

Intelligent Video Archives: How AI Is Changing the Content Management Paradigm

White paper by Neodata group

Executive Summary

In the digital age, dominated by the speed imposed by social media, quickly finding the right video content is crucial to remain competitive. **Artificial intelligence (AI)** transforms **video management, automating search and analysis** with advanced visual, speech and semantic recognition technologies.

These innovations allow you to **identify scenes, objects and people quickly**, improving operational efficiency and enhancing existing archives. Sectors such as **media, security and e-learning** are already benefiting from this technology, which transforms videos into a strategic asset for companies.

Index

01

The Video Era: Opportunities and Challenges in Multimedia Content Management

04

Automate Search: Strategic Advantages for Companies in the Sector

02

Navigating the Sea of Data: The Challenges of Large Archives

05

Neovid: The AI Solution for Video Analysis

03

Artificial Intelligence and Video Analysis: Automation and Efficiency

06

Case Study: -34% Costs, +94% Accuracy: The Case of a Media Company

A young girl with pigtails is sitting on a couch, smiling and looking at a tablet device. The background is a dimly lit room with shelves and a window.

01

The Video Era: Opportunities and Challenges in Multimedia Content Management

167 million videos
are viewed every minute
on Tiktok



We live in an era where **video content dominates the digital landscape**. Every minute, hours of video are uploaded online or archived by companies, broadcasters, newsrooms, social media.

The competition is huge and it is becoming **increasingly difficult to build relevant and engaging video content** for your audience, especially in the era of fast-paced content where being first is often crucial.

Managing this huge amount of data is **no longer just a technological challenge**, but also an extraordinary opportunity to exploit **artificial intelligence (AI)** not only to revolutionize video management and analysis but also to manage, analyze and extract valuable information or bring back to life content lost over time.

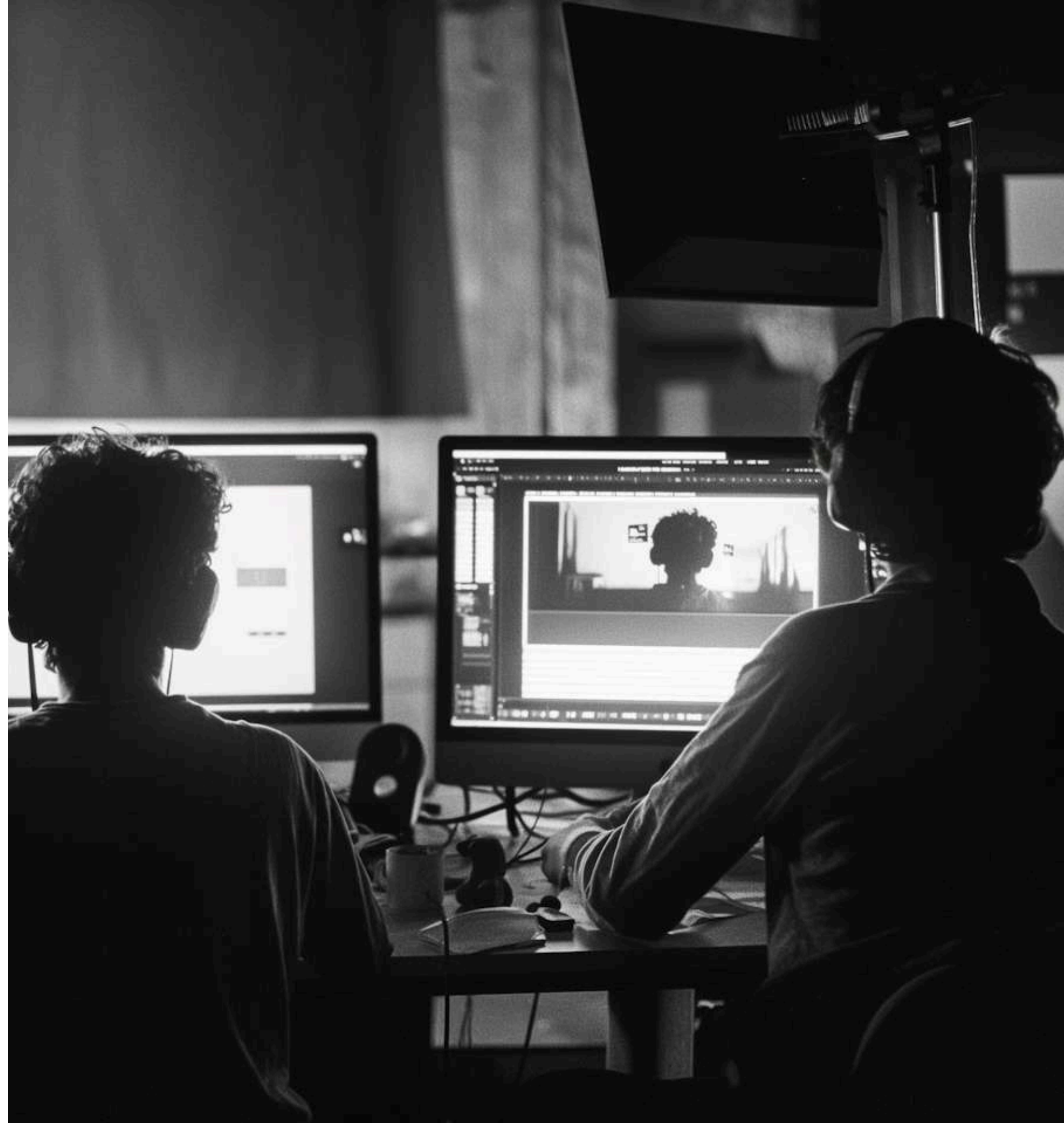


A goldmine of content

With the advent of generative AI technologies, it is also becoming easier to create video and image content, so much so that since the launch of ChatGpt at the beginning of 2024, the number of **contents generated has increased by +8000%**.

With this huge increase in competition and demand for video content, production **teams have been forced to find innovative ways to deliver new and exciting content**. For this reason, **many media outlets and broadcasters have been looking to repurpose archive content**.

AI can become a strategic ally, helping companies quickly identify the most suitable content from their archives, **speeding up the creative and editing process** and, above all, for organizations that have large archives covered by copyrights, opening up new monetization opportunities.



A black and white photograph of a person's head and shoulders in profile, looking towards a wall of multiple computer monitors. The monitors are arranged in a grid and display various abstract, blurry patterns. The person's hair is dark and slightly messy. The overall atmosphere is one of data processing or surveillance.

02

Navigating the Sea of Data: The Challenges of Large Archives

Traditional video archives have several limitations



Large video archives represent a precious resource, but their traditional management presents some evident critical issues:

- **Growing volume of data:** Corporate and digital archives are expanding exponentially, requiring scalable infrastructure and advanced technologies for efficient access.
- **Content Variety and Complexity:** Videos can include many different types (security footage, live events, user-generated content), each with specific formats and requirements.
- **Slow Search Times:** Identifying a specific scene or detail in hours of footage is often a time-consuming and inefficient process. In competitive environments, this slowness can undermine strategic advantage.

Manual search and labeling

Traditional video archiving relies heavily on manual tagging and indexing, a time-consuming and error-prone process. As the volume of video content explodes, these outdated methods can't keep up with the demand for fast and accurate retrieval.

For example, imagine you need to find a specific moment from a 20-year-old soccer match in an archive containing thousands of sporting events.

Without the proper tools, this task could take days of manual work, with a significant margin for error.

In this context just outlined, artificial intelligence is a candidate as a technology capable of bringing great benefits by changing the rules of the game and offering automated and scalable solutions that improve efficiency and accuracy.

The underlying technology allows you to intelligently analyze video content, find information, describe content, and label images and clips very efficiently.





03

Artificial Intelligence and Video Analysis: Automation and Efficiency

How does AI work and what are its potentials?

1. Automated Tagging and Indexing

One of the distinctive capabilities of AI is the automatic analysis of videos to generate descriptive metadata. Algorithms can:

- **Recognizing objects and scenes:** Identifying elements of all kinds, describing settings, natural landscapes, identifying images, logos, etc.
- **Detect faces:** The most sophisticated systems can identify well-known faces such as politicians, actors, footballers etc... with great ease.

- **Interpreting Emotions:** Analyzing Facial Expressions and Body Language to Understand Sentiment.
- **Analyze audio:** with this type of analysis, AI can find specific interventions, statements, but also analyze the tone and context of the statements

For example, if a user is looking for a specific scene in a movie or a particular segment of a video lesson, AI can locate it in seconds, eliminating hours of manual labor.

Object recognition



Face recognition



Emotion recognition



2. Enhance Search with Natural Language Processing (NLP)

Thanks to the integration with Natural Language Processing (NLP), video search becomes more intuitive and user-friendly.

Users can interact with archives using natural language, without the need for exact keywords or timestamps.

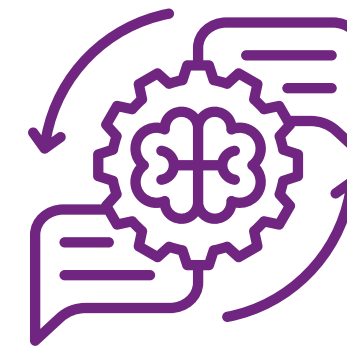
For example, a query like “Find beach sunset scenes from our original series” will return accurate results.

3. Security and compliance

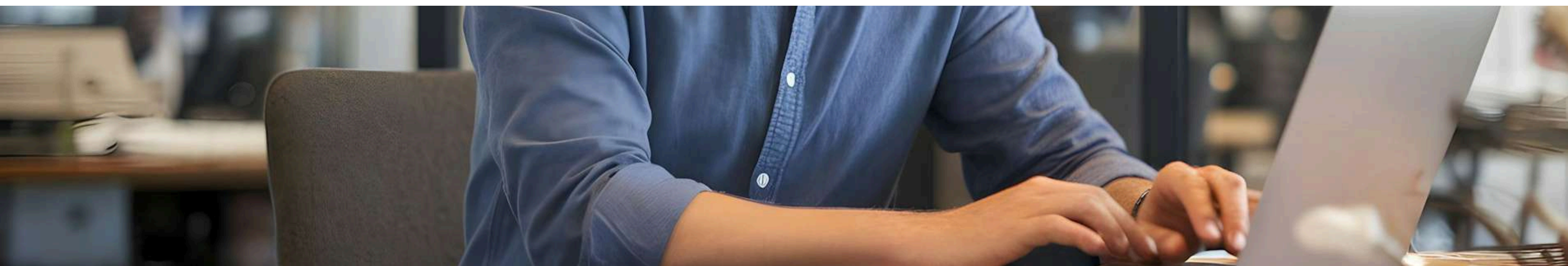
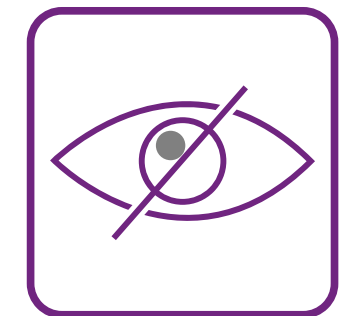
AI can quickly analyze videos to identify sensitive content, such as personal data, or materials that do not comply with current regulations.

This automates the risk management process and ensures that the company is always in line with legal and security standards.

Accessibility



Safety





04

Automating Search: Strategic Benefits for Companies in the Sector

The main sectors

Automation in video content management is providing tangible results and powerful tools to accelerate processes and improve efficiency. Among the industries that are successfully adopting these technologies are:

- **Media and Entertainment:** AI simplifies the management of historical archives, facilitates automatic video editing and improves the user experience with personalized content suggestions, allowing broadcasters, streaming platforms and production houses to respond more quickly and specifically to audience needs.
- **E-learning:** Educational platforms are using artificial intelligence to index video lessons and make content more accessible. Features such as keyword or topic search enhance the learning experience by making learning materials easier to use and more personalized.
- **Security:** From surveillance cameras to incident analysis, AI is revolutionizing investigative processes. It enables the identification of relevant events within hours of footage, accelerating decision-making and improving public and corporate safety.



A full-page background image of the Beatles crossing the zebra crossing in Abbey Road. The image is overlaid with a semi-transparent purple box on the left side containing text. Five purple rectangular frames are positioned around the heads of the four band members, indicating facial detection. The frames are located at approximately [380, 230, 480, 300] for John Lennon, [380, 360, 480, 430] for Paul McCartney, [380, 490, 510, 560] for George Harrison, [380, 630, 510, 710] for Ringo Starr, and [380, 780, 510, 860] for another instance of Ringo Starr. The purple box has a white vertical bar on its left edge.

06

Neovid: The AI Solution for Video Analysis

What is NeoVid?

NeoVid is Neodata's AI-based video analytics solution that enables advanced search and video frame extraction. With NeoVid, you can instantly find celebrities, identify objects, people or even emotions, and easily extract frames and clips.

Accuracy and
speed of research



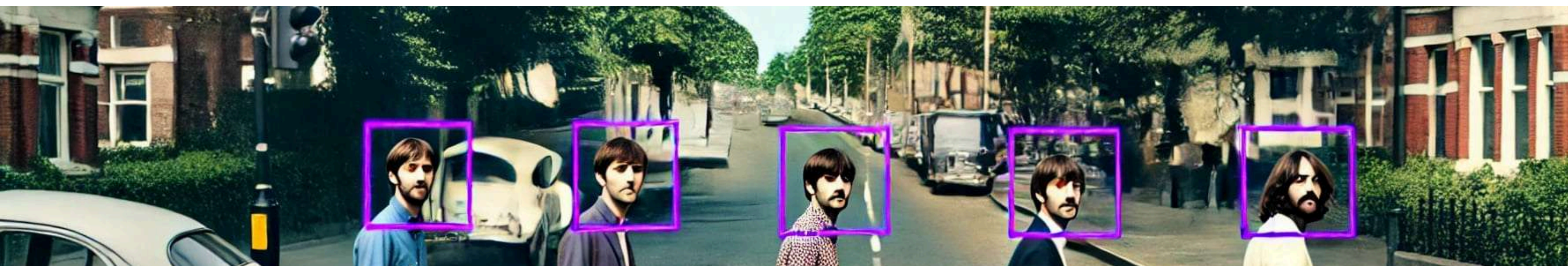
Multimodal Research



Famous Face
Recognition



Monetize your archive



Functionality



Smart Video Search:

Find images, specific frames or video clips based on keywords such as people's names, descriptions, emotions or specific actions. Download content in the highest quality SD/HD or 4K.



Familiar Face Recognition:

NeoVid identifies and categorizes famous faces, with a focus on Italian personalities.



Audio recognition:

Find, identify, and categorize specific sounds or voices within videos, such as speech, key phrases, sound effects, or tones.

White label sales portal

Give external customers access to your watermarked and copyrighted videos and images, allowing them to make direct purchases.



Private and secure archive:

No transfer of video content that remains within the customer's infrastructure, ensuring privacy and security.



Detection of specific actions and events:

Ability to identify actions (e.g. "person walking", "applause", "conversation").



A professional video camera, likely a Sony or similar brand, is shown from a side-rear perspective. It has a large LCD screen on the left side, which is turned on and displays a blue-tinted image. The camera is equipped with various cables, including a black cable with a yellow connector. The background is dark and out of focus, suggesting an indoor setting with some ambient light.

06

Case Study: –34% Costs,
+94% Accuracy: *The Case of
a Media Company*

-34% Costs, +94% Accuracy: The Case of a Media Company

- One of the main Italian media companies manages an audiovisual heritage of colossal dimensions, including:
- **180,000 hours of entertainment content**
- **85,000 hours of in-depth reporting and documentaries**
- **65,000 hours of fiction and TV series**
- **20,000 hours of sports events and special programs**

Despite the wealth of content, the company faced a significant challenge: the inability to access its archive quickly and efficiently.

The company had three main problems

Inefficient manual search: Each operator spent an average of 4–6 hours sourcing specific program segments requested by editorial, advertising or client teams.

Incomplete cataloging: Only 35% of the content was correctly indexed, making any retrieval activity complex.

Lost business opportunities: Due to the inaccessibility of materials, the company was unable to meet external demands, losing concrete monetization opportunities.

The solution

Thanks to the adoption of our intelligent automatic indexing system based on AI technologies, the company has completely revolutionized the management and use of its archive. The intervention involved:

- Automatic content analysis using AI models and video recognition
- Semantic indexing of content, including contextual and chronological metadata
- Intuitive search interface, supported by intelligent suggestions and advanced filters

Metric	Before	After	Improvement
Average search time	4,5 ore	12 minutes	-95%
Indexed archive percentage	35%	98%	+280%
Full Time Equivalent (FTE) required	8	3	-62%
Accuracy of search results	67%	94%	+40%



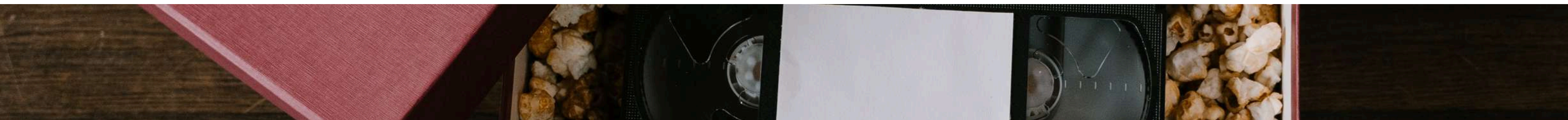
The solution

Economic Impact

- **Reduction of operating costs:** estimated at -34%, thanks to the drastic reduction in man-time required for research and cataloguing operations.
- **Increased direct revenue:** The greater accessibility of content has allowed the generation of incremental revenues linked to the commercial valorization of previously unavailable content.

This case demonstrates how artificial intelligence applied to the management of multimedia archives is not just a technological issue,

but you represent a true business enabler. Automating the understanding and access to content means transforming a dormant archive into a strategic asset, capable of generating continuous value for the company and its partners.



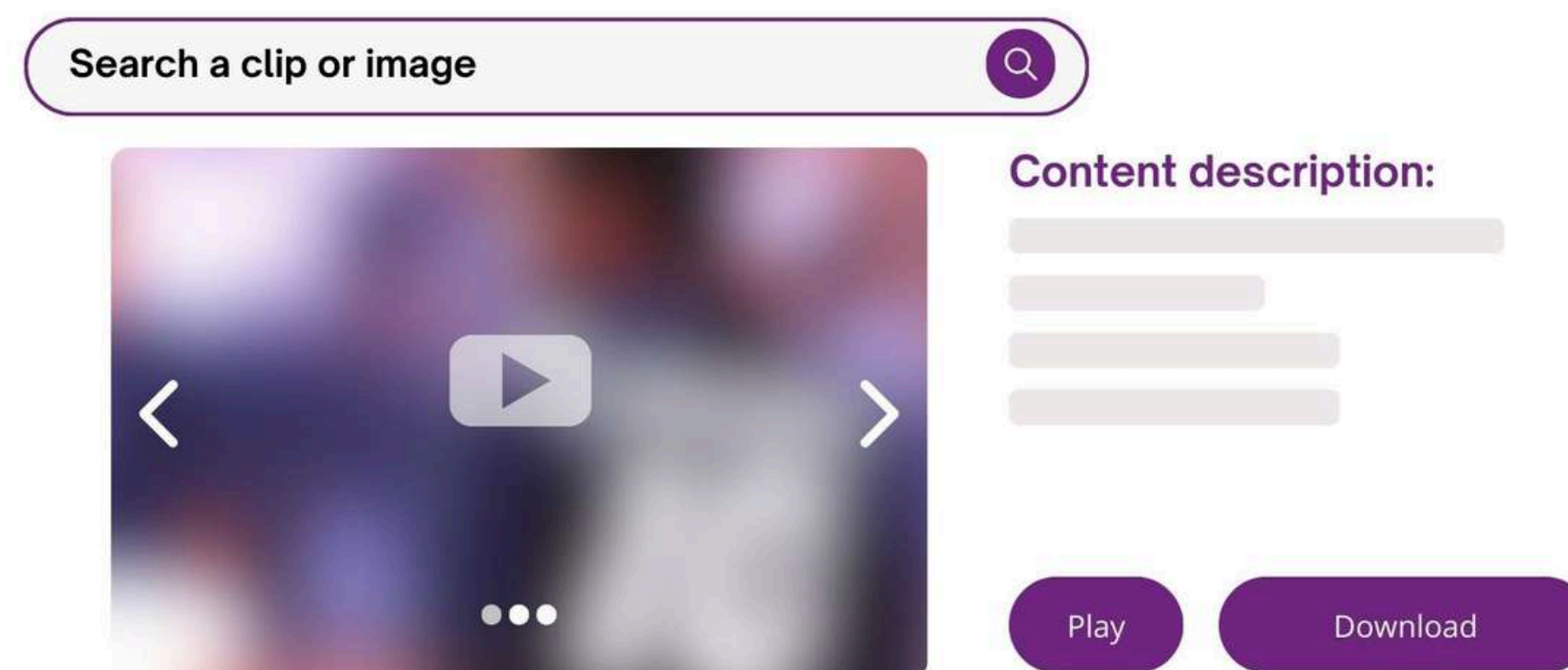
Discover Neovid

Artificial Intelligence can do much more than analyze data: it can give shape, order and value to the content that we archive every day without fully exploiting its potential.

If you want to transform your video library into a strategic, accessible, and organized resource, it's time to see AI in action.

Discover how our AI-native solution can revolutionize video management.

[Learn more about Neovid](#)



About neodata



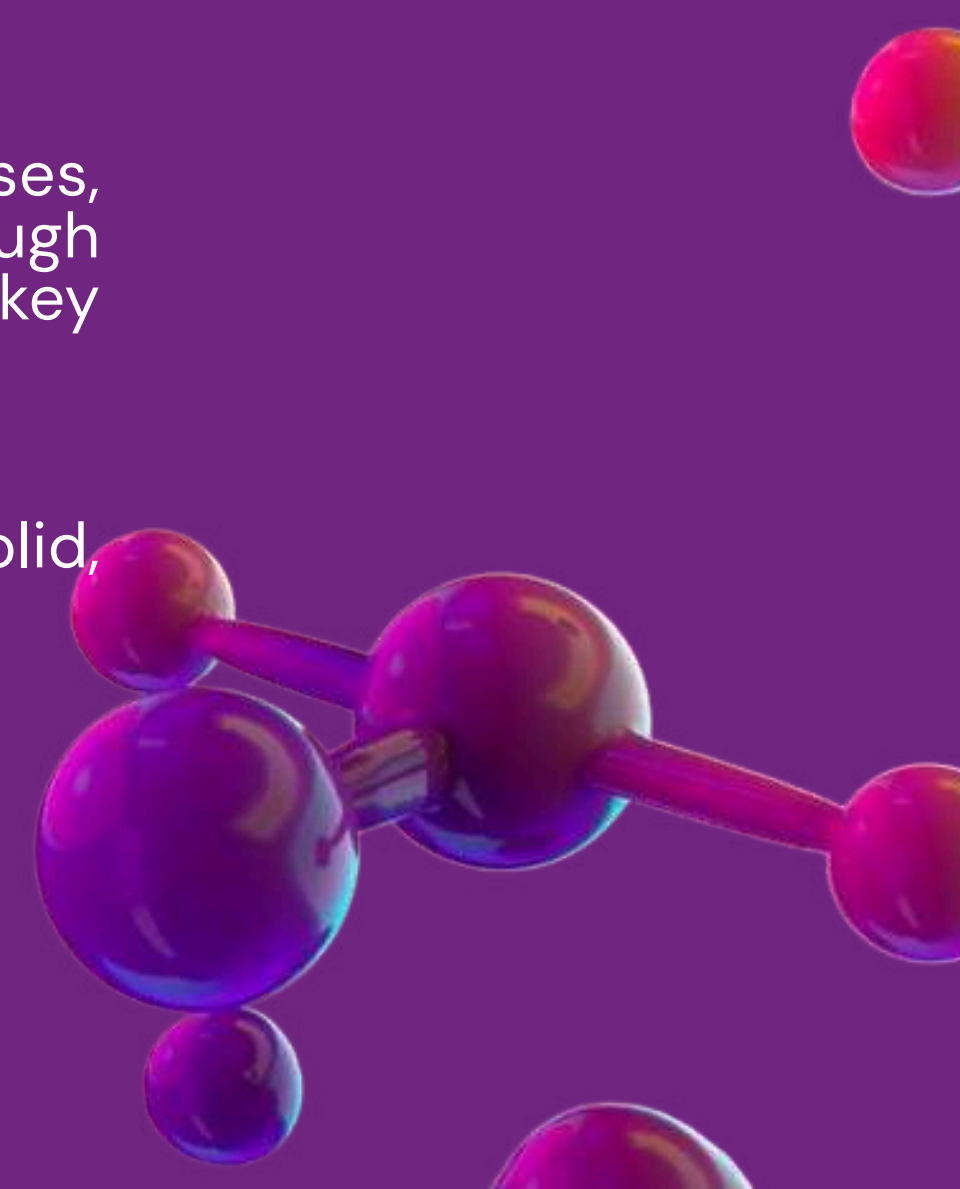
Neodata, with over twenty years of international success in the Big Data and Ad-tech sector, today places data-driven Artificial Intelligence at the heart of its mission.

Our company stands out for excellence and innovation, carrying out cutting-edge projects with a multidisciplinary team of data scientists, programmers, data analysts, business consultants and marketing experts.

Our experience translates into tailor-made solutions for medium and large enterprises, aimed at transforming data into strategic decisions and concrete actions. Through advanced analytics and intelligent data processing, Neodata is committed to improving key business metrics such as sustainability, efficiency and profitability for its partners.

With Neodata, data becomes the engine of a complete business transformation, a solid, technological and competent guide towards a smarter and more sustainable future.

AI for your business. Delivered





Contacts

info@neodatagroup.ai

MILAN

Via Giovanni Battista Pirelli 30 –
20124 Milan

CATANIA

Viale Guglielmo Oberdan 141 –
95129 Catania



www.neodatagroup.ai



Neodatagroup



neodatagroup