



SYSTEM SPECIFICATION

IMAGEN VIDEO MANAGEMENT PLATFORM | AUGUST 2020

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WE ARE IMAGEN

WIN HEARTS, MINDS AND MARKETS

Imagen puts you in complete control of your content. And it gives your customers secure access to a customisable and easy to use content archive. Organise complex content with our feature-rich, scalable platform, and unlock the true value of your video.

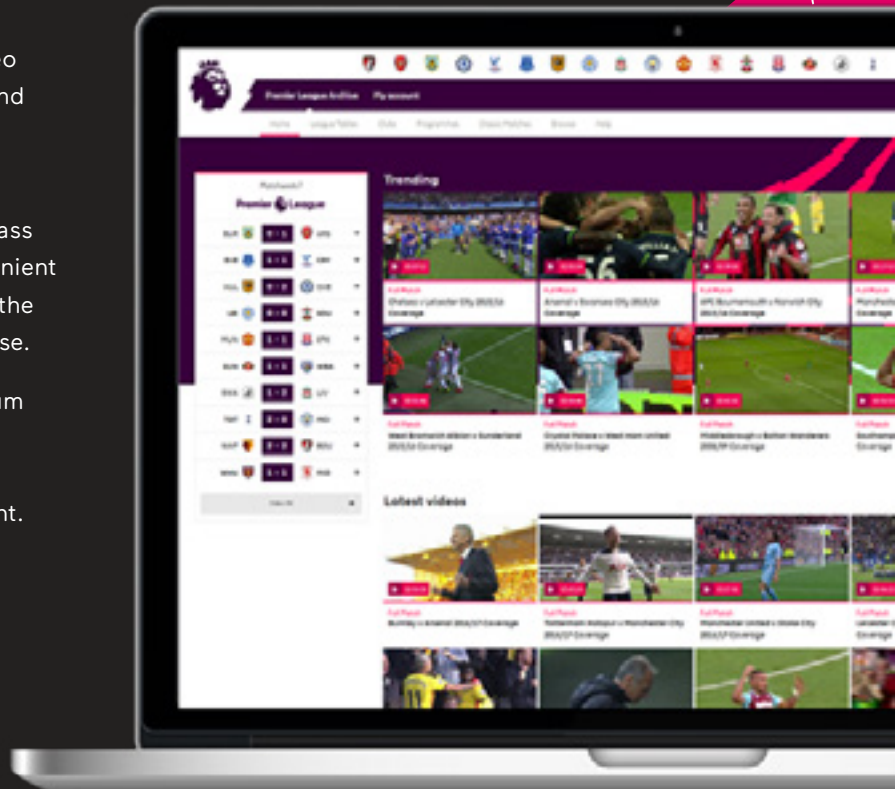
We help businesses, sports organisations and media companies to store, manage and distribute their ever-growing media libraries.

ABOUT IMAGEN

Imagen manages media for some of the world's biggest brands, preserving large collections of video for the long-term and enabling controlled access and distribution through a secure, scalable and highly customisable web platform.

Featuring powerful ingest workflows and best-in class media asset management, Imagen provides a convenient and cost-effective way to manage content without the need for hardware expenditure and hosting expertise.

Imagen delivers a premium performance for premium content – allowing end-users to search large video libraries in seconds, playback proxies, create edits, run workflows and download high resolution content.



STORE





STORE

Store your video, images, audio and documents in one place. Imagen also preserves your Adobe artwork files and social media posts; all easy to access and ready to be used any time.

STORE AND ARCHIVE ALL TYPES OF MEDIA

Video - Imagen can store most professional and consumer grade video file formats including: .MPG, .MOV, .MP4, .MXF and .TS

It also supports a vast range of codecs including: DV, MPEG-1 and 2, h.264, ProRes, DNxHD and XDCAM

Images - Store a wide range of image file formats including: JPG, PNG, TIFF, GIF, BMP, RAW

Audio - Keep all your professional and consumer grade audio files safe in Imagen, Supported formats include: WAV, MP3, OGG, AIF, AAC, WMA, FLAC

Documents - DOCX, PDF, PPT, XLSX, PSD, AI, FLA, EPS, .7z, .RAR

STORE SOCIAL MEDIA POSTS

Imagen will store the URL for each post and renders the content when accessed. Compatible social media platforms include Twitter, Instagram, Facebook, YouTube, Tumblr, SoundCloud, Vimeo and Reddit.

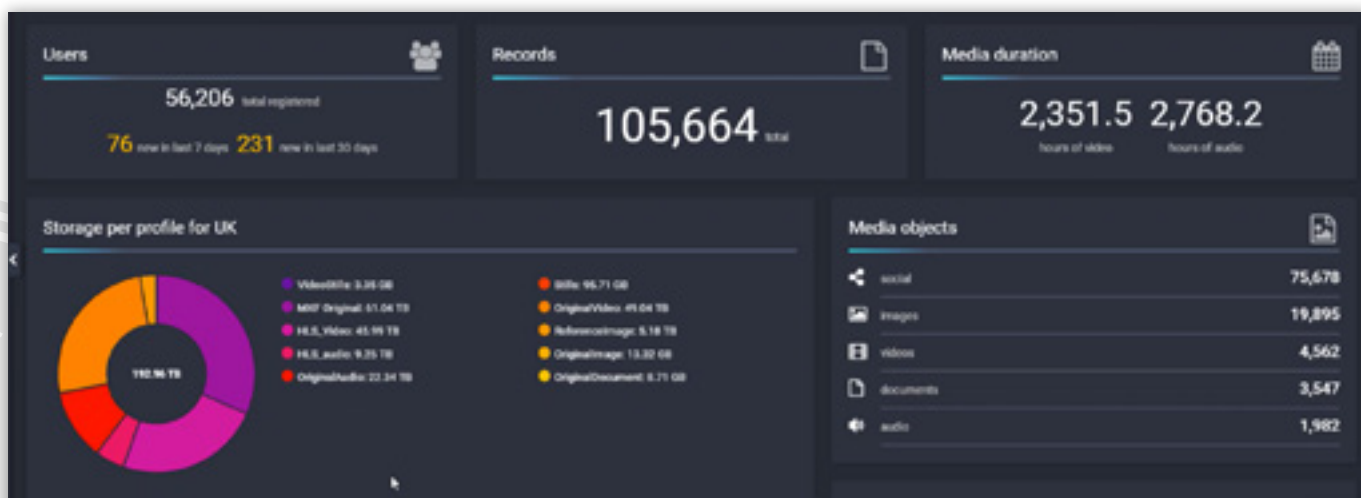
STORAGE OPTIONS

Imagen connects to a range of leading public cloud storage services including Azure, Amazon S3 and Backblaze B2 to give you the greatest range of options for balancing budget and speed. Choose between hot and cold storage levels to manage online storage costs while maintaining high levels of availability. Imagen uses local storage redundancy and can also be configured for geo-redundancy across multiple data centres.



Imagen's high-availability storage scales in either direction to accommodate any size of media library and flexes as your system grows. We can store media libraries as small as 10 terabytes up to multiple petabytes.

Our experienced engineers can advise on storing your content efficiently and economically and explain the options and features you can use to optimise performance and plan for growth.



INGEST

Upload large volumes of new content or legacy archives quickly and easily with our intuitive ingest tools. Imagen gives you great flexibility for adding content to your platform.

INGEST ALL TYPES OF MEDIA FILES

Video, Images, Audio, Documents, Adobe files (PSD/AI/FLA/EPS) & Social Media Post URLs.

SINGLE FILE OR BATCH FILE UPLOAD VIA WEB PAGE

Drag and drop files to upload media to your Imagen platform. Import media files from a local directory and add descriptive metadata – one file at a time or in large groups.

UPLOAD VIA REST INTERFACE / API

Our secure API makes it simple to add metadata, remotely trigger a file transfer and run a workflow to create browse copies, all in a single call.

Full API details available here:

<https://developers.imagen.io/>

INGEST LIVE STREAM

Capture live streams from an RTMP URL. Once the live stream has ended, the finished file is added to your Imagen video library where it can be accessed and repurposed anytime in the future.

METADATA IMPORT

Imagen can import XML formatted metadata files to create new Imagen database records. We can take in any type of XML and transform/conform using an import mapping process (XSLT). Timed text metadata can also be imported for improved searching and navigation of video or for use as annotations. Supported formats: Adobe Prelude (.CSV), EVS IPDirector logs (.XML), Imagen annotations (.XML), SubRip (.SRT), TTML (.XML or .TTML), and WebVTT (.VTT).

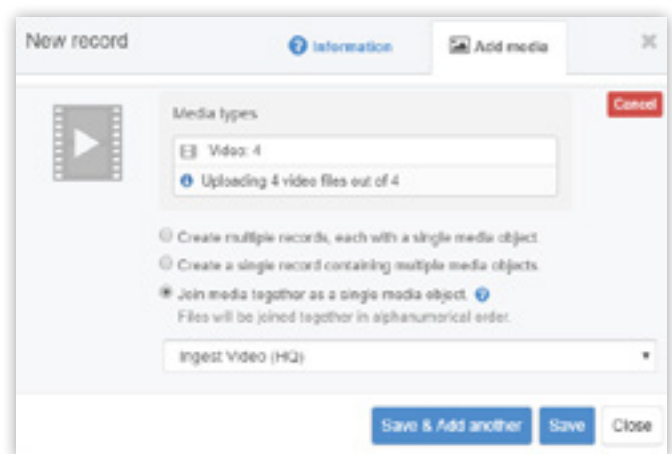
DROPBOX AND ONEDRIVE

Ingest directly from your Dropbox and OneDrive accounts. You can also add media from any publicly accessible URL.

VIDEO CONCATENATION

Stitch together a sequence of files to create one long video asset. At the point of ingest, simply navigate to the videos or drag and drop them onto the upload interface.

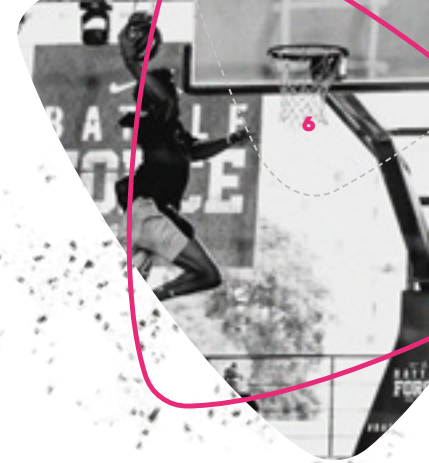
Imagen will detect you are preparing multiple media files for upload and provide a range of options, including the concatenation option. Files are joined in alphanumerical order. You can also access the video concatenation feature through Imagen's REST API interface.



EXIF/IPTC/XMP EXTRACTION

Many images contain embedded metadata which describes technical aspects of the picture, such as date, time and GPS information as well as copyright and descriptive information. When ingesting image files, Imagen can extract embedded EXIF, IPTC and XMP data and save as searchable metadata in the database. We also extract base timecode from the videos we ingest.

Imagen's *Update Record Metadata* ingest workflow module defines how the image data maps to the record fields in Imagen. The rules allow for overwriting, concatenation and adding to the database field if empty.



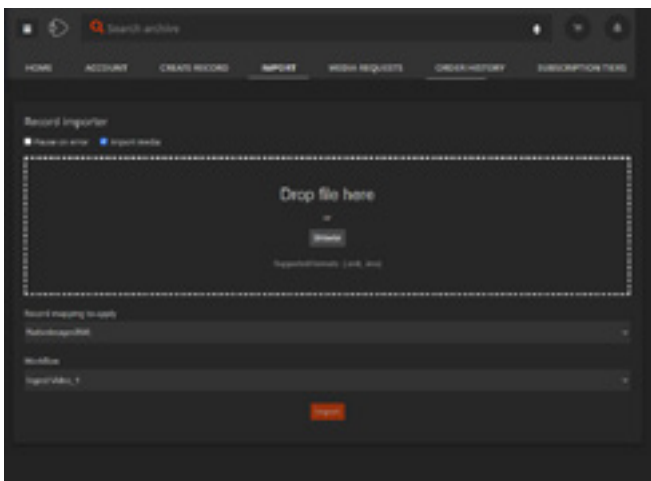
XML IMPORTER

Create new files from legacy archive data or import a large batch of new content with the XML import tool.

Tens – or even tens of thousands of Metadata records – can be uploaded to Imagen via a handy drag and drop interface. New Imagen metadata records are created from the XML import file.

Use the mapping feature to choose which legacy field in your XML file maps to an Imagen metadata field – e.g: the *Overview* field in the XML can translate to the *Description* field in your Imagen database schema.

If your XML file also contains a UNC path to the related media file for each line of metadata, Imagen will also automatically bulk ingest your media for you. You can even select the workflow to send it to.



REVIEW & APPROVAL

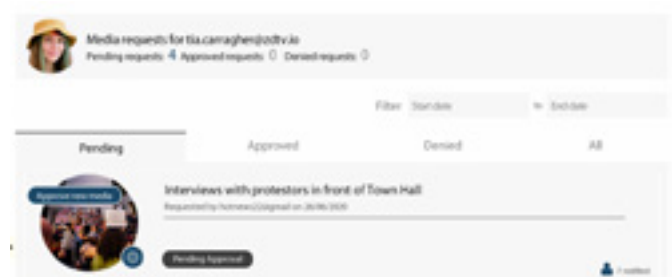
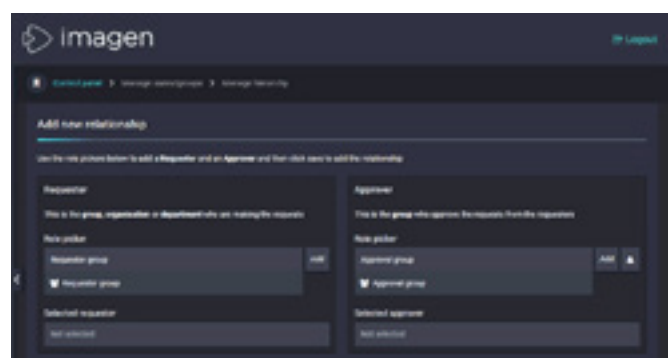
Content is usually ingested into Imagen by system administrators or approved content managers.

You may wish to allow for a wider range of contributors to add their content to your platform. Naturally, you may need to check or moderate the content before it is made available for wider consumption by your end-users.

The *Review and Approval* ingest workflow for external contributors removes controls from the upload interface which normally manage access and workflows. Instead, all they can do is upload and add metadata tags. Administrator level users who have been allocated the *Approver* role are then notified when new content is uploaded to Imagen.

Users with the *Approver* permission are then able to quickly accept, modify or deny the addition of the new video, image, audio, or document file. Any number of *Approvers* can be nominated to handle incoming content from any number of groups. Groups of contributors could be made up of individuals covering a particular territory or subject area for example.

The system is highly configurable so any approved content can then take on a default set of Access Controls – which could make it publicly available, or only to be seen or edited by specific groups or individuals.



SECURITY

Keep your media safe and secure for the long term and accessible only by the people or organisations you trust. With a range of advanced security features, you can be sure that only the users with appropriate permission levels get to access and use your media.

SECURE STREAMING AND DOWNLOADS

Streaming and downloads use HTTPS – a secure method of exchanging data between the server and the client browser.

We use the latest TLS 1.3 (Transport Layer Security) standard to provide secure communication between web browsers and servers. That means requests for data or media files are encrypted.



Image courtesy of IMG Replay

WATERMARKING

Overlay logos and metadata text onto your media to deter piracy and prove ownership. Imagen can burn onscreen graphics into proxies before making them available for preview online or sharing via social media.

GEO-IP BLOCKING

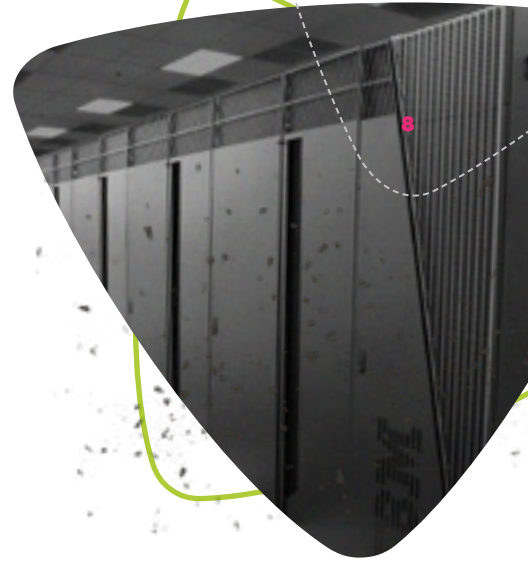
For rights restrictions or security reasons you may wish to block internet traffic from geographical locations based on an IP address range. Preventing specific territories from accessing your media via your Imagen platform is easily achieved using Imagen's GEO-IP filters.

EXPIRING MEDIA LINKS

Media URLs contain digitally signed access tokens with built in expiry time. Imagen digitally signs and dynamically updates links to media every 6 hours. This prevents unscrupulous users from uncovering and publishing the URL of the media object from the source code. Non-persistent URLs deter unauthorised sharing of links to your media files.

SUNRISE AND SUNSET DATES

Choose a date range for content to be available for individuals or groups. This makes time sensitive content available for a specific length of time and no longer – during a licensing agreement, or when distributing previews ahead of release date.





SCALABILITY

Imagen gives you all the benefits of cloud architecture including infinitely scalable storage, processing power and bandwidth.

GLOBAL DISTRIBUTION NETWORK

Imagen's Global Distribution Network (GDN) feature automatically replicates large libraries of media to any number of strategic Points of Presence (PoPs) using public cloud infrastructure. GDN is a custom Content Delivery Network perfectly suited for distributing large libraries of long tail content to a small audience of professional users. This ensures that customers can access and download large broadcast quality files quickly from their nearest local host.

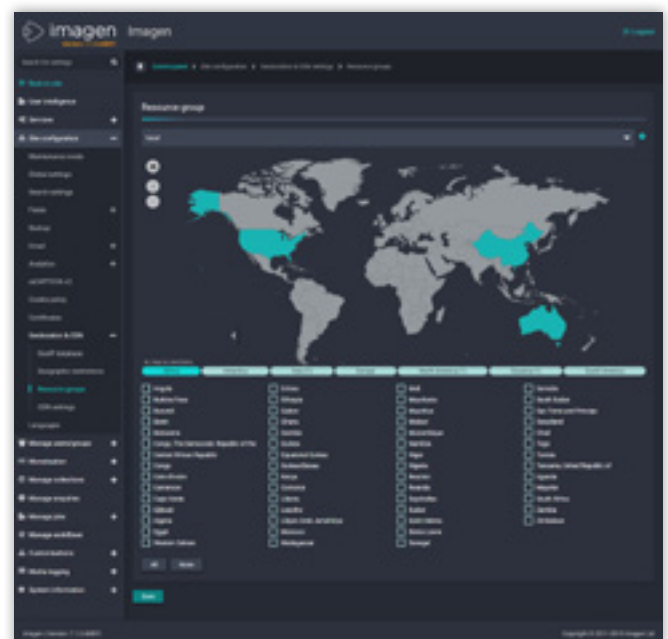
Simply choose your global PoPs from Imagen's admin interface and your high-resolution library will be automatically replicated to new locations.

Libraries of large, high-resolution files are copied to multiple storage locations around the world so they are closer to your clients. That means downloads are faster – allowing your clients to search entire video libraries in seconds, playback proxies, create edits, run workflows and download high resolution content at high speed from a data centre in their region.

CONNECT TO CDNS

For large audiences wishing to view live content, Imagen streams can be broadcast via a CDN. This can be useful for global/multi territory coverage of a live event – e.g. sports tournaments or corporate presentations.

This delivers robust, low latency connectivity that would not be possible if you streamed directly from the source.



FIND



SEARCH

Fast, powerful text-based searching, flexible filtering and sort controls connect you with the content you need in just a few clicks.

SIMPLE SEARCH

Just enter a word or phrase into the search box to find the content you need in your media library. You can even use your microphone to input your search request verbally.

FLEXIBLE SEARCH RESULT LAYOUT

Users can switch between list, grid and flexi-grid views to optimise the layout of search results for easier navigation.

TIME-BASED METADATA SEARCHES

One of Imagen's most powerful features is its ability to enable users to search for specific moments within long form video content.

Where shot list or time-based metadata has been applied to the video content, users can jump straight to the most relevant moment in the video where the action takes place – directly from the search results.

Markers on the video timeline highlight where the search term or phrase is located, so the user can navigate to multiple reference points. Users can also search through the time-based annotations using the filter tool within the annotations list to locate specific moments within the video.

THUMBNAIL PREVIEWS

Thumbnail previews now give you another level of detail in the search results grid. Simply skim over the search result thumbnails to see a short preview of the videos available to locate the perfect clip in your shortlist without having to watch individual videos.

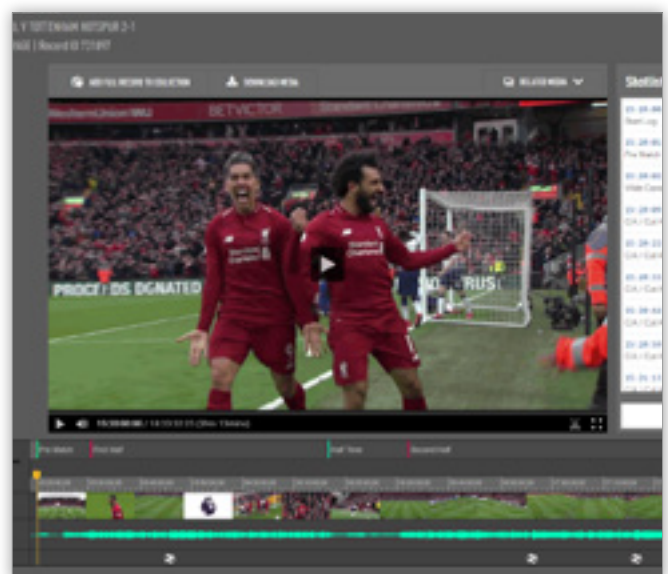
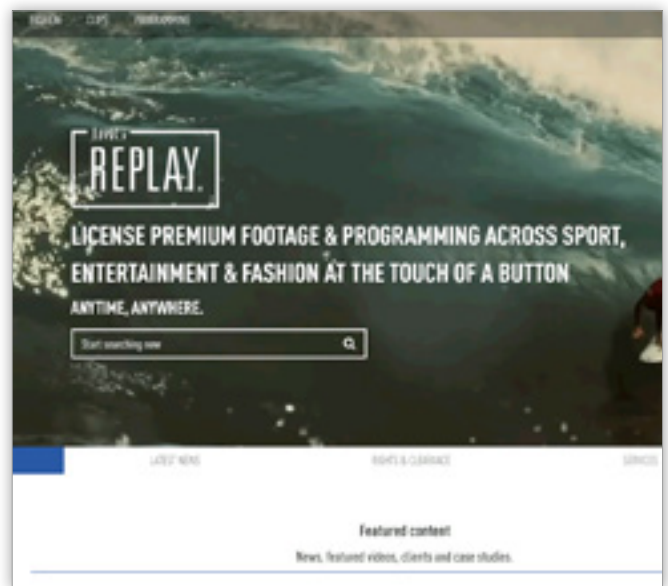
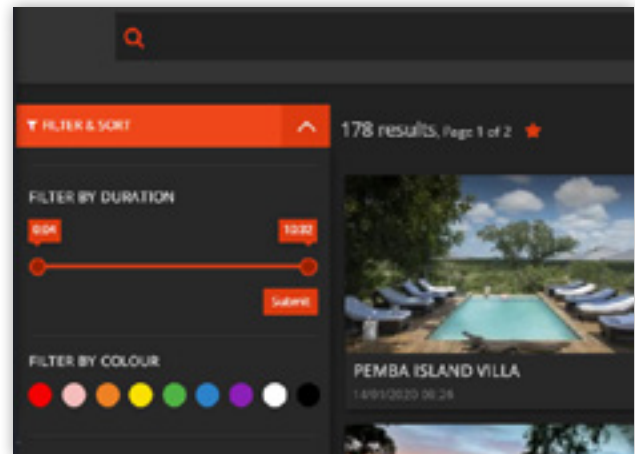


Image courtesy of IMG Replay

FACETED SEARCH (FILTER AND SORT)

Large hitlists can be made more manageable with filtering and sorting controls (e.g. date range, relevance, player name, genre, media type) to produce more relevant search results. With just a couple of clicks, your end-users can reduce thousands or millions of records into a manageable results list.

Refine your image searches with our Colour Filter to find pictures in a specific tonal range. For time based media you can now locate video or audio of a specific length with our Duration Filter.



SAVED SEARCHES

Complex searches can be saved so users don't need to repeat the query every time they want to search for the same type of material. Users can be notified automatically when new content is added to Imagen based on criteria set in saved searches.

Subscribers to Saved Searches can choose to be notified daily or as new content fitting their criteria is added to the platform. Users are also updated on the availability of new content if the access settings change for a specific record.

Multiple saved searches can be created by a user and individually controlled.

Notification emails sent to subscribers can be branded and customised by the system administrator.

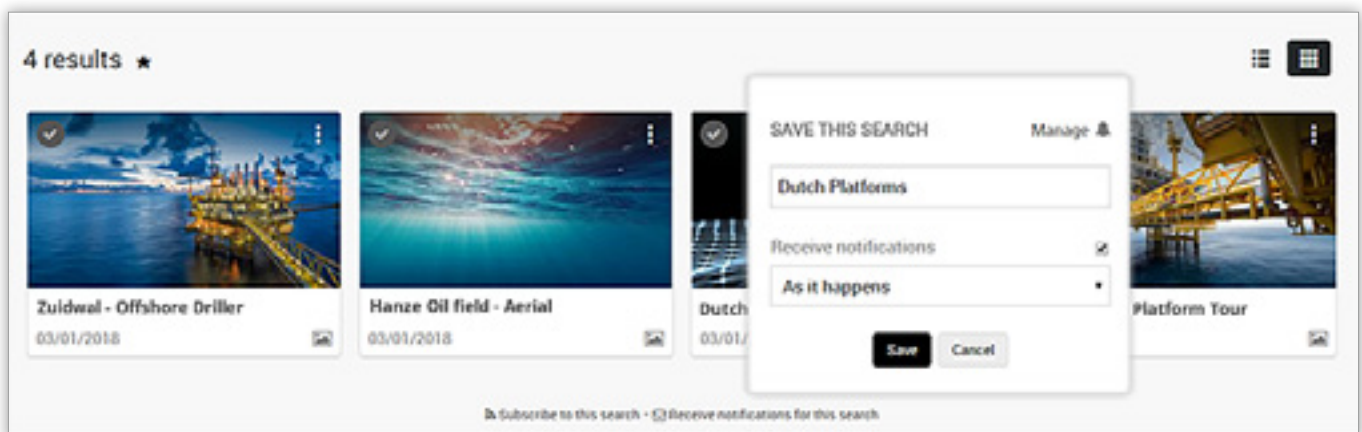
MRSS

Users can also subscribe to MRSS (Media Really Simple Syndication) feeds to receive updates based on saved search criteria.

MRSS extends the capability of RSS feeds by including links to multimedia files (audio, video, image).

MRSS clients and third-party tools can check the feed at regular intervals to discover new content. Downloads can be triggered via information in the feed and can be handled by Imagen's AFD (Accelerated File Delivery).

Simply subscribe to an MRSS using a saved search query for automatic updates on new additions to the Imagen platform. This offers a simple method of pulling new content into a production environment without the need for complex integration.

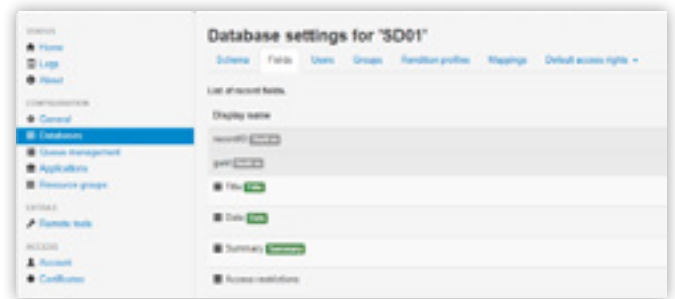


ADDING METADATA

Choose your own database fields and add descriptive, technical and time-based metadata tags and annotations to improve the searchability of your media.

CUSTOMISABLE METADATA SCHEMA (CHOOSE YOUR OWN DATABASE FIELDS)

Imagen's browser-based database management interface makes it easy to design & modify your database schema without any prior knowledge of SQL. The schema is constructed from a range of database field types and labels which describe the information they are storing – e.g. Title, Description, Director, Rights holder etc.



BROWSER BASED METADATA ENTRY

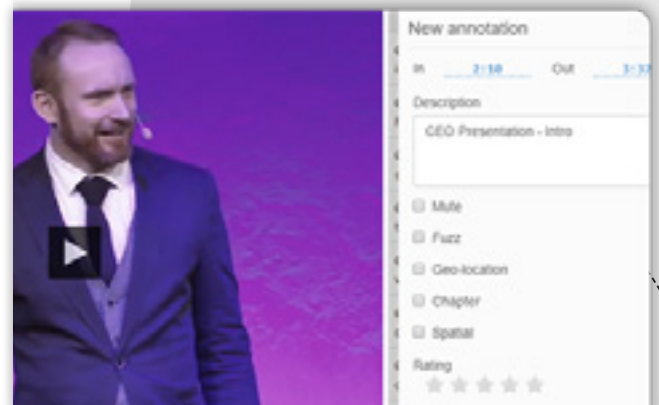
Imagen provides web browser based interfaces for easy metadata entry or edits of single or multiple media records.

Simply type in free text or use drop down menus and date pickers to maintain your metadata within the range of existing fields in your database schema.

TIME BASED METADATA

Time based metadata allows you to describe segments of a video or audio asset. Once applied, time-based metadata enables pinpoint searches of content within video and other time-based media.

Imagen's Media Logger and Annotation tools give users the chance to add time-based metadata manually. Our AI Services can also be used to generate time based metadata automatically. It can also be imported with XML formatted timed text files.



ANNOTATIONS

Annotations allow searchable contextual metadata to be added to a media object, e.g. onscreen spatial annotations to highlight people in a photograph.

Annotations can be created manually or automatically generated using AI services (see the next section for more info).

Time-based descriptive metadata tags can be applied to long form video content to improve searchability and navigation. For video or audio files, a long sequence can be broken down into a logical sequence and specific category markers applied to the timeline to highlight chapters and participants – such as actors, players or staff. Short text codes can also be used to insert a wide range of emoticons to bring a visual appeal to the timeline. Types of Annotation include:

- **Face detection**

Faces within digital images can be automatically identified using Imagen's face detection feature. Imagen highlights faces ready for tagging by administrators – so individuals can be found during basic searches. This reduces the overhead of marking up one or more faces in an image.

- **Spatial annotations**

Spatial annotations can be used to highlight areas on an image which can be tagged with searchable metadata. E.g. draw a square marquee around a face and add a name. The name will be searchable and the persons face will be highlighted in the image or video.

- **Moving spatial annotations**

Objects can be tracked between two points in time. Highlight an object with a marquee at different positions with a start and end time. Imagen will animate the path of the object over time.

- **Emoji support**

Insert emojis into the timeline to provide visual representations of mood.

- **Chapters**

Mark out specific areas in long form video or audio e.g. Quarters in an American football game.

- **Participants**

Add a controlled range of personnel to your annotations, e.g. team players in a game of football. Each participant can have their own row on the timeline for easier search and navigation and can be annotated separately.

- **Star ratings**

Apply a star rating to any set of annotations to enable users to rate content. Imagen star ratings can be exported and are interoperable with other applications including EVS IP Director's Interest Level rating.

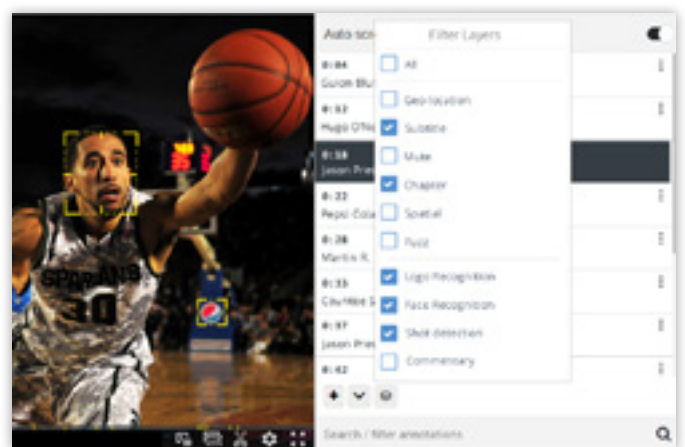
GEO-LOCATION DATA

For media files with related latitude and longitude information, Imagen can store geo-information as a link in the metadata record. Simply click on the coordinates stored in the metadata record and Imagen will pop up a dynamic zoomable map. This can be used to show where a video or image was taken.

ANNOTATION LAYERS

Manually applied metadata tags and AI services can automatically generate significant volumes of time based annotations. With so much extra descriptive information available, Imagen's *Annotation Layers* help users to decide which descriptive tags to display – For example, you could choose to show logo recognition and commentary and turn off face recognition.

Use tick boxes to toggle the visibility of the available metadata tags and use the *Layer Visibility* control to turn visual highlighting on or off.



ARTIFICIAL INTELLIGENCE FOR VIDEO

Generate rich descriptive metadata, automate repetitive tasks and improve the discoverability of rich media assets.

VISUAL ANALYSIS

FACE RECOGNITION

Identify faces and use biog data

LOGO RECOGNITION

Identify branding in video sequences

OBJECT RECOGNITION

Identify and label everyday objects

OBJECT TRACKING

Track movement of multiple objects

SHOT DETECTION

Detect scene breaks

CONTENT MODERATION

Detect and prevent explicit content

AUDIO ANALYSIS

SPEECH TO TEXT

Convert speech from audio to text in 10 languages

SENTIMENT ANALYSIS

Detect levels of positive and negative sentiments

SPEAKER IDENTIFICATION

Understand who spoke and when from an audio track

TEXT ANALYSIS

TRANSLATION

Translate text into more than 40 languages

TEXT DETECTION

Detect and show point where text is found

AND MANY MORE

Get in touch to find out more about our full range of AI services

AI WORKFLOWS FOR VIDEO

During Ingest simply choose your AI enabled workflows to access the services you need. Imagen workflows can be configured with one or more AI services.

Legacy content already stored in your Imagen platform can also be selected and submitted to an AI enabled workflow. Your files will be automatically analysed and existing database records appended with extra metadata.

AI services output JSON (JavaScript Object Notation) data which can also include timecodes. During set up we test a sample of your media and set a Confidence Score threshold to ensure that the data you receive back from the AI service is sufficiently accurate for your needs.

Your users will now be able to find the media they need more easily using Imagen's powerful search engine - including the ability to find key moments in video and audio thanks to timecoded metadata tagging.

AI Services are available to Imagen customers at additional cost. Contact your account manager for a full list of AI services and pricing.



Powering next generation AI to augment content management relies on partnering with the biggest and best R&D companies in the world. Our AI services leverage the best technology on offer from the labs of Google and Microsoft Azure.

Through Imagen, content owners can take full advantage of the world's most powerful, highly scalable, deep learning technology that requires no machine learning expertise to use.

ARTIFICIAL INTELLIGENCE FOR IMAGES

AI WORKFLOWS FOR IMAGES

Imagen's AI services for images help content owners to automate the generation of descriptive metadata tags for fast and accurate searching of picture libraries. It can also be used to spot and flag inappropriate imagery as part of a Quality Assurance workflow. AI Services are available to Imagen customers at additional cost. Contact your account manager for a full list of AI services and pricing. Services include:

FACE RECOGNITION

Identify faces and use biog data

LOGO RECOGNITION

Identify branding in video sequences

OBJECT RECOGNITION

Identify and label everyday objects

TEXT DETECTION

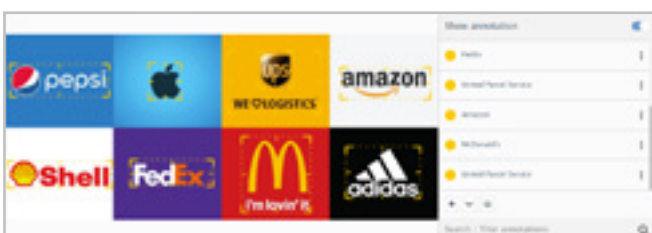
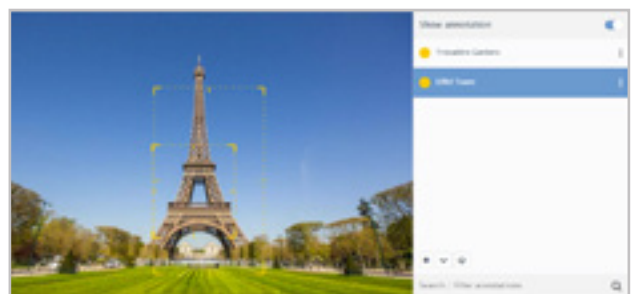
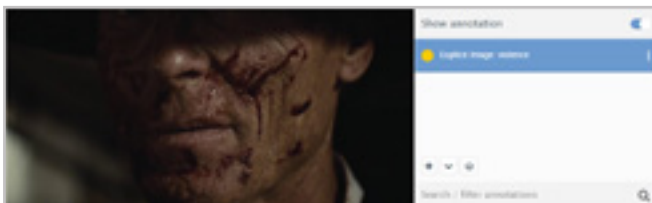
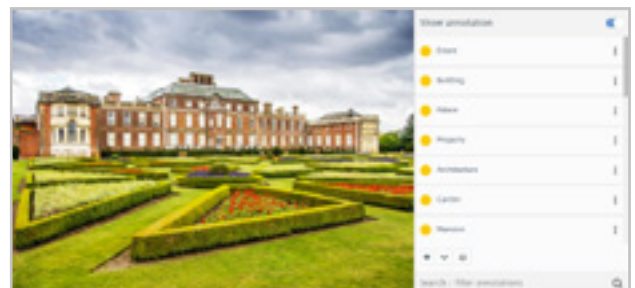
Detect and annotate found text

CONTENT MODERATION

Detect and prevent explicit content

LANDMARK DETECTION

Detect and prevent explicit content



METADATA CREATION TOOLS

Describe the action in your long form video more efficiently with Media Logger metadata generation feature.

MEDIA LOGGER

The Media Logger tool generates consistent time-based metadata which can be used to index long form video. Once applied end-users are able to search for specific moments within long form content, such as a goal within a game of football.

During playback, administrators or logging teams can click or tap away on a grid of customisable keywords, emojis, chapters, phrases and participants to generate rich, searchable metadata which will be displayed and synchronised alongside the video as annotations.

Media Logger uses a pre-defined grid of keywords or phrases which can be easily customised and saved as personalised layouts.

LOG LIVE CONTENT

Add descriptive metadata to your live streams with the Media Logger. Live logging means content is indexed with time-based metadata in real time as the live stream plays. This ensures content is ready for use immediately, rather than waiting for the file to be captured beforehand.

CUSTOMISABLE KEYWORD GRIDS

Add a controlled vocabulary to make data entry consistent e.g. keywords, emojis, chapters, phrases and participants. You can save and export your vocab grids as XML and import into other Imagen systems.

EXPORT ANNOTATIONS TO EVS

EVS IP Director grids or XML files can be imported directly into Imagen for pro sports video logging. Likewise, you can export your vocab grid/taxonomy to EVS IP Director.



VIEW



PLAY

Watch video, previews and live streams with the Media Player. You can also view images, listen to audio and read documents all through one powerful player.

WATCH VIDEO

Users can watch the video in the Imagen Media Player. Controls include Volume, Full Screen, Fast Forward (x2, x4, x8, x16) and Slow Motion Seeking (x0.5, x0.25 and x0.125). Use left and right keys for frame by frame advance. Professional editors can also switch to Timecode view and take advantage of a full range of keyboard shortcuts. The desktop browser player makes your media look great and is easy to customize to complement your brand. The player uses HLS dynamic streaming for optimised viewing and content protection.

WATCH LIVE STREAMS

Audiences can watch and navigate a live stream via the Media Player. Streams are accessed as 'live' Imagen records and can be searched, collected and manipulated just like any Imagen record.

Time shift controls are available to pause, rewind and fast-forward through the live feed from a time specific occasion such as a sporting event. Continuous streams from a TV station or local camera can also be viewed.

VIEW IMAGES

Low-resolution previews and high-resolution images can be viewed. Large images can be viewed full screen and navigated using onscreen controls to locate areas of detail.

LISTEN TO AUDIO

Listen to audio files in Media Player. The waveform representation of the file is included in the Interactive Timeline. This helps users to find specific moments in an audio file such as silence, beats and music.

Users can also toggle between different audio tracks – such as different language versions. For sports content, multiple audio tracks could contain crowd noise, commentator or stereo mix etc. Each of the tracks can be isolated and listened to separately.

REVIEW DOCUMENTS

Imagen stores a range of common office formats including Word, PDF, Excel and PowerPoint. Word and PDF files can be viewed in the Media Player. Excel and PowerPoint files may be viewable depending on version compatibility.



INTERACTIVE TIMELINE

The Interactive Timeline gives you greater control when seeking through video with a zoomable timeline to preview the action in detail – frame by frame – even if the media is several hours long.

Once zoomed, the user can pan back and forth in time. The timeline also displays annotation elements – such as emojis, chapter titles and participants – creating a highly visual and intuitive way to navigate long form video data. This makes creating frame accurate clips an easy task.

WATCH BY EPISODE

Users can watch a logical sequence of content from a single record page, e.g. watch every episode in a TV series in one player/webpage.

POP UP MAP

Simply click on the coordinates stored in the metadata record and Imagen will pop up a dynamic zoomable map to show the location that the image or video was taken.

KEYBOARD SHORTCUTS

Users can take advantage of keyboard shortcuts to aid navigation and tasks such as clipping, adding annotations and adding to collections.

WATCH PREVIEWS

For valuable or commercially sensitive content, access can be restricted to the first 30 seconds of a video. Users can request access to the full version by filling in an enquiry form.

RELATED RECORDS

Users can watch similar videos or access other media objects which are related to the current record.

PIP

Picture in Picture (PiP) allows users with supporting browsers (such as Safari and Chrome) to pop out a video from an Imagen web page, move it across screens and carry on watching while they scroll around, use a different app or visit another website.



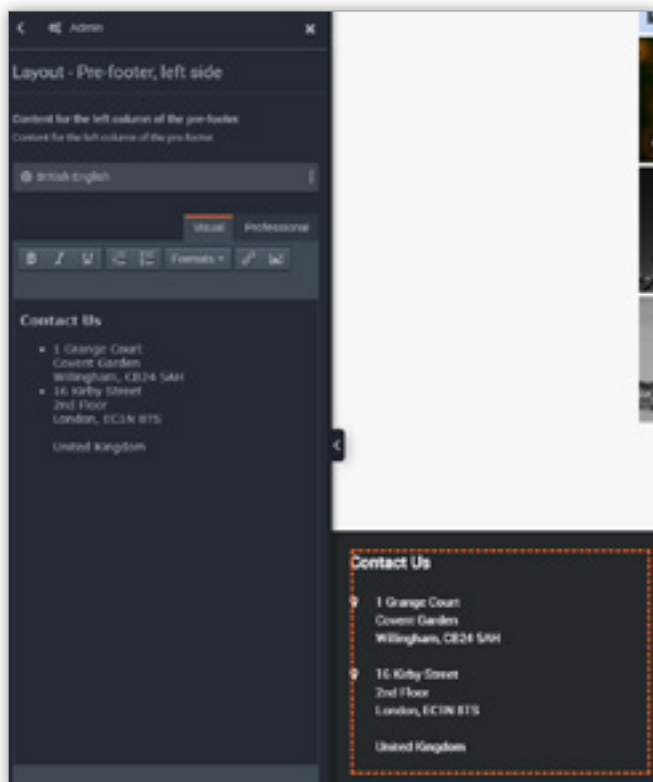
CUSTOMISATION

Imagen's video management platform gives content owners complete control over the way their media is accessed through a customisable web interface. Easily configure Imagen to reflect your brand and provide a seamless, multi-language user experience.

UI TOOLS

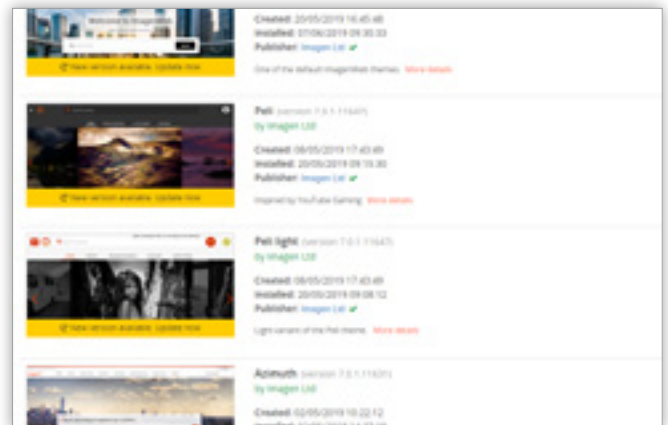
Sophisticated UI (User Interface) tools enable you to change the look and feel of your platform. Switch web themes to suit your brand and your audience, construct menus, add web pages, text and imagery with an easy to use WYSIWG (What-you-see-is-what-you-get) page editor.

Administrator level users can change the look and feel of a basic theme by clicking on the pencil icon to edit sections of the website called Editable Zones. Additional textual content, new pages and menus can be added to Editable Zones to create a rich, fully featured website to support your media portal.



THEMES

Imagen can be customised using a range of themes which change the page layout and styling of the web interface. Our standard themes are available in a range of colours and layouts. We can also create bespoke themes based on supplied designs.



WIDGETS

A range of Imagen widgets can be added to Editable Zones to add rich, interactive media elements; to help showcase your content and create an engaging experience for your end-users. Available widgets include:

- **Carousel**
Embed a series of videos or images in a scrolling carousel to promote a collection or feature the latest additions to your media library on your homepage or in any editable zone.
- **Custom HTML**
Insert lines of custom HTML into a page.
- **Twitter Timeline**
Embed a twitter timeline-feed to see your most recent posts.
- **Spacer**
Construct web page layout with blank space.



- **Image Viewer**

Place a static image in an Imagen web page.

- **Map Viewer**

Add lat/long coordinates and Imagen will render the map in your page.

- **Responsive Grid**

Embed a responsive image grid.

- **Template**

Rich text template.

- **Records Viewer**

Displays a grid of Imagen records (as thumbnails).

- **Video Player**

Imagen media in HTML player.

- **Social Media Posts**

Embed social media posts.

- **Form Builder**

Easily set up forms on your Imagen platform to allow end-users to contact administrators or sales teams and embed them anywhere in your Imagen platform.

FORMS

Forms can be accessed by end-users to make general enquiries about content, request access to media, register a new account and more. System administrators can create any number of forms with customisable fields to aid communication between the end-user and system administrators.

SEO

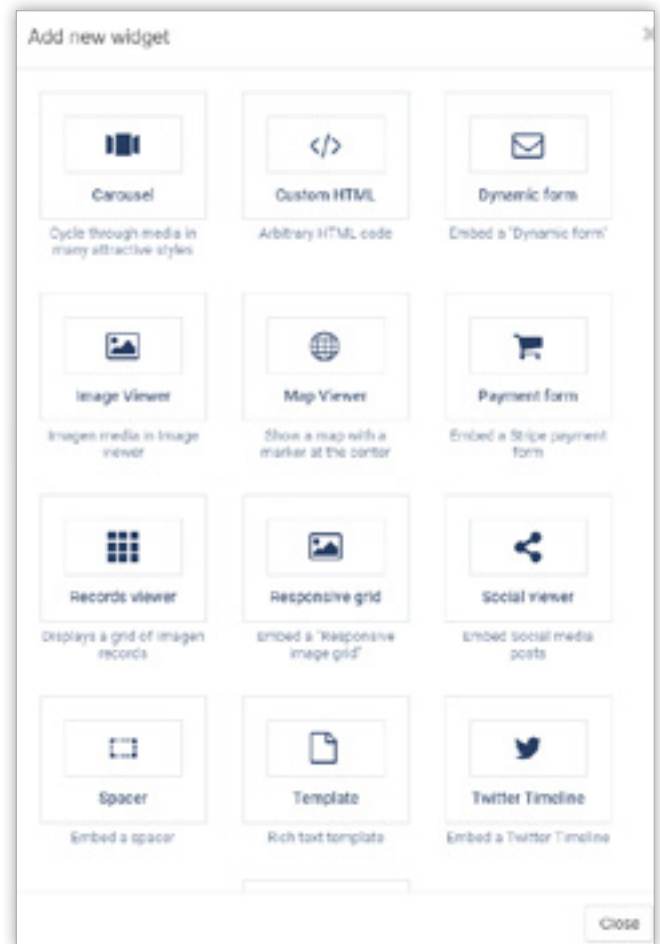
Make your media portal easier to find with site wide and page level meta-tag insertion tools. Imagen also generates XML sitemaps to improve search engine visibility for your content.

COOKIE AND PRIVACY POLICY

Edit and publish your Cookie and Privacy Policy.

MAINTENANCE SETTINGS

Your site can be put into a hold state 'for maintenance'. The message can be customised.



MULTI-LANGUAGE SUPPORT

Imagen detects the language preference in the user's browser and delivers a localised version automatically. Add your own translations for menus, custom page content or purchase additional Language Packs for deeper UI customisation.

- Metadata and search languages**

Imagen stores metadata in over 70 languages with no additional configuration required. Metadata field names such as Title, Description and Date can be translated in a range of languages and then presented to the relevant localised audience based on browser language settings.

- Add translated page content**

Deliver web page content in the end-user's local language by adding translations for key areas of text like welcome messages on the home page. Translations for whole pages – such as an About Us page can be stored and then displayed dynamically based on the users' browser language setting.

- Subtitles and multiple audio tracks**

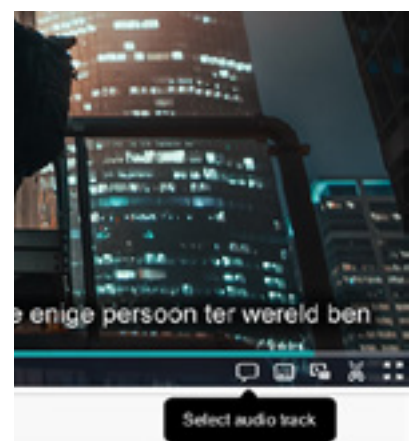
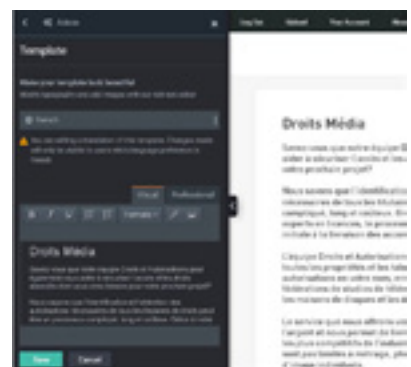
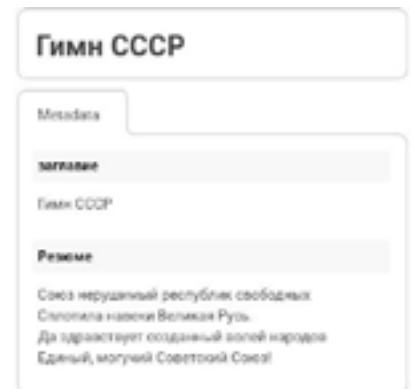
For improved accessibility, import subtitle files to play alongside your video in the Imagen player. Videos can also be stored with multiple audio tracks so users can toggle between multiple language versions of the audio stream. Standalone audio files can also be streamed with multiple language options.

- Multi-language annotations**

Imagen can store time-based descriptive metadata (Annotations) which enable end-users to find specific moments on the time-line using a simple text based search. Multiple versions of annotations can be generated in a variety of languages to deliver a truly international user experience.

- Language Packs**

Language Packs are additional modules which can be added to your Imagen platform to give you low level language localisation across all major components of the user interface – such as clipping tools, account pages, record page options and dialogue boxes. For right to left reading languages such as Arabic, Imagen dynamically flips the user interface horizontally. Current Packs include French, German, Arabic, Welsh and US English.





MONETISE

Generate revenue from your content through basket payments, subscription video on demand (VOD) packages or clip-licensing via credit packages.

CONTENT LICENSING

Imagen delivers a convenient 'shopping basket' experience for clients wishing to license content for use in broadcast, advertising campaigns, documentaries, TV productions or newsrooms.

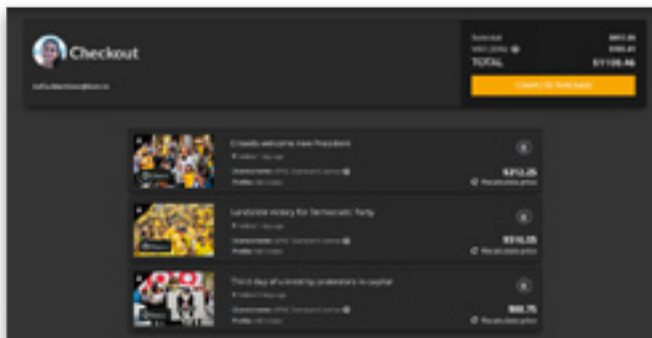
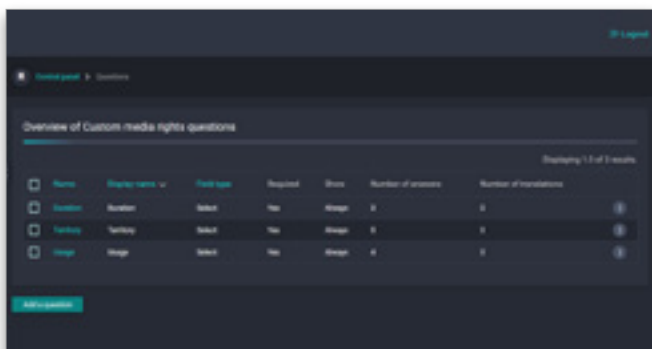


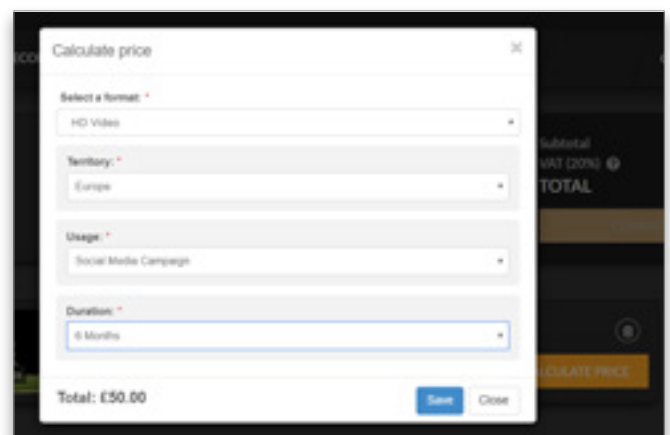
Imagen automates the licensing process through customisable Media Rights Packages. Media Rights Packages create a framework of options which enable content owners to define terms of usage and calculate price.

Packages are built around a series of customisable questions which the client answers during checkout.



Multiple language translations for the questions can be added and are automatically displayed according to the users' language preferences set in their browser.

Imagen calculates the final price of the license based on the answers to the questions, multiplied by the unit cost for the length of the content selected. E.g. a 10 second clip for a social media campaign, for use in France, for 12 months will have a different price for a 30 second clip which will be used in a TV advert in North America for 3 years.

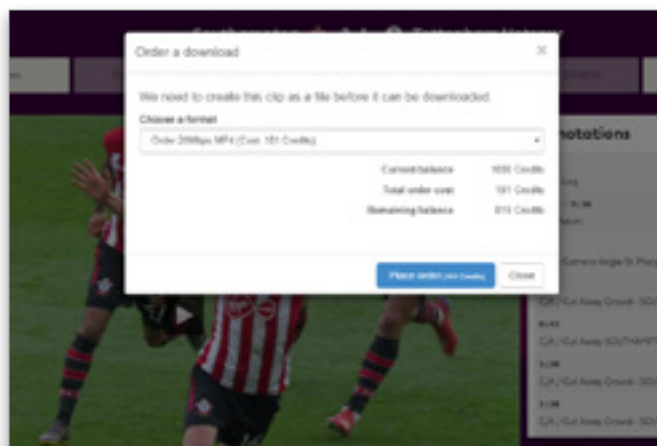


Users can add multiple items to a basket and create individual licenses for each item, or apply one license to all. Users can also select their format for download at checkout.

Once rights have been established, customers checkout through a conventional e-commerce basket process and pay securely using their credit card, Apple Pay or GPay. Receipts and license summaries are also sent via email to the licensee. Imagen takes care of VAT calculations and provides full reports of all transactions in the system management interface.

CREDIT PACKAGES

License clips online through a credit-based payment system. Imagen's flexible payment model enables your customers to make granular credit payments for every second of content they need.



Simply set values for credit per unit of duration and set licensing terms to define appropriate usage. Users can pay for credits which will enable them to consume (download) media from the platform. Offer price breaks for larger credit packages.

Imagen uses Stripe as the payment gateway to handle credit card transactions. Imagen does not store credit card details.

Full details of transactions and account options are shown in the users' account management panel.

SVOD SUBSCRIPTION PAYMENTS

Generate revenue from your content through highly customisable subscription VOD packages for B2C audiences. Users can purchase a subscription account which will give them access to ranges of content on the platform (for playback and or download).

Set up a series of tiers/offers for subscribers. These can include access to different levels of content and pricing. Packages can be set up with different price options. Full details of transactions and account options are shown in the users' account management panel.

STRIPE PAYMENT GATEWAY

Imagen manages payments for shopping basket purchases, credits and subscription accounts through Stripe. Stripe provides the technical, fraud prevention, and banking infrastructure required to take payments online from any user worldwide.

WALLETS

Wallets are used to store users' credits. Every user has a personal wallet they can top-up, or they can also use credits from wallets they have access to through group membership.

REQUEST AD HOC PAYMENTS

Raise requests for payment for additional services such as digitising or film research and manage the transaction through your media portal.

Simply create a payment form and send to the customer. Imagen will take care of the credit card payment. You can even embed the payment form into your Imagen platform to handle ad-hoc payments such as charitable donations.

ENGAGEMENT TOOLS

Cutting edge features to help you and your users get the most value from your media. Create clips, add annotations, curate collections, add comments and more.

CREATE CLIP

Users can set in and out points using drag handles on the zoomable timeline to create a video edit. There are number of things you can do with your clip:

ORDER CLIP FOR DOWNLOAD

After selecting in and out points, the edit is sent to a predefined workflow. The transcoder creates a new file which can be accessed from the account page where it can be downloaded.

ADD CLIP TO COLLECTION

Users can add a clip to a new or existing collection. This process stores the in and outpoint and title set by the user without transcoding a new file.

SEND CLIP TO A WORKFLOW

User can choose to send a clip selection to a workflow. For example: choose a clip to send to a social media publishing workflow.

CREATE A SEGMENT

Generate a new searchable media record based on the edit created by the clipping tool. Typical use case: break down a 30-minute news report into a series of 3-minute stories. Each of the new metadata records can be updated with relevant information for each of the segments.

CLIP FROM LIVE

For users with sufficient access levels, the live feed can also clipped, downloaded or shared via social media. Simply set in and outpoints and send the video edit to a social media publishing workflow.

ORDER CLIP DOWNLOAD FOR ANOTHER USER

Create an edit on behalf of another user. The other user will be notified by email which contains a link to the downloadable file. The link will require the user to log in. Once logged in the download will start automatically and can be handled by Imagen's Accelerated File Delivery (AFD) application if installed.

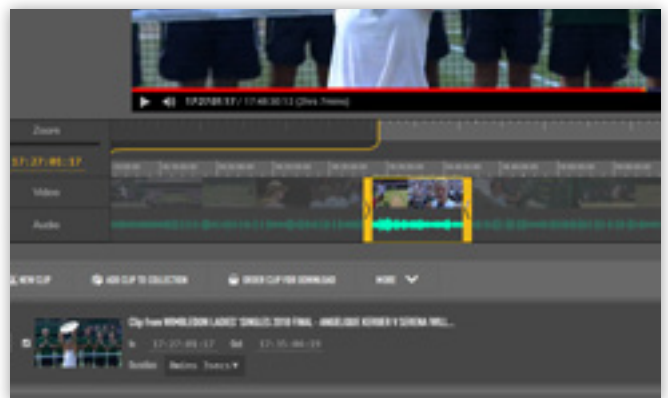


Image courtesy of IMG Replay

ADD ANNOTATIONS

Users with sufficient access rights can add searchable annotations to media – such as highlighting people in a photograph, describing the events at a point in time within a video or adding chapter points to an audio file. See page 14 and other sections for more info.

COMMENTS

End-users can make comments underneath a media item. Other Imagen users can reply to the comments. Moderators can block and edit discussions.

Images can be added to comments. Additional formatting can be added in the comments window – such as bold text, bullet points etc.

USER ACCOUNT PAGE

Every Imagen user has their own account page where they can:

- **Access collections**

Content can be organised into named collections that can be kept private or shared with other users.

- **Access shared collections**

Users can also collect and access collections which were not created by them.

- **Access records**

If users have created records and uploaded content they will be shown in their account page.

- **Access orders**

Users can reference the records they have created from a panel in the account interface.

- **Access segments**

Users can access the segments (child objects) they have created from a panel in the account interface.

- **Update details**

User can modify the account details like name and email address in the account management interface.

- **View billing history**

Review historical billing for content usage/licensing.

- **Manage payment methods**

User can update credit card details. Note: we do not store payment details, but we allow users to update a stripe account.

- **Manage subscriptions**

Users can change subscription details, cancel packages or upgrade to new a package.

- **Buy credits**

User can buy credits to enable content downloads (full records and/or clips).

ADOBE PREMIERE PRO VIDEO EDITING

Connect to Imagen from Adobe Premiere Pro to access your entire media library for faster editing and greater choice of approved content.

To set up, simply download and install the Imagen extension from Adobe's Creative Cloud Extension library. When logged in, you can search and filter across your assets to find content for your edit.

Download low-resolution renditions into your Premiere Pro edit to get started and Imagen will convert to high-resolution when you're finished and ready to export.

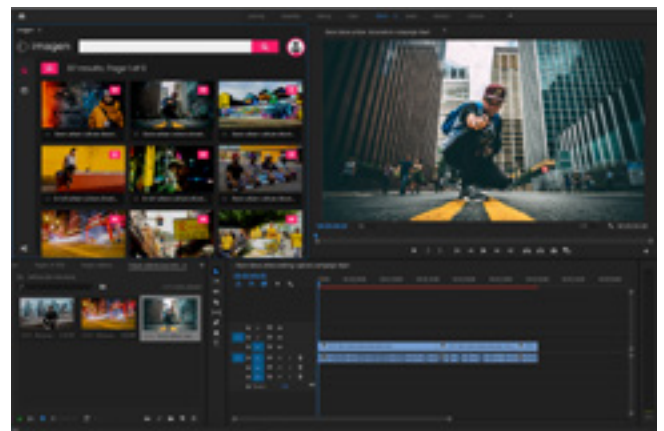
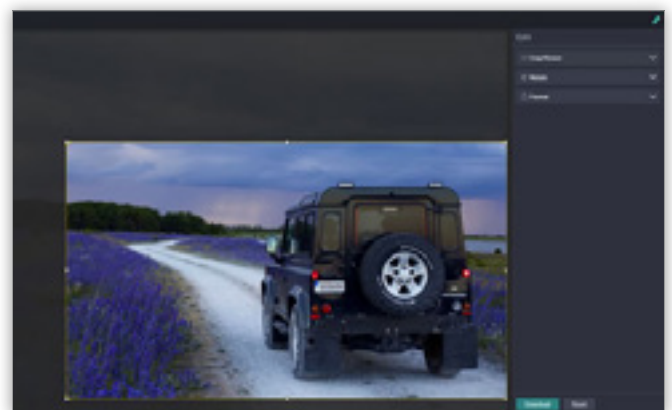


IMAGE EDITING

Imagen's image editing tools enable users to manipulate and download pictures from their browser. Users can:

- **Crop an image**
- **Resize an image**
- **Rotate, flip or mirror**
- **Select an output format for download**





DISTRIBUTE

DOWNLOADS

Enjoy fast access to original or high-resolution files with Imagen's fast, flexible and free Accelerated File Delivery feature.

SECURE DOWNLOADS

Download over HTTPS – a secure method of exchanging data between the server and the client browser. That means requests for data or media files (either streamed or downloaded) are encrypted.

BULK DOWNLOADS

Download a complete media set from a single Imagen record with one click. This is particularly useful where an Imagen database record contains multiple media objects. For example:

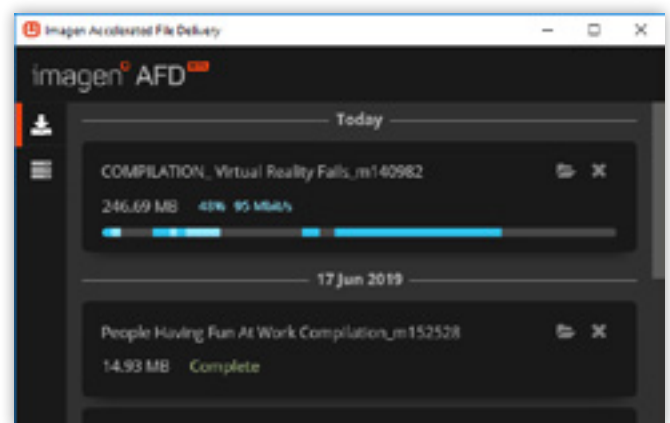
- Multiple television episodes stored as a series
- Videos with related files such as promotional posters, scripts or documentation
- Multiple language versions etc.

Users can choose to download all media objects available in an Imagen record per rendition – e.g. mezzanine or original quality. Appropriate access permissions must be in place to access single or multiple media files before batch downloading can be initiated. Bulk downloading is managed using Imagen Accelerated File Delivery (AFD).

DISTRIBUTION WORKFLOWS

Distribution Workflows can be configured to support professional file delivery to broadcasters, OTT platforms, subscribing clients or other departments in your organisation. Set up any number of distribution targets using their FTP details and send individual files or a batch of content using predefined transcode and delivery workflows for each recipient.

You can also set up notifications based on saved search criteria to automatically send content that matches the requirement – e.g. clips featuring a specific player or team, files from a specific location, or the latest content uploaded from a department in your organisation.



ACCELERATED FILE DELIVERY

AFD is Imagen's, high-speed file transfer service used by many of the world's biggest media companies to distribute broadcast quality files to their key clients at blistering speeds.

AFD is free for all Imagen users and their clients. From any connected device connected to your account, you can download or send professional file formats to any PC or Mac running the AFD client. This makes distributing large, broadcast quality files to customers, colleagues or edit suites simple – and much faster than using conventional methods such as HTTP, FTP or courier.

From the download menu choose a file format and a target download location. The recipient can watch the download progress using the free AFD download management client.

Notifications from AFD are integrated into Imagen, Windows and Mac OS so users receive regular updates during transmission.

DOWNLOAD ORIGINALS OR RENDITIONS

An Imagen record can store multiple versions of a media object, e.g. high-resolution original, mezzanine or low resolution versions of a file. Imagen allows you to download the profile you need (assuming the user has permission).

LIVE STREAM

Stream your live video and capture the feed to make it available for catch up later.

LIVE STREAMING ON IMAGEN

Simply add your RTMP server URL and stream keys to set up your live feed. Imagen can display live streams directly to logged in or public users through the ImagenWeb interface.

The live feed can be set up as an Imagen record which can be watched, archived, logged, found in a search, collected, clipped and shared on social media.

CDN SUPPORT

Imagen connects to third party CDNs for high bandwidth, low latency distribution of live streamed HD video.

EMBED AND SHARE

Place content in third party web pages or platforms.
Send private or public links to friends or colleagues.

EMBED VIDEO

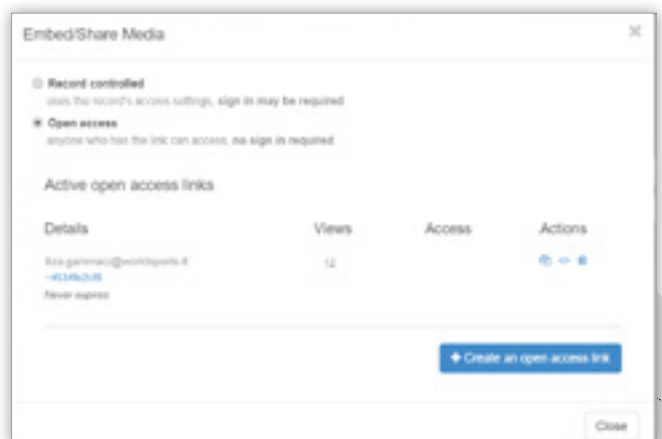
Users can watch video (hosted by Imagen) in third party websites. The video can be set to be responsive, so it will fill the full area available. Alternatively, a fixed size can be set.

SHARE LINK - PUBLIC OR RESTRICTED

Send a link to a friend or colleague. If the record is private they will need to log in to view it. If the record is public they can watch it immediately without logging in.

OPEN ACCESS CONTROLS

When sharing content (full records or clips), extra parameters can be applied to control access. Use sunrise and sunset dates to define when the link will be usable. You can also restrict or enable downloads or control access to the range of media assets within a specific record. Crucially, the shared link can be revoked at any time and the creator can see how many times the link has been used.



SOCIAL SHARING

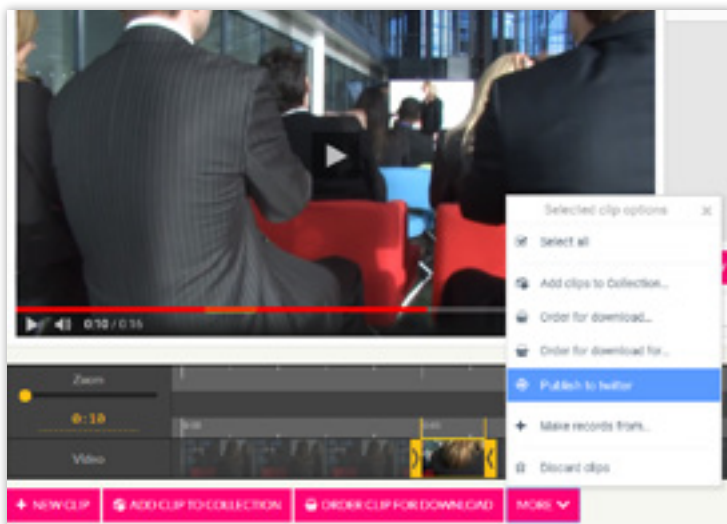
Create clips and share content across social media.

SOCIAL MEDIA PUBLISHING

Post video to social media accounts via a dedicated workflow. Workflow options allow watermarks or metadata from database fields to be burned in to protect content with logos or other images. Predefined text can also be added during the workflow process to establish rights or contact information.

CLIP VIDEO AND PUBLISH

Create a clip from a video using the timeline navigation tool and choose a social media workflow to post the media to one or more social media platforms.



POST IMAGES

Select an image and choose a social media publishing workflow.

POST AUDIO

Create in point and outpoint then select a social media publishing workflow.

ADD TEXT TO POST

At the point of posting, a dialogue box allows comments to be added by the user. Alternatively default text can be set as part of the social media workflow configuration – e.g. 'Here's our video of the day'.

MARKETING

Send bulk emails to Imagen users using Mailchimp and other email services.

MAILCHIMP INTEGRATION

Imagen users can now receive email newsletters, company updates, marketing campaigns and more via leading email marketing platform Mailchimp. Simply connect Imagen to Mailchimp using Mailchimp's API key.

Construct GDPR compliant registration forms in Imagen and give new users the option to be added to a Mailchimp mailing list. You can even map Imagen's custom registration fields to Mailchimp fields.

Administrators also have full control over user accounts so they can be removed from mailing lists using Imagen. The two-way integration means that both systems will automatically update if a user unsubscribes or updates their contact details.

Alternative email marketing platforms such as Sendinblue and MailerLite can also be connected to Imagen in the same way as Mailchimp.

MANAGE



USER PERMISSIONS

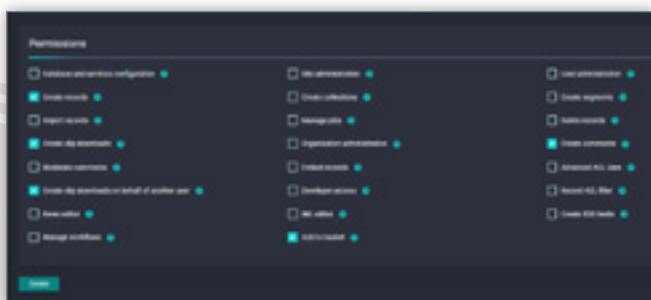
Granular permission and access controls give system administrators full control over who can see their media and what they can do with it.

PERMISSION SETS

It's not just about access – it's also about what you can and can't do with the content you have access to. Imagen's granular permission controls enable administrators to specify what each individual user or group can do with any specific media asset or groups of assets.

CHOOSE FROM THE FOLLOWING PERMISSIONS:

- Database and services configuration
- Site administration
- User administration
- Create records
- Create collections
- Create segments
- Import records
- Manage jobs
- Delete records
- Create clip downloads
- Organisation administration
- Create comments
- Moderate comments
- Embed records
- Advanced ACL view
- Create clip downloads on behalf of another user
- Developer access
- Record ACL filter
- News editor
- IML editor
- Create RSS feeds

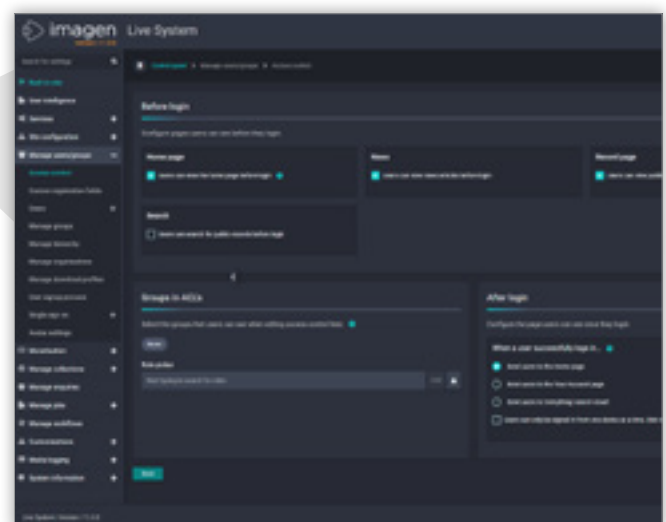


ACCESS CONTROL LISTS

Every record, media object, collection and workflow in an Imagen database has its own Access Control List. These are lists of the users, groups, departments and organisations that have the right to view or modify the object.

System administrators and users with appropriate access levels are able to modify the default permissions and can control which users are able to view individual media items e.g. can be viewed by the public, or by a group or individual.

The batch permissions update tool can be used to set permissions for large groups of objects in just a few clicks.



SSO OR EMAIL AUTHENTICATION

Single Sign-On (SSO) permits a user logging in with a single set of credentials, to have access to multiple services, without being prompted for a separate username and password for each one.

Imagen offers powerful options for identity management and authentication of users. Alongside basic email and password authenticated accounts, Imagen allows users to sign in using their existing corporate/enterprise credentials via secure SSO.

Imagen's standards based (SAML2) implementation of SSO has proven support for a wide variety of identity providers (Including; AFDS, Azure AFDS, Shibboleth, IBM IAM, OneLogin, etc.).

ACCOUNT LOCK PROTECTION

Too many failed logins or repeated use of the forgotten password feature will result in a locked Imagen account.



The screenshot shows a web form titled "Create a new account". It contains several input fields with red asterisks indicating required fields: "Email address" (with a placeholder "yourname@example.com"), "Password", "Repeat password", "Forename", "Surname", "Company Name / Organisation you are working on behalf of", "Job Title", and "Industry Sector" (with a dropdown menu showing "(Select an option)").

SESSION USER LIMIT

Imagen can limit the number of sessions to prevent multiple users accessing the same account simultaneously with a shared set of log in details.

AUTO OR MANUAL ACCOUNT REVIEW

Once a registration form is submitted, Imagen can either provide immediate access or send the registration to an administrator for evaluation before access is granted. Administrators can set access and permission sets for an individual or add the new user to a group of users with predefined access levels. New users can also be auto-enrolled in a specific group.

COMMENTS MODERATION

Where comments can be applied to media records, Imagen can enable users with appropriate permission to moderate comments before or after publishing as well as ban or suspend users.

USER REGISTRATION FORMS

Imagen's customisable user registration forms can be designed to capture specific information from end-users. New users can be made to verify their email address when registering. Welcome emails can be created, customised and sent automatically when a new user registers.

MANAGE USER ACCOUNTS AND PASSWORDS

Customer data is stored within Imagen and can be accessed through the administrative interface. Users can be deleted or suspended, their details updated, or passwords reset.

RECAPTCHA VERIFICATION

Google reCAPTCHA is an optional integration and helps protect your Imagen platform from spam and abuse. A "CAPTCHA" is a turing test to tell human and bots apart.

MEDIA PROCESSING WORKFLOWS

Imagen's workflow components automate complex tasks to streamline business and technical processes. Workflows take care of storage, format conversion, notifications, file distribution, AI services and more.

WORKFLOW EDITOR

Workflows can be created and modified using a "drag and drop" graphical interface. Set the parameters in each workflow module to define your own custom ingest, transcode and storage processes.

Workflow modules can be connected to automate a complex sequence of processes. Modules include:

- Audio Transcription
- Create Annotations
- Email Sender
- Temporary File Store
- Image Converter
- Media Type Detector
- REST Plugin
- Record Exporter
- Media Retriever
- Social Media Publisher
- Store and Update
- Order Update
- Timer
- Transcoder
- Update Record Metadata (EXIF)

TRANSCODER / FILE CONVERSION

Imagen's Transcoder module converts original or master files into a wide range of alternative file formats which can be created for distribution or streaming. Files containing more than one audio track (e.g. background crowd noise or alternative languages) can be preserved or paired down to a single stereo channel. Whole or short sections of audio can be muted to remove sensitive or inappropriate material.

VIDEO PRE-ROLLS

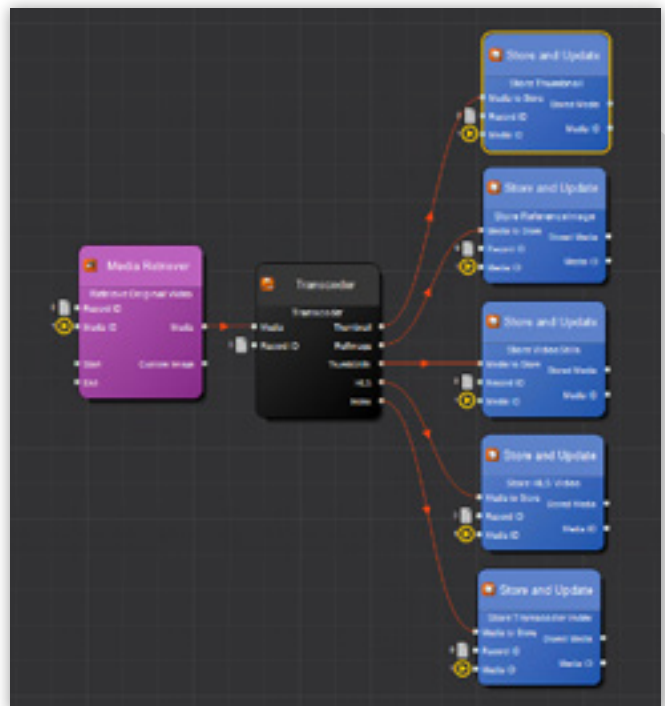
Create any number of pre-roll workflows to easily add exciting, branded intros to your video content.

PARTIAL FILE RESTORE

All media ingested into Imagen is indexed so that clips can be retrieved from the middle of a file very quickly using just timecoded in and out points. For MXF wrapped XDCAM HD422, MXF wrapped DNxHD120 and MXF wrapped IMX50 this process is extra fast and lossless.

JOB MONITORING

Imagen's control panel keeps administrators up to date with jobs running through the system. It also allows you to delete or retry current workflow tasks.





ANALYTICS

Plan and optimise your content strategy with insight on most active users, downloads, searches and more with user intelligence dashboards.

USER INTELLIGENCE - OVERVIEW DASHBOARD

At-a-glance look at storage volume per asset type, number of users registered, number of database records, number of media objects, total media in duration and subscription transaction value.



USER ANALYTICS

Up to the minute information on platform performance and engagement rates, helping you to plan production of new assets, manage your media more effectively and improve the user experience. All metrics in the user intelligence dashboards can be viewed for defined date ranges – e.g. 7 days, 30 days, 12 months or any custom range.

ACTIVITY DASHBOARD

Integrates with Google Analytics to provide detailed analysis of site traffic. Displays most active signed in users, popular search terms, etc.

DOWNLOADS DASHBOARDS

Total downloads, AFD or browser download, top content downloads and top downloading users.

CLIP ORDER DOWNLOADS DASHBOARD

Total clip downloads, top clip downloads, top clip downloading users

PLAYS DASHBOARDS

See which videos are the most popular and the average drop off rate.

MEDIA CURATION

A range of features to help you manage large volumes of media in just a few clicks – including batch metadata updates, uploading and video editing.



METADATA EDITS

Update your descriptive metadata with our easy to use browser-based editor, one at a time or in batches.

VIEW/DELETE VIDEO ELEMENTS

Workflows generate a range of media assets from the source file – these can include a series of thumbnail stills, streaming formats and mezzanine quality versions. Imagen gives you flexibility to view, delete and download individual elements.

You can also see the technical information for each individual element including file size, duration, frame rate and UMID (Unique Material Identifier).

SEND TO WORKFLOW

Send the media from the selected record(s) to any of the workflows you have access to – this can be used to transcode to a different format for example.

API

The API can be used for system integration and enables third party services to securely connect to Imagen.

OAuth is used to interact with the API on behalf of a specific user. Users with the **Developer access** permission can register their own Apps and get a key. It's self-service and additional permissions can be granted to that App by an administrator.

The fully documented REST APIs also provide secure access to the Imagen database and media library.

Find out more here: <https://developers.imagenet.org>

RECYCLE BIN

Prevent accidental file deletion and recover files by setting the number of days you wish to keep source media files available after deletion.

NOTIFICATIONS

System notifications keeps the user up to date with job order progress, additions to collections – and feedback on system tasks. They can be turned on and off.

SELECT POSTER FRAME

Imagen's Transcoder will automatically generate a poster frame to represent your video. If you don't like the default poster frame you can select a good-looking frame that more accurately reflects what your video is all about.

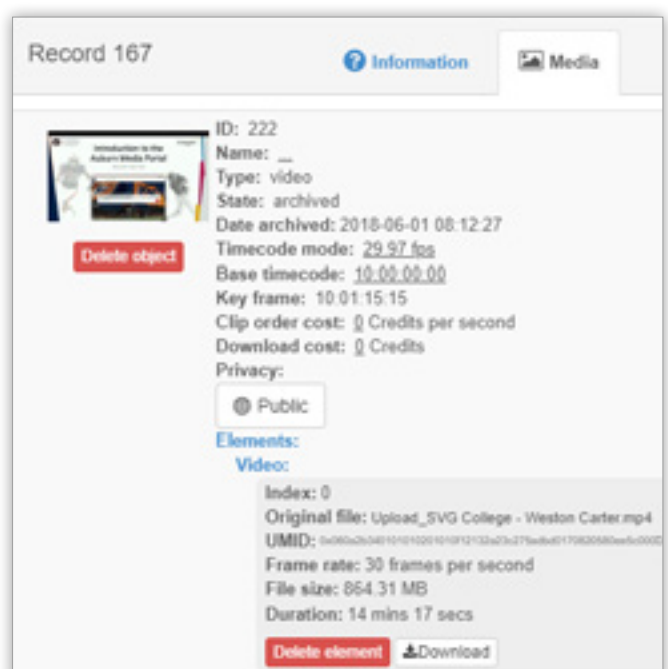


IMAGEN FOR SPORTS

POWERFUL MEDIA DISTRIBUTION

Imagen offers a premium solution for managing and distributing your sports content, enabling easy access to broadcast quality content and the fastest delivery speeds, around the world.

YOUR PLATFORM, YOUR BRANDING Imagen gives you control over the look and feel of the platform so your brand and your media look as good as they should.

DELIVER AT SPEED Ultra fast transfers of broadcast quality files, downloaded around the world at speed with Accelerated File Delivery.

UTILISE AND PROFIT FROM EVERY VIDEO Generate revenue from your content through subscription VOD packages or clip licensing via credit-based payments.

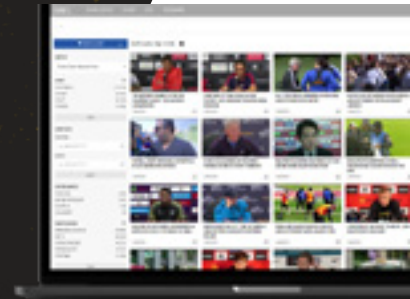


IMAGEN FOR MEDIA AND ENTERTAINMENT

INTUITIVE MEDIA MANAGEMENT

Imagen lets you take control of your video assets, whether your archive is chaotic, or you need to license and sell your clips. Welcome to intuitive video management.

CUSTOM INTERFACE Imagen gives you control over the look and feel of the platform so your brand and your media look as good as they should.

ORGANISE YOUR CONTENT LIBRARY Your media is only as good as the metadata that describes it. Imagen gives you the best tools in the business to make sure your media is fully indexed and ready to be discovered.

THE FORT KNOX OF VIDEO MANAGEMENT Granular permission and access controls give content owners full control over who can see their media and what they can do with it.



IMAGEN FOR BUSINESS AND ENTERPRISE

TOTAL CONTENT CONSOLIDATION

Imagen helps you to manage your assets and streamline your operations. Find the content you need, when you need it and deliver around the world at speed to maximise the return on investment for your content.

YOUR VIDEO, FRONT OF MIND Seamless internal and external access, coordination and management of assets and projects, all within one platform.

DRIVE EFFICIENCY AND BRAND CONSISTENCY Get the maximum value from your content by utilising all your assets, and build seamless brand communications.

DELIVER AT SPEED Store, find and deliver with ultra fast, flexible file transfers and secure live streaming across your organisation.





CAMBRIDGE, UK

1 Grange Court, Covent Garden,
Willingham, Cambridge, CB24 5AH

LONDON, UK

Second Floor, 16 Kirby Street,
London, EC1N 8TS

NEW YORK, USA

106 West 32nd Street, 2nd Floor,
Office #115, New York, NY

☎ UK +44 (0)1954 262 000
USA +1 (857) 574 9847

✉ hello@imagen.io

🖱 www.imagen.io



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