

# Digital Production Resource Packet

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## Introduction

Over the summer, a group of colleagues from Tisch Drama came together to investigate and evaluate how to produce theatre on a digital platform. As the conversation developed, two points became clear:

1. The need for a common vocabulary
2. The vast and ever-changing nature of options for working with digital platforms

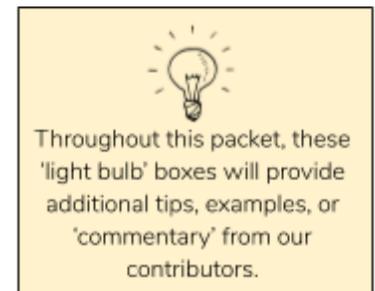
With these points in mind, we started to identify a common vocabulary to be used when working in the realm of digital production, with the hope of streamlining communication.

We quickly realized that we could not build a 'digital producing model' to meet the needs of every production. Instead, we came up with a series of questions to help guide and shape decisions, supplemented by a handful of resources and recommendations.

This packet is not intended to supply you with a step-by-step method, but rather to serve as a resource to guide your process of identifying which tools will best serve the story you wish to tell.

The packet itself is assembled to reflect the traditional theatrical process, from Pre-Production through Performance. Each section provides questions and resources about how that phase may shift in the digital production realm. We discovered that the phases of the digital production process differ from those of the traditional process, and we have tried to provide some explanation as to those differences.

Within this packet, you will find **bolded words** that link to the Glossary. The Glossary is a tool to help create a common language amongst us all. While the Glossary is the key location for all 'vocab words' mentioned throughout this packet, we wanted to start off with a handful of key terminology that informs the entire process.



**Rehearsal Platform:** The digital space where the director, actors and stage managers meet for rehearsal e.g. Zoom Meeting . The interrogation that takes place in this ['room'](#) leads us to our next stage.

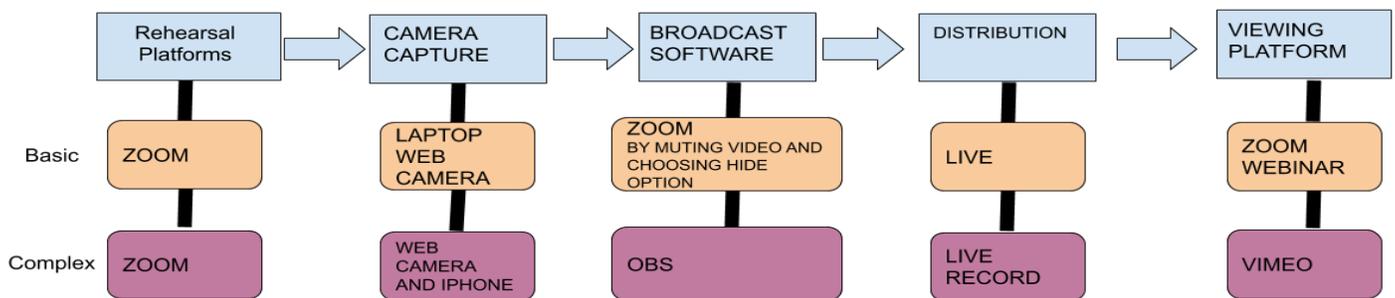
**Camera Capture:** How the visual image is being captured. E.g. Laptop's built-in webcam or another device such as a smartphone or video camera.

**Broadcast Software:** How the visuals from the camera capture are manipulated and compiled. E.g. [Open Broadcast Software \(OBS\)](#) or the use of spotlighting people within a Zoom Meeting.

**Distribution:** In what form will the content be shared? Three main types of distribution:

1. **Active-Live:** The actors are performing “in the moment”; the audience is seeing the action while it is happening
2. **Recorded-Live:** Recording a single instance of the performance; e.g. recording the ‘final dress’ rehearsal and playing that back as the performance. Similar to setting up a single camera in a theatre and recording the performance.
3. **Recorded-Film:** Pre-recording the content and taking time to edit it. Similar to movie or TV production.

**Viewing Platform:** The portal through which the Audience will view the performance. E.g. [Vimeo](#), [YouTube](#), or [ShowTix4U](#).



## Pre-Production

So how do we begin? This is the question that everyone asks once they’ve chosen to create a digital production. As this form is quickly developing, one thing we’ve observed is that the in-person pre-production framework needs to be modified. This includes adding new considerations and re-organizing the sequence for which steps are to be followed. Many logistics will have to be considered much earlier than usual and might even affect material selection and the directing style.

  
For example, with in-person production we consider costume quickchange solutions within the domain of the Costume Designer and the Costume shop, however with digital productions, the performer will be orchestrating the quickchanges themselves without assistance and in-person fitting or adjustment is not possible.

### STEP 1: Big Questions

Consider the following questions before selecting the material.

How do you want the final event to look and sound?

Consider: [Active-Live](#) vs [Recorded-Live](#) vs [Recorded-Film](#)

This is a very important question to determine early because it affects how you will spend your time for the entire process. It affects what type of personnel and skills you will need. Consider the following:

- ❖ How much [glitch](#) (lag time and need for precision) can the piece accommodate without sacrificing storytelling?

- What is the level of “[glitches](#)” you are imagining are acceptable? For example Hollywood film level = 0 (no glitches) versus [Bard’s Mad Forest](#) = 10 (max glitches)
- ❖ What do you want the visual environment to look like? “Real”, like the performers’ homes (can be designed but is still an actual 3D room with interactive furniture and objects)? Or a digital image of a sunrise or a moving wave like the ocean in the ocean – virtual imagery that the performers cannot interact with?
- ❖ How often do you imagine the visual and audio composition changing? Are the changes fast and complex?
- ❖ How do you imagine the audio environment? Zoom meeting-like audio, or more radio- and movie-like quality?

### Is [synchronicity](#) important to the piece?

- ❖ In digital production, there is an inherent lag. The average delay in a voice conference call is 135 ms. Musically, this is roughly equivalent to a 1/16th note off at 120 bpm (steady march). This is not consistent and depends on the equipment, internet connection, etc.
- ❖ Do you imagine live music and dance synchronization?
- ❖ This applies to all actions - e.g. in *Glengarry Glen Ross*, sharpness of language and language dynamics will be difficult to achieve with Zoom due to [glitches](#), same for synchronize music, dance and choral aspects

### How would you like to see the “stage”?

Consider the frame as a proscenium stage.

- ❖ Do you want a [UNIFIED “STAGE” VIEW](#)?
- ❖ Do you want to toggle between individual Zoom boxes and one [unified stage view](#)?
- ❖ Do you want manipulation of the Zoom boxes to create a different layout?

### How much TIME do you have?

- ❖ From rehearsal to tech<sup>1</sup>?
- ❖ Do you have time to ship items to your performers?

### Will your project include licensed work such as a script or music?

- ❖ Many of the major theatrical licensing companies have strict contractual requirements around digital production, such as requiring productions to use a specific streaming service.
- ❖ The use of copyrighted material, such as music or imagery, may impact which streaming platforms you can use for delivery.

### How big is your cast and how comfortable they are with setting up technology?

- ❖ The size of your cast and their comfort levels with setting up their own technology may impact how complex a production you choose to pursue.

### What is the length of the performance?

- ❖ Form and Style matters because it dictates length and other demands
- ❖ Data has shown that 20-25 mins is the most common duration for an audience to watch online performance or events in one sitting - however, it does not mean you have to make your performance that length, just a barometer for attention span.

- ❖ Tisch Drama recommends that digital productions be between 30 and 90 minutes in run-time: long enough for the student performers to have a valuable performance experience, but not so long that audience engagement will drop.
- ❖ There can be an inverse relationship between the length of the performances and the demand on tech needs depending on your approach.

### Is Audience feedback important to you?

- ❖ Do you expect some sort of [“live chat”](#) for audience reactions during the performance?
- ❖ Performers will never really hear the audience like in-person theater in a way that is not interrupting.

### What level of production and design personnel do you have? Level of Studio support? How many concurrent projects are you having within the Studio?

- ❖ The shift to digital often requires a longer time commitment from designers and technical personnel. E.g. they may join rehearsals 3-4 weeks in advance of performances, rather than 1-2 weeks.

## STEP 2: Mode of Delivery (aka The Show):

To aid with making decisions on how to allocate resources and the assemblage of a team, we suggest you consider the scale of the production along the line from basic to complex and the definition of these terms are:

### BASIC Operation

- ❖ This is your first digital production or you have very limited experience
- ❖ Solely on one Streaming Platform E.g. Zoom
- ❖ The final event can be either [Active-Live](#) or [Recorded-Live](#) or [Recorded-Film](#) but is [live stream](#) (i.e at a designated time for a designated audience)
- ❖ Not using Green Screen
- ❖ No budget to procure equipment and softwares
- ❖ Performers solely [triggering](#) cues on their end to affect the visual and/or audio environment
- ❖ Very limited production and design personnel
- ❖ Have front-of-house personnel to manage live chats or audience connectivity issues

### MEDIUM Operation

- ❖ Have some experience with creating digital productions
- ❖ Moderate knowledge in streaming
- ❖ The final event comprises of [Active-Live component](#) and [Recorded-Film](#)
- ❖ Not using Green Screen
- ❖ Want to use one additional software for streaming - e.g OBS, Live Studio, etc...
- ❖ Limited budget to procure equipment and software

- ❖ Beyond having performers solely [triggering](#) cues on their end to affect the visual and/or audio environment
- ❖ Have a team of production and design personnel including: 2 SMs, Sound Designer, Visual Designer with knowledge of creating digital imageries, and Costume Designer
- ❖ Have front-of-house personnel to manage live chats or audience connectivity issues

## COMPLEX Operation

- ❖ Very experienced with creating digital productions
- ❖ Very knowledgeable in streaming and very comfortable in manipulating and learning new technologies and softwares like [Isadora](#), [Qlab](#), [Zoom OSC](#), etc.
- ❖ The final event primarily has an [Active-Live](#) component.
- ❖ Use Green Screen or other composite ideas
- ❖ Have access to or the budget to procure equipment and softwares
- ❖ Performers will not be [triggering](#) cues on their end to affect the visual and/or audio environment
- ❖ Have a full team of production and design personnel including: 2-4 SMs, 2+ Sound Designer, 2+ Visual Designer with knowledge of creating digital imageries, and Costume Designer
- ❖ Have front-of-house personnel to manage live chats or audience connectivity issues.

## Breakdown of Various Modes of Delivery

CRITERIA/ DELIVERY MODE	BASIC	MEDIUM	COMPLEX
<b>Studio Support</b>	Minimal	Moderate	Maximum
<b>Time (rehearsal + tech<sup>1</sup>)</b>	1 to 2 wks	At least 4 wks	6+ wks
<b>Rehearsal Platform Support</b>	Zoom, Google Hangout, Skype, or Microsoft Team - single platform	Incorporating virtual backgrounds and sound effects into rehearsal	Actors working with technical equipment provided by production such as microphones and cameras
<b>Project with Licensed Material</b>	Must use certain viewing platform	Must use certain viewing platform	Must use certain viewing platform
<b>Technical Expertise Availability</b>	In-house: within Studio and the production	Will require additional production support	Will require additional production support; will need staff with expertise
<b># of Designer present during rehearsal</b>	Minimal	Moderate	Constant

<b># Stage Management Personnel</b>	At least 1, can be within cast if simple.	At least 2	2+
<b><a href="#">Backstage Communication</a><sup>3</sup></b>	Text messages likely suffice	Might need multiple tools/apps	Will need multiple tools/apps
<b>Front of House Personnel</b>	Minimal depending on Chat monitoring	At least 1	1+
<b>Performer Technical Expertise</b> <sup>2</sup>	Minimal	Minimal to Moderate amount of performer <a href="#">trigger</a> vs not	Minimal - likely <a href="#">trigger</a> by designers
<b>Equipment Needs</b>	Minimal: Laptop or desktop with built-in webcam and mic	Moderate - if outside procurement is needed, then plan for ordering, shipping and testing	Outside Procurement and control locations might be needed, plan for ordering, shipping and testing
<b>Bandwidth (internet speed and reliability)</b> <sup>4</sup>	Stable and Moderate - less need to test under show conditions	Stable and Robust - need to test under show conditions	Stable and VERY Robust - must test under show conditions
<b>Performer Physical Setup</b>	Minimal	Moderate	Involved
<b>Amount of Setup Time (to be factored into rehearsal time)</b>	Need to consider if performer can leave the setup; if not, keep it simple	Need to consider if performer can leave the setup; if not, moderate time	Need to consider if performer can leave the setup; if not, very involved
<b>Expectation of precision of setup</b>	Minimal	Moderate to Involved	Involved
<b>Can I have multiple camera angles for each performer?</b>	No	Possible with more equipment and <a href="#">triggers</a>	Yes with more equipment and software for <a href="#">triggers</a>
<b>If final event is <a href="#">Active-Live</a></b>	Yes - Zoom has built-in Chat function	Need to find streaming platform that allows for chat	Need to find streaming platform that allows for chat
<b>If final event is recorded-film</b>	Need to find streaming platform that allows for chat	Need to find streaming platform that allows for chat	Need to find streaming platform that allows for chat
<b>Virtual Background or Environment</b>	Yes but minimal (performers <a href="#">trigger</a> changes)	Yes - Moderate (designer to manage and to create content)	Can be very involved - must have

			designers to manage and to create content
<b>Audio Quality (speaking and live music)</b>	“Zoom” level, Built in Mic / Bluetooth Headphones	USB Mic or External Mic and/or interface	More involved external audio - mixer, etc.
<b>Switching between <a href="#">Unified “STAGE”</a> and other arrangement options (this only matters if you want a <a href="#">Active-Live</a> component)</b>	Limited - Gallery View vs Speaker View - performers <a href="#">trigger</a>	Moderate - will require more technical expertise and management of the <a href="#">triggers</a>	Most Flexible but very involved with technical expertise and management of the <a href="#">triggers</a>
<b>Ticketing</b>	Difficult	Moderate - will require more technical expertise	Most Flexible but very involved with technical expertise and management of the <a href="#">triggers</a>

### STEP 3: Detailed Considerations for Each Production Element

#### Scenic

- ❖ **Do the performers need to interact with their environment physically?**
- ❖ Real aka 3D space like the bedroom vs Virtual Environment
- ❖ Static Digital vs Moving Digital Environment (i.e. Animation)
- ❖ Who is going to design the digital images?
- ❖ Physical Set pieces - Shipping? Assemblage?
- ❖ Full body, ½ body, ¾ body, or close up shots?
- ❖ Will there need to be an illusion of scale?
- ❖ Does the piece require a lot of change in settings?
- ❖ Is a Green Screen needed?
  - Mad Forest did 6’ by 7’-4” but then needed to send more material later because it was not tall enough - they just sent commando hooks and safety pins for them to hang it.
- ❖ Is there space in the performer’s home to allow for setup?
- ❖ Is there time for the performer to set up?
- ❖ How precise does the setup need to be?
- ❖ Graphic, film, and/or [Adobe Creative Suite](#) software access and skill levels?
- ❖ Copyright images

#### Props

- ❖ **Are performers using props from their households or is the production shipping them props?**
- ❖ Does everyone need the same prop?
- ❖ How big is the prop?

- ❖ Does the prop need to be custom made?
- ❖ Can the prop be easily shipped?
- ❖ Can the performer repair it on their own?

## Costumes

- ❖ **How self-sufficient does the performer need to be?**
- ❖ **Are there any quick changes?**
- ❖ Period?
- ❖ How many costume changes are there? How many quick changes?
- ❖ Full body, ½ body, ¾ body, or close up shots?
  - Depending on how much of the performer's body will be visible on screen, you may only need to costume them from the waist up.
- ❖ Are there any characters that need to be dressed identically?
- ❖ Hair and makeup needs?
- ❖ Green screen Costume Base? Or green screen "masks"?
- ❖ Costume fixing kit to performers like binder clips to fit the clothing
- ❖ Laundry needs?

## Lighting

- ❖ **How controllable is the lighting in the performer's location where the performance takes place?**
- ❖ **How much precision do we need to create consistency in the [Active-Live](#) setting?**
- ❖ **How much can the performer control while also performing?**
  - **There is a small universe where a remote location can control the lighting but needs a lot of setup and there will be some lag.**
- ❖ Overall comfort and skill level of the performer to set up and manipulate lights?
- ❖ Amount of time during rehearsal and "[tech](#)"
- ❖ Is there space in the performer's home to allow for setup?
  - Can that set-up remain or does it need to be struck and re set-up daily?
- ❖ Is there time for the performer to set up?
- ❖ Do the lights need to change live on screen?
- ❖ Isolation vs broad
- ❖ 3 point lighting system vs more self-contained lighting like a Ring Light?
- ❖ Green Screen Lighting Setup?
- ❖ Auto focus and iris adjustment features on cameras?

## Sound

- ❖ **Does it need to be precise? In sync?**
- ❖ **Expectation of audio quality like room tone from mic, quality matching across the performers (i.e. uniformed), broadcast volume, etc.**
- ❖ [Live or recorded or Recorded Film](#); continuity of images and designs
- ❖ Comfort and skill level of the performer to set up and manipulate sound?
- ❖ Will you have a sound mixer with virtual mixing board experience?
- ❖ Is there time for the performer to set up? How precise does the setup need to be?
- ❖ Using copyrighted sounds or music?

## Music

- ❖ **Need live music and live singing?**
- ❖ **Precision? Aka in sync?**
- ❖ Original composition?
- ❖ Recording the musicians or do they need to be live?
- ❖ Seeing the conductor?
- ❖ Can the singer's recording technology be manually adjusted?

### Projection

- ❖ This is about [Active-Live](#) composition [trigger](#) - not about content design; content design will fall within SET for now
- ❖ Work closely with Scenic
- ❖ Capability of the computer(s)
- ❖ Depending on complexity, there might need to be many people to control different aspects - for example, Bard's [Mad Forest](#) had one person for content and pipeline to the broadcasting platform and another person for camera switches.

### Software and Hardware Considerations

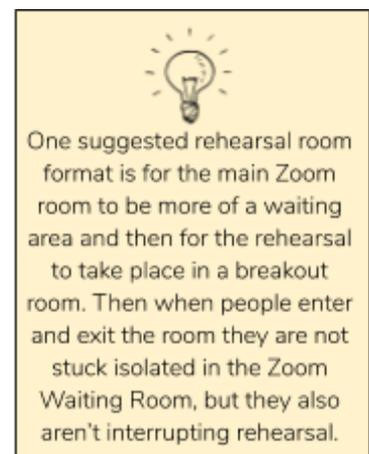
TECHNOLOGY	FREE	BASIC	MEDIUM	COMPLEX
ZOOM	X	X	X	X
<a href="#">WHATSAPP</a>	X	X	X	X
<a href="#">OBS</a>	X		X	XX
<a href="#">QLAB</a>	LIMITED	X	XX	XX
<a href="#">ISADORA</a>			X	XX
<a href="#">ZOOM OSC</a>				XX
<a href="#">STREAMWEAVER</a>				XX
<a href="#">SNAP CAMERA</a>	X		X	XX
<a href="#">LENS STUDIO</a>	X			XX
<a href="#">NDI FEED</a>	X			
<a href="#">VPN</a>	X			
<a href="#">ADOBE CREATIVE SUITE</a>	KINDA	X	XX	XXX
<a href="#">VMIX</a>				XXX
<a href="#">DAVINCI</a>	X		X	XX

# Rehearsals

## Considerations for Remote Personnel

Rehearsing remotely with each company member working from their own home studio presents unique challenges and opportunities, and traditional models and roles of production need to be re-examined. The technical constraints of being online instead of rehearsing together in person must be thought through in order to have as smooth an experience as possible. Glitches will happen, people will lose their connection, audio will be out of sync, limbs will disappear into the background, and cats and siblings will run across the stage, etc.– but patience, a sense of humor and improvisation are essential as everyone is learning new approaches, techniques and software. Consider the following:

- ❖ Where is everyone? In what time zones are the actors and creative/production teams?
- ❖ Limiting the amount of overall rehearsal time
  - Zoom fatigue can easily overwhelm a cast and crew and we must take into consideration the hours students are spending at their screens for classes and homework
  - See [Rehearsal Schedule Guidelines](#).
- ❖ Does everyone have the equipment to properly connect with one another?
- ❖ Suggested questions to ask company members include:
  - What devices do you have access to
    - Laptop
      - Year:
      - Operating System:
    - iPad
    - Secondary Monitor
    - Headset with mic
    - Smart Phone
  - Test headphones / microphone
  - Internet speed test ([speedtest.net](http://speedtest.net))
    - Do this a couple times - at different times of day
  - Are you able to hardwire your laptop?
    - Know where your router is
  - Do you need any cables or dongles for hardwiring or connecting to monitors?
  - Do you need any lighting support?
  - Do you have a desk and chair that's appropriate for sitting for long periods of time?
  - Where will you be working from?
    - Are there people around you etc; talk to them about rehearsal expectations; if it's possible for them to give you privacy / bandwidth



- Do you need time with a tech-savvy person to walk you through setting everything up or are you confident at doing that yourself?
- ❖ Actors will need to be their own technicians. Is the set-up and take-down time of the Zoom rehearsal [room](#) factored into the rehearsal day?
- ❖ Are there protocols in place for joining the rehearsal space?
- ❖ How will everyone communicate? See [Stage Management Practices](#).

## TISCH DRAMA STAGE Rehearsal Schedule Guidelines

The following guidelines are required for TD STAGE and Student Works digital productions and recommended for studio digital productions.

### Rehearsal Hour Requirements

- ❖ No more than 6 hours per day (non-class days)
- ❖ One 5-minute break after 55 minutes of rehearsal time or one 10-minute break after 80 minutes of rehearsal time
- ❖ Must take a 1-hour break after 3 hours
- ❖ Rehearsals may only take place between the hours of 10am and 11pm (Eastern); on class days, rehearsals shall not begin earlier than 7pm

### Weekly Rehearsal Schedule Guidelines

When classes are in session, productions may rehearse up to:

- ❖ 4 weeknights; 3 hours per night = 12 hours
- ❖ 1 weekend day = 6 hours

Total: 18 hours per week

When classes are not in session:

5 days per week; 6 hours per day = 30 hours

### Pre-Performance Week

(Seven days prior to first performance)

- ❖ 4 weeknights; 3-1/2 hours per night = 14 hours
- ❖ Two weekend days = 12 hours

Total: 26 hours



## Stage Management Practices

The overall role of the stage management team doesn't change in the digital realm, but the specific tasks and responsibilities do shift. Some things to consider:

## Communication

- Creating a virtual callboard with links to daily calls, contacts, rehearsal reports, and resources for the company will be essential. Ideally, train the company to go to the callboard for daily updates, script changes, etc. instead of sending out individual emails.
- Set up Zoom [breakout rooms](#) for any one-on-one or smaller group conversations.
- With Zoom it's that much harder to 'read the room'. Important for stage managers to check in frequently with the cast and production team to see how they are doing and what they need.
- The stage manager's role as communication central takes on even more significance in the remote environment. Don't forget anyone. Err on the side of over-communicating.
- Consider how to help with creating the community that would have happened had the production happened in person. Set up digital social events for the company. Games.

## Monitoring the Rehearsal Space

- What checklist do you go through with each actor to help with their individual set-up?
- What replaces blocking?
- How do you track entrances and exits? Scene breaks?
- How do you cue actors to direct their gaze in a specific direction?
- How do you track props and costumes?
- How do you manage playing music or sound effects so that all actors can hear and react to it appropriately?
- If choosing a pre-recorded performance, this would require detailed tracking of scenes and a naming structure for editing purposes.

[For additional stage management resources, check out the SM video and Supplemental Materials from Tisch Drama's New Studio on Broadway production of \*The Clouds\*.](#)

## Tech

### What does "Tech" mean now?

In a traditional theatrical production, technical rehearsals typically occur in a contained period of time once major design decisions have been implemented and the theater is in a suitable state for performer use. In a remote configuration, there are significant changes to the "tech" process... Locations near the performer may need to be modified to accommodate performance, and as there is not a physical crew present to perform production actions in these spaces, the performer will have to manage these variables for themselves. Additionally, you may choose to incorporate technical elements during the rehearsal process to familiarize the cast with these responsibilities and to discover potential challenges. As with a traditional in-person production, the increase in technical sophistication is directly correlated with the time needed to execute it.

## Technical Elements to Consider

### Shipping of Production Materials

Items such as props, costumes, and technical equipment may need to be shipped to performers. In the current state of the world, major shipping and retail companies suffer supply chain breakdowns more often. If an item is critical for a production, the earlier it is shipped, the sooner it can be implemented and ‘teched.’ Lists of items sent and received should be maintained by the production team and the performers. Productions may have students sign a ‘property agreement’ ([sample here](#)) agreeing to return the materials following the production. A packing list should also be included with any NYU owned items shipped to the production team outside NYU spaces and productions may choose to share tracking numbers with Stage Management and the company so they can track their packages.. Please refer to the [Shipping and Logistics](#) section for further details.

### Technical Configuration

Time should be allocated for the initial setup of technical elements; the amount of time needed will depend on the level of complexity. The inclusion of external microphones, light panels, color screens, hardware, software, etc. will require time to address the function and usage. If a production is using popular video conferencing software and user owned equipment, this may be minimal. Beyond that, it is desirable to have the production and performance teams spend time familiarizing themselves with operation and execution of these components, preferably as they become available during the rehearsal process.

### Setup and Breakdown

As the spaces used to perform are no longer under the privy of NYU, consideration should be given to the amount of time that may be required to convert a space to ‘show ready’ condition. Many of these spaces will be the personal living areas that a production member and their co-habitants have to utilize during non-show hours. If items like computers, light panels, microphones, or color screens need to be struck between usage, additional setup and ring-out time will be needed to achieve a consistency of performance.

### Technical Execution

Depending on the nature of the performance, certain technical elements may need to be handled live or in a [post-production](#) stage. Live elements (live editing, virtual backgrounds, live cuing, etc.) should be implemented as they are available to the production. Post-production elements (video editing, post-sound mixing, post-video effects) can be executed once raw content is recorded, however the process is time-consuming.



## How and When to Implement Tech?

It may be difficult to gauge how much time it takes to integrate certain technical elements into your production. Here are a few rough guidelines that may help a production gauge possible time allocation:

### Pre-Recorded

<b>Technical Elements for Recorded Content</b>			
	<b>Case Examples - Rough Estimates dependent on experience</b>		
	<b>Basic</b>	<b>Intermediate</b>	<b>Advanced</b>
<b>Audio Recording</b>	Recording to Computer Microphone	Recording through Audio Interface / USB Mic with Click/Track	Recording multiple tracks through conferencing software or live audio software
	3 minutes per finished minute	5 minutes per finished minute	8 minutes per finished minute
<b>Audio Post Mixing</b>	1 - 4 Voices in separate tracks	Voices w/ Musical Accompaniment. Separate tracks	Several Voices, Instruments, effects. Music Production
	3-5 Minutes per finished minute	10 minutes per finished minute	30+ minutes per finished minute
<b>Video Recording</b>	Static torso / face video shot with phone, computer, webcam. Simple or home lighting	Video shot with full body and static lighting fixtures	Video shot with green screen, full body, multiple lighting sources
	5 minutes per finished minute	10 minutes per finished minute	20+ Minutes per finished minute
<b>Video Editing</b>	Simple trimming of video clips	Multiple clips with simple transitions	Video presentation w/ graphics, transitions, effects, correction, etc.
	5 Minutes per finished minute	20 minutes per finished minute	1.5+ hours per finished minute
<b>Video Graphics</b>	Simple Text	Animated Titles, 2D graphics	Animated Graphics, Transitions, 3D
	5 minutes dependent on style/length	30 Minutes dependent on style / length	1.5 hours+ dependent on style / length

### Recorded-Live or Active-Live

<b>Technical Elements for Live Content</b>			
	<b>Case Examples - Rough Estimates dependent on experience</b>		
	<b>Basic</b>	<b>Intermediate</b>	<b>Advanced</b>
<b>Live Audio</b>	Live voice on built in or bluetooth headphones.	Live voice w/ simple reverb or similar effect. External Equipment. . Actor driven	Live audio engineering done remotely
	Audio consistency should be checked per rehearsal.	5-10 minutes of setup per rehearsal.. Needs dedicated	Several hours of setup and platform dependent. Needs

		rehearsal time.	specific technical rehearsal time and run throughs
<b>Live Presentation &amp; Effects</b>	Basic Titles / Slides / Videos Single Camera View	Transition Effects, Intermixed Live and Recorded Content. Alternate Camera Placement	Green Screens, Compositing, Graphics Overlays.
	2-6 Hours of Tech. Small production team.	Needs rehearsal implementation and additional staff.	<i>Time for effect(s) construction must be considered. Requires rehearsal implementation and additional staff.</i>
<b>Virtual Backgrounds / Scenery &amp; Set Dressing</b>	Physical Set, Static Stock Backgrounds.	Original Content, Multiple Backgrounds, Simple animation.	Artwork, complex animation
	<i>Time to build. Actor Driven. Needs rehearsal implementation upon availability.</i>	<i>Time to create., Actor Driven. Needs dedicated rehearsal time.</i>	<i>Time to create. Additional Staff required. Needs dedicated rehearsal time.</i>
<b>Virtual Costumes, Props, Interactivity.</b>	Simple Pre-Built Graphics	Interactive or simple custom built masks, props, hats.	Animated backgrounds and foregrounds. Multiple Filters and layers with transparency
	<i>Requires External Software. Time to build / source.</i>	<i>External Software, programming and technical rehearsal time.</i>	<i>External Software, programming and rehearsal time. Additional staff.</i>

## Pre-Stream Schedule Guidelines

Depending on the presentation format of your performance, the schedule of the preceding week may vary. A [Live Streamed](#) performance may want to run several run throughs at performance times to discover unforeseen bandwidth or environmental issues (individuals using shared internet for work, weather or daytime/nighttime variables). A [Scheduled](#) or [On Demand](#) performance may spend this time to finalize their presentation and dry run their content. Based on Drama guidelines, a recommended schedule would consist of:

### [Pre-Performance Week \(Seven days prior to first performance\)](#)

- 4 weeknights; 3-1/2 hours per night = 14 hours
- Two weekend days = 12 hours
- Total: 26 hours

## Shipping and Logistics (Specific to NYU Studios)

Tisch Drama has shipping accounts that will handle the cost of shipping and return of materials. This will not affect your individual production's budget. Records should be kept of any NYU-owned items that are being sent outside of campus. It is recommended that a packing list is included with any kits that are distributed for inventory and loss prevention. If certain items are crucial to the execution of rehearsal or production, it is recommended that these items be shipped two weeks before their implementation date. Return address labels should be procured and distributed (mail / digital) prior to the final performance.

Each studio has at least one person who has been authorized to print shipping labels through UPS CampusShip, the platform our department is using to handle all production shipping. Please reach out to your Studio Administrator to find out who is processing shipping requests and what information they need from you.

## Performances

### Audience Viewing Platform

The Audience Viewing Platform may be the same or different from the platform the actors use for rehearsal and/or performance. The type of audience viewing platform you use may be dictated by the rights holder of your play/musical. Some options for Audience Platform are:

- A group meeting platform e.g., [Zoom Webinar/Meeting](#) or [Skype](#)
- A paywall site e.g., [ShowTix4U](#) or [StreamYard](#)
- A livestream platform e.g., [YouTube](#), [Twitch](#), [Vimeo](#), or [Facebook](#)

### Considerations for selecting an Audience Viewing Platform

- Will your audience be in the “[room](#)” with the cast or outside?
- Does the audience need to interact with the cast/show during or after the show?
- Will there be a post-show Q&A or other experience offered?
- Is real-time audience feedback important? (platform/streaming vehicle will affect the lag time between performance and reaction)
- Is the show [pre-recorded or live](#)?
- How important is the regulation of audience members? Do you want to know who has attended?
- Is there a capacity limit to your audience?
- What are the requirements made by the publisher for the rights to the play/show?

### Additional considerations regarding the audience

- What is the expected attention span of the audience? Do you expect the audience to watch the show in full?
- Will you offer an intermission?
- What is the appropriate run time?

### Options for Audience Viewing Platforms with Features

	Zoom <a href="#">Webinar</a>	Zoom <a href="#">Meeting</a>	<a href="#">ShowTix4U</a>	<a href="#">Youtube / Twitch / Facebook Live / Vimeo</a>
<b>Ticketing</b>	Audience members can	One general link and password	Audience members	One general link and password (if

	register and receive a personalized link. This link could be shared without the host knowing.	can be shared with all audience members. This link can be shared without the host knowing.	purchase access to a personalized link that can only be used by one device.	desired) can be shared with all audience members. This link can be shared without the host knowing.
<b>Data Collection</b>	Hosts can gather email addresses of attendees and distinguish between those who registered and those who actually attended.	Reports can be gathered of meeting attendance and interaction through Zoom settings.	There is a Box Office that can produce contact info for ticket buyers.	Basic user metrics (views/likes). Anonymized data.
<b>Interaction</b>	Hosts can see audience members names, but audience members can't see each other	Audience members are in the same "room" as the performers, and have control over their own interaction (video, microphone)	Audience members are on an outside platform and can't affect performance	Audience members are on an outside platform and can't affect performance
<u><a href="#">Live Chat</a></u>	Hosts can opt to turn chat on or off. Actors can see chat if it is on	Hosts can opt to turn chat on or off. Actors can see chat if it is on	Audience can chat with each other - the actors cannot see it.	Audience can chat with each other - the actors cannot see it.
<u><a href="#">Q&amp;A</a></u>	Audience can submit questions to panelists/actors via text - can be anonymous	n/a	n/a	n/a
<b>Licensing</b>	*Can be a performance platform used to stream to ShowTix4U if required by publisher*	n/a	Required platform for streaming shows from MTI, Dramatists, possibly others	n/a
<b>Fees/Costs</b>	Monthly fee of \$40 on top of Zoom Meeting costs - Available	Free Account only allows for 40 minute meetings. Pro version is	\$1 ticket fee added to each ticket (including free shows) can	Some paid accounts available with additional features beyond

	through NYU with <a href="#">special approval</a>	\$14.99 per month; Available through NYU	be paid by producer or audience member	free versions (such as password protection)
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## Front-Of-House

The complexity of your production and the Audience Viewing Platform will affect how much support you will need on your FOH Teams. Tasks to be completed include:

- Creating [Webinar/Platform](#) Links either per performance or one for the show
- Sharing links with audience members, assisting patrons with any registration/ticket sales issues
- “Ushers” to assist with any questions that come up in audience [live chat](#) before or during the performance
- Assisting with any technical issues that arise at the time of performance, sharing new links if needed
- Following up with patrons after the performance

## Communications

There are several options available to communicate with your audience as well as behind the scenes. Some options for FOH communications are:

- Chat feature within the audience viewing [platform](#)
- Outside text communication app such as [GroupMe](#)
- Outside auditory communication app such as Slack or TeamSpeak

Sharing a playbill is another way to communicate with your audience. This can be created on a website and sharing the link with audience members before, during, or after the performance. Some platforms have an option to share a playbill during the show.

## Pre-show and Post-show Checklists

Pre-show and Post-show Checklists are necessary not only for actors (to set props, costumes) but also for SM and/or FOH staff to prepare your virtual platform for each show. This will vary depending on your platform but could include:

- Setting Audience View (Gallery vs Speaker View)
- Setting chat functionality and access for audience
- Preparing any necessary media (pre-recorded preshow speech, “Hold for technical difficulties” slide, attendee list, etc)

# Glossary

## **Active Live**

The event is happening simultaneously with the performers performing in real-time.

## **Adobe Creative Suite**

A collection of software used for graphic design, video editing, and web development applications. Includes staples such as Photoshop, Premiere, InDesign, and Illustrator.

## **Backstage**

Communicating with the actors in a way the audience cannot access. Can be either through a separate service like Discord, WhatsApp, or texting- or through a private channel on a streaming service.

## **Breakout Rooms**

A feature in Zoom where people can be split off into smaller video chat groups. The host is able to move participants between rooms, assign rooms, and bring all participants back to the main room.

## **Broadcast**

A generic term used to mean that the performance (either active live, recorded-live or recorded-film) is showing to an audience.

## **Chat / Chat Window**

Refers to any running text service, either audience-facing or “backstage”.

## **Captioning**

Text printed on screen (either by default or available by choice), often as an accessibility feature that prints dialogue, sound descriptions on screen for the deaf or hard of hearing. Captioning can be autogenerated (decent accuracy), transcribed from recordings, or cued from a script. NYU’s policy on Closed Captioning [can be found here](#).

## **Davinci**

A free software, originally developed to color correct video, that is capable of editing video.

## **Discord**

A free messaging and VoIP application and platform. Discord is popular with youtubers, gamers, and streamers. The platform allows you to create public or private groups.

## **Embed**

A streaming video player that uses a separate web service or server as a source. When you see a youtube video player on a news website, that is an example of embedded video. Embedding video is usually a simple process that doesn’t need to be manually coded (although it can be for greater options).

### **Encoding**

The coding scheme that determines how a video is played, by what software it is played, how small or large it is, and how large the file is. All encoding compresses the data. The more times a file is encoded (processed and exported) by a program, the more that file is compressed and loses quality (not always visibly but the loss in quality is cumulative).

### **Facebook Live**

A built-in live streaming feature on Facebook that allows viewers to comment in real-time. Facebook Live does not necessarily require viewers to have a Facebook account to watch the livestream or the automatically generated VOD after the performance.

### **File Format**

The formatting of a media file that makes it able to be played and seen by some programs and not others. The common formats for Video are .mov .mp4 .m4v .mpeg .wmv .avi .dv. Common formats for audio are .mp3 .m4a .wav .aiff. E.g. a **Wrapper** or **File Type**

### **Glitch**

Latency, dropped frames, like in Zoom meeting when you miss the first word when someone is talking. It can be a quick bleep or image freezes. There is NO WAY to eliminate this entirely for Active-Live.

### **GroupMe**

A group messaging app for mobile phones and desktops. Mainly used for group text communication. It is growing in popularity for college-aged people and younger.

### **Host / Hosting Service**

A website or platform that stores and/or streams your video. Youtube, Facebook, Vimeo and many more are all video hosts in addition to their other services. Even if you are creating your own website where audiences will watch the video, it is a good idea to have another service host the video file itself for many reasons, especially for streaming speeds and amount of file storage.

### **Isadora**

A graphic programming environment for Mac and Windows which allows the user to manipulate video elements in real-time.

### **Lens Studio**

A software that allows you to add augmented reality to live video feeds. You are able to add 3d objects with interactivity to video, and export or stream video out from there.

### **Live Chat**

Audience typing into a designated chat area to chat with others or make comments during the broadcast.

### **Live Stream**

The event is broadcasted at a specific time for a specific group of audience who sign-up to see it. The event can be either Active-Live or Recorded-Film or a mixture of both.

### **Live-Streaming**

A video streaming and compositing software that works well with many other video software. Allows multiple layers of media, can act as a virtual video switcher, outputs multiple streams, and allows you to manipulate video streams in several creative and utilitarian ways.

### **Meeting**

A video chat room where each person is able to speak by default. Meeting Hosts do have the power to turn off video and microphones of other participants, but the participants are able to turn both back on themselves. Distinct from a *Webinar* which distinguishes in the room between “Panelists” and “Audience” and gives each different capabilities.

### **NDI Feed**

A software that allows video applications to deliver and exchange high-definition video over a computer network.

### **OBS / Open Broadcaster Software**

A free open-source application for Mac and Windows that can manipulate video stream. OBS can combine multiple video streams into 1, cue changes in video, add graphics and text, and many other functions.

### **Platform**

The front-facing web service that hosts or displays your video. A platform can either be public or private and can display live video, pre-recorded video, or a mix of both. Common platforms talked about in this document are YouTube, Vimeo, and to a lesser extent Zoom (since platform usually refers to a website location, rather than an application like Zoom).

### **Post Production**

A catch-all term for all the processes that take place after footage for a video is recorded. Usually refers to editing, color correction & grading, sound mixing, music, special effects, and exporting or preparing for playback.

### **Q Lab**

A cue-based, multimedia playback software for macOS, intended for use in theatre and live entertainment.

### **Questions & Answer**

A distinct feature of Zoom and other *Webinar* services that allow audience members to ask questions. There are many options for Q & A on Zoom such as anonymous questions, responding to other audience members, even upvoting other questions. Q & A must be turned on as a feature of Webinars by IT.

**Recorded-Film**

Like a film; at the time of broadcast, performers are not performing simultaneously with it.

**Recorded-Live**

Recording a single ‘take’ (likely at the last few final rehearsals or earlier depending on schedule) and broadcasting that recording at a specific performance date or making it available as a link.

**Room**

Can refer either to a semi-private digital space, such as a Zoom Room, or to the more casual concept of the “space” that the audience occupies. The audience can be completely visible to the performers like in a Zoom Room, limited to text like in a YouTube livestream, or just able to view without interacting.

**Scheduled Content**

Usually refers to a video file that is made available to watch online at the same time. The file is stored on a server and a video player is prepared, but will only be available to an audience at a specific time. Usually the video will autoplay at that scheduled time, rather than passively allowing the audience members to individually skip around in the video timeline.

**ShowTix4U**

A live streaming and Video on Demand web service designed to make streaming videos for audiences easier. They provide options for handling ticketing, hosting video, hosting live streams, handling royalties for MTI licensed shows, playbill info and more. They also have add-on options for hardware packages and technical training and professionals. Base fees are fairly low.

**Snap Camera**

Brings Snapchat’s augmented reality and other filters to streaming video and video chats.

**Software**

A program that “lives” on your computer. Distinct from an **Application** which lives on a mobile device, or a **Cloud-Based Software** which lives on the internet but is accessed by your computer or mobile device continually through the internet (and needs live internet to run usually)

**Streamweaver**

A software and data integration application that allows you to monitor and manage analytics and ITOM easily from one screen.

**Synchronicity**

The simultaneous occurrence of events which appear significantly related but have no discernible causal connection.

**Tracking Link**

A URL (web address) that is unique to a person or a group of people that allows you to track how the URL was used. For example, you could create a facebook specific tracking link to see how many people watching your video specifically came from Facebook, instead of a link sent out in an email or from an

NYU page. These can also be automatically generated for individuals, so you can track if anyone shares their personalized link.

### **Trigger**

Firing of cues (any); there are TWO main considerations and a mixture is possible:

- Local: on performer’s computer
- Non-local: this can take many forms, generally it means a designer will fire the cues remotely. This setup is for medium to complex setup and in complex, there can be multiple “remote” locations firing cues.

### **Twitch**

A streaming platform and community that has built-in streaming and chat features. Twitch monitors audio and video for licensed media, similar to youtube, so it cannot be used for streaming unlicensed music.

### **Unified “Stage“ View**

Basically the difference between seeing individual Zoom boxes (mini proscenium frame for each box) vs seeing a big box (one proscenium frame) that holds the entirety of an image - like in spotlight view.

### **Video-On-Demand**

Video that is stored on a web platform and is available to view at any time, but usually only after one has paid for it or bought a ticket. Movies on amazon or iTunes are examples of VOD. This can also imply that the video is available to the audience to download.

### **Vimeo**

A robust video hosting website with options for live streaming. Vimeo allows higher quality video than youtube, has options for downloading, and does not monitor video for licensed content. Free accounts have very little storage space but the paid tiers are reasonably priced.

### **VMIX**

A video switcher software, allowing users to combine and cue multiple video and audio feeds as well as pre-recorded media.

### **VoIP - Voice over Internet Protocol**

A way of delivering live audio, like a telephone call, between two or more people over the internet. Multiple services have VoIP functionality.

### **VPN - Virtual Private Network**

A service that reroutes your internet traffic through a secondary server, usually encrypting your traffic data as well.

### **Webinar**

A distinct way of using (or mode of) a streaming platform. Webinars allow you to designate “panelists” who are able to appear on video, and “audience” who can only watch or possibly write in a chat thread.

Zoom’s Webinar feature is an add on that IT can add to your teams’ zoom account capabilities. Other web services have Webinar functionality as well.

**WhatsApp**

An American startup, freeware, cross-platform messaging and Voice over IP service owned by Facebook, Inc. It allows users to send text messages and voice messages, make voice and video calls, and share images, documents, user locations, and other media.

**Zoom OSC**

A 3rd party tool that functions as a virtual video switcher for Zoom and other video feeds and gives increased functionality. Works with Isadora and other media servers and incorporates programming and triggers to handle some functions automatically.

## References & Additional Resources

[ADOBE CREATIVE SUITE](#)

[Davinci](#)

[ISADORA](#)

[LENS STUDIO](#)

[NDI FEED](#)

[OBS: Open Broadcaster Software](#)

[QLab](#)

[ShowTix4U](#)

[SNAP CAMERA](#)

[STREAMWEAVER](#)

[VMIX](#)

[VPN](#)

[WHATSAPP](#)

[ZOOM - General Resources](#)

[ZOOM - NYU-specific Resources](#)

[ZOOM OSC](#)

In June 2020, Tisch Drama produced a workshop about digital production, exploring NSB’s production of *The Clouds* as a case study. The full archive and supplemental materials from the workshop can be found [here](#).

## Credits

This resource packet was compiled by Tisch Drama’s Digital Production Working Group:

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