An Intro to Digital Workflow

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Learning Aims

- Understand what the term “DIT” means
- Understand the difference between On-Set DIT, Near-Set DIT, Data Manager and Lab Operator
- Know the difference between three standard industry workflows
- Understand how camera choice, shooting format and resolution influences workflow

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What is a Digital Workflow?

How does the footage get from the camera to wherever it’s going next, and how do we make sure departments are getting the files they need?

- Defines the way that footage moves from camera through to post
- Should incorporate 3 major elements: data, colour and resolution
- Preserves metadata
- Ensures everything links up in post

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Think of the process like an old school film laboratory.

- Rushes (film negatives) get taken on wrap to the processing lab
- Dunked in chemicals and are made ready for cutting in the edit
- It’s the lab that prepares what’s needed at the next stage

That’s a film workflow, and digital is no different, except instead of using a chemical bath to turn the rushes from one thing into another, we use a computer and software to change the digital file into what’s needed.

Who looks after this digital process? A DIT.

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Roles & Responsibilities

Know your On Set DIT from your Dailies Lab Operator

What is a DIT?

The $1,000,000 question:

What’s the difference between a DIT and a Data Manager?

Short answer: it’s complicated.

Longer answer:

- Rushes (film negatives) get taken on wrap to the processing lab
- It’s often confused in the industry; there is no definitive
- A data manager only manages data

A DIT looks after the needs of a cinematographer, e.g., managing the exposure of the image, working to preserve the fidelity of the footage being captured in both a mathematical and artistic sense.

BUT depending on the project, responsibilities can overlap.

Let’s dive deeper into the roles.

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Digital Imaging Technician
On Set

A key role in setting up, overseeing and communicating the overall image pipeline between set, post and VFX departments, working closely with the DOP, camera assistants and gaffers.

They are subject matter experts for color and image pipelines, digital cameras, imaging capture, metadata and data management. On-set DITs should be capable of **live color correction, exposure checks, live QC** and establishing an accurate and consistent viewing experience. A DIT should have a working knowledge of the **setup, maintenance and troubleshooting** of digital cameras and associated equipment.

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Digital Imaging Technician
Near Set

A hybrid role that sits between the On-Set DIT on-set and the Data Manager. This role is often employed when the separation of DIT and Data Manager isn’t possible e.g., due to location constraints, budget or workflow requirements.

Key responsibilities cover **data management**, plus some of the duties of the DIT, including **workflow** and **camera setup**, **basic color management** and **OCF color grading**.

Duties such as Live Grading and Live QC will not be possible in a Near-Set configuration.

Data Manager / Wrangler

An authority on the **design and execution of the Data Management Plan** (or "workflow document") for the OCF (Original Camera Files) and production sound files. They **work on-set or near-set,** alongside the DIT (when present), **maintaining strong, clear communication** with the dailies lab, editorial and post departments.

Digital Dailies Lab Operator

Some tasks are not recommended to be performed on set or near set due to the requirements of the work environments and the time constraints required to properly perform those tasks.

Modern technologies allow fast image processing and rendering to be accessible everywhere, even on-set. However, the job of processing OCF into proxy files isn’t just about speed;
it requires manual operations that require human focus
and dedicated time.

Dailies labs are typically situated in facilities rather than on set. Often they are operational overnight, receiving the rushes on wrap and completing tasks for dailies viewing the following morning.

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FULL AUDIO AND VISUAL QC

This is a rigorous check of the OCF that takes substantial time and a controlled environment to perform correctly.

ARCHIVING TO LTO OR CONTENT HUB UPLOAD

LTO tapes are very fragile and uploading to Content Hub requires time, a stable high speed internet connection and specialized equipment to perform correctly.

CREATION AND UPLOAD OF DAILIES VIEWING MATERIAL

External departments require access to view the previous day's rushes via an online portal or Cloud Dailies viewing tool. These will be created from the OCF and rendered for viewing via the internet.

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Roles In Summary

A DIT has the domain knowledge to all roles, whereas a Data Manager or Lab Operator is responsible for their specific area of their role only. That doesn’t mean to say that the DIT is best placed to do these roles but simply they have the requisite knowledge across all areas.

Every production should have at least an On Set DIT or a Near Set DIT, whereas the other roles are optional based on the workflow requirements.

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Roles and Responsibilities

What influences your choice of technician?

- Cinematographer’s preference
- Skillset required
- Camera type and shooting format
- Deliverable requirements
- Location
- Budgetary restraints

Establishing an Effective Workflow

- What camera(s) type and format are being used?
- Does the shoot take place in a studio or on location?
- Where is the editorial team based?
- Which digital deliverables are needed?
- Which physical deliverables are needed?
- Who is the cinematographer and what are their expectations?
- Does the show feature a high ratio of VFX?
- What are the final delivery requirements (dictated by the studio)
- Who is grading the project and what requirements do they have?

Designing a Workflow

Different setups for different projects, depending on what you need

Workflow 1:
Near Set DIT and Archive

- Technician downloads and transcodes rushes near set applying a show LUT and or basic colour correction
- Typically for projects with a limited budget or minimal QC needs, i.e., reality television / documentaries / Band 2 TV
- Single deliverable: editorial files
- Hard drives copies
- NO LTO / NO Sound Sync / No livegrade

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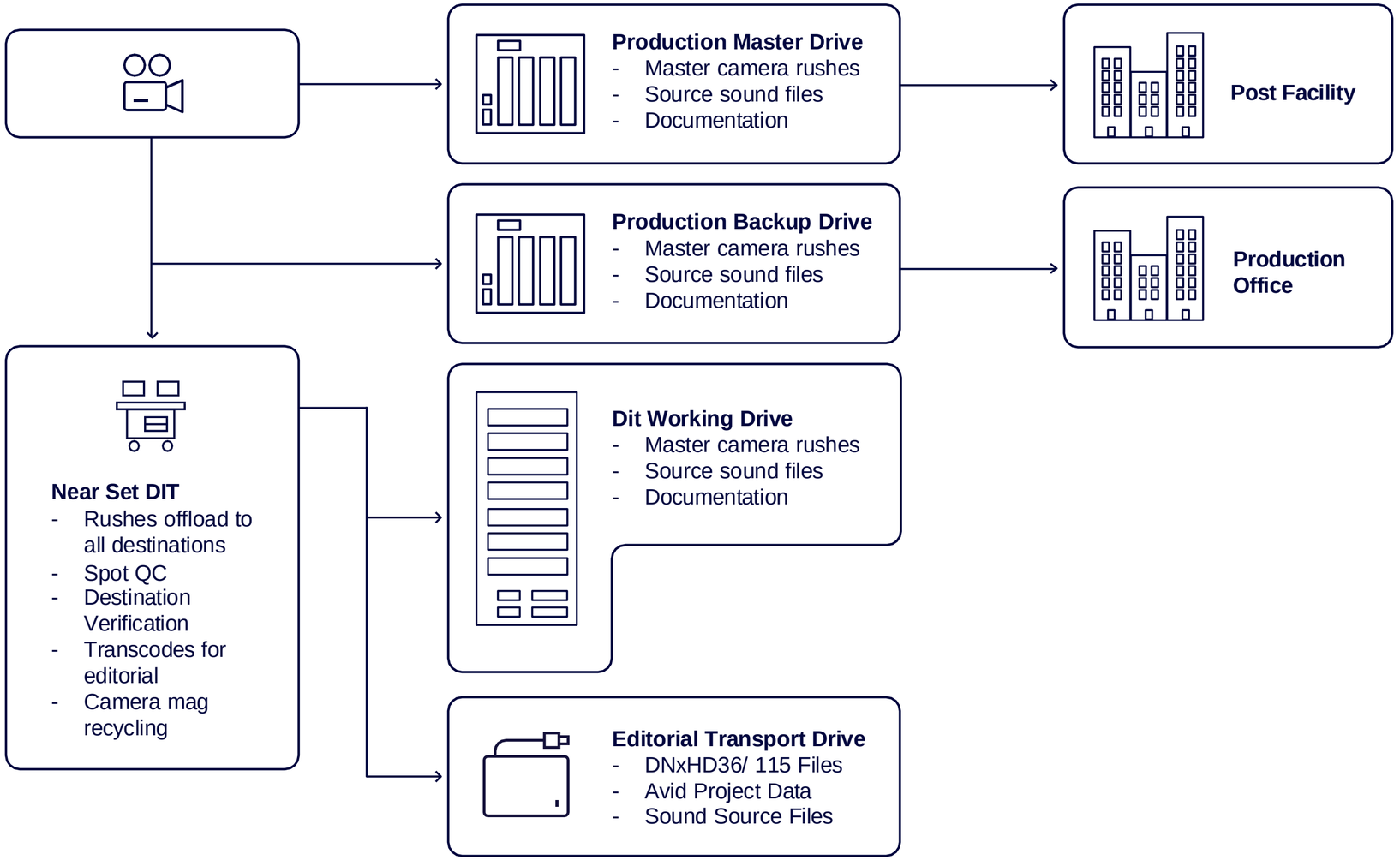
Workflow 1.0 - Near Set DIT and Archive



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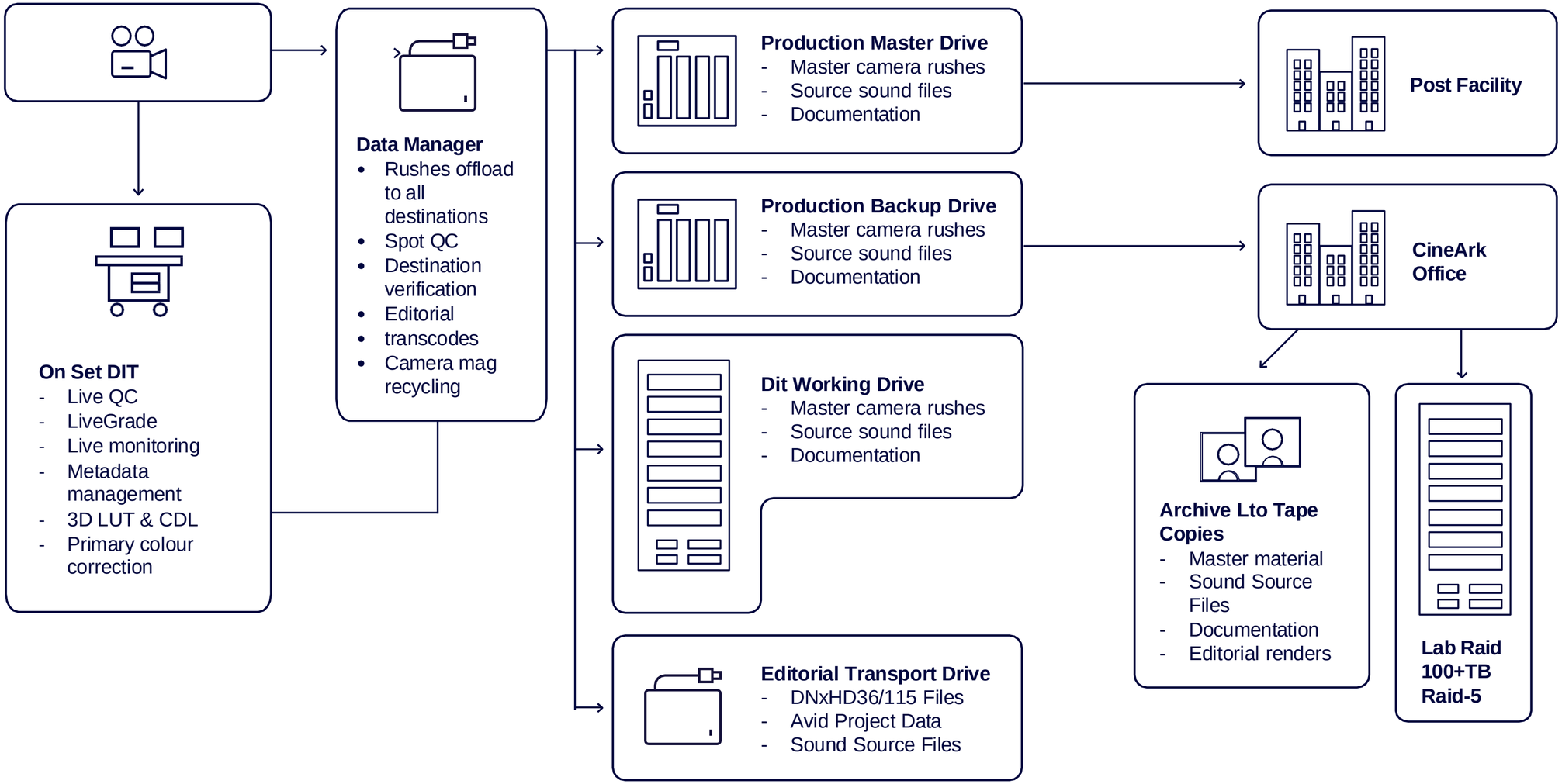
Workflow 2:
On Set DIT, Data and Archive

- DIT livegrade and exposure management
- DIT creates colour corrections to be passed on to the lab
- Data Manager creates backups near set
- Add data manager roles. e.g metadata entry, QC
- Further colour corrections
- Rushes travel to digital lab on camera mags or hard drives
- Suitable for projects with requirements for thorough QC, multiple deliverables

Workflow 2.0 - DIT, Data and Archive



Workflow 3:
On Set DIT, Data and Dailies

- DIT livegrade & Exposure Management
- DIT creates colour corrections to be passed on to the lab
- Data Manager creates backups near set
- Add data manager roles. E.g metadata entry QC
- Further colour corrections
- Rushes travel to digital lab on camera mags or hard drives
- Cinematographers with a need for colour corrections
  on set, consistent exposure monitored by a DIT using waveforms
- Multiple deliverables: editorial files, sound synced
  H264 files for online dailies etc
- Uploads to cloud storage possible

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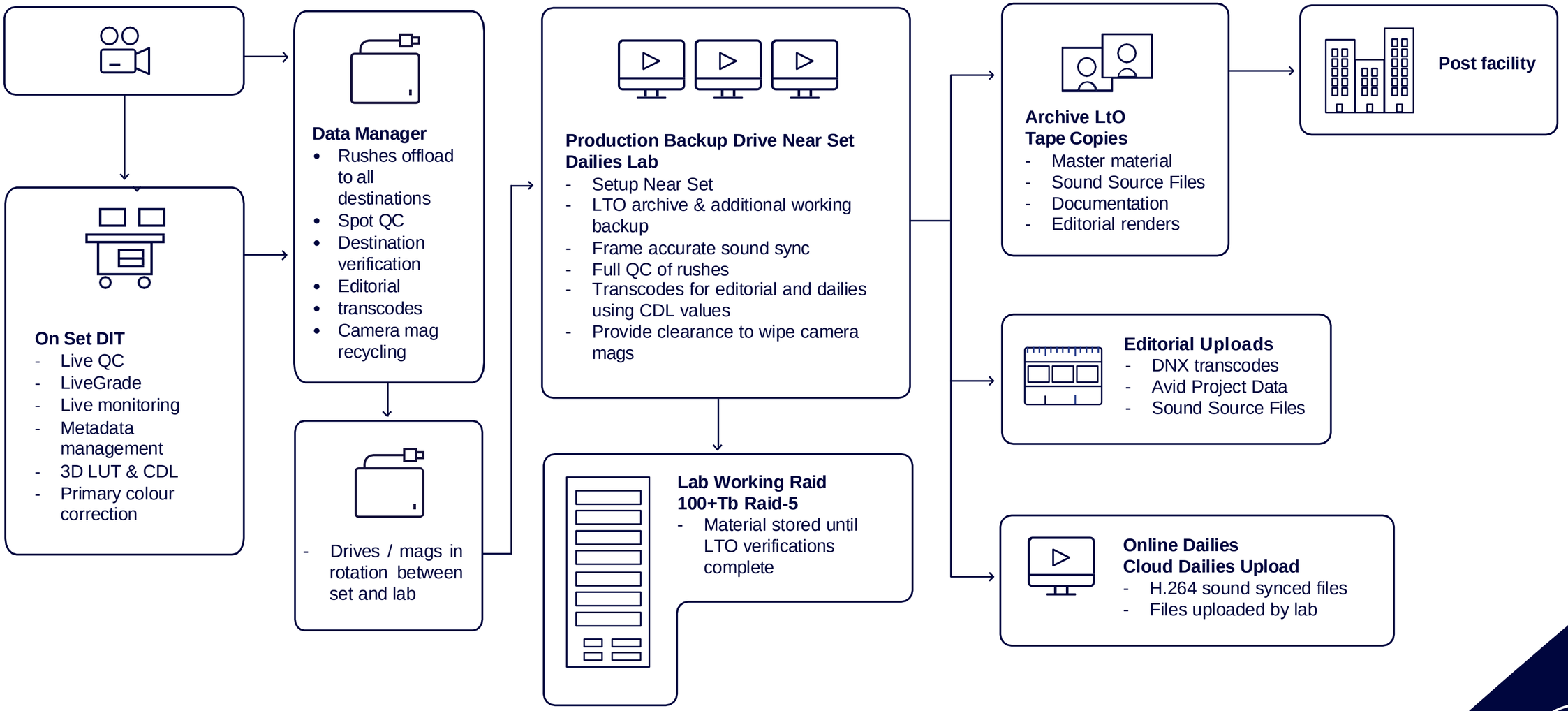
Workflow 3.0 - DIT, Data and Dailies



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Workflow Comparison

	Workflow 1.0 Near Set DIT	**Workflow 2.0** On-Set DIT + Data + archive at office	**Workflow 3.0** On-Set DIT + Data + Lab
LiveGrade		**On Set DIT**	**On Set DIT**
On-Set Spot QC (focus / exposure / Boom in shot)	**Near Set DIT**	**On Set DIT**	**On Set DIT**
Full QC (Camera artifacts / Dead Pixels/ Fixed Pattern Noise)			**Dailies Lab**
Editorial Transcodes (with LUT applied)	**Near Set DIT**	**Data Manager**	**Dailies Lab**
Sound Sync			**Dailies Lab**
H264, Sound Synched Online Dailies			**Dailies Lab**
Additional Transcodes			**Dailies Lab**
Edit/Cloud Uploads	Office (Additional)	**Office**	**Dailies Lab**
Drive backups	**Near Set DIT**	**Data Manager**	**Data Manager**
LTO backups	Office (Additional)	**Office**	**Dailies Lab**
Cloud Storage backups	Office (Additional)	**Office**	**Dailies Lab**

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In Summary

DP Requirements

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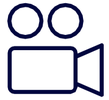

Camera choice, shooting spec and resolution

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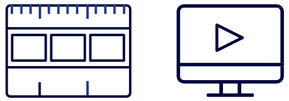

Project deliverables and studio requirements

Informs the following:

Workflow and storage

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Technician choice

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