Virtual Production Workflow, Technologies and Terms

Development/Pre-Production

Pre-vis

Written script treatment

VAD Art Dept VFX Dept

Pitch-vis **Final asset creation**

Previs Techvis Stuntvis
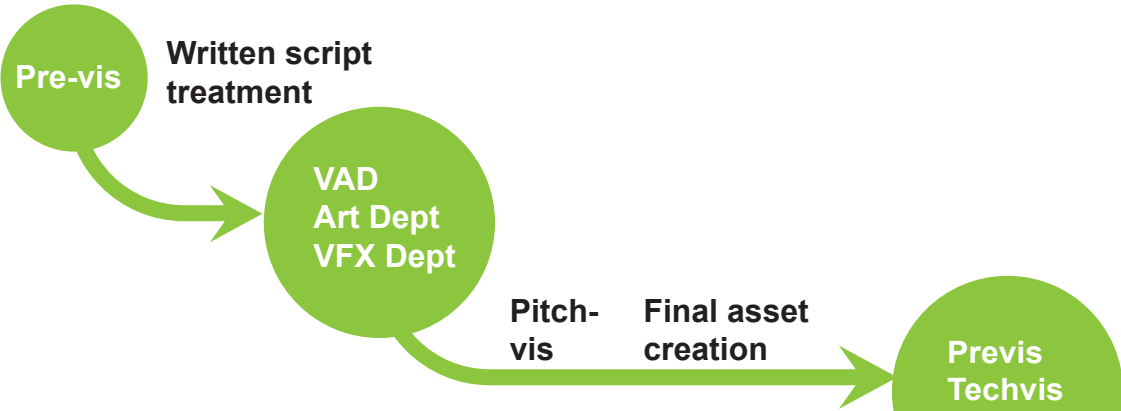
- ◉ **VAD** (Virtual Art Department)
- ◉ **Digital assets** (3D models and environments)
- ◉ **Practical effects** (physical props and set pieces)

- ◉ **World capture** location/set scanning
- ◉ **Virtual scout**
- ◉ **Visualization** (previs, techvis, postvis)
- ◉ **Performance capture** (mocap, volumetric capture)
- ◉ **Simulcam** (on-set visualization)
- ◉ **ICVFX** (In-camera visual effects)

What makes up a VP Workflow?

Virtual Production (VP) is a physical process, performed on a set, with cameras, microphones, actors and props combined with real-time visualization workflows. Unlike traditional production, the VP workflow is characterized by a suite of new and emerging technologies which combine physical and digital elements together on-set, in real-time. These technologies enable real-time feedback and iteration, and include world capture (location/set scanning and digitization), visualization (previs, techvis, postvis), performance capture (mocap, volumetric capture), simulcam (on-set visualization), and in-camera visual effects (ICVFX). A VP workflow shifts resources to preproduction, enabling greater creative control and visibility earlier in the production process.

Production

**LED volume
ICVFX
Live Action**

Principal photography

- ◉ **LED volume.**
Virtual worlds projected on the wall behind actors and set pieces; also generates lighting and reflections.

- ◉ **Pixel pitch**
- ◉ **Camera tracking**
- ◉ **Parallax**
- ◉ **Frustum**
- ◉ **Optimization**
- ◉ **Greenscreen**

Editorial

Post-Production

Post VFX

Final Edit

- ◉ **Color grading**
- ◉ **VFX**
- ◉ **Compositing**

$ ⓥ 🔗 **50% of VFX spend is moved to the VAD; 40% of the practical effects spend is moved to pre-production from post-production. Visualization technologies increase visibility and creative control of final product early on.**

$ $ **Using the Volume for vfx and greenscreen shots optimizes production efficiency, minimizes shoot time, travel time and expenses.**

$ **Cost savings from less time spent on post-production, VFX houses, and better visibility of final product.**