Project 03

Awaking Collections

The "Awaking Collections" project, through Mental Canvas and AR technology, connects three collections of the Science Museum - the illustration of the Rhododendron Valley in the clouds, the satirical illustration of the professional Trojan Horse, and the penicillin molecule model - into a concise and sincere interactive narrative. Starting and ending with a "box", it symbolizes the collection box in a museum or archive. The audience begins by opening an ordinary wooden box and explores three imaginative scenes - the fantasy mechanical world, the professional interest world, and the scientific microscopic world. Finally, they return to reality, experiencing the history and significance behind each item.

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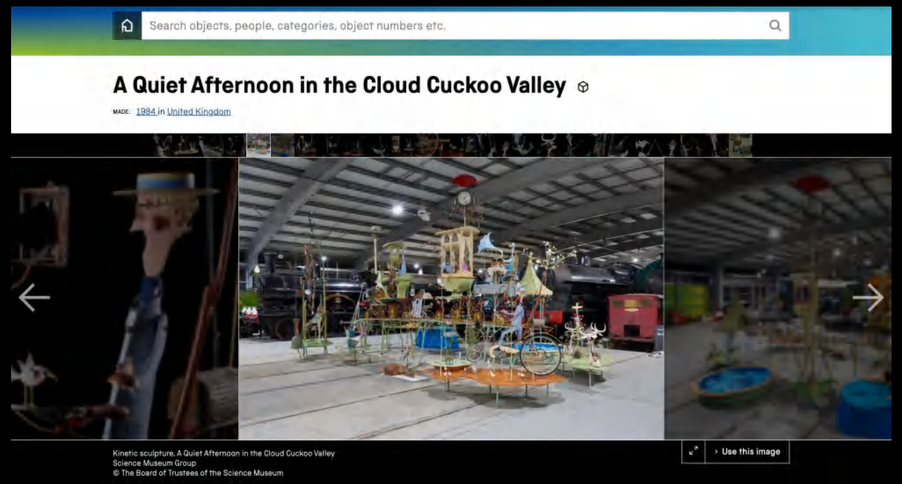
STUDENT NUMBER: 35953209

Research

Object 1 [A Quiet Afternoon in the Cloud Cuckoo Valley (Rowland Emett, 1984).]



Function:

A large-scale kinetic sculpture (automaton) intended to delight viewers by enacting eight whimsical scenes along Emett's fictional Far Tottering & Oyster Creek Railway every quarter-hour.

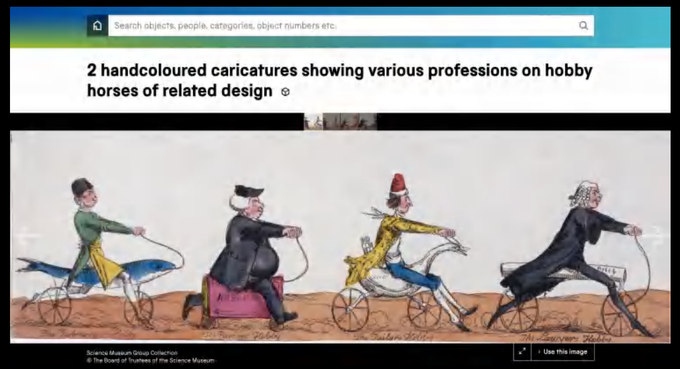
Materials:

A rich assemblage: wood and polychrome wood for the structural forms; fibreglass shells; metal, copper, lead, rubber and plastic for mechanisms and detailing; textiles for figures and padding; electric motors, wiring and lightbulbs for motion and illumination.

Story / Metaphor

Each "car" animates a vignette– cows nodding to harp music, fishermen hauling mermaids, a clock in a blossom tree, a Victorian swimmer diving, and more–evoking an improbable, dream-like journey. Emett's engine becomes a playful critique of Victorian engineering, and the entire piece asks: what fancies drive our own modern "railways"?

Object 2 Caricatures Showing Various Professions on Hobby Horses



Function:

A satirical print designed to lampoon contemporary tradesmen by depicting each “gentleman” literally riding his own profession—an early 19th-century commentary on social roles and occupational fervour.

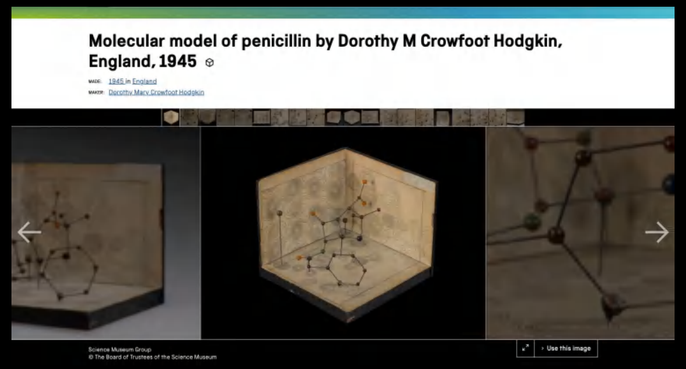
Materials:

Hand-coloured aquatint or lithograph on paper (205 × 316 mm), combining a printed outline with watercolor or gouache washes for vivid effect.

Story / Metaphor:

The fishmonger astride a giant fish, the parson on an oversized Bible, the tailor on a goose with scissors at his side, the lawyer on a scroll of briefs—all serve as a visual pun: our jobs don’t just define us, they carry us, sometimes to absurd extremes.

Object 3 Molecular model of penicillin



Function:

A teaching and research model that translates the X-ray crystallographic data of penicillin into a tangible, three-dimensional structure, helping chemists and students visualize how atoms bond in this landmark antibiotic.

Materials:

Typically wooden or plastic spheres representing atoms, metal rods as bonds, mounted on a wooden base—all painted or color-coded to distinguish elements (e.g. carbon, hydrogen, oxygen, nitrogen, sulfur).

Story / Metaphor:

Beyond its scientific utility, Hodgkin’s model symbolises the intersection of art and science: a delicate, handcrafted object that embodies the molecular “architecture” of life-saving medicine and highlights the invisible order underpinning medical breakthroughs.

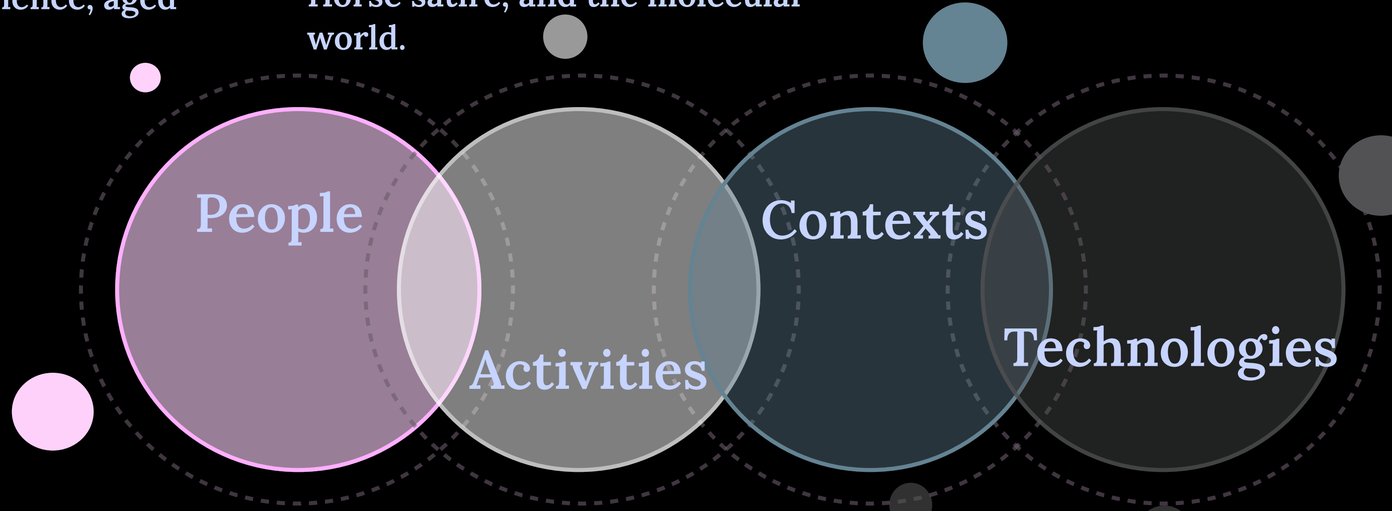
PACT Analysis

Primary users：

Cultural Explorer, Curious about the history of art or science, aged 18 to 35.

Secondary users：

Prefer short videos and value visual impact.



1.Open the ‘Box’ : Start the experience → Focus visually on the ‘box opening’.
2.Watch three scenes: entering the cloud fantasy, the Trojan Horse satire, and the molecular world.

3.AR interaction: Rotate/ zoom the model.
4.Leave: Return to reality as a closing hint.

1. Online browsing: Mobile phone/ tablet/desktop, zero-space layout.
2. Museum Application: Embedded AR tour guide App within the museum.

3.Usage duration: ≤3 minutes each time.

1.Video player: Web MP4 + Canvas control for scrolling triggering.

2.AR engine: Reality Composer.
3.Animation: Mental Canvas

Persona

Helen

About

25 | Postgraduate | London | Art history

Background

A master's student in art history, passionate about illustrations from the 18th to the 19th century.

Goals

I wants to analyze the history and artistic value of different collections.

Behavior

I like in-depth reading, playing it repeatedly and taking screenshots as notes.

Demand &pain points

1. I need a detailed background and source description of the collection.
2. I am easily confused by the ambiguous motion effects.

Darren

About

27 | Postgraduate | China | Visual design

Background

I'm a beginner in visual design and I like to express creativity through new media.

Goals

I want to quickly produce a cool prototype and show it to my friends.

Behavior

After looking at the example once, start copying immediately. I prefer visual tutorials.

Demand &pain points

1. I need simple and reusable interface components.
2. And simple interaction examples.

Ivy

About

22 | Undergraduate | London | Biology

Background

I am an undergraduate biology student and have a strong curiosity about the stories behind scientific discoveries.

Goals

I would like to learn about the history and significance of molecular models and casually share it with the community.

Behavior

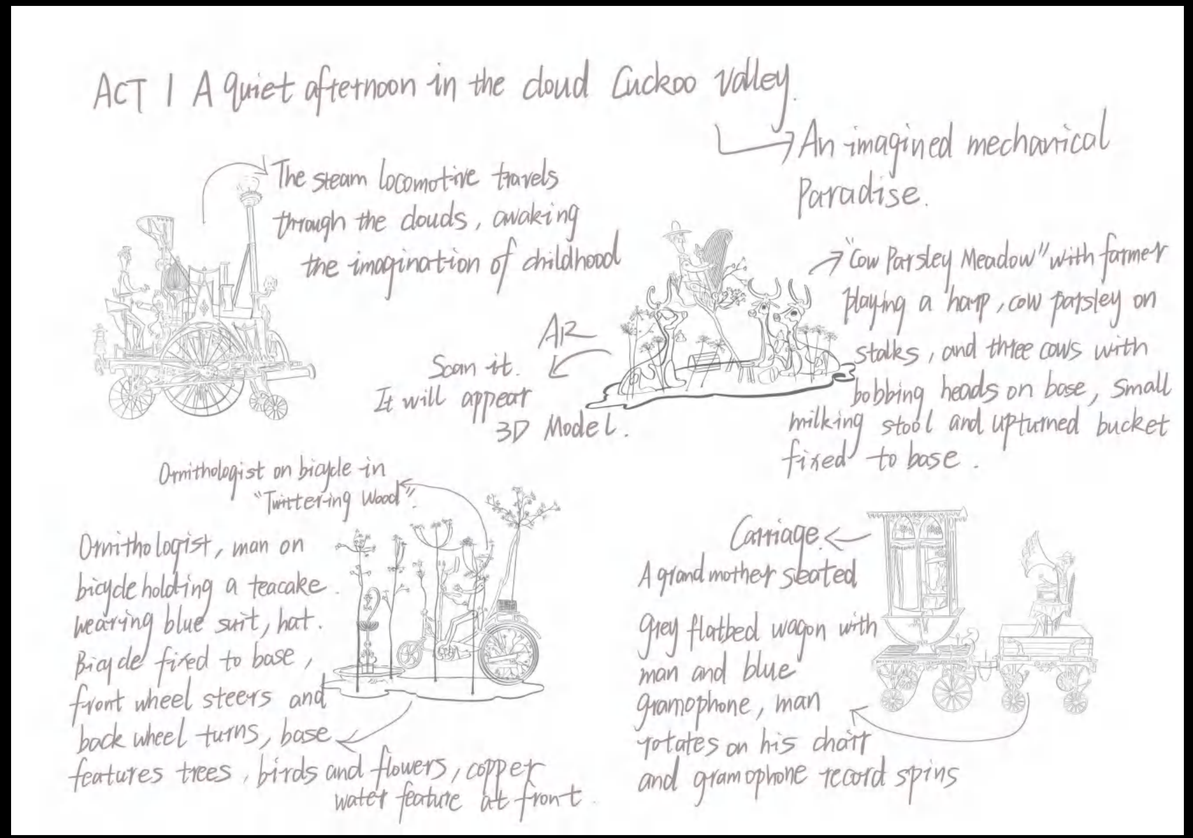
Jumping in and out, paying attention to key subtitles and voiceovers, not very patient with complex operations.

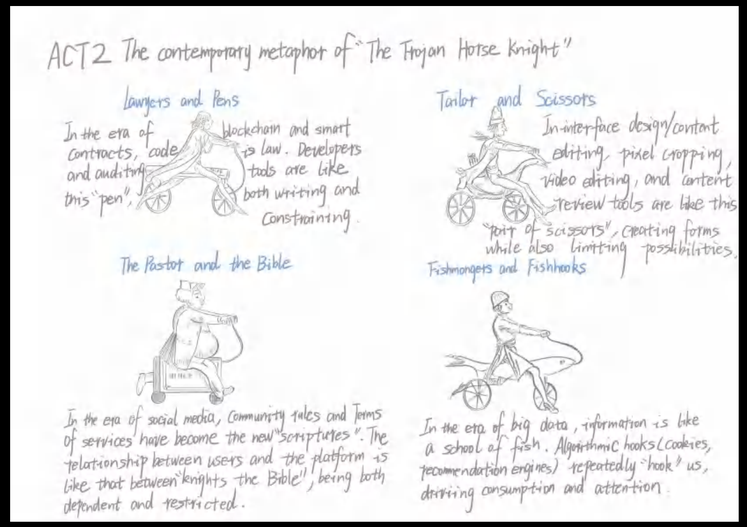
Demand &pain points

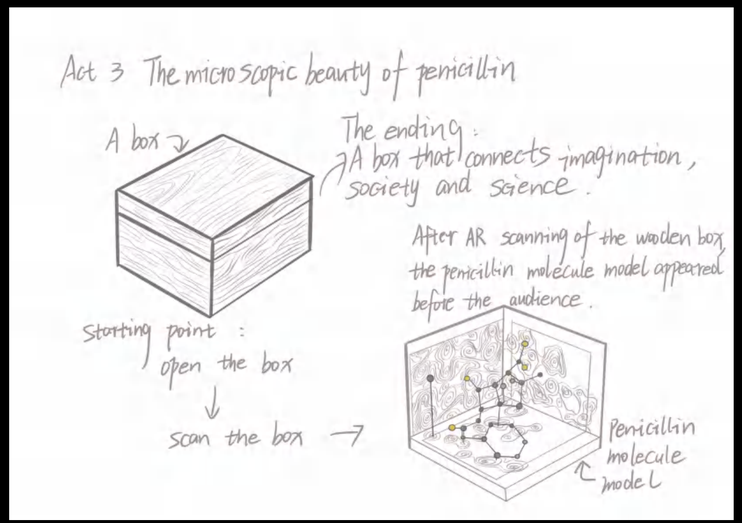
1. I need concise integration of knowledge points.
2. And interactive little surprises.

Sketch

Based on the background and content of these three collections, I renarrate them and divide them into three themes.







Narrative Structure

Prologue - "Opening the Box"

Vision: A calm wooden box.

Narrative objective: Establish the metaphor of the "museum collection box" - from which all stories are born.

Sound: The soft sound of a wooden box + the sound of a steam train in the distance.

Act 1 - "Imagined Mechanical Park"

Subject: Dynamic Sculpture Model of "A Quiet Afternoon in the Cloud Sparrow Valley".

Visual/Interaction: Pull out the clouds and mist on the Mental Canvas → Display four small scene simple animations - AR can be achieved here. Scan according to the prompts and the corresponding 3d model will appear.

Metaphor: The "steam locomotive" of human imagination - grand and absurd, carrying our yearning for utopia.

Act 2 - "Satire and Resonance of Professional Trojan Horses"

Object: Satirical image of the "Professional Trojan Horse" in the 19th century.

Visual/Interaction: Slide the screen → Four wooden horse wheels flow into the screen; On the last page, four people enter simultaneously. Scanning can achieve AR. Scan according to the prompts and the corresponding 3d model will appear.

Metaphor: We "ride" on professional tools, benefiting from and being driven by them.

Act 3 - "The Microscopic Beauty of penicillin"

Object: Hodgkin's penicillin molecular model.

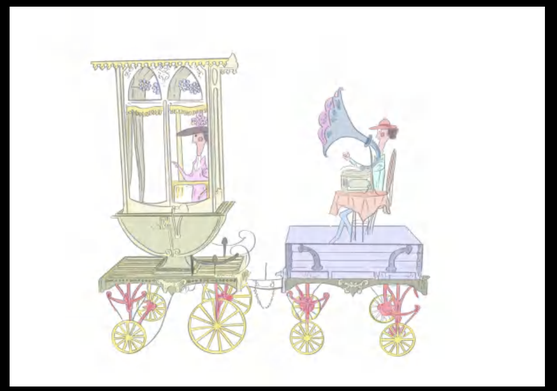
Visual/Interaction: Scan the box → The 3D model rotates slowly; Gestures/mouse dragging can zoom in.

Metaphor: At the most minute level, science reveals the "intangible mechanism" that sustains life.

End Title: A box, connecting imagination, society and science.

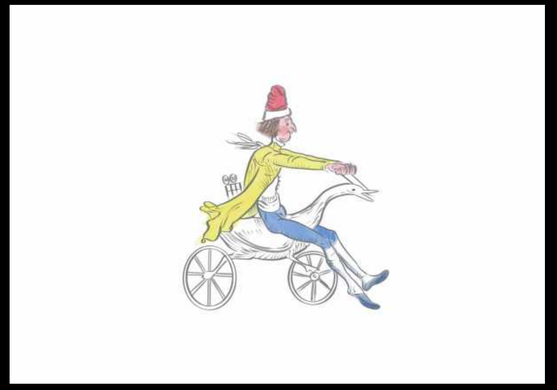
Static Outcome

An imagined mechanical paradise



Satire and Resonance of Professional Trojans

Fishmongers and fishhooks



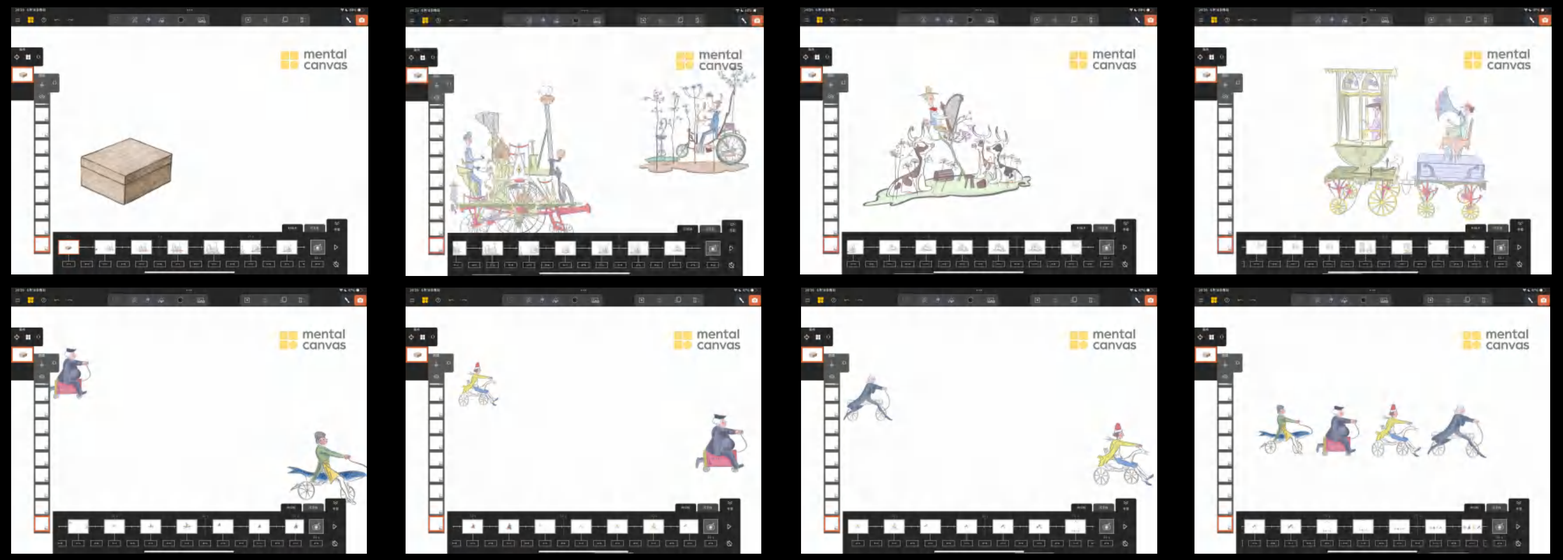
Tailor and Scissors

The Pastor and the Bible

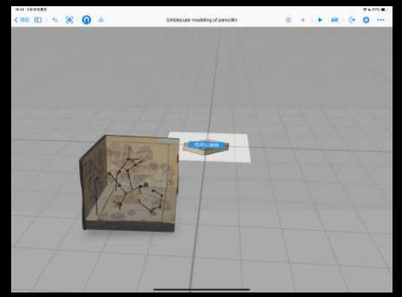
Lawyers and Pens

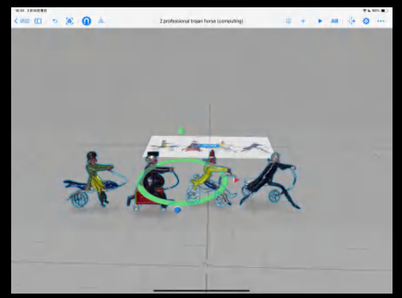
Video Process

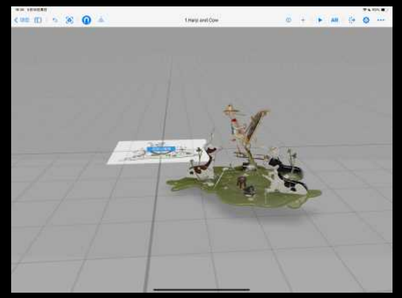
Mental Canvas Screenshot



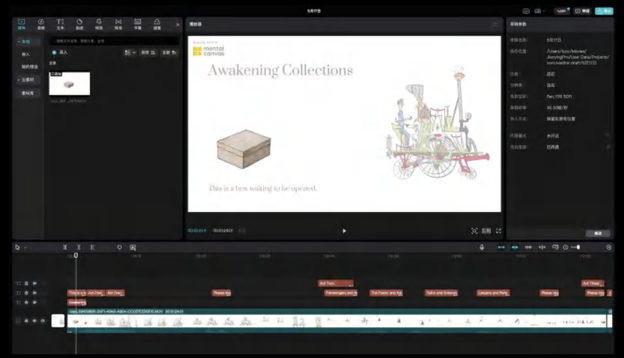
AR Screenshot







Video Clip Screenshot



Video Outcome

Video Link:
https://youtu.be/APVFc1u4vm4

Interactive User Testing

Video Link:
https://youtu.be/hSBdY8VHJDA

Outcome

Interactive AR 3D Model