

Film production occurs in five stages:^[1]

- **Development**—The script is written and drafted into a workable blueprint for a film.
- **Pre-production**—Preparations are made for the shoot, in which cast and crew are hired, locations are selected, and sets are built.
- **Production**—The raw elements for the finished film are recorded.
- **Post-Production**—The film is edited; production sound (dialogue) is concurrently (but separately) edited, music tracks (and songs) are composed, performed and recorded, if a film is sought to have a score; sound effects are designed and recorded; and any other computer-graphic 'visual' effects are digitally added, all sound elements are mixed into "stems" then the stems are mixed then married to picture and the film is fully completed ("locked").
- **Sales and distribution**—The film is screened for potential buyers (distributors), is picked up by a distributor and reaches its cinema and/or home media audience.

Development

In this stage, the project's producer finds a story, which may come from a book, play, another film, a true story, original idea, etc. After identifying a theme or underlying message, the producer works with writers to prepare a synopsis. Next they produce a step outline, which breaks the story down into one-paragraph scenes that concentrate on dramatic structure. Then, they prepare a treatment, a 25 to 30 page description of the story, its mood, and characters. This usually has little dialogue and stage direction, but often contains drawings that help visualize key points. Another way is to produce a scriptment once a synopsis is produced.

Next, a screenwriter writes a screenplay over a period of several months. The screenwriter may rewrite it several times to improve dramatization, clarity, structure, characters, dialogue, and overall style. However, producers often skip the previous steps and develop submitted screenplays which investors, studios, and other interested parties assess through a process called script coverage. A film distributor may be contacted at an early stage to assess the likely market and potential financial success of the film. Hollywood distributors adopt a hard-headed business approach and consider factors such as the film genre, the target audience, the historical success of similar films, the actors who might appear in the film, and potential directors. All these factors imply a certain appeal of the film to a possible audience and hence the number of "B.I.S." (or "buns in Seats") during the theatrical release. Not all films make a profit from the theatrical release alone, so film companies take DVD sales and worldwide distribution rights into account. The producer and screenwriter prepare a film pitch, or treatment, and present it to potential financiers. If the pitch is successful, the film receives a "green light", meaning someone offers financial backing: typically a major film studio, film council, or independent investor. The parties involved negotiate a deal and sign contracts. Once all parties have met and the deal has been set, the film may proceed into the pre-production period. By this stage, the film should have a clearly defined marketing strategy and target audience.

Pre-production

Main article: Pre-production

In pre-production, the video is designed and planned. The production company is created and a production office established. The production is storyboarded and visualized with the help of illustrators and concept artists. A production budget is drawn up to plan expenditures for the film.

The producer hires a crew, and in some cases conceives of a project and oversees the storytelling, and/or the hiring of storytellers (such as the writer and/or director). The nature of the film, and the budget, determine the size and type of crew used during filmmaking. Many Hollywood blockbusters employ a cast and crew of hundreds, while a low-budget, independent film may be made by a skeleton crew of eight or nine (or fewer). These are typical crew positions:

- The director is primarily responsible for the storytelling (with the writer), creative decisions and acting of the film.
- The assistant director (AD) manages the shooting schedule and logistics of the production, among other tasks. There are several types of AD, each with different responsibilities.
- The casting director finds actors to fill the parts in the script. This normally requires that actors audition.

- The location manager finds and manages film locations. Most pictures are shot in the controllable environment of a studio sound stage but occasionally, outdoor sequences call for filming on location.
- The production manager manages the production budget and production schedule. They also report, on behalf of the production office, to the studio executives or financiers of the film.
- The director of photography (DoP) is the cinematographer who supervises the photography of the entire film.
- The director of audiography (DoA) is the audiographer who supervises the audiography of the entire film. For productions in the Western world this role is also known as either sound designer or supervising sound editor ^[2].
- The production sound mixer is the head of the sound department during the production stage of filmmaking. They record and mix the audio on set - dialogue, presence and sound effects in mono and ambience in stereo ^{[3][4]}. They work with the boom operator, Director, DoA, DoP, and First AD.
- The sound designer creates the aural conception of the film^[5], working with the supervising sound editor. On some productions the sound designer plays the role of a director of audiography.
- The composer creates new music for the film (usually not until post-production).
- The production designer creates the visual conception of the film, working with the art director^[5].
- The art director manages the art department, which makes production sets.
- The costume designer creates the clothing for the characters in the film working closely with the actors, as well as other departments.
- The make up and hair designer works closely with the costume designer in addition to create a certain look for a character.
- The storyboard artist creates visual images to help the director and production designer communicate their ideas to the production team.
- The choreographer creates and coordinates the movement and dance - typically for musicals. Some films also credit a fight choreographer.

Production

See also: Cinematography and Audiography



 Sesame Workshop crews film an improvised segment of *Sesame Street*, a children's series, on location in Washington Square Park in New York City.

In production, the video/film is created and shot. More crew will be recruited at this stage, such as the property master, script supervisor, assistant directors, stills photographer, picture editor, and sound editors. These are just the most common roles in filmmaking; the production office will be free to create any unique blend of roles to suit the various responsibilities possible during the production of a film.

A typical day's shooting begins with the crew arriving on the set/location by their call time. Actors usually have their own separate call times. Since set construction, dressing and lighting can take many hours or even days, they are often set up in advance.

The grip, electric and production design crews are typically a step ahead of the camera and sound departments: for efficiency's sake, while a scene is being filmed, they are already preparing the next one. While the crew prepare their equipment, the actors are wardrobe in their costumes and attend the hair and make-up departments. The actors rehearse the script and blocking with the director, and the camera and sound crews rehearse with them and make final tweaks. Finally, the action is shot in as many takes as the director wishes. Most American productions follow a specific procedure:

The assistant director calls "picture is up!" to inform everyone that a take is about to be recorded, and then "quiet, everyone!" Once everyone is ready to shoot, he calls "roll sound" (if the take involves sound), and the production sound mixer will start their equipment, record a verbal slate of the take's information, and announce "sound speed" when they are ready. The AD follows with "roll camera", answered by "speed!" by the camera operator once the camera is recording. The clapper, who is already in front of the camera with the clapperboard, calls "marker!" and slaps it shut. If the take involves extras or background action, the AD will cue them ("action background!"), and last is the director, telling the actors "action!".

A take is over when the director calls "cut!", and camera and sound stop recording. The script supervisor will note any continuity issues and the sound and camera teams log technical notes for the take on their respective report sheets. If the director decides additional takes are required, the whole process repeats. Once satisfied, the crew moves on to the next camera angle or "setup," until the whole scene is "covered." When shooting is finished for the scene, the assistant director declares a "wrap" or "moving on," and the crew will "strike," or dismantle, the set for that scene.

At the end of the day, the director approves the next day's shooting schedule and a daily progress report is sent to the production office. This includes the report sheets from continuity, sound, and camera teams. Call sheets are distributed to the cast and crew to tell them when and where to turn up the next shooting day. Later on, the director, producer, other department heads, and, sometimes, the cast, may gather to watch that day or yesterday's footage, called *dailies*, and review their work.

Post-production

Main article: Post-production

Here the video/film is assembled by the video/film editor. The modern use of video in the filmmaking process has resulted in two workflow variants: one using entirely film, and the other using a mixture of film and video.

In the film work, the original camera film is developed and copied to a one-light workprint (positive) for editing with a mechanical editing machine. An edge code is recorded onto film to locate the position of picture frames. Since the development of non-linear editing systems such as Avid, Quantel or Final Cut Pro, the film workflow is used by very few productions.

In the video workflow, the original camera negative is developed and telecined to video for editing with computer editing software. A timecode is recorded onto video tape to locate the position of picture frames. Production sound is also synced up to the video picture frames during this process.

The first job of the film editor is to build a rough cut taken from sequences (or scenes) based on individual "takes" (shots). The purpose of the rough cut is to select and order the best shots. The director usually works with the editor to ensure the envisioned shots are selected. The next step is to create a fine cut by getting all the shots to flow smoothly in a seamless story. Trimming, the process of shortening scenes by a few seconds, or even frames, is done during this phase. After the fine cut has been screened and approved by the director and producer, the picture is "locked," meaning no further changes are made. Next, the editor creates a negative cut list (using edge code) or an edit decision list (using timecode) either manually or automatically. These edit lists identify the source and the picture frame of each shot in the fine cut.

Once the picture is locked, the film is passed into the hands of the postproduction supervising sound editor of the sound department to build up the sound track. The voice recordings are synchronised and the final sound mix is created by the re-recording mixer. The sound mix combines dialogue, sound effects, atmos, ADR, walla, foleys and music.

The sound track and picture are combined together, resulting in a low quality answer print of the film. There are now two possible workflows to create the high quality release print depending on the recording medium:

1. In the film workflow, the cut list that describes the film-based answer print is used to cut the original color negative (OCN) and create a color timed copy called the color master positive or interpositive print. For all subsequent steps this effectively becomes the master copy. The next step is to create a one-light copy called the color duplicate negative or internegative. It is from this that many copies of the final theatrical release print are made. Copying from the internegative is much simpler than copying from the interpositive directly because it is a one-light process; it also reduces wear-and-tear on the interpositive print.
2. In the video workflow, the edit decision list that describes the video-based answer print is used to edit the original color tape (OCT) and create a high quality color master tape. For all subsequent steps this effectively becomes the master copy. The next step uses a film recorder to read the color master tape and copy each video frame directly to film to create the final theatrical release print.

Finally the film is previewed, normally by the target audience, and any feedback may result in further shooting or edits to the film.

There are two ways that film can be put together. One way is linear editing and the other is non-linear editing.

Linear editing uses the film as it is in a continuous film. All of the parts of the film are already in order and need not be moved or any such thing.

Conversely, non-linear editing is not subject to using the film in the order it is taped. Scenes can be moved around or even removed.

Distribution and exhibition

This is the final stage, where the film is released to cinemas or, occasionally, to DVD, VCD, VHS (though VHS tapes are less common now that more people own DVD players), Blu-ray, or direct download from a provider. The film is duplicated as required for distribution to cinemas. Press kits, posters, and other advertising materials are published and the film is advertised. Film companies usually release a film with a launch party, press releases, interviews with the press, press preview screenings, and film festival screenings. Most films have a website. The film plays at selected cinemas and the DVD typically is released a few months later. The distribution rights for the film and DVD are also usually sold for worldwide distribution. The distributor and the production company share profits.