

Explanatory Animation

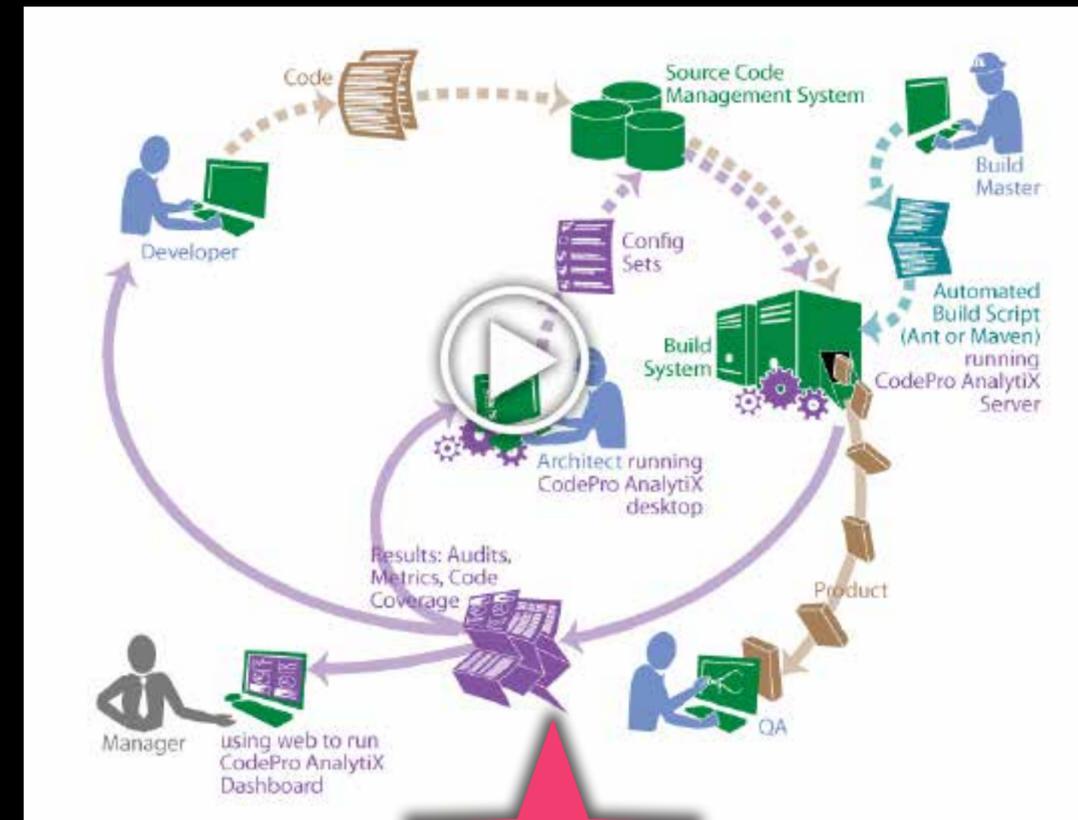
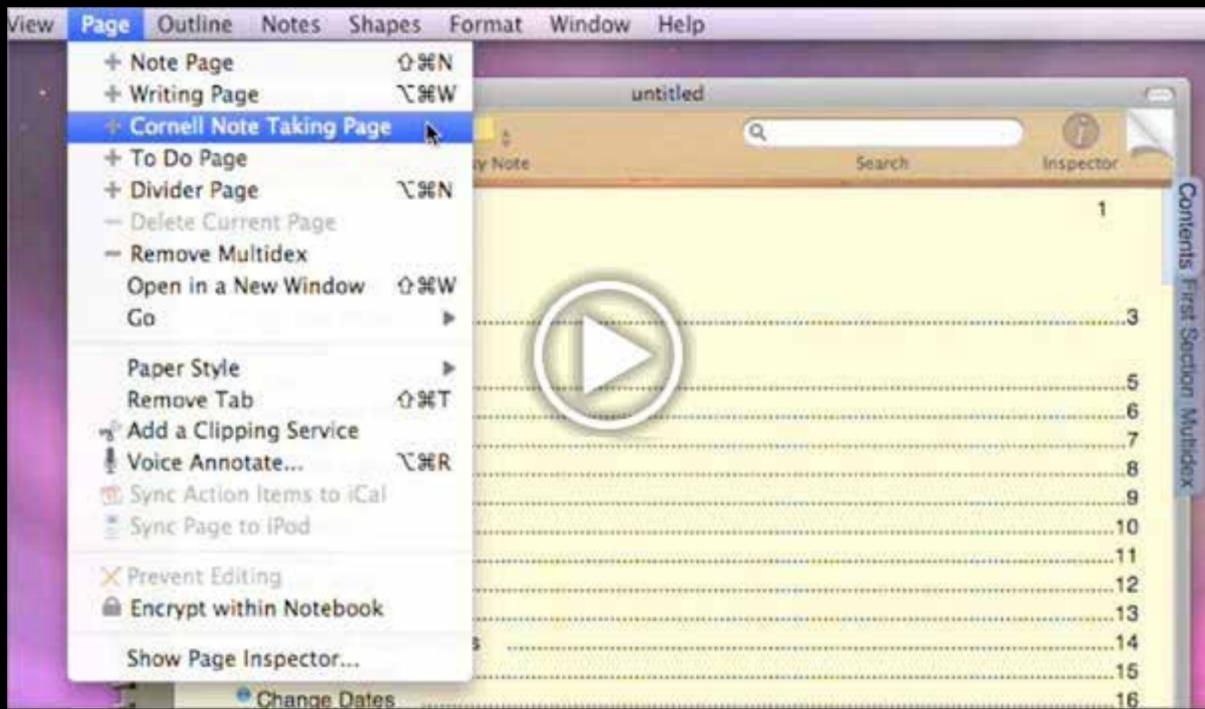
Motion graphics
applied to
diagrams, charts and graphs, maps,
and technical illustrations

Nancy Wirsig McClure

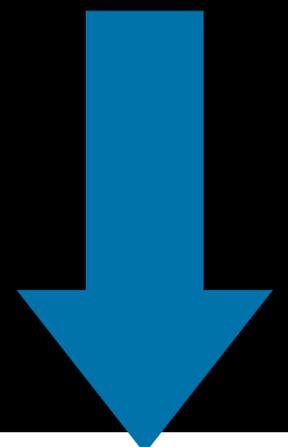
explanimation.com

captured

created

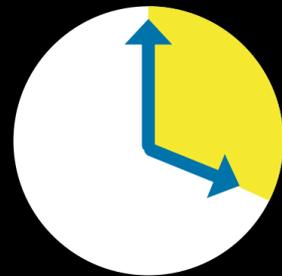


play examples here



>> Mashup <<

Motion Graphics

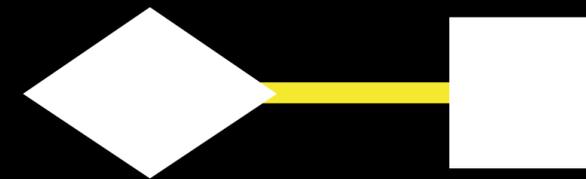


Animation (visual change over time)

NOT

cartoons à la Disney,
realistic 3D animation,
etc.

Infographics



Explanatory
diagrams, charts and
graphs, maps

NOT

exploratory
“data visualization”

Examples

How to... **or** How it Works

Change over time

Map

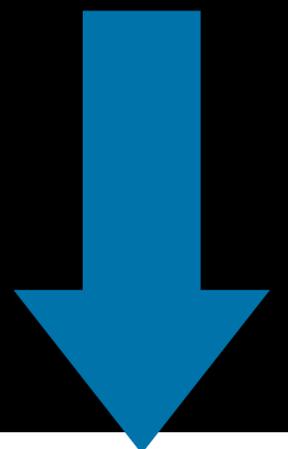
Morph

Abstract relationships

Emphasize comparisons

Fly-through and peel-away

play
examples
here



Bad examples



Gratuitous animation

“Don’t waste my time!”



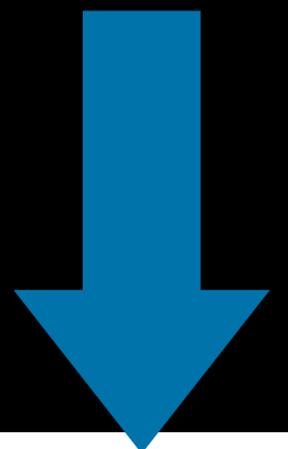
On screen with other content: distracting?

“Don’t bother me!”



Forced-pace reading

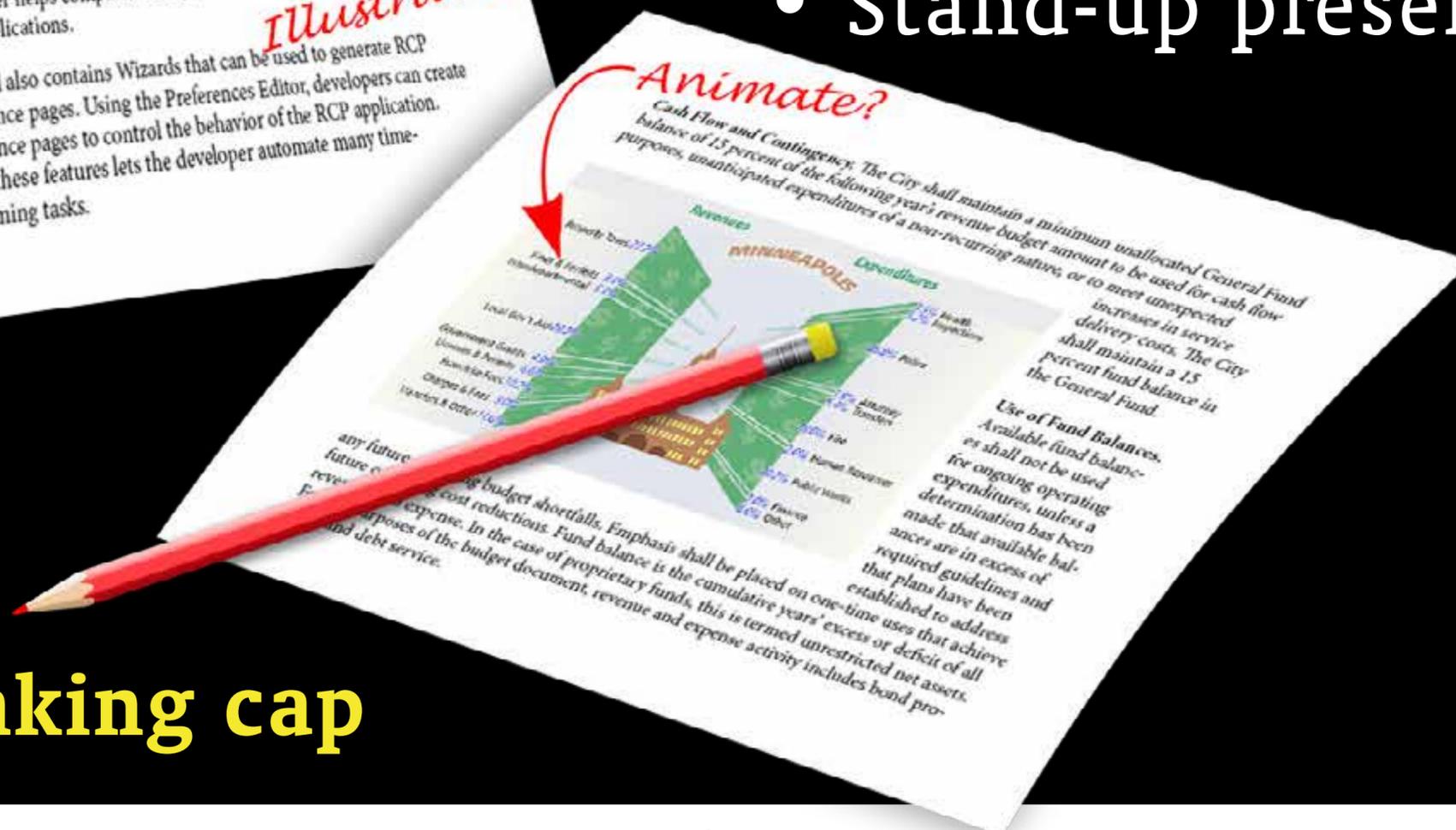
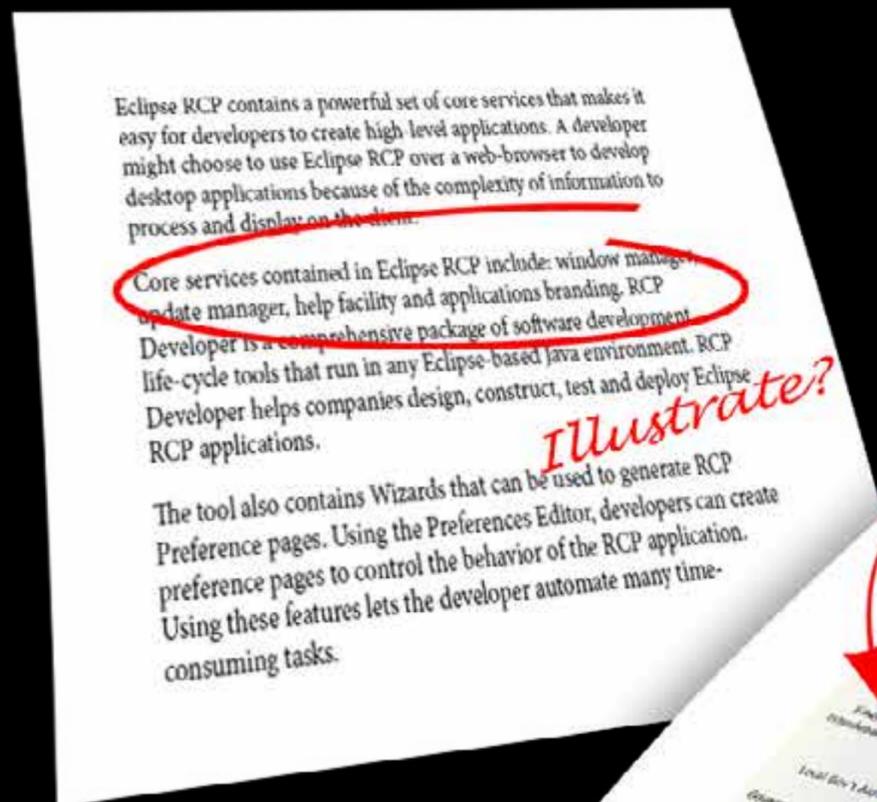
play
examples
here



Think: could/should we animate?

Consider **context**:

- Stand-alone system?
- Stand-up presentation?



new thinking cap

Think: Options for every animation

Sound?

Pacing

Branching?

User control?



interactive

Technology: Delivery

File format options

Flash

Video

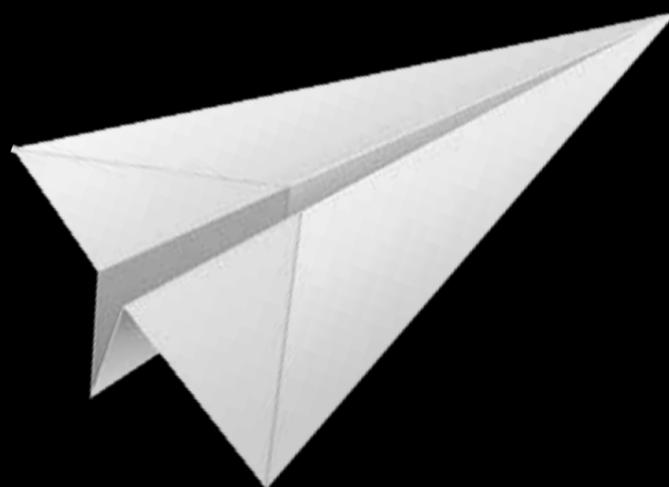
Animated GIF

File format selection criteria

File size concerns?

Mostly history.

Shareable
online?



Technology: Development tools

Graphics



Audio

Any

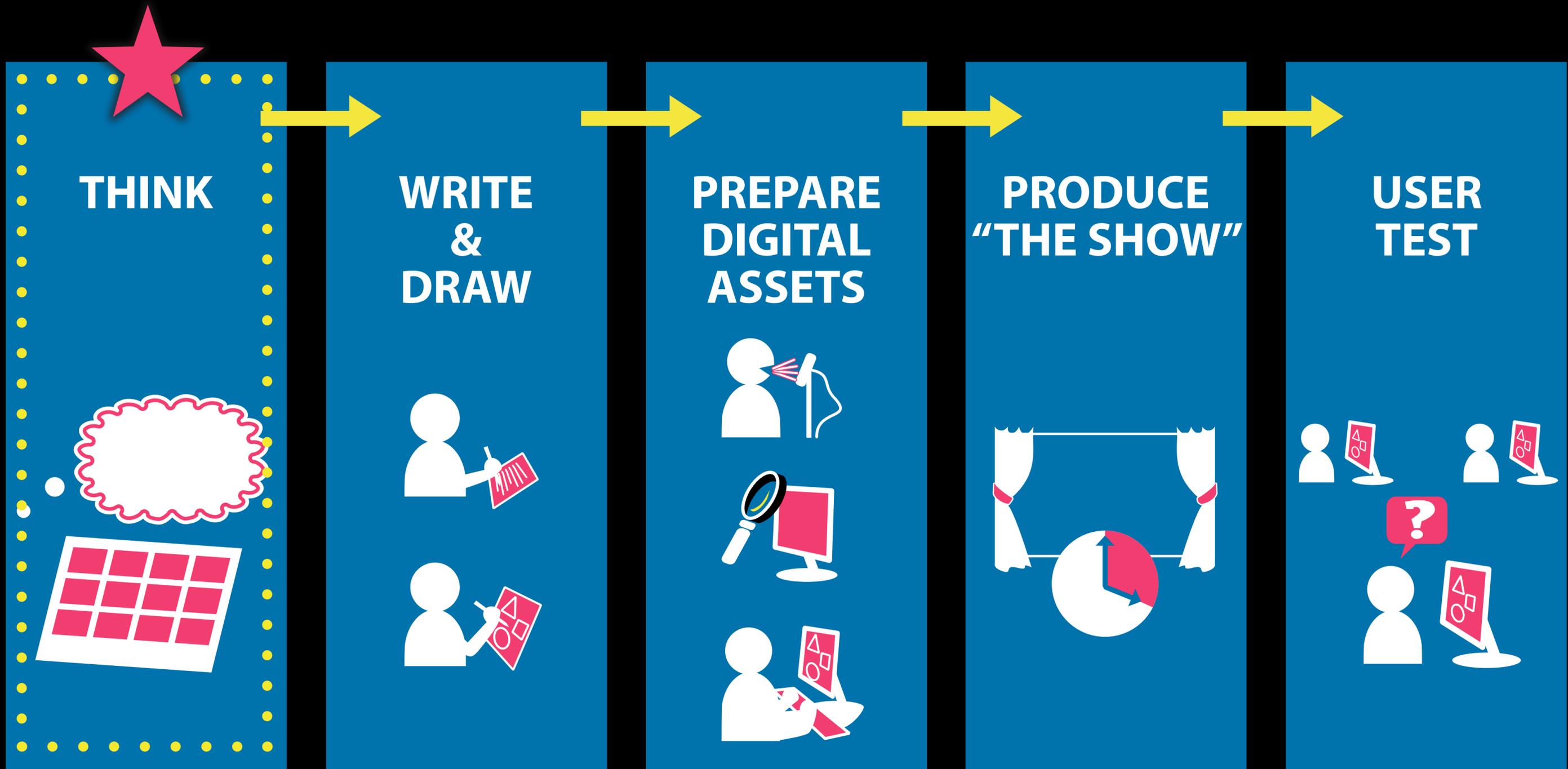
Images



Video Production



Authoring Phases; Phase 1



Thinking about *your* topic

Thoughts on visuals

Analysis/synthesis

How pictorial?

Tufte's "chart junk"

Match

existing styles?

Thoughts on animation

The 4th
dimension (time)

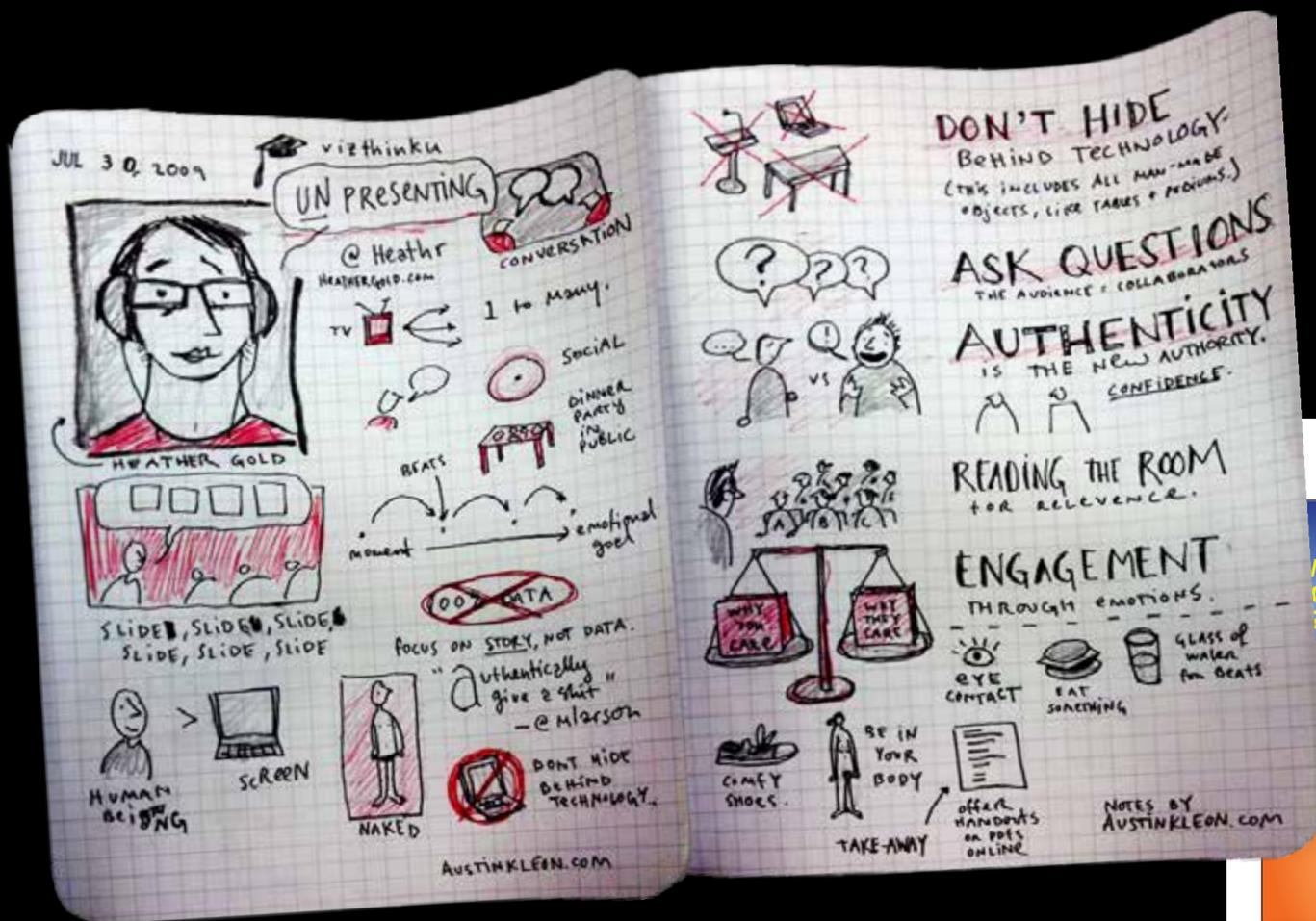
Principles of
traditional animation

Motion style

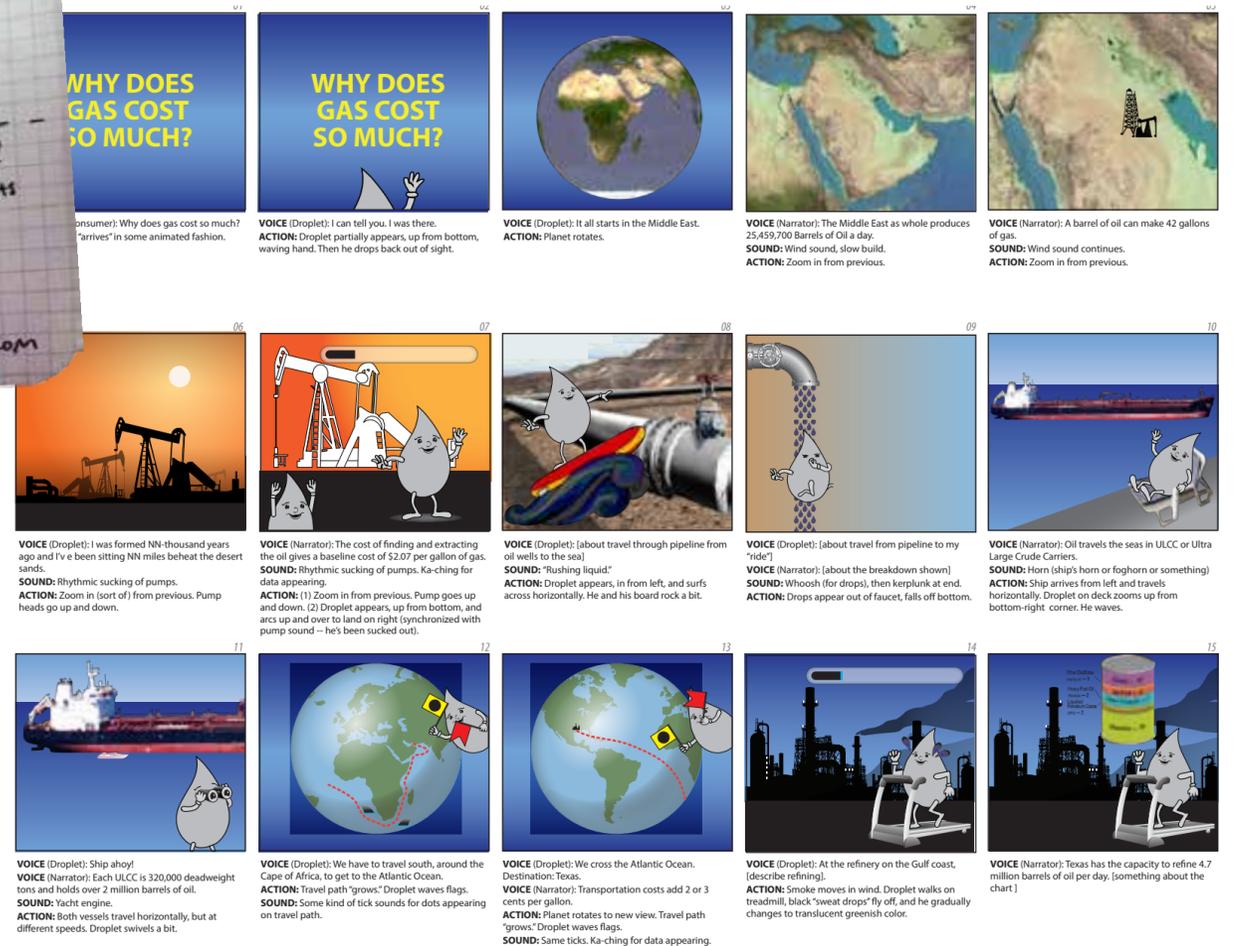
Both: what story are you telling?



Storyboard

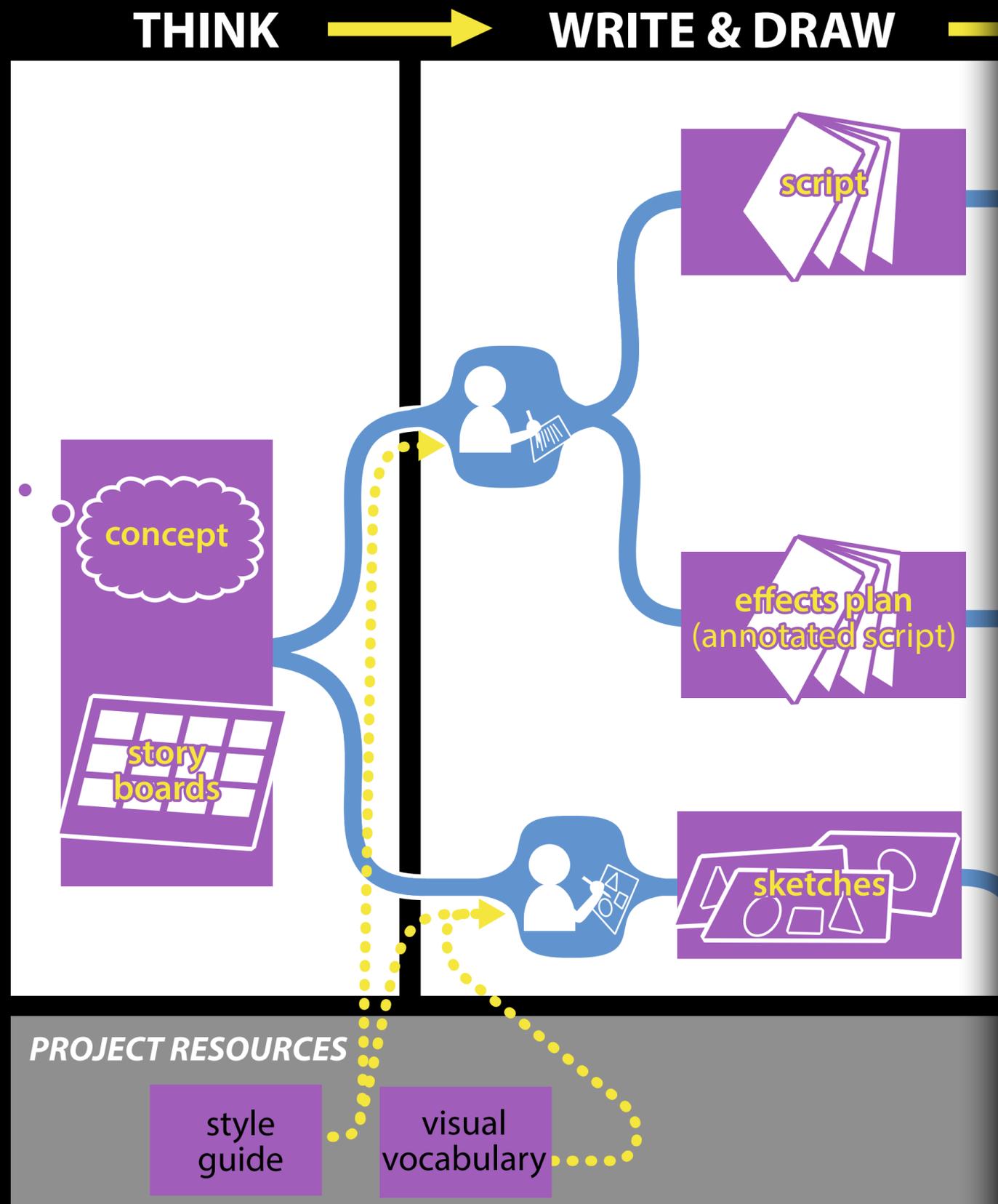


sequential
words & pictures

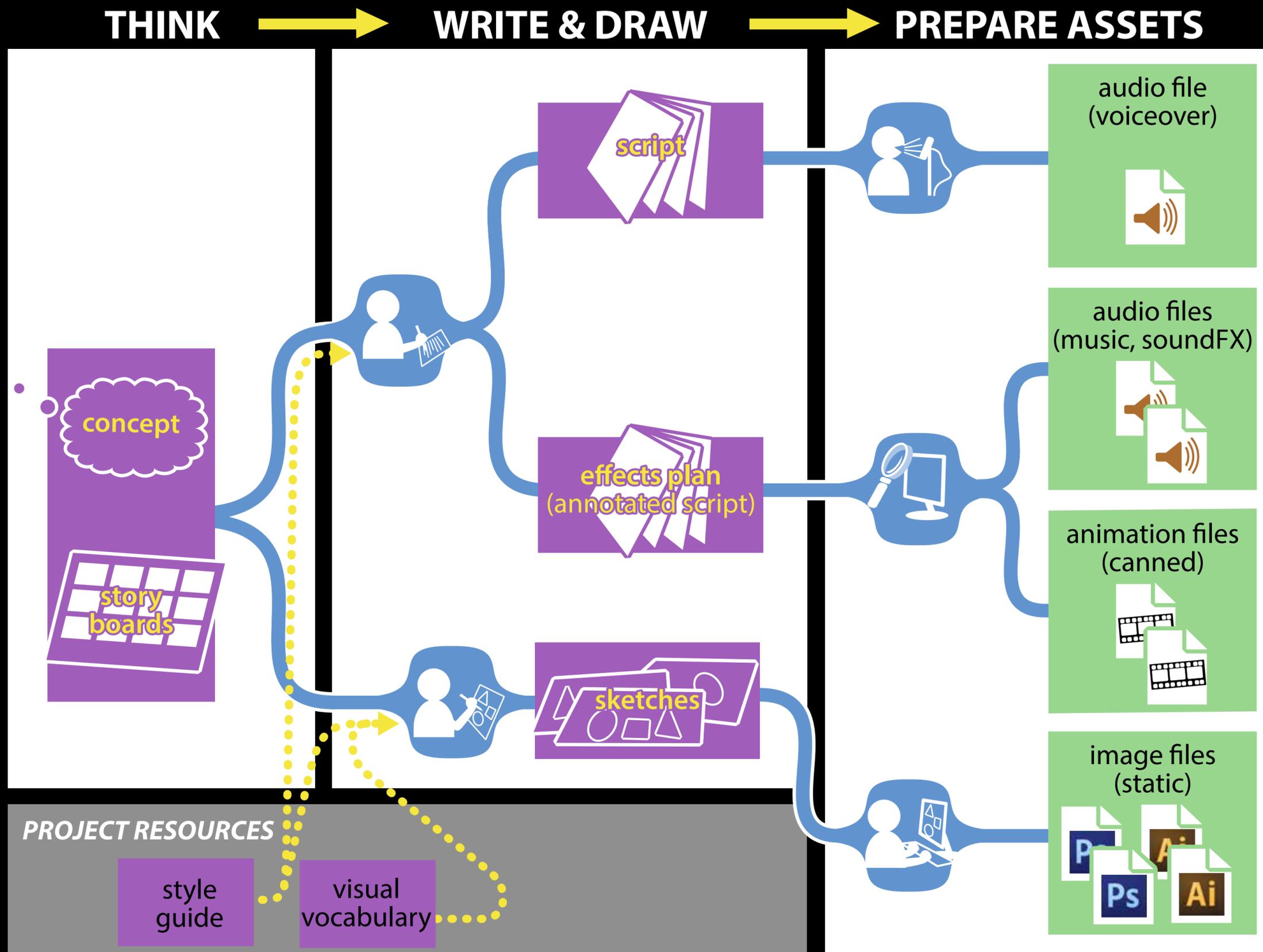


Authoring: Phases 2–3

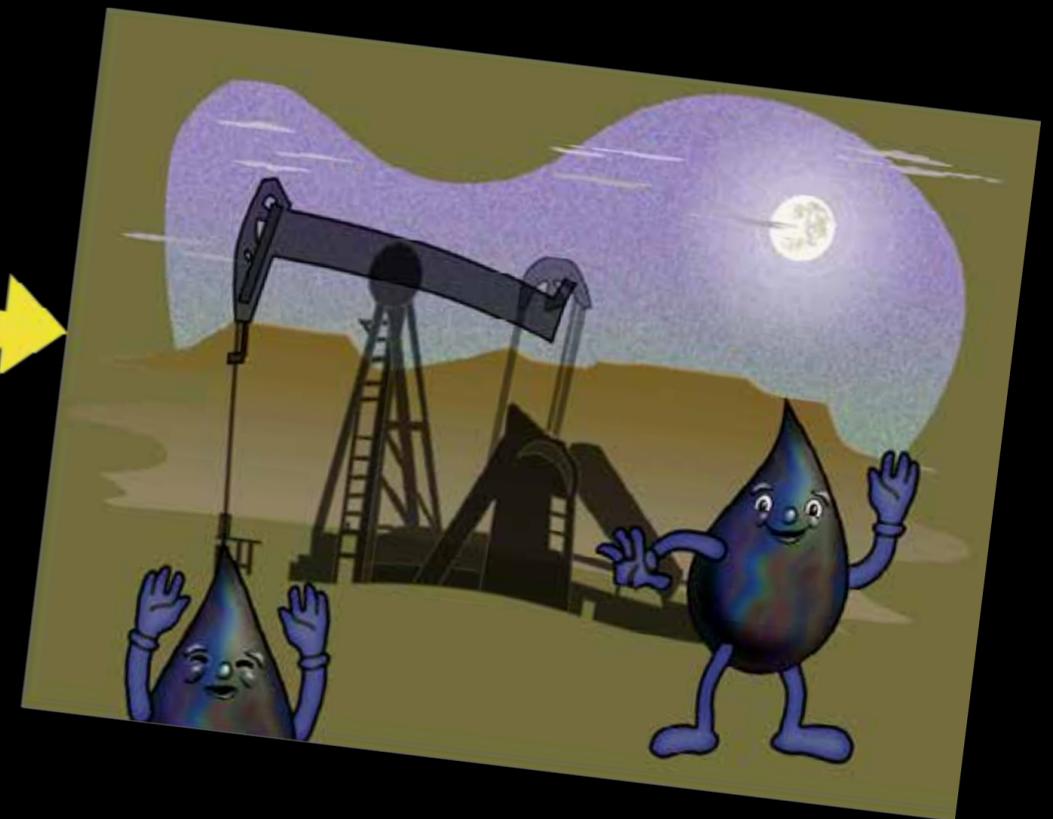
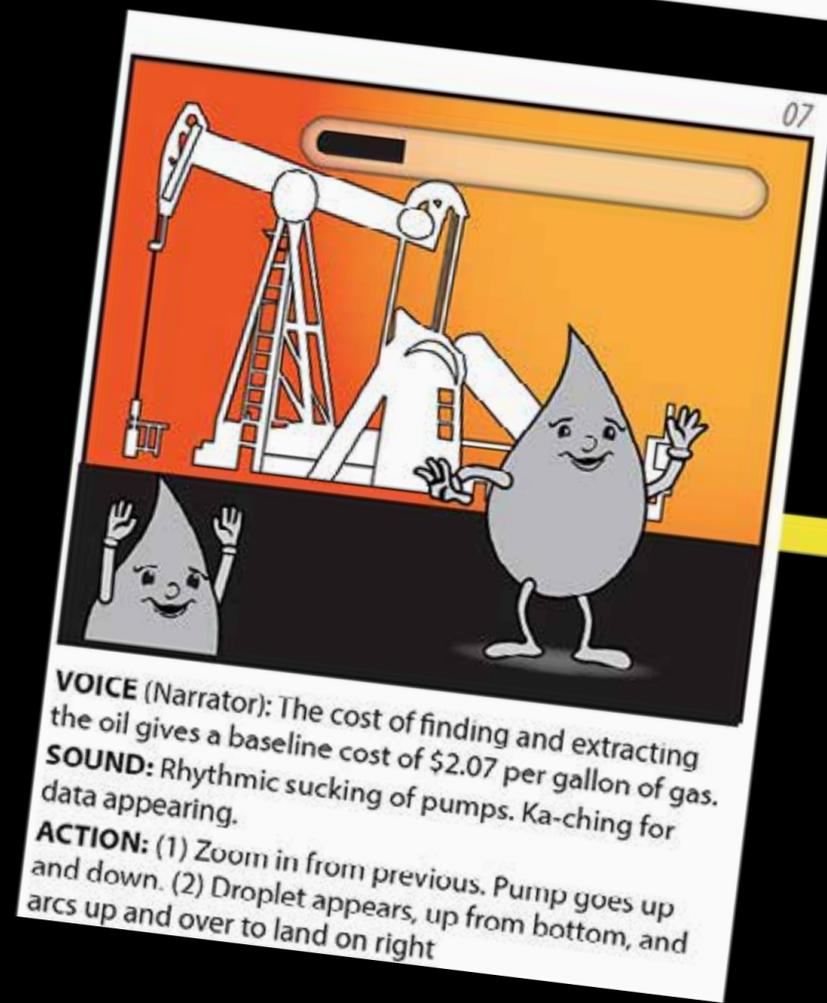




PREPARE DIGITAL ASSETS



Sketches to final art



Authoring: Phase 4



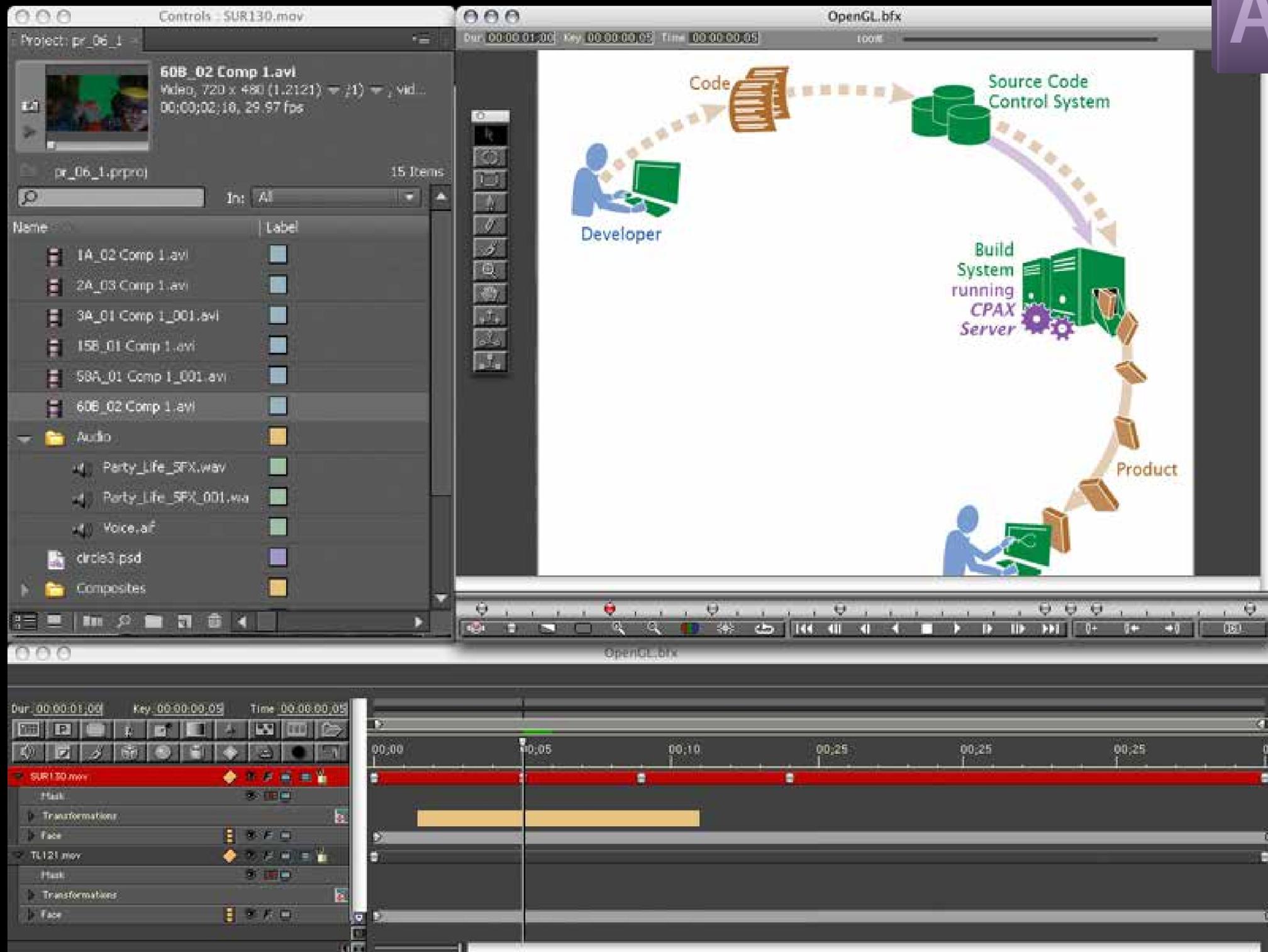
“Let’s put on a show!”

What
goes **where?**
when?

Who
is offstage
at this moment?



After Effects



ASSETS

STAGE

audio file (voiceover)



audio files (music, soundFX)



animation files (canned)



image files (static)



image files (static)



animation files (canned)



audio files (music, soundFX)



audio file (voiceover)



TIMELINE



ASSETS

 image files
(static)

 animation files
(canned)

 audio files
(music, soundFX)

 audio file
(voiceover)

STAGE



TIMELINE



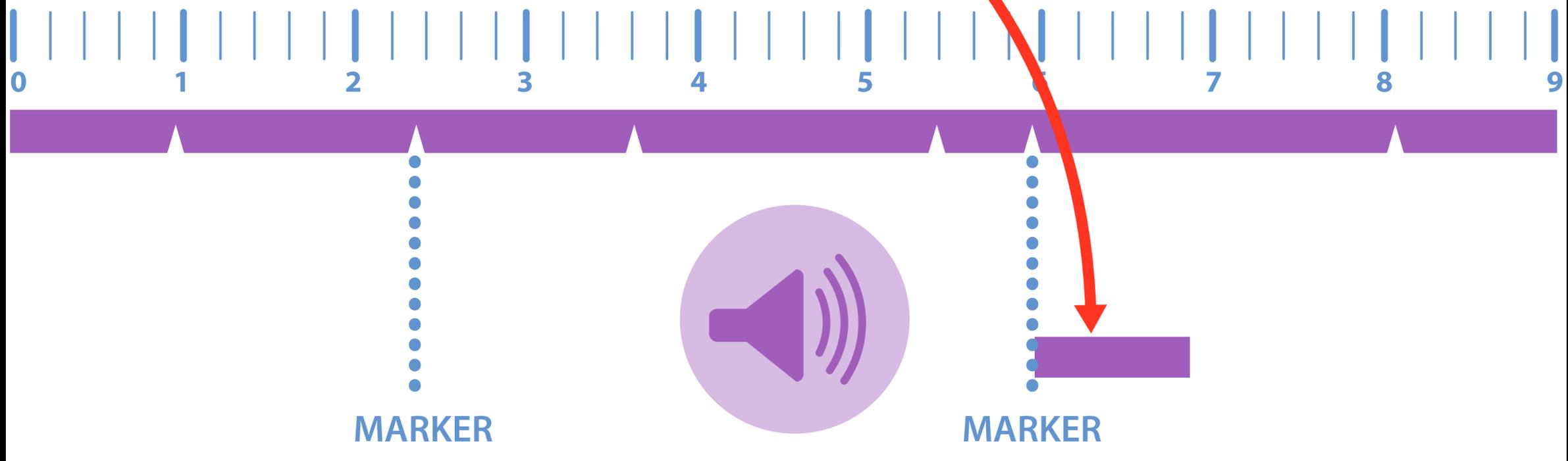
ASSETS

- image files (static)
- animation files (canned)
- audio files (music, soundFX)
- audio file (voiceover)

STAGE



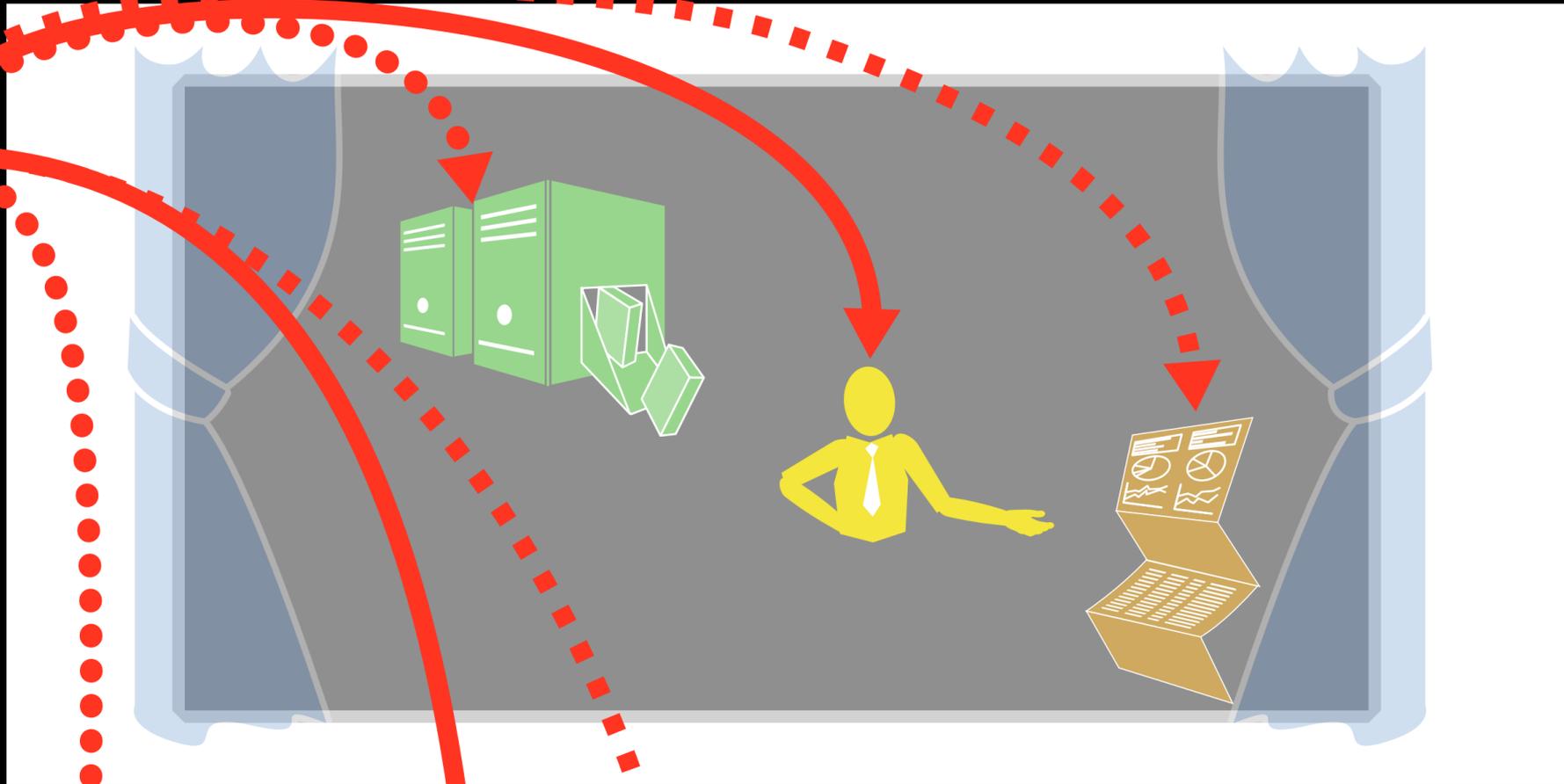
TIMELINE



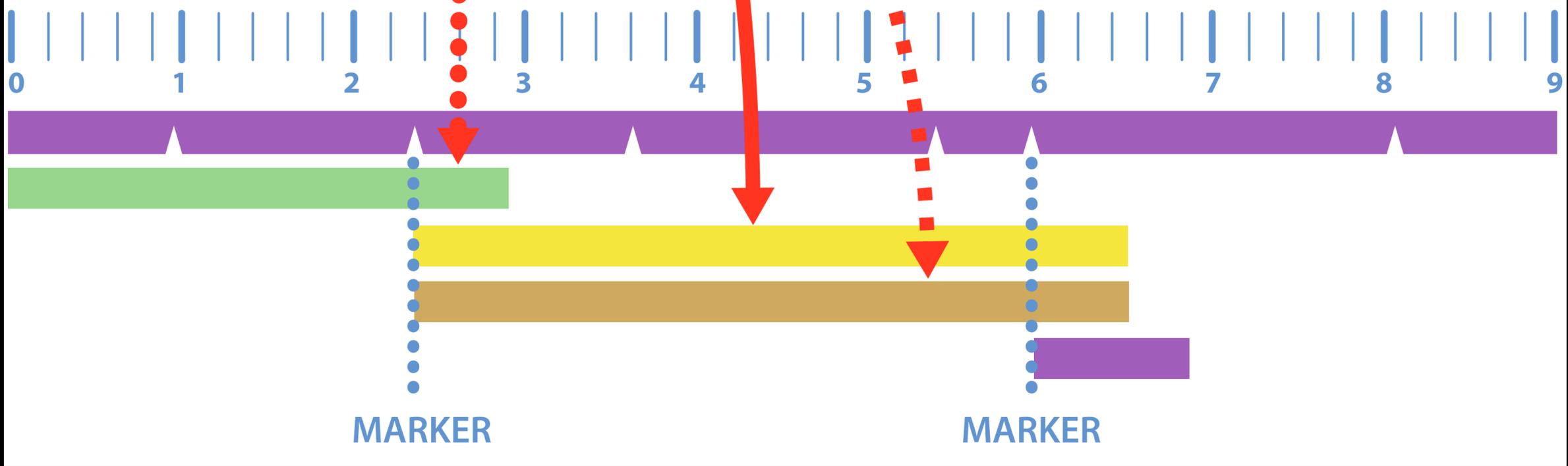
ASSETS

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STAGE



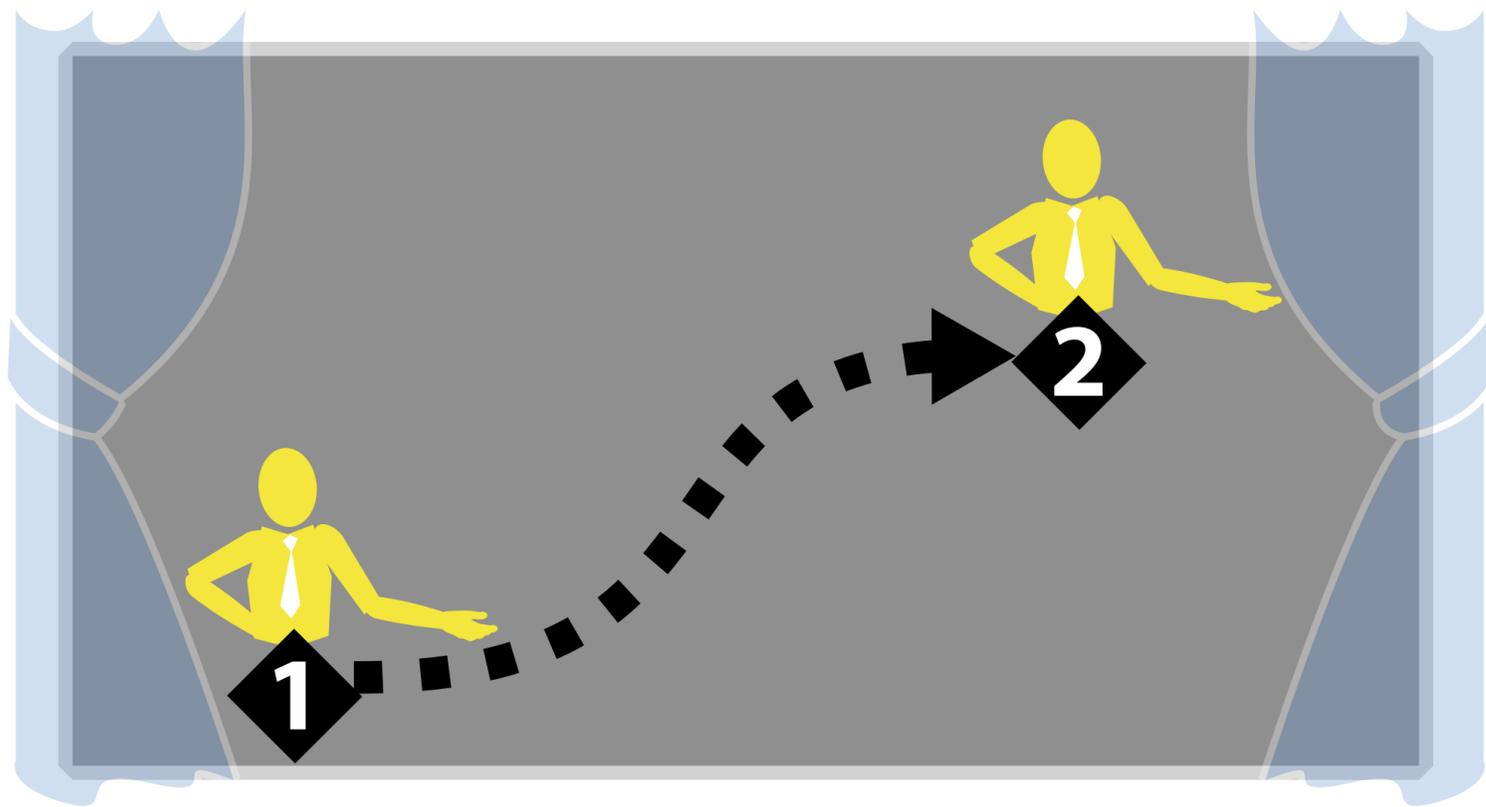
TIMELINE



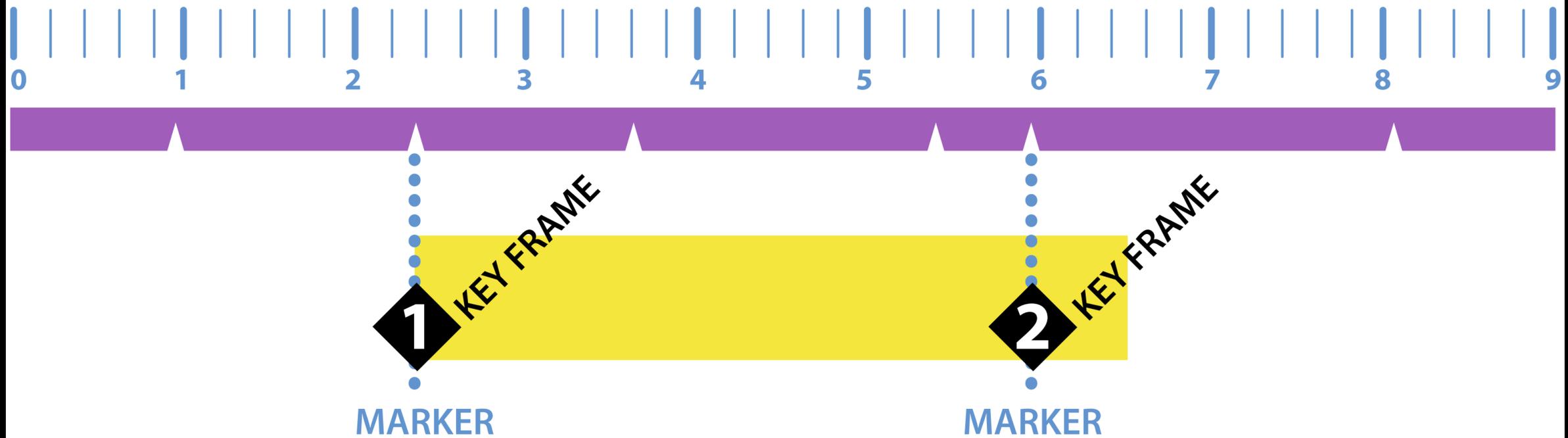
ASSETS

- image files (static)
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- audio file (voiceover)

STAGE



TIMELINE



Visual change over time

Change an object

Position, scale & rotation

Basic color

Layering (stacking order,
opacity & blending)

Apply effects

Blur, sharpen, texture

Distort

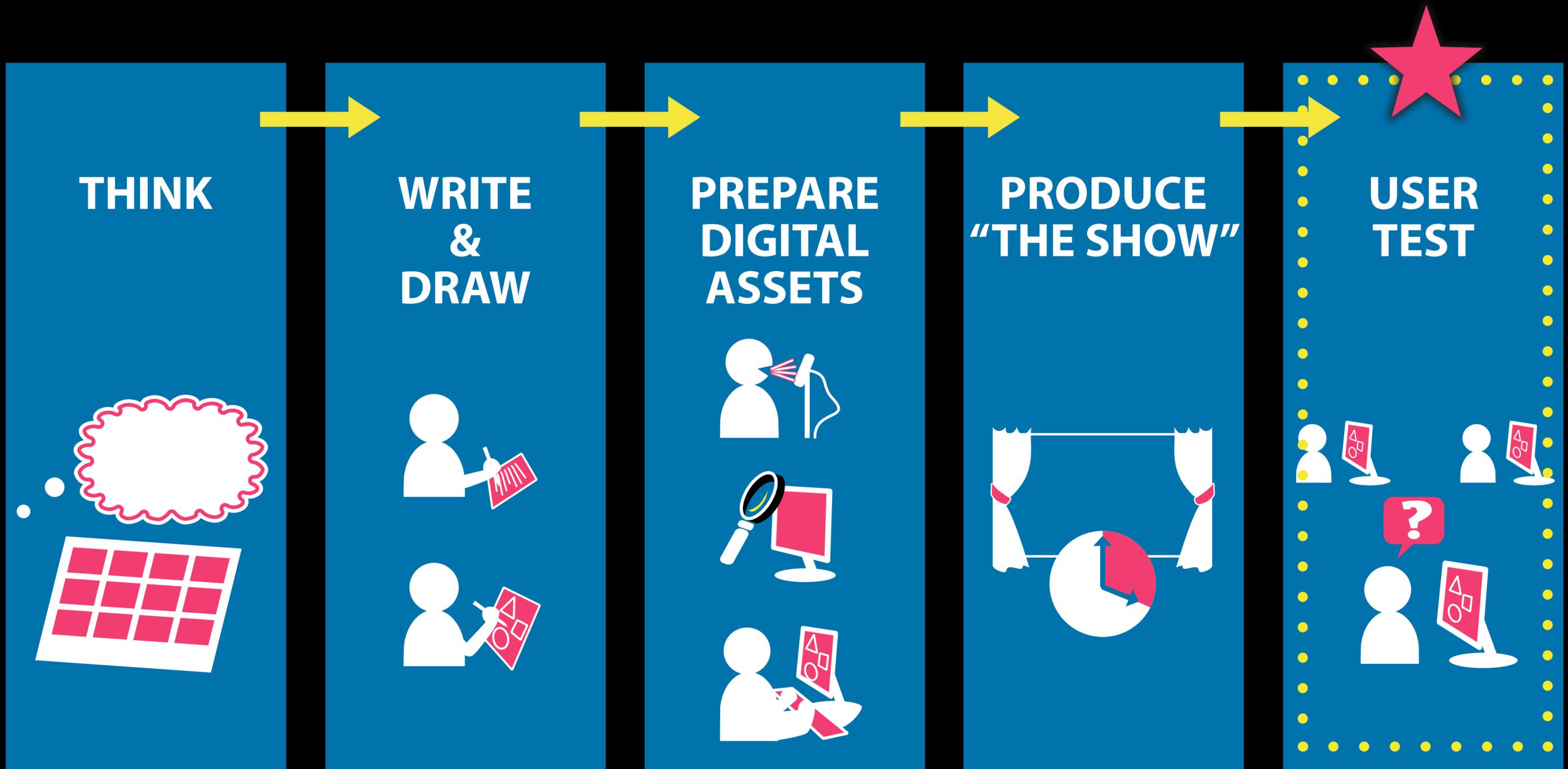
Mask (reveal portions)

Swap out objects

to “morph”

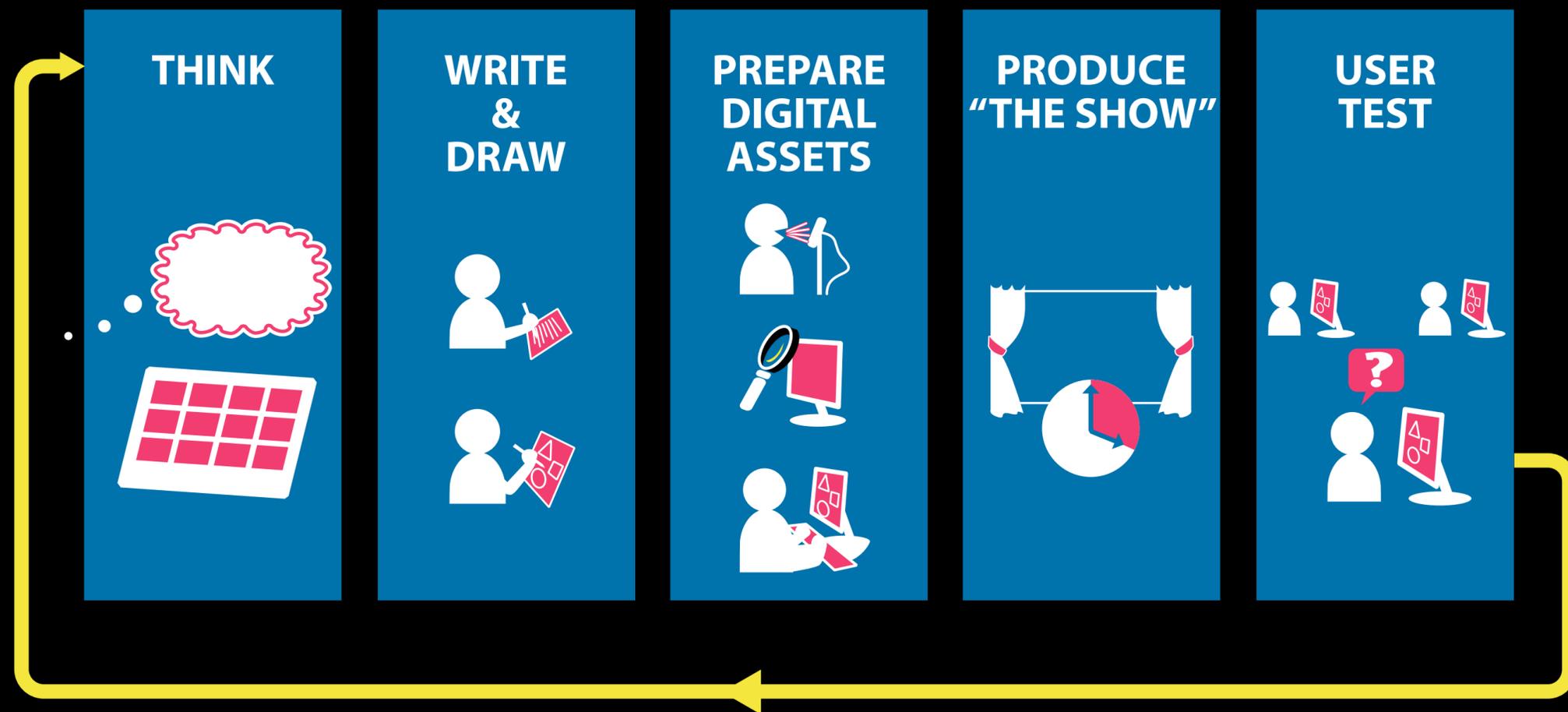
Authoring: Phase 5

Animation is *especially* likely to **fail** to communicate.



Authoring: Phase N+1: Iterate?

Do we **want** to spend more time and money?!
Careful storyboarding may prevent revisions.



Explanatory Animation

Worth it?

Research-based evidence:
it results in better...

engagement

comprehension

retention

contact
Nancy

OR

find
resources

