51		
A001	A001HOL23C256	20210219	Woman in a hat turns back and	Young attractive Brunette Eurc sun care, woman, young, Europ		Caucasian (W)	1	Female	Young Adults (2 Studio Shot)	White, Grey	0	Professional Lighting, 5 Close-up	Real Tir	14.56		
A001	A001HOL23C262	20210219	Caucasian woman puts a straw	Young pretty brown-haired Cai sun care, young, woman, young		Caucasian (W)	1	Female	Young Adults (2 Studio Shot)	White, Grey	0	Professional Lighting, 5 Close-up	Real Tir	8.59		

Figure 3.3 –Content description spreadsheet

Following the completion of content descriptions, the Content Manager uploads the CSV file containing this data into the BBRoll database. This enables the search engine to establish the correlation between the file name and the associated keywords, facilitating filters to connect attributes linked to that specific file.

Once the content is in place, the contributions from both the contributor and Content Manager conclude, and the platform is enriched with a new batch of fresh footage. At this stage, users (content consumers) can seamlessly search and discover the necessary footage for their projects using the primary functions of the platform - namely, the search engine and search filters.

In the future, as new content is generated or when a new contributor expresses interest in providing footage to the platform, the process will follow a similar trajectory. New files will be uploaded to the server via FTP, previews will be automatically generated, and the Content Manager will undertake the task of describing these fresh clips, subsequently uploading the CSV to BBRoll. This iterative process ensures the continuous expansion of the clip database.

3.2 User Interaction Management: Customer Journey Map

BBRoll serves as an online marketplace catering to Beauty Brands and individuals seeking skincare video footage for their marketing endeavors. Upon landing on the platform's homepage, users are greeted with an overview of its functions, a detailed description, and the key tools available (refer to Figure 3.4).

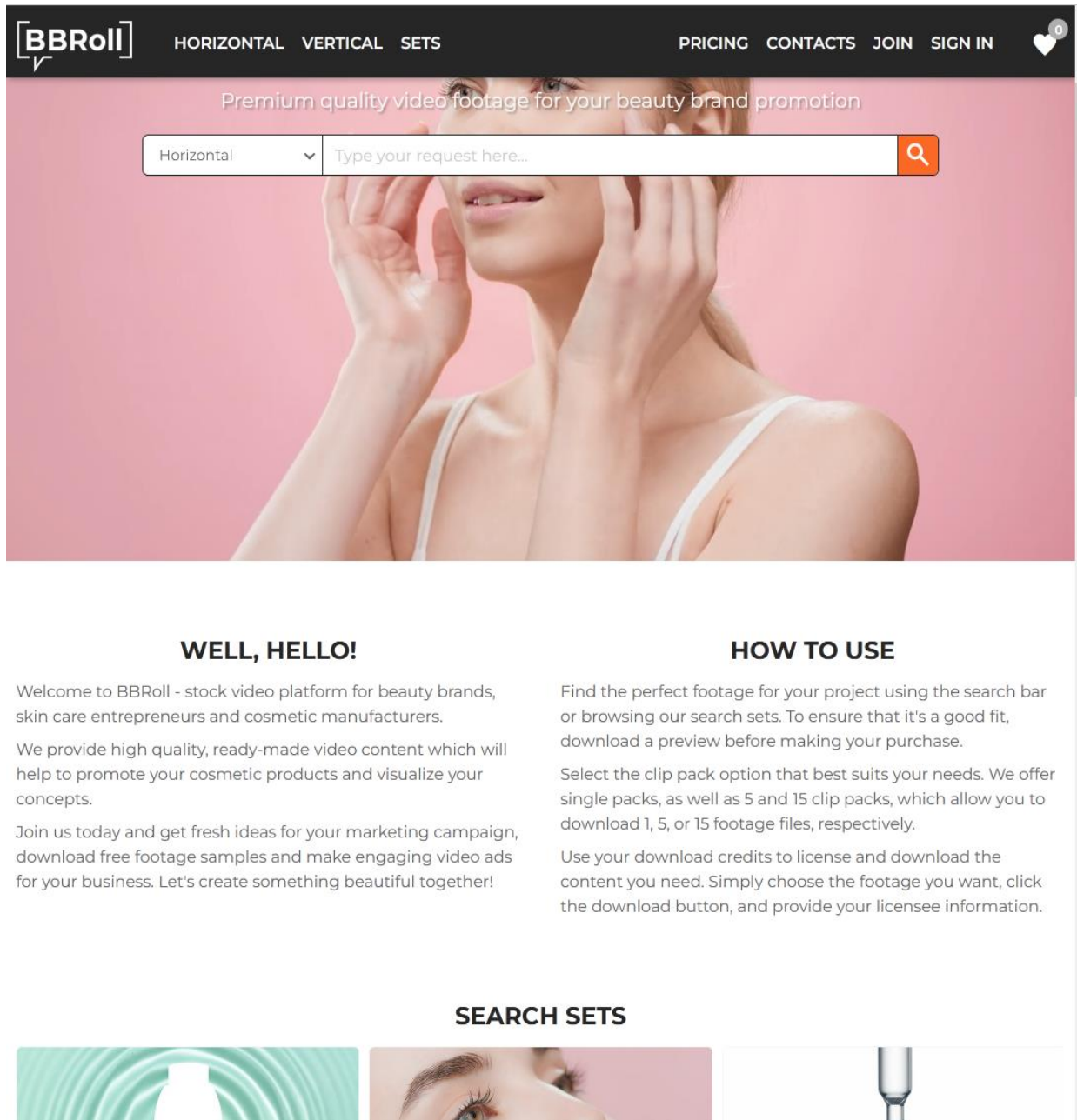


Figure 3.4 –Screenshot of what the user sees on the landing page first

Users have the option to explore the available video footage through Search Sets or conduct a targeted search using specific keywords. For instance, consider a search query for "skin cream application" and the resulting search page is displayed in the screenshot (see Figure 3.5).

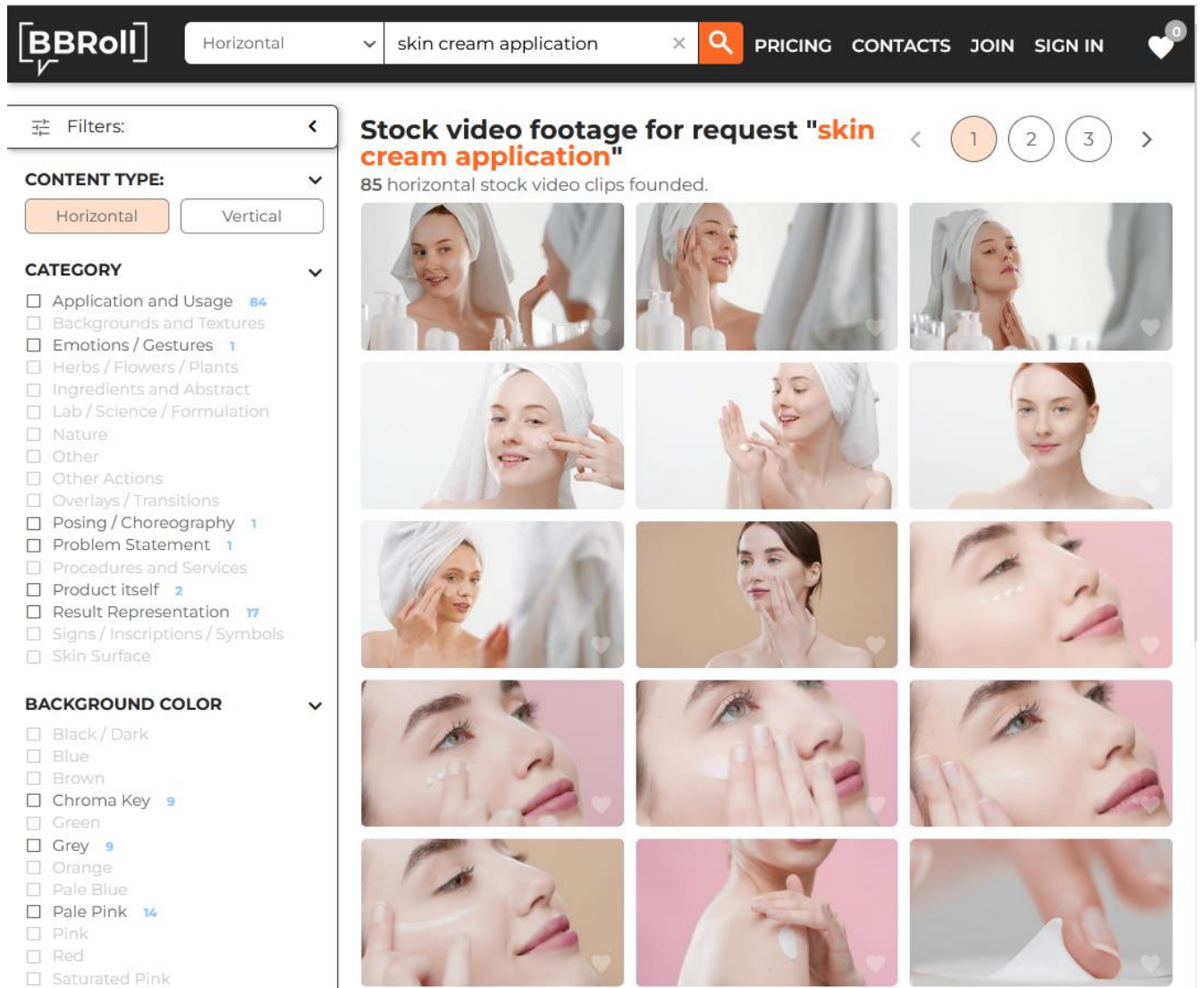


Figure 3.5 –Search results page for “skin cream application”

Users have the flexibility to fine-tune their search results by specifying criteria such as style, resolution, or length. As an illustration, observe the search results page featuring a query for "anti-acne" and applied filters for background colors in Grey, Pale Blue, and Beige (refer to Figure 3.6).

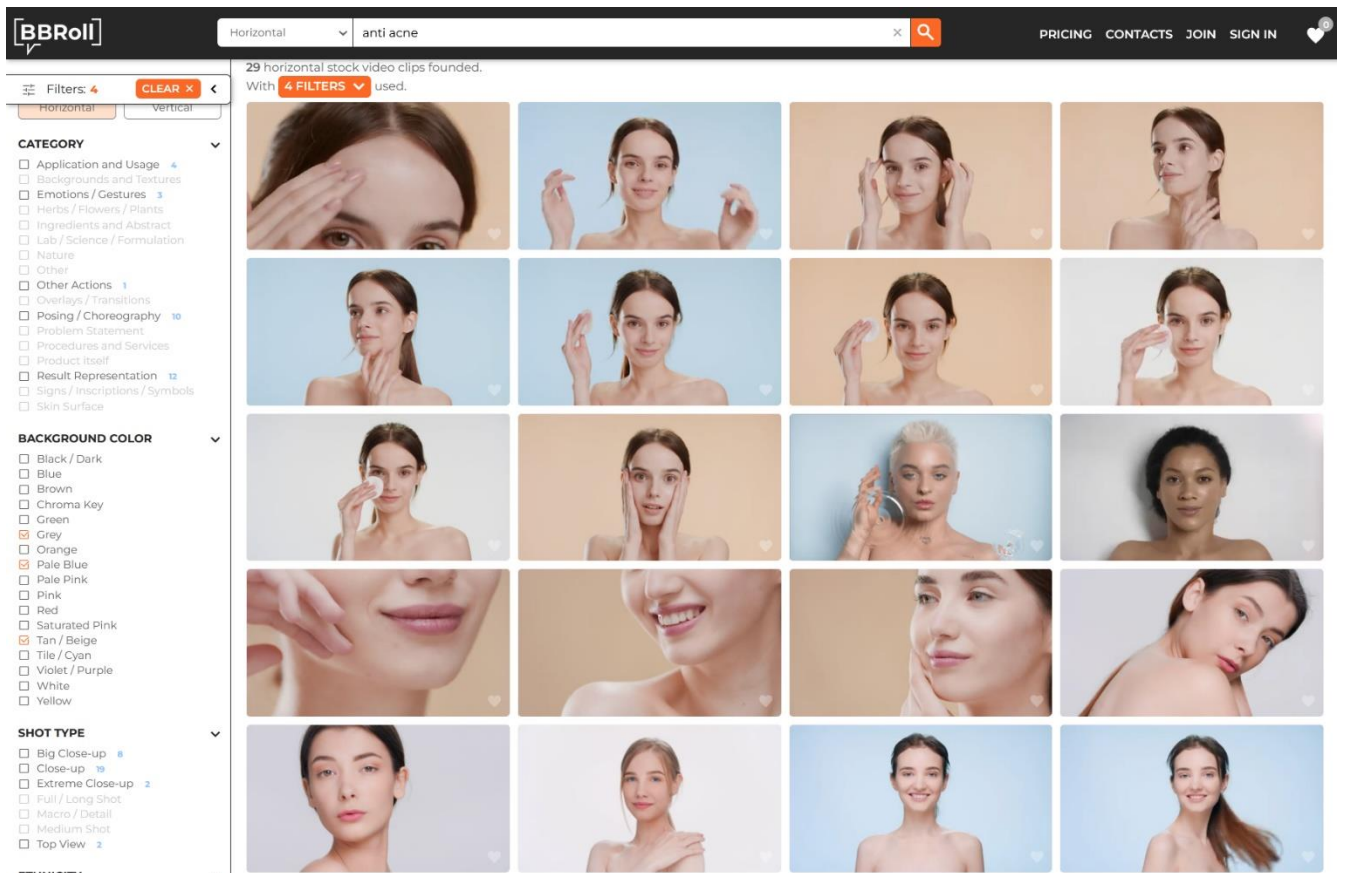


Figure 3.6 –Search results page for “anti acne” with filters

Hovering over any icon on the results page allows users to instantly preview the video corresponding to that still icon. Additionally, users can click on the heart icon to add the footage to their Favorites.

Moreover, users have the option to visit the item page, offering a larger preview, by clicking on the icon of any clip from the search results. The item page furnishes additional details about the footage, including FPS, Codec, Author, etc. This page also presents a larger video preview and facilitates downloading for proxy editing, ensuring that the footage precisely meets the user's requirements (see Figure 3.7).

The screenshot displays a video search results page. At the top, a video player shows a close-up of a blonde woman touching her skin. Below the player, the video title is "BLONDE WOMAN TOUCHES HER FOREARM SKIN AND LOOKS AT THE CAMERA". The description reads: "Close-up beauty portrait of young blonde woman touches her body skin running fingers along a forearm and looks at the camera through her hands | Skin care products commercial".

Key details include:

- Clip ID: A001H0KBSB232
- By: Pavel_dp
- Licence: [Standard BBRoll license included](#)

Technical specifications are listed:

- 4K: \$67, 3840x2160 | ProRes | h.264
- HD: \$47, 1920x1080 | ProRes | h.264

A prominent orange button labeled "HOW TO BUY" is visible. A Firefox file dialog box is overlaid on the page, showing the file "A001H0KBSB232.mp4" (MPEG-4 Video) and options to "Open with" or "Save File".

Figure 3.7 –Search results page for “anti acne” with filters

To initiate the clip purchase, the user clicks on the "How to Buy" button, leading them to the pricing and offers page (refer to Figure 3.8). In line with the strategy outlined in Paragraph 1.7 of Chapter 1, designed to enhance the customer's lifetime value (LTV), pricing is structured to incentivize interest in the Annual Unlimited plan [28]. Nevertheless, users also have the option to purchase a clip credits pack. The central concept of the platform is to encourage users not to buy individual footage but to prompt them to make larger purchases. This is achieved through the sale of "downloads," wherein the user, upon purchasing a pack (e.g., 15 clips), can choose and download the specified number of clips. The more clips a user purchases in a single transaction, the more cost-effective the pricing becomes.

PRICING

Get a better price with clip packs by paying upfront for more than one footage!

Option	Price	Per Clip
Single Clip HD	\$47	\$47 per clip
5 Clips HD	\$235 \$77	\$15.4 per clip
15 Clips HD	\$705 \$97	\$6.46 per clip
Unlimited HD	\$447/year	\$37 per month

Figure 3.8 –Pricing and offerings page

Upon selecting, for instance, the 15 Clips HD option, the user initiates the purchasing process. At this stage, the platform prompts the user to either sign in or sign up.

LOG IN TO BBROLL:

Not registered? [Join](#)

Your E-mail *
tvoyfilm.ua@gmail.com

Your password *
●●●●●●●●

[Forgot my password](#)

SIGN IN

or continue with

Google Twitter LinkedIn

Figure 3.9 –Sign in dialog

The platform facilitates the entry of payment details into the form and seamlessly processes the payment (see Figure 3.10).

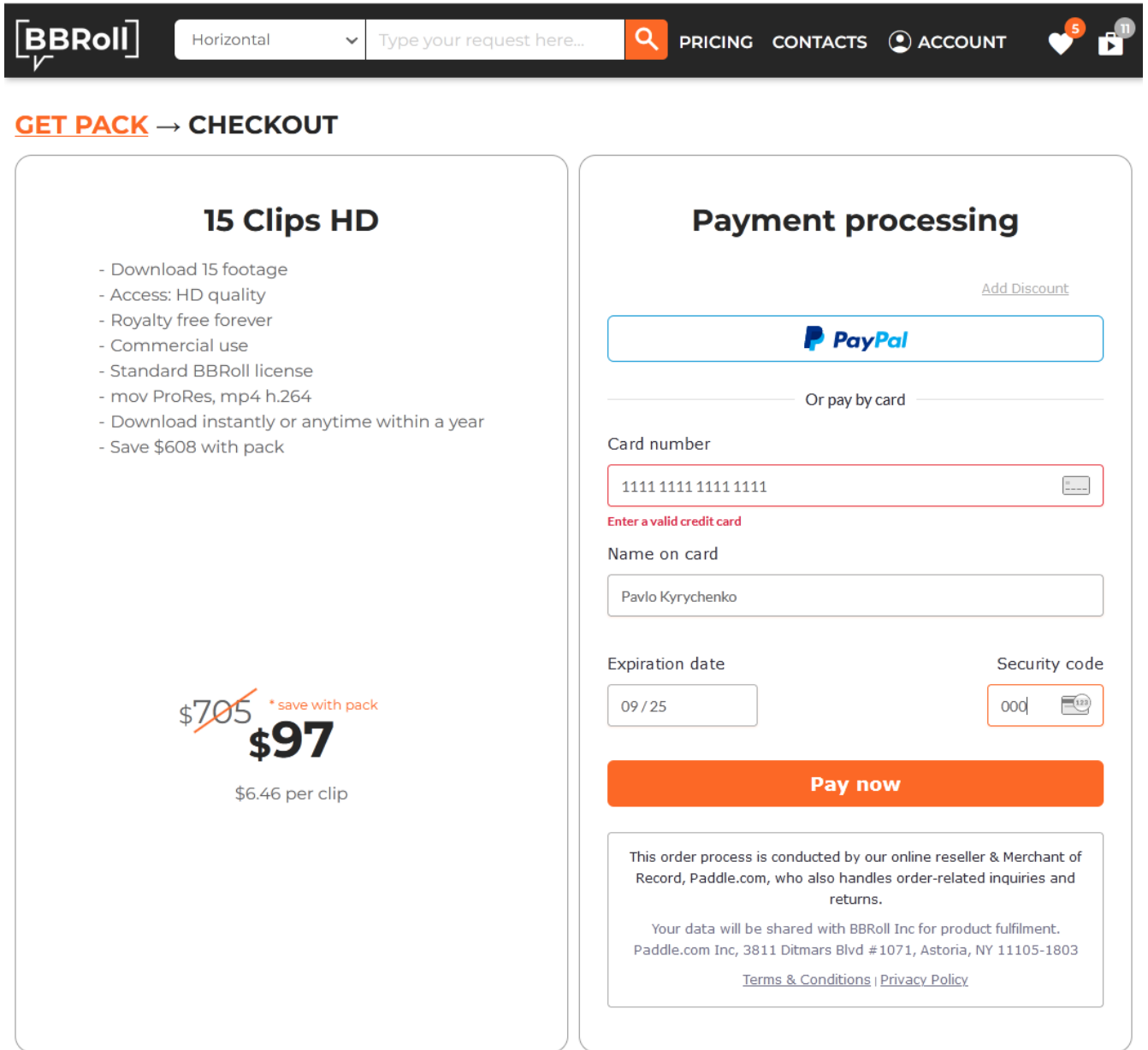


Figure 3.10 –The Checkout process

Following a successful checkout process, the user receives an email confirmation of their order, and download credits are added to their account (refer to Figure 3.12). Subsequently, the "How to Buy" button transforms into a "Download" button, enabling the user to download any footage by clicking on it (see Figure 3.11).

The download process initiates with the provision of licensee information. This step is essential to issue an appropriate license, considering scenarios where the user may be purchasing footage for a client project. In such cases, it is possible to designate the client's end user as the footage licensee, allowing them to utilize the content for marketing purposes. (see Figure 3.11).

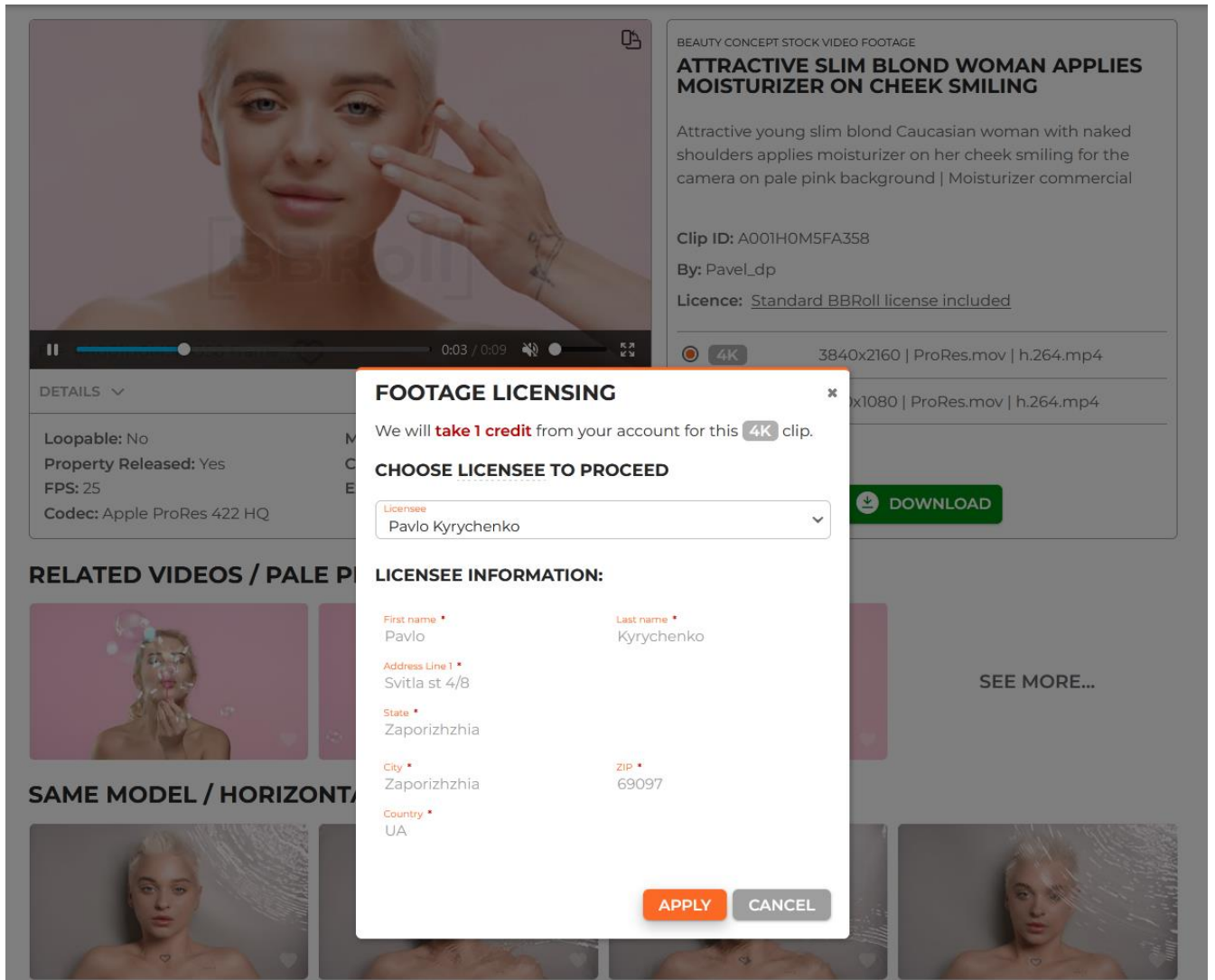


Figure 3.11 –Filling License Information for the Footage Before Download

Upon providing the licensee information and clicking the "Apply" button, the file download initiates promptly, enabling the user to save the large-sized file for their project.

The downloaded file have the same name as the previously acquired watermarked preview, facilitating a seamless replacement in the user's project.

MY PURCHASES

AVAILABLE CREDITS:

HD 5 items left 4K 0 items left

[BUY MORE](#)

BY ORDERS BY ITEMS

ORDER	DATE	ITEM	SIZE	LICENSE	PRICE	STATUS
✓ #449 pack	Aug 6, 2023	15 Clips HD 15 prepaid credits for licensing HD footage	HD		\$97 Invoice	Active till Aug 6, 2024 5 clips left
Aug 7, 2023 Pack Order #449		A002U0M89A005D 1920x1080 ProRes.mov h.264.mp4	HD	Standard ⓘ Download pdf	Expired: Aug 21, 2023 Reactivate links	
Aug 7, 2023 Pack Order #449		A001U0L8CA101G 1920x1080 ProRes.mov h.264.mp4	HD	Standard ⓘ Download pdf	Expired: Aug 21, 2023 Reactivate links	
Aug 7, 2023 Pack Order #449		A001U0L5EA074E 1920x1080 ProRes.mov h.264.mp4	HD	Standard ⓘ Download pdf	Expired: Aug 21, 2023 Reactivate links	
Aug 7, 2023 Pack Order #449		A002H0M96A029G 1920x1080 ProRes.mov h.264.mp4	HD	Standard ⓘ Download pdf	Expired: Aug 21, 2023 Reactivate links	
Aug 7, 2023 Pack Order #449		A002H0M84A013F 1920x1080 ProRes.mov h.264.mp4	HD	Standard ⓘ Download pdf	Expired: Aug 21, 2023 Reactivate links	
Aug 7, 2023 Pack Order #449		A001U0L8RA136 1920x1080 ProRes.mov h.264.mp4	HD	Standard ⓘ Download pdf	Expired: Aug 21, 2023 Reactivate links	
Sep 21, 2023 Pack Order #449		A001U0L8CA018C 1920x1080 ProRes.mov h.264.mp4	HD	Standard ⓘ Download pdf	Expired: Oct 5, 2023 Reactivate links	
Sep 21, 2023 Pack Order #449		A001U0L8CB059C 1920x1080 ProRes.mov h.264.mp4	HD	Standard ⓘ Download pdf	Expired: Oct 5, 2023 Reactivate links	

Figure 3.12 –The “History of purchases” page

All of the user's downloads are consolidated in a spreadsheet on the "My Purchases" page within their user's cabinet. This provides them with access to review or re-download clips, download a PDF license, and view the available download credits on their account (see Figure 3.12).

Users also have the option to purchase the Annual Unlimited Subscription plan (see Figure 3.8). In this scenario, their cabinet will display the subscribed plan and its expiration date instead of available download credits (see Figure 3.13).




MY PURCHASES		YOUR SUBSCRIPTION PLAN(S)					
BY ORDERS BY ITEMS		#698-1: UNLIMITED HD Next billing date: October 5, 2024				CANCEL	
ORDER	DATE	ITEM	SIZE	LICENSE	PRICE	STATUS	
✓ #698-1 <small>subscr</small>	Oct 5, 2023	 Unlimited HD <small>Unlimited prepaid credits for licensing HD footage</small>	HD		\$447 Invoice	Active <small>till Oct 5, 2024</small> Auto-Renew: on	
Oct 5, 2023 <small>Subscr Order #698</small>		A001H0L43A274 <small>1920x1080 ProRes.mov h.264.mp4</small>	HD	Standard ⓘ Download.pdf		Expired: Oct 19, 2023 Reactivate links	
Oct 5, 2023 <small>Subscr Order #698</small>		A001H0L43A274 <small>1920x1080 ProRes.mov h.264.mp4</small>	HD	Standard ⓘ Download.pdf		Expired: Oct 19, 2023 Reactivate links	

Figure 3.13 –The “History of purchases” page with Annual Subscription

All other processes, including licensing and downloading, remain the same for the user.

Conclusions to Chapter 3

Overall, the customer journey map for an online marketplace that sells video footage for beauty brands includes several steps, from landing page overview to downloading footage. The journey map ensures a user-friendly experience that allows users to search through the database of footage, preview it, register for a user account, purchase download credits, choose the footage they want, fill in licensing information, and download the footage. The BBRoll offers a simple and streamlined process that is designed to make purchasing video footage as easy as possible.

CONCLUSIONS

As a result, a platform was developed, including all key functionality and ready as a minimum viable product (MVP), ready for market fit experiments [29]. The platform allows contributors to upload and sell the content through the platform and customers to find, license and download high quality pre-created footage for their digital marketing projects. Both parties, as well as owners of the website are stakeholders of the project and everyone gets their profit out of it.

The comprehensive testing phase affirmed the stability of the platform's functionality. The website's design and functionality not only enable smooth navigation but also enhance the overall user experience, allowing users to effortlessly navigate from their initial visit to downloading items without necessitating additional support.

The business model of the platform emerges as profitable, particularly upon surpassing the milestone of 500 subscribers. With an expansive and growing market for stock videos, the goal appears to be attainable.

The project manager played a pivotal role in steering the project, orchestrating tasks and ensuring smooth coordination among participants. Key milestones, including initiate meeting, company incorporation, and development of all pages marked critical steps toward financial transactions. The Gantt diagram proved invaluable for planning, enabling the systematic allocation of tasks and effective control of the project pipeline.

The customer path map offered by BBRoll ensures a straightforward customer journey encompassing searching, previewing, footage selection, licensing and download. This simplicity is designed to make the purchase of video footage as user-friendly and efficient as possible.

In summary, the successful completion of this project not only meets the immediate needs of the beauty industry and independent content contributors, but also positions the platform for sustained growth, profitability, and a positive impact on the market for stock video footage.

REFERENCES

1. Bootstrapping and Lean Startup: A Perfect Match for Success // Faster Capital Article: web-site. URL: <https://fastercapital.com/content/Lean-startup--Bootstrapping-and-Lean-Startup--A-Perfect-Match-for-Success.html> (Retrieved 18.10.2023).
2. Stock video store for beauty brands // Official website of the BBRoll Inc: web-site. URL: <https://bbroll.com>. (Retrieved 24.11.2023).
3. Pavlo Kyrychenko, Video production project estimation. URL: <https://youtu.be/cojQkFnwI58?t=570> , Timecode 09:30.
4. Eisha Armstong, Productize: The Ultimate Guide to Turning Professional Services into Scalable Products, 2021.
5. Supriya Bajaj, The Best Stock Video Sites of 2023 // web-site. URL: <https://www.softwaresuggest.com/blog/best-stock-videos-sites/> (Captured 03.09.2023)
6. Christopher Bowen and Roy Thompson, Grammar of the Edit, 2018, ISBN 9781138632202, Chapter 1.12.
7. The global stock video market // web-site. URL: <https://www.expertmarketresearch.com/reports/stock-video-market> (captured 10.10.2023).
8. Content Management Software (CMS) Systems Of 2023. // web-site. URL: <https://www.forbes.com/advisor/business/software/best-content-management-software/> (captured 12.08.2023).
9. Project Management Institute, A Guide to the Project Management Body of Knowledge (PMBOK® Guide), 2021.
10. Configure hosting and set up the storage serve.
11. Stefan Buttcher, Charles L. A. Clarke, Information Retrieval: Implementing and Evaluating Search Engines, 2016. ISBN-10 0262528878.
12. Jan Ozer, Learn to Produce Video with FFmpeg, 2018.
13. Rex Hartson, The UX Book - Guidelines for Ensuring a Quality User Experience, 2012.
14. Dominique Rambure, Alec Nacamuli, Payment Systems, 2015.

15. Jonathan Rasmusson, *The Way of the Web Tester: A Beginner's Guide to Automating Tests*. ISBN-10 1680501836.
16. Stock footage prices Overview // web-site. URL: <https://photutorial.com/how-much-does-stock-footage-cost/>, (captured 16.10.2023).
17. Stock Video Subscription Offers Compared // web-site. URL: <https://www.footagesecrets.com/buyers-guide/top-3-stock-video-subscriptions/>.
18. Stock Video Market Research Report 2023 // web-site. URL: <https://www.technavio.com/report/stock-video-market-size-industry-analysis> (captured 04.11.2023).
19. Legal Documents Needed by a Niche Website // web-site. URL: <https://www.contractscounsel.com/g/999/us/niche-website-legal-documents> (captured 2023.09.27).
20. Jon Duckett, *HTML and CSS: Design and Build Websites*, 2018. ISBN-10 1118008189.
21. Tom Corson-Knowles, *Email Marketing Mastery*, Email Marketing Mastery, 2016.
22. Creating FAQs That Turn Prospects into Customers // web-site. URL: <https://www.superoffice.com/blog/faq/>.
23. Andy Grove, *How Query Engines Work - An Introductory Guide*, 2022.
24. Dennis Puhalla, *Layout Workbook - a guide to building pages in graphic design*, 2018.
25. Steve Krug, *Don't Make Me Think - A Common Sense Approach to Web Usability*, 2017.
26. Dave Parker, *Trajectory: Startup - Ideation to Product/Market Fit*, 2021.
27. Pamela Hazelton, *Subscription Model Can Increase Lifetime Values*, Article. // web-site. URL: <https://www.practicalecommerce.com/Subscription-Model-Can-Help-Increase-Lifetime-Values> (Captured 2023.10.14).
28. Jon Levy, *You're Invited: The Art and Science of Connection, Trust, and Belonging*, 2021.
29. Eric Ries, *The Lean Startup*, 2015.