

EL MANSEB
EDUCATIONAL
GAME
01

DESIGN GRADUATION PROJECT
SPRING - FALL 2019

GAME DESIGN
ILLUSTRATION | ANIMATION
PRODUCT DESIGN

CATEGORY: EDUCATIONAL | POLITICAL
LANGUAGE: ARABIC

An **educational game** enhancing **political awareness** and **youth engagement**. This game represents the country on a macro scale, reflecting how its economy works and highlighting the conflict between an individual's self-interest and the overall wellbeing of the population.

The game is set up such that each player learns **collaborative work play** through collectively managing resources with other players. In turn, every decision a player makes affects those **shared resources**, and consequently, the rest of the players.

The aim of the project is to introduce basic **political, governance** and **constitutional elements** to young adults in order to make them more politically engaged. The game is built on top of the **constitution**, as it teaches players how constitutional articles directly relate to our day-to-day lives.



GAME SPECIFICATIONS
TIME: 20 - 50 MINS
NUMBER OF PLAYERS: 2-4
AGE: 14+

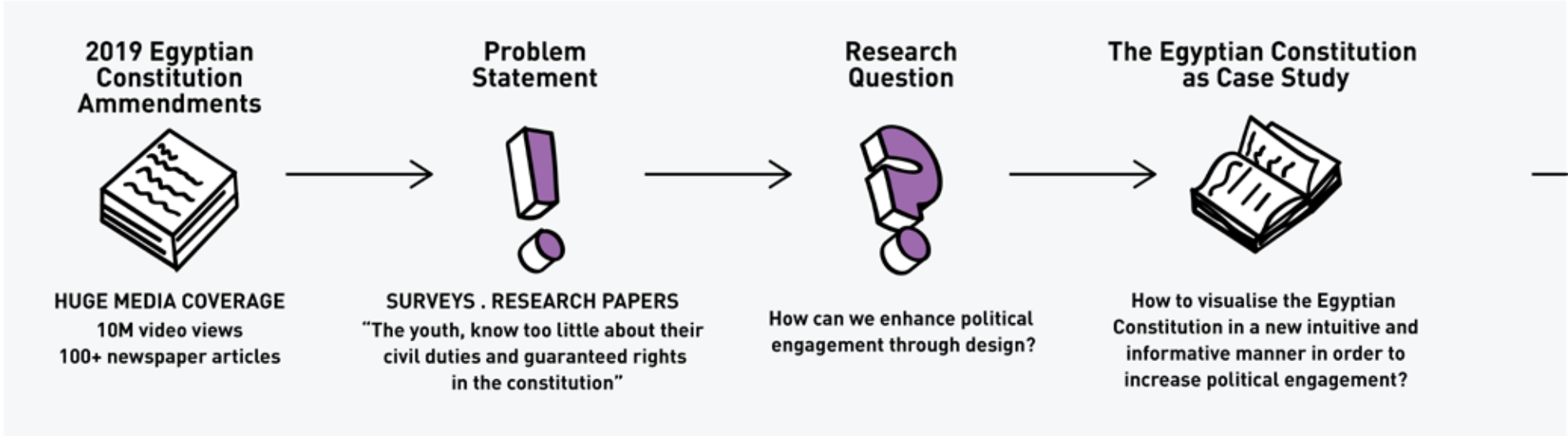
MOTIVATION:

During the latest ammendments of the **Egyptian Constitution**, more than ten million video views on YouTube, hundreds of newspaper articles, media coverage by various famous media channels as well as billboards, radio advertisements and social media posts were discussing the new changes. Such rising public interest shows the importance of investigating this document, which has a great symbolic and practical value.

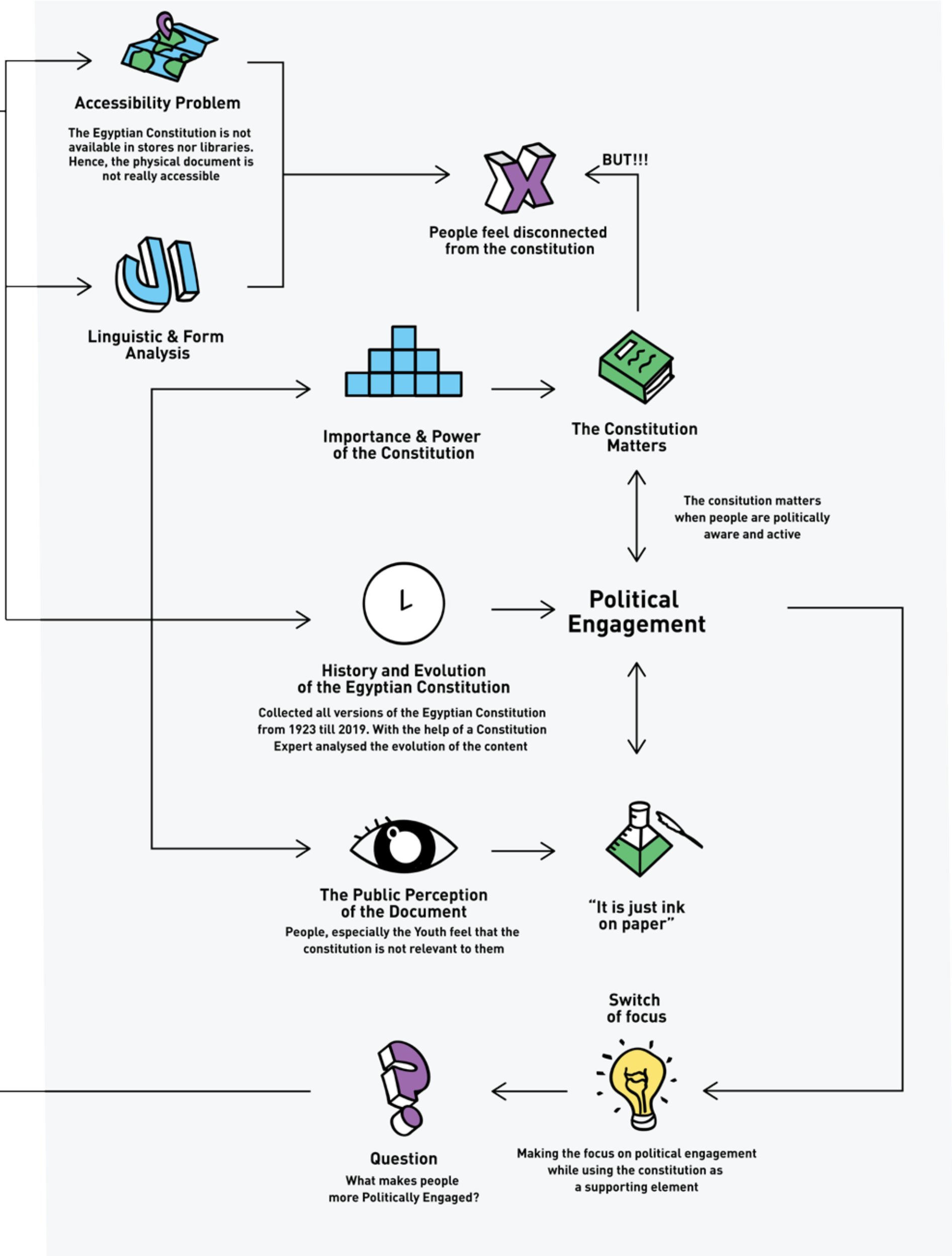
As a matter of fact, statistics show that there is an accrued ignorance of the basic elements of the constitution, including basic political structures, history and evolution, among Egyptian citizens. The general public, especially the youth, know too little about their civil duties and guaranteed rights in the constitution.

This problem has led Egyptian citizens to feel disconnected from their own constitution. In order to solve this issue, many questions arise such as how can we enhance political engagement through design?

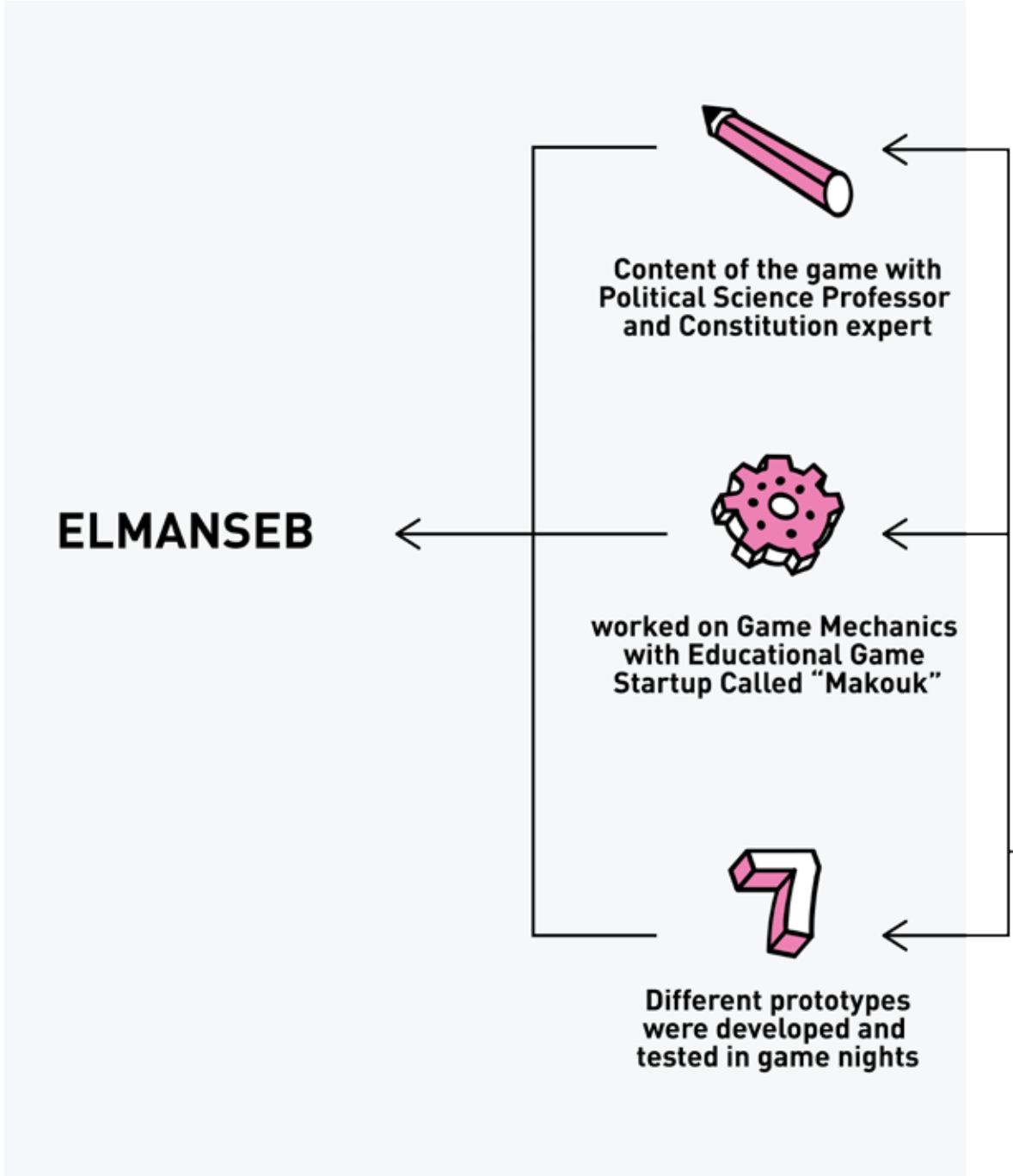
Phase 1: Identifying the Problem



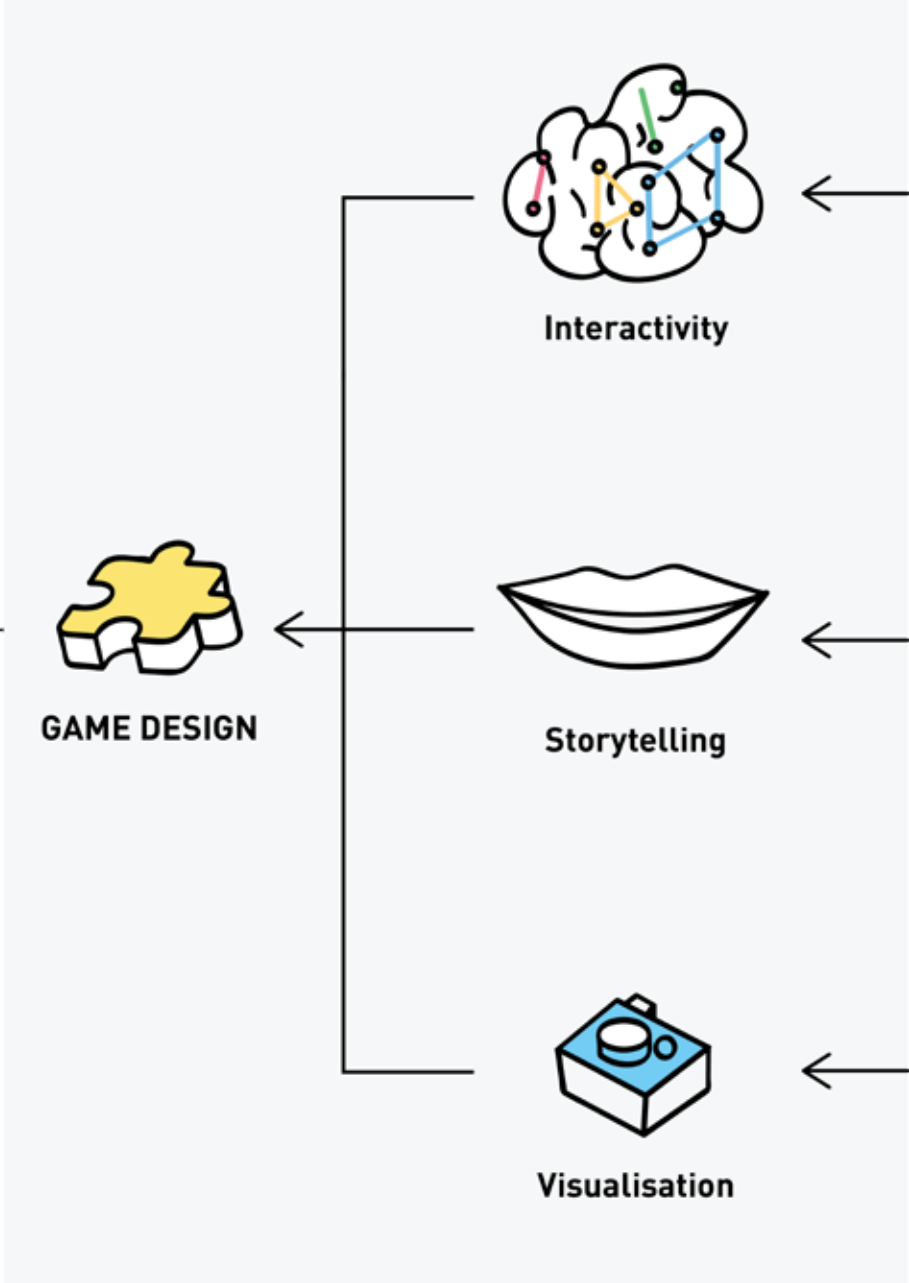
Phase 2: Hypothesis & Research of a Possible Design Solution

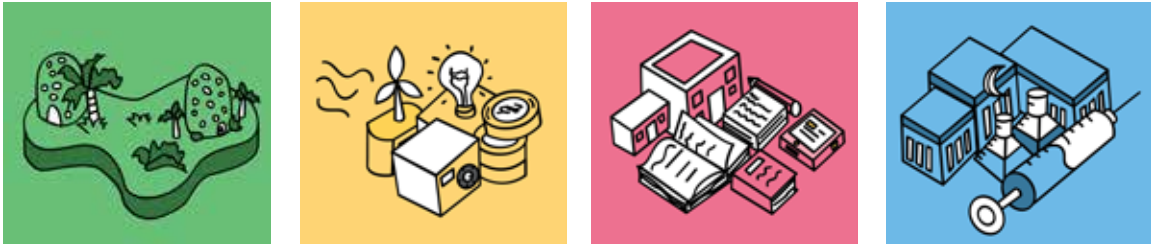


Phase 4: Design Process

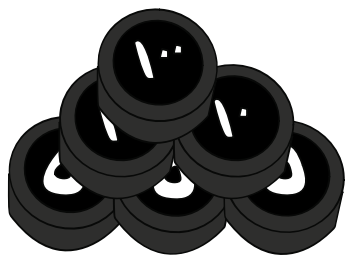


Phase 3: Chosing a Design Outcome



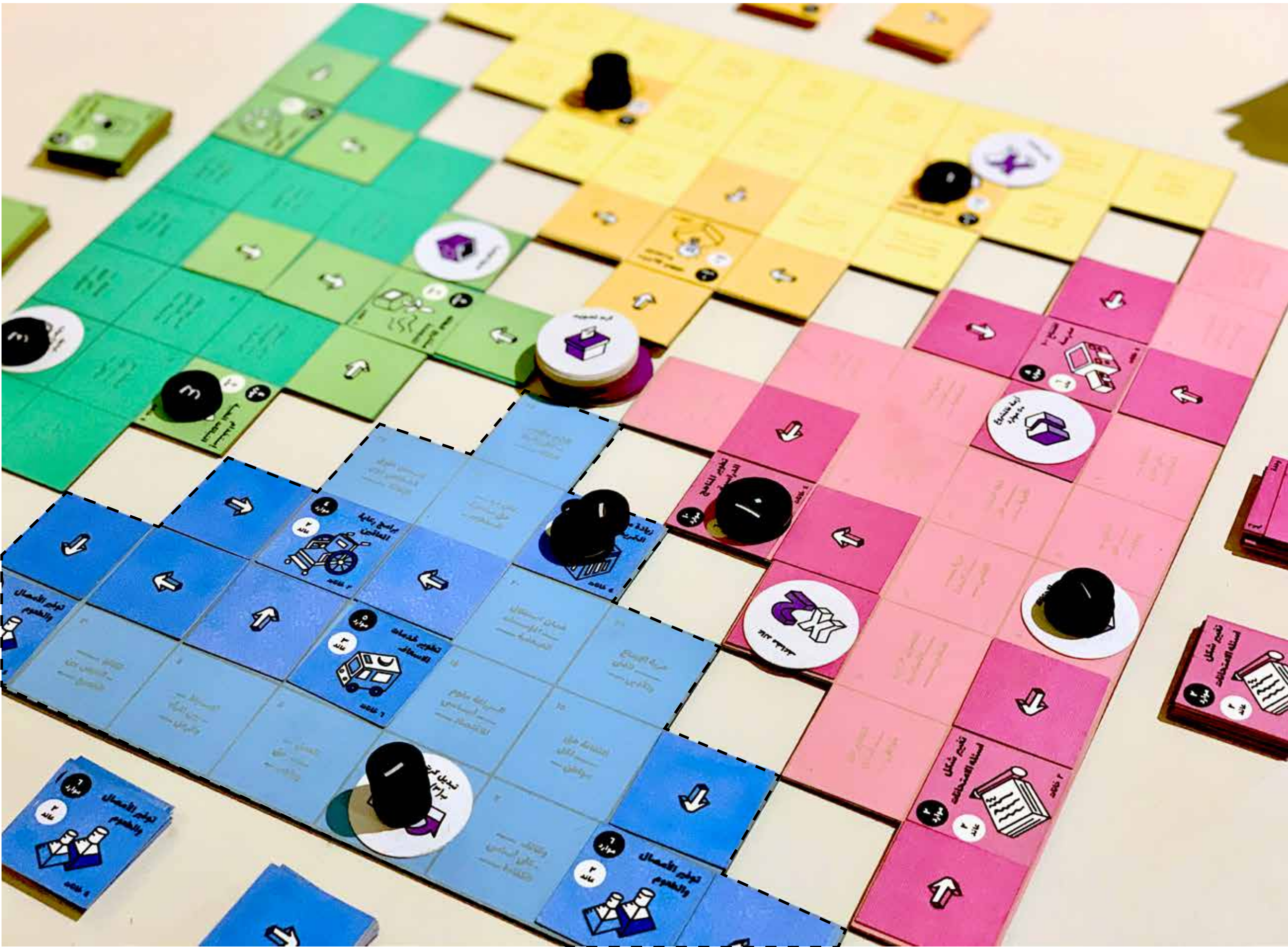


HOW TO WIN? Each player acts as a member of the parlement who is held responsible for a specific sector (Environment, Economy, Education or Healthcare). The winner is the player who fills completely his/her board with successfull iniatives.



SHARED RESOURCES

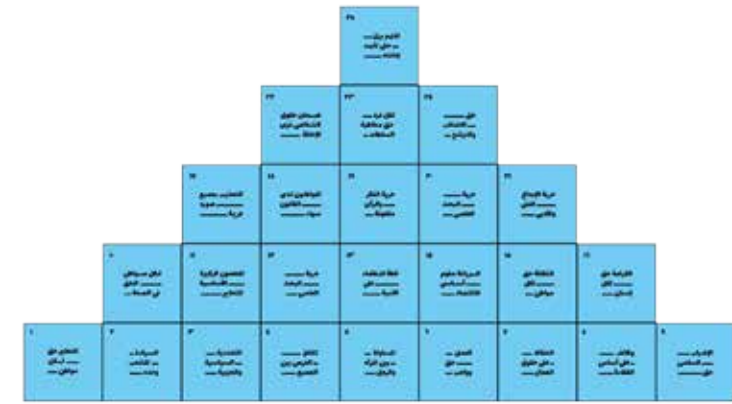
The budget and manpower are represented in the form of country resources that are managed collectively by all 4 players.



ACTION CARDS

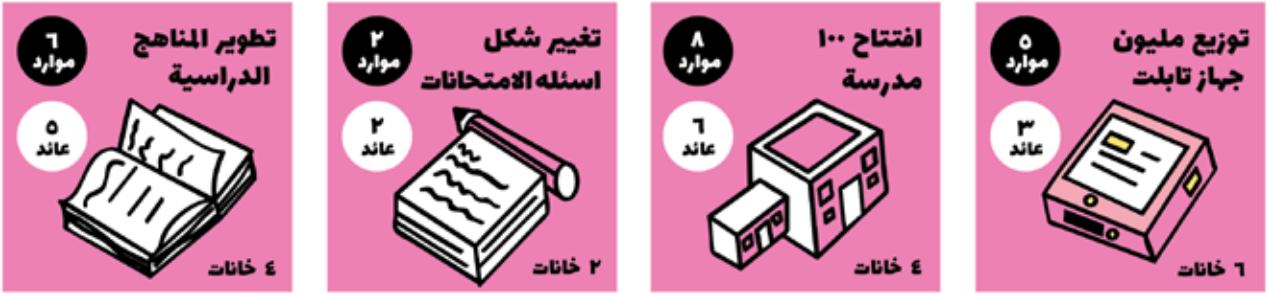


Simulating political actions: That's how players voice their opinions about the other decisions.



THE BOARD IS
THE CONSTITUTION

25 different articles from the current egyptian constitution are written on each block: players can learn information about their rights and duties.



REAL SIMULATION

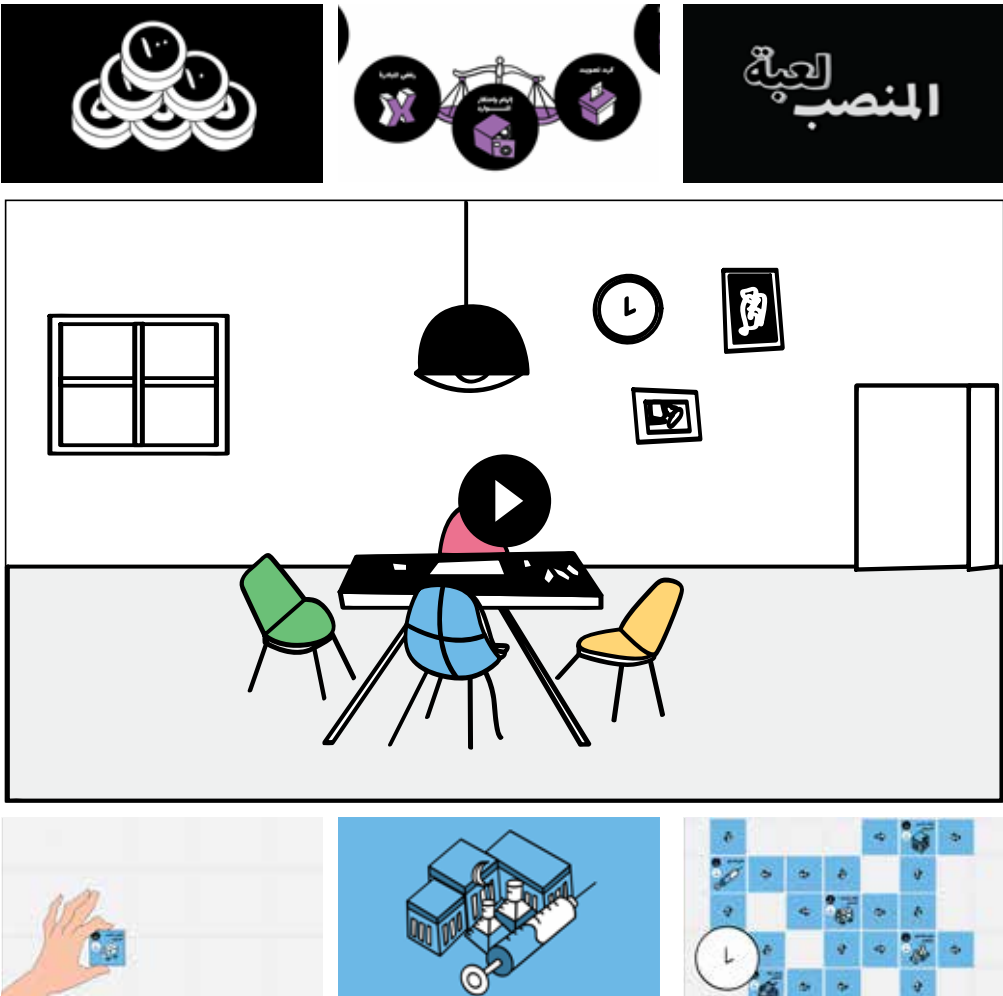
Initiatives are extracted from the official egyptian ministries plans in the 4 different sectors.

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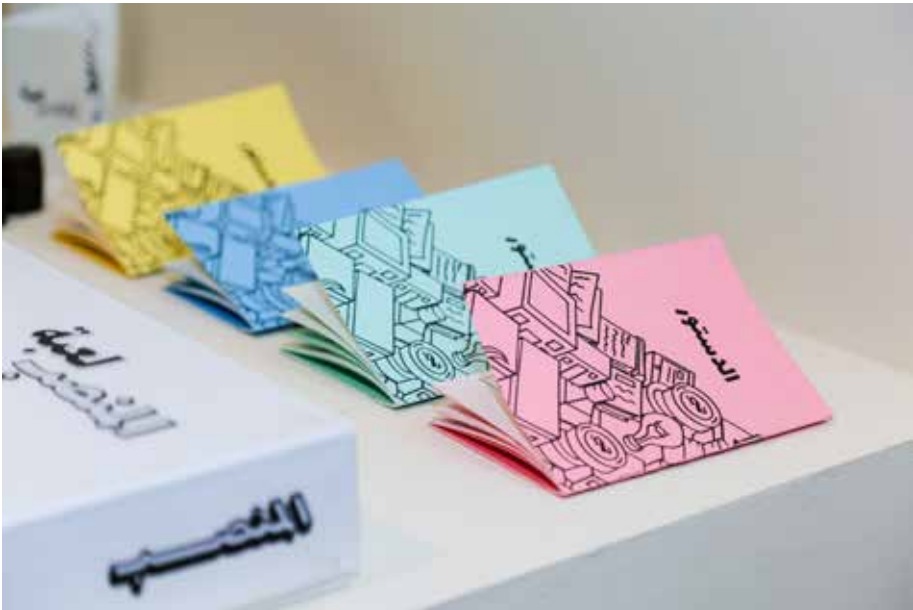
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Animation video explaining the gameplay of ELManseb displayed on the iPad



Constitution booklets



Shared country resources



4 constitution booklets (1 for each player) to know more details about the 25 constitution articles included in the game



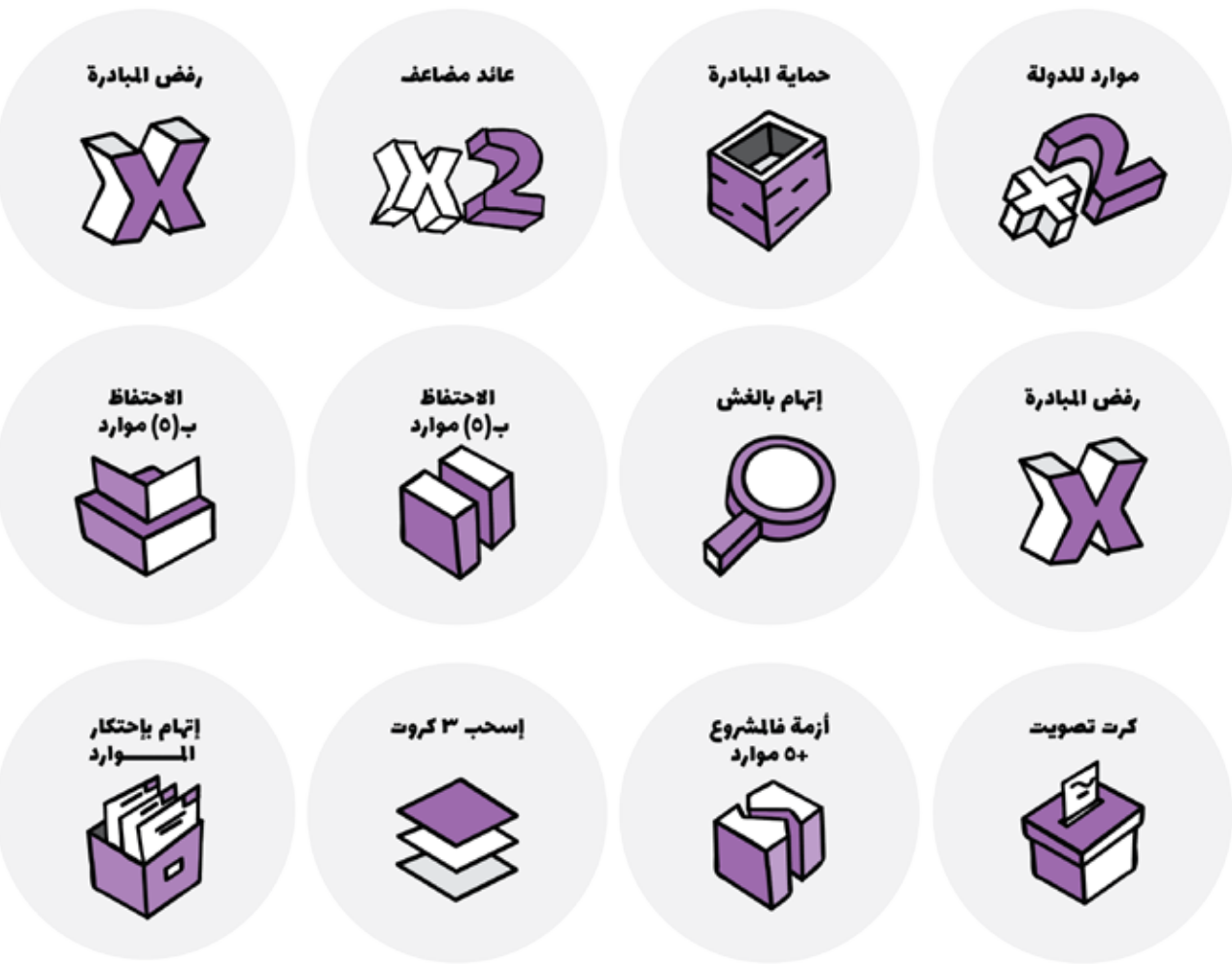
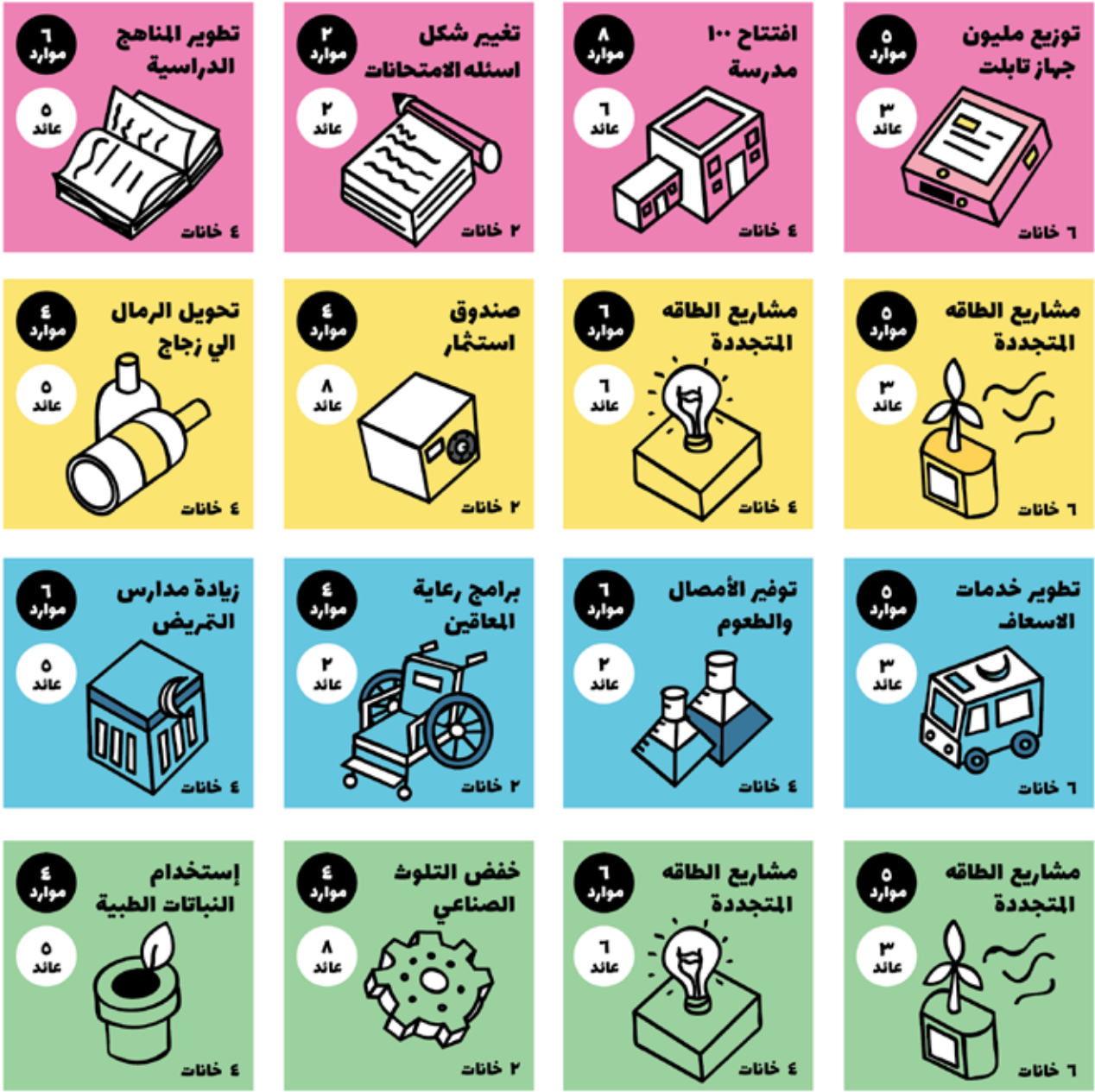
Game Unboxed:
4 Sector Boards | Action Cards (circular)
Initiative Cards (rectangular) | Constitution Booklets
Instruction Manual | Country resources

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As part of a team, we custom-designed an **Augmented Reality (AR) projector** as well as a **framework** for non-programmers that allow them to build AR experiences. As a proof of concept, we built an educational interactive magazine and projection mapping using our framework.

Tetra is a user-friendly tool for building **AR** experiences. It features intuitive interaction using **gesture recognition** and the AR Creator ARc. ARc is an **interface** that allows you to develop your own **AR** and **projection mapping** software with **visual scripting** and **object identification**.



HARDWARE

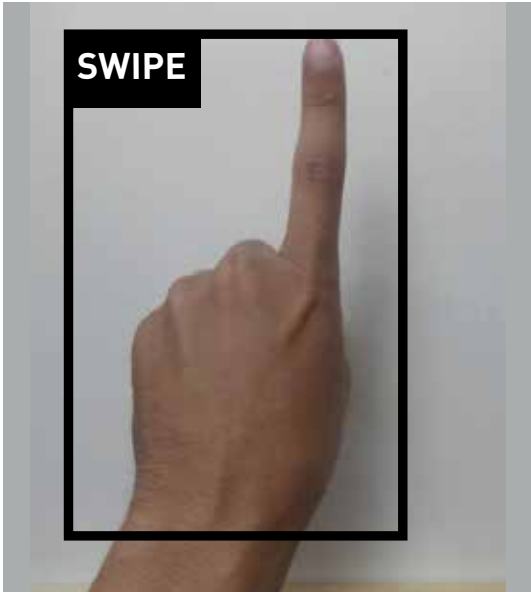
CAMERA: INTEL REALSENSE D415
PROJECTOR: WOWOTO H9
COMPUTER: ANY LINUX COMPUTER

MOTIVATION:

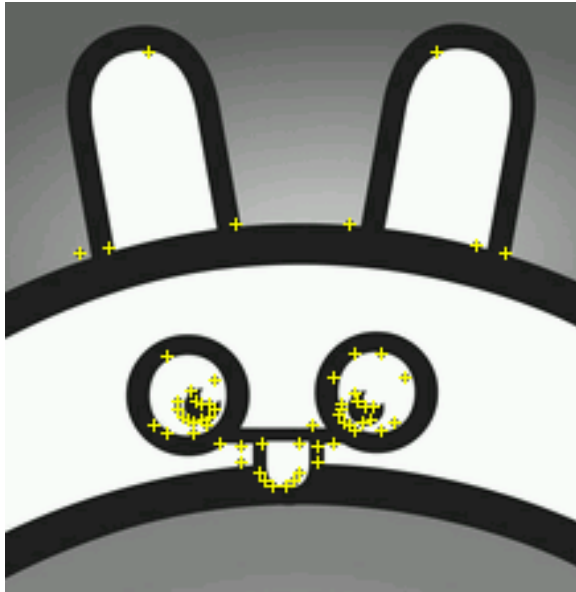
Interactions with students in the design department revealed a strong resistance from my colleagues to adopt new technologies to complement their projects. One of the main barriers to incorporate technology in design is the need for coding skills. Through research, we found that projection mapping as well as creating custom AR applications is expensive, difficult and non-standardised. A tool with modular components that would allow an interactive and standardised way of developing applications is lacking, and thus would be a new addition to the local and global markets.

PROJECT FEATURES

- GESTURE RECOGNITION
- OBJECT IDENTIFICATION
- PROJECTION MAPPING
- AUGMENTED REALITY SOFTWARE



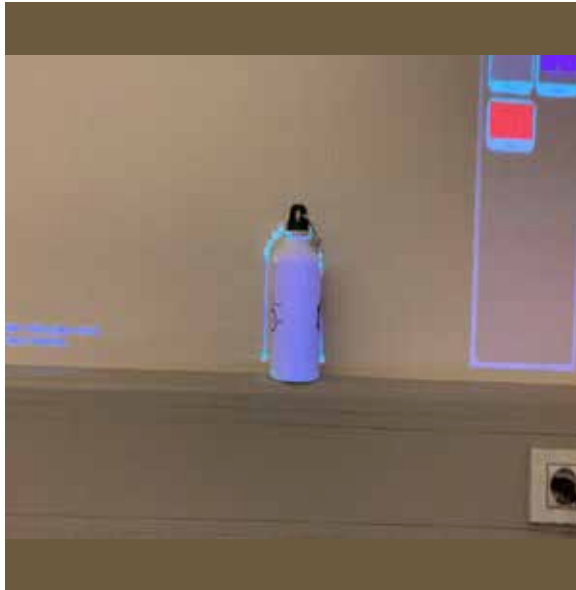
GESTURE CONTROL



OBJECT IDENTIFICATION



AUGMENTED REALITY



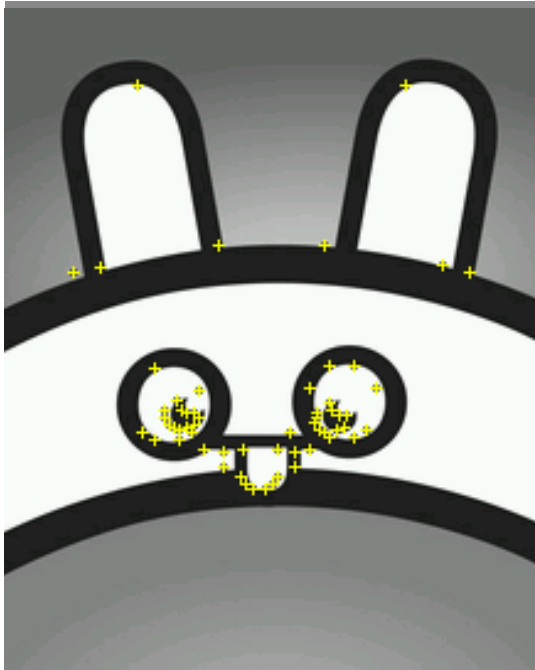
PROJECTION MAPPING

OBJECT IDENTIFICATION

The object identification system is using ARToolkit SDK with Unity to extract the image features allowing for accurate object detection.



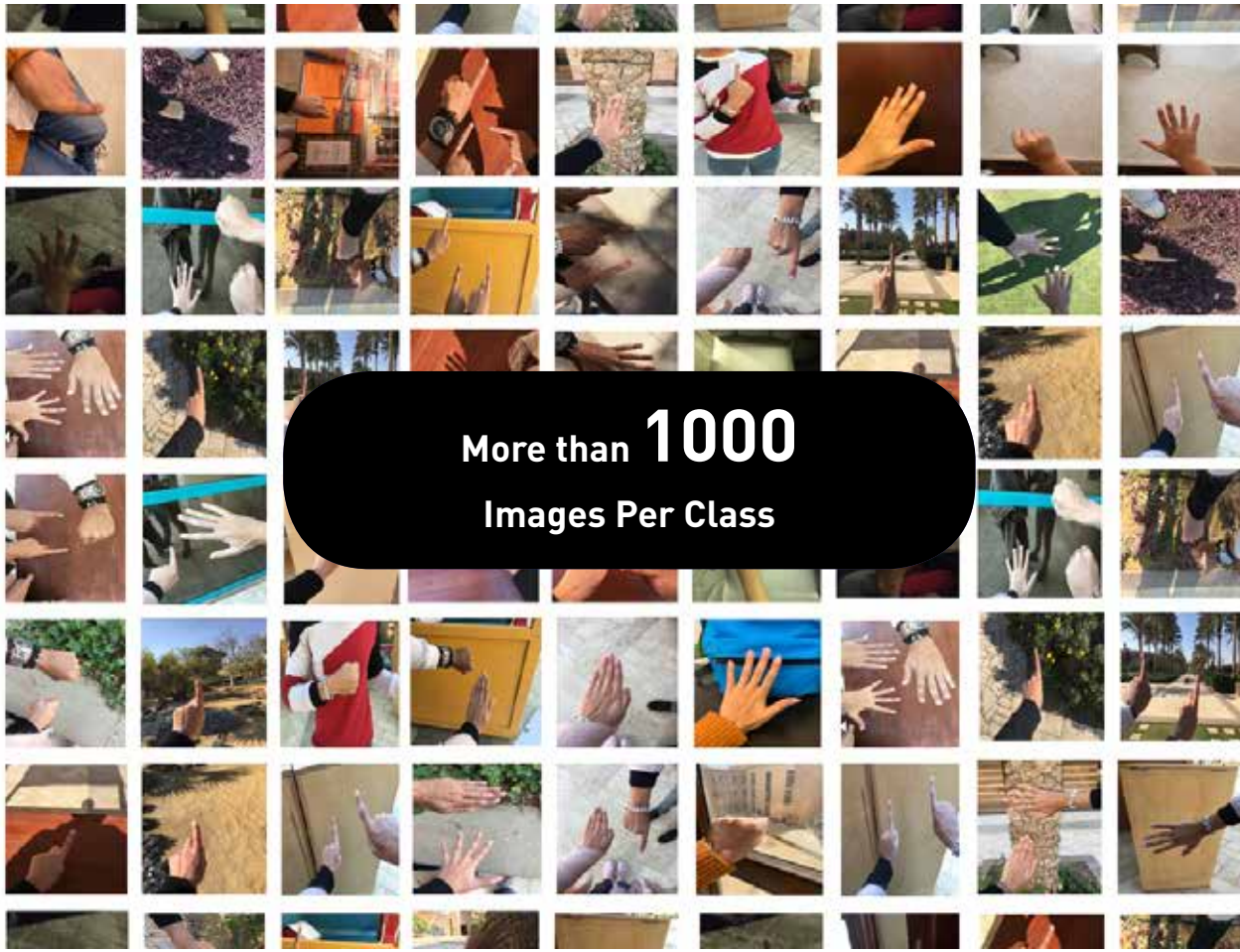
ORIGINAL IMAGE



EXTRACTED FEATURES

GESTURE RECOGNITION

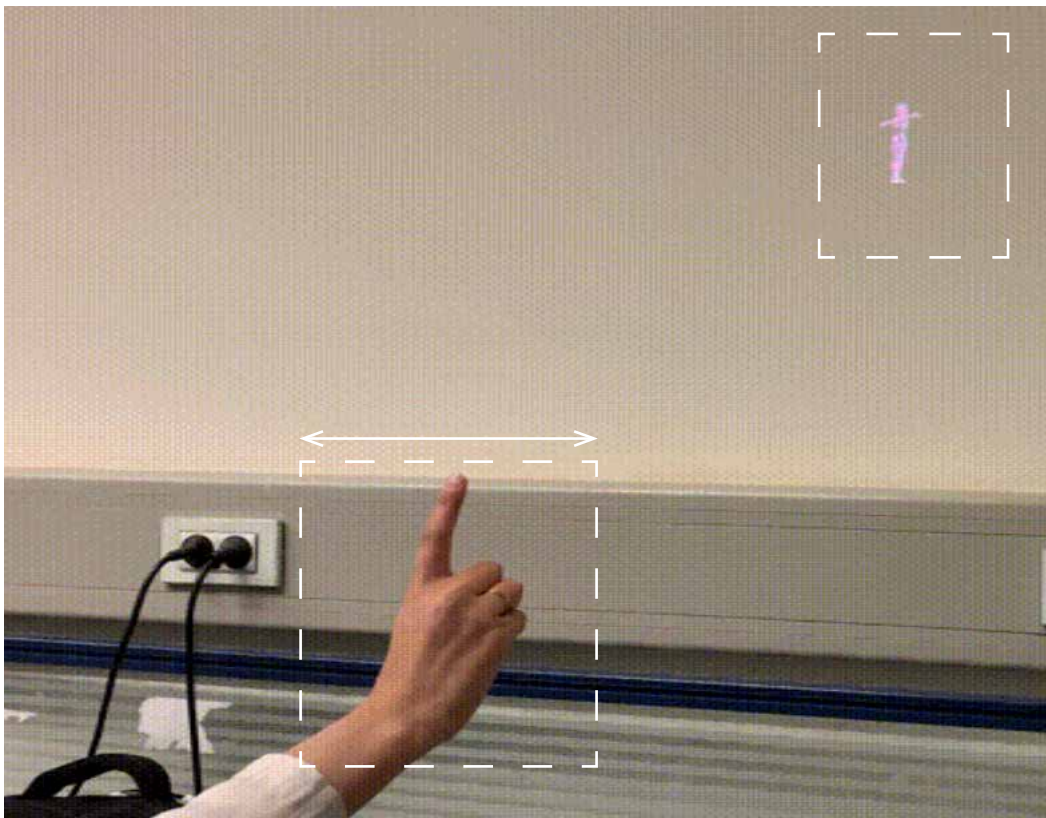
The gesture system is responsible for the detection of the user's hand gestures and interaction with the camera. The system relies on the state-of-the-art machine learning algorithm YOLO (You Only Look Once) and computer vision components for efficient recognition of multiple hand gestures.



SWIPE

PRESS

RELEASE



PROJECTION CONTROL

Projections can be controlled by simple hand gestures captured by the camera.

EXAMPLE OF APPLICATION

By swiping [left or right] the user can rotate the 3D projected model 360 degrees.

AUGMENTED REALITY

Allows users to create dynamic Augmented Reality objects using Unity such as images, 3D models, text, videos, etc...

The system interacts with the gesture recognition module and allows the user to create or edit a certain AR object in a scene using specific gestures. The AR creator also interacts with the object identification system to augment some of recognized objects.

Event: Start

Execution Out

Constant: String

Value Out

Value

xbot_prefab

Set String

Execute In

Value

Variable: MyVar

Get String

Value

Variable: MyVar

Instantiate Model

Execute In

Prefab Name

Execution Out

By connecting simple blocks, users can create a complete AR application. As an example, this one displays a 3D model

BACK TO MAIN MENU

Variables

MyVar

ADD VARIABLE

REMOVE VARIABLE

Selected Variable

MyVar

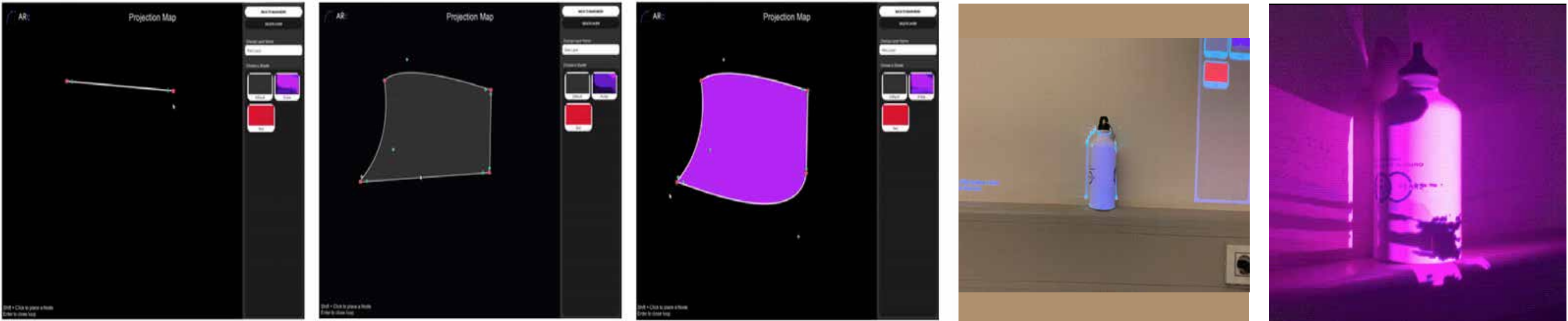
String

CREATE GETTER

CREATE SETTER

PROJECTION MAPPING

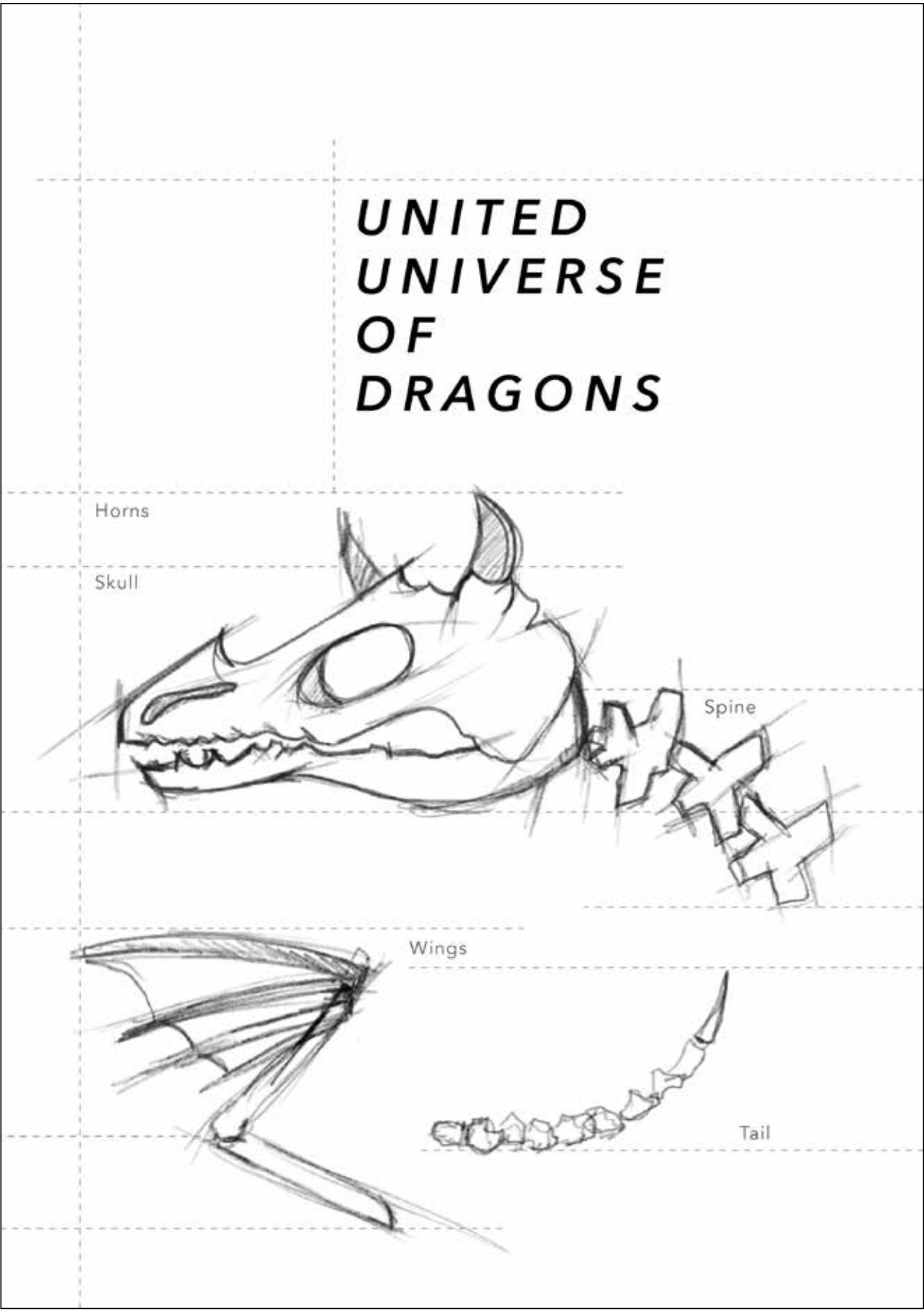
Users can create projection mapping masks and edit these masks via anchor points or nodes.



MAGAZINE CONTENT
DESCRIPTION:

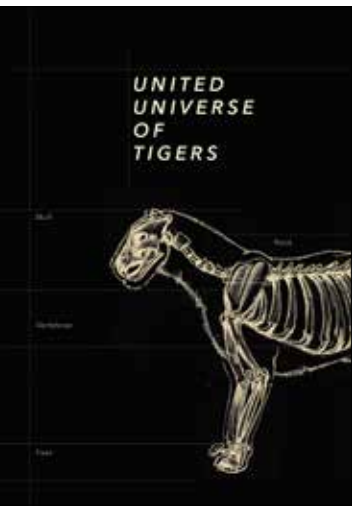
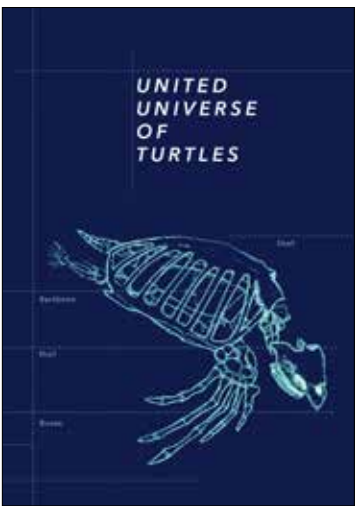
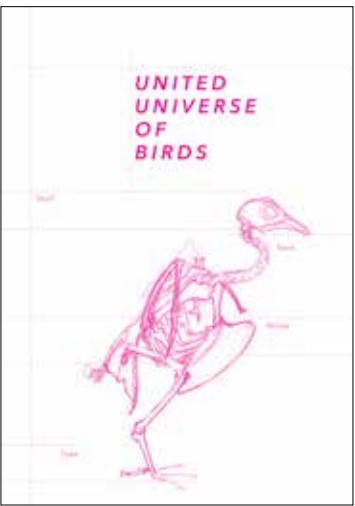
United Universe of Characters is a monthly augmented reality design magazine showcasing the latest characters illustrations, sketches and animations.

The magazine consists of different segments: articles, featured story, reviews and gallery. Each issue revolves around a certain character such as dragons, tigers, plantoids, zombies ...etc. This helps the reader draw inspiration, learn and hopefully develop their own characters.



MAGAZINE COVER
COVER SIZE: A4

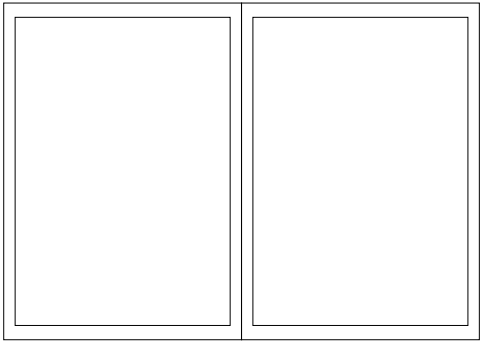
COVERS OF
PREVIOUS ISSUES



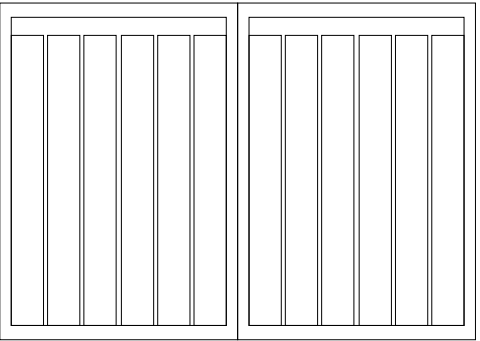
PUBLICATION DESIGN
CHARACTER DESIGN
PRODUCT DESIGN

CATEGORY: EDUCATIONAL | DESIGN
LANGUAGE: ENGLISH

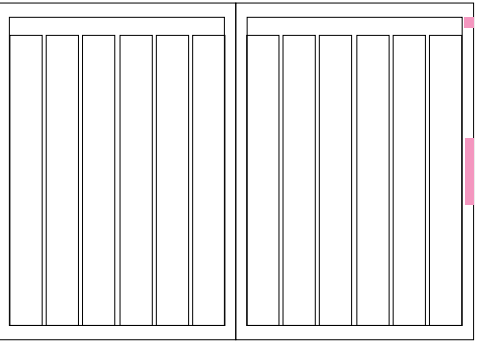
DETAILED MASTER PLAN



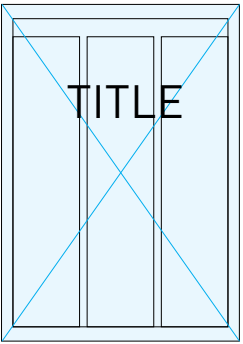
MARGINS: 15 MM
SPREAD SIZE: 600 X 420 MM



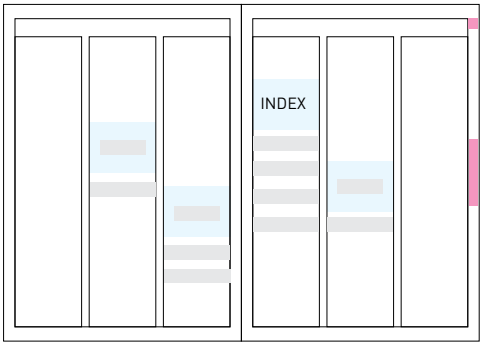
GRID [COLUMNS]: 6 COLUMNS
GUTTER: 5 MM



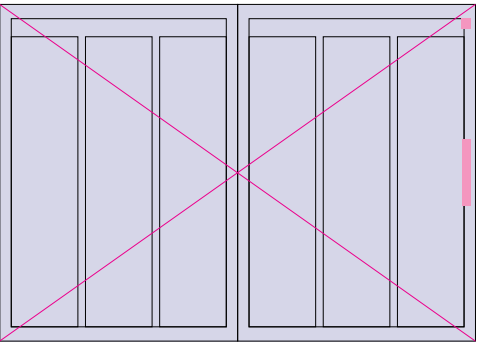
P.N.R PLACEMENT: TOP RIGHT
CONTENT INFO: CENTERED RIGHT



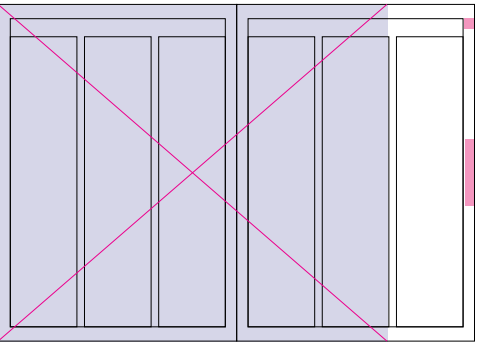
S 01: COVER



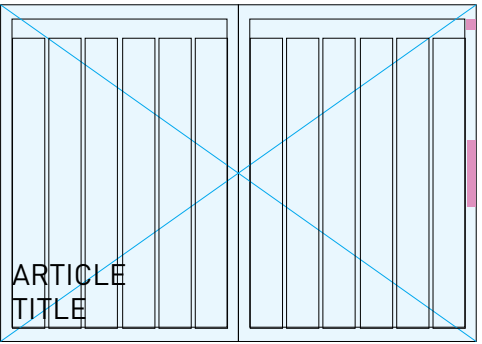
S 02: INDEX



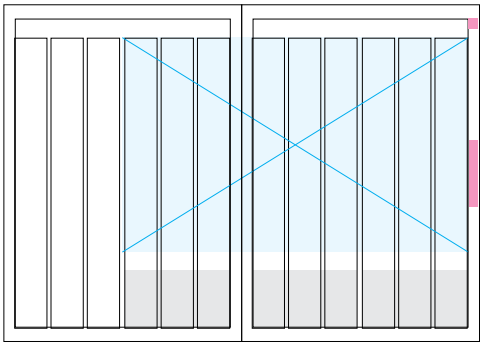
S 03: EDITORIAL SEPARATORS / THEME



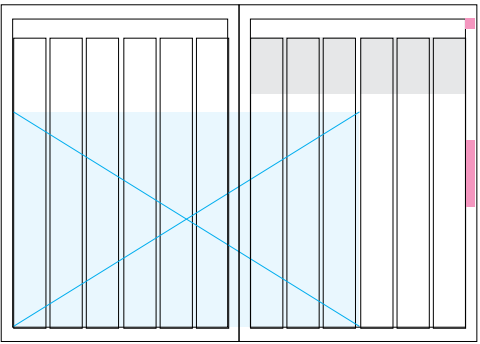
S 04: ADDITIONAL VOUCHERS



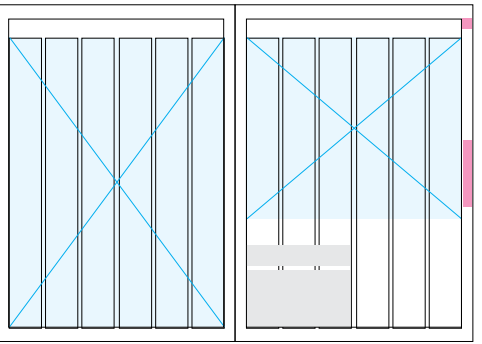
S 05: MAIN ARTICLE / INTRO
LAYOUT: FULL SPREAD IMAGE + TITLE



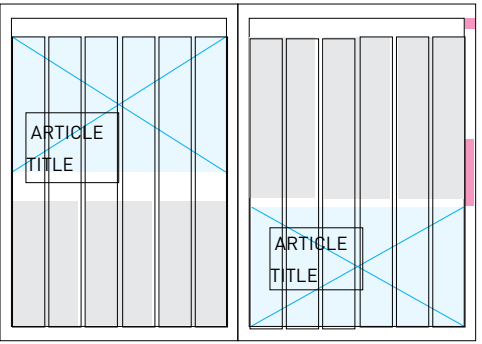
S 05: MAIN ARTICLE / CONTENT PAGE



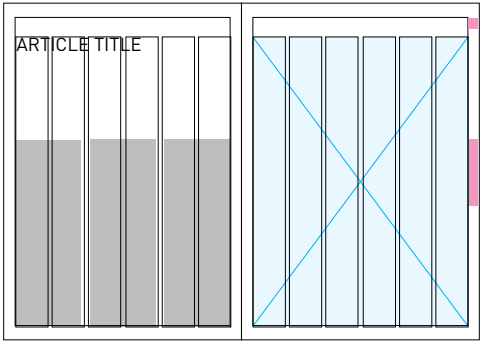
S 05: MAIN ARTICLE
LAYOUT: CONTENT VARIATION



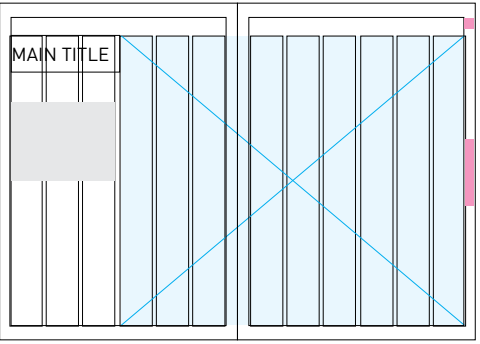
S 05: MAIN ARTICLE / CONTENT PAGE



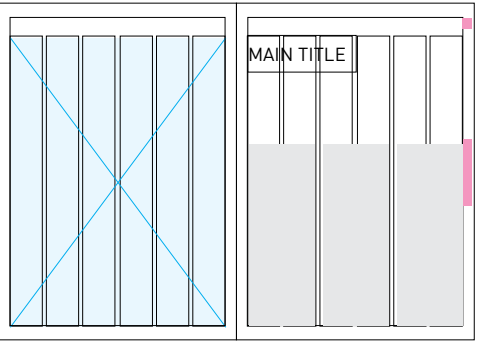
S 06: SECONDARY ARTICLE



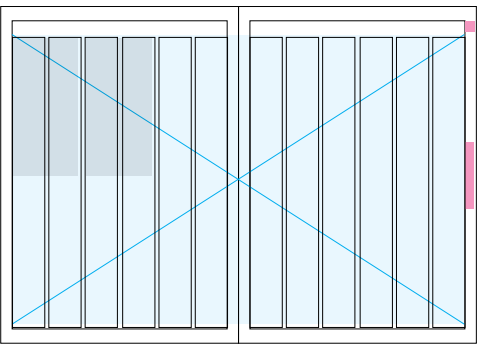
S 06: SECONDARY ARTICLES
LAYOUT: FULL PAGE IMAGE + TEXT



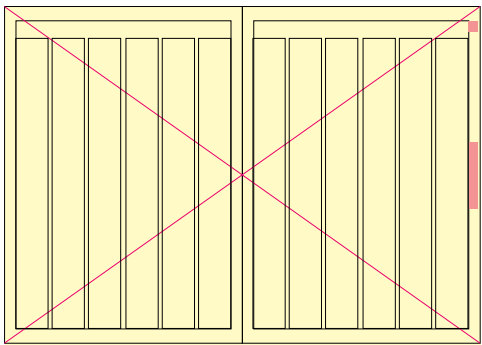
S 07: FEATURED STORY



S 08: REVIEW



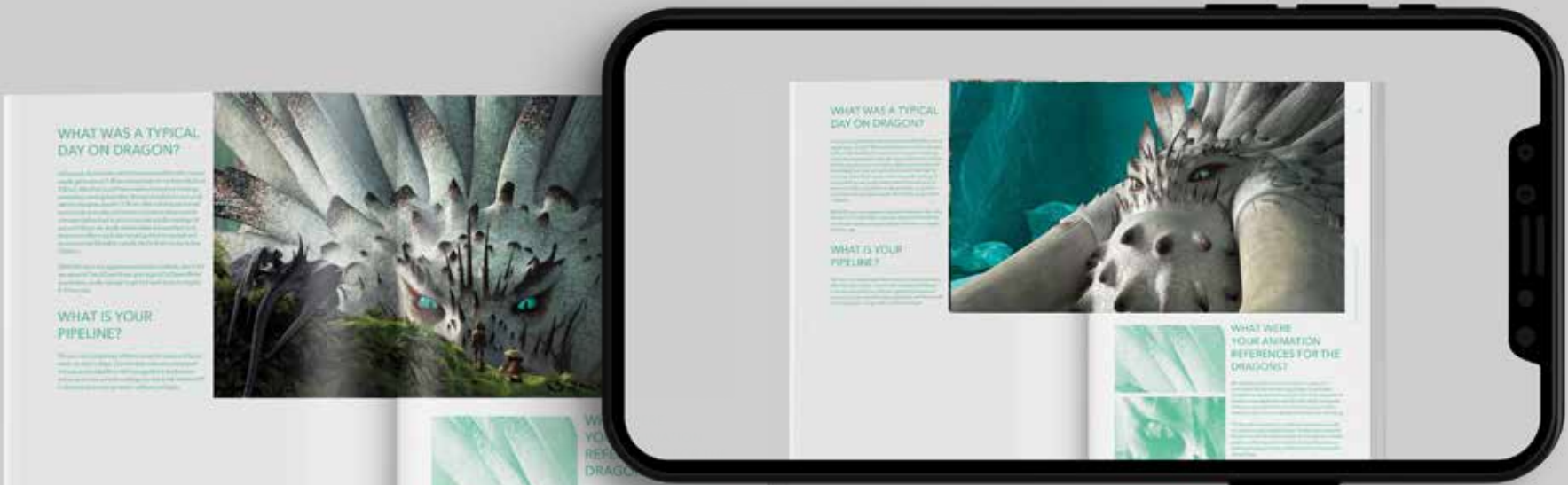
S 08: REVIEW VARIATION



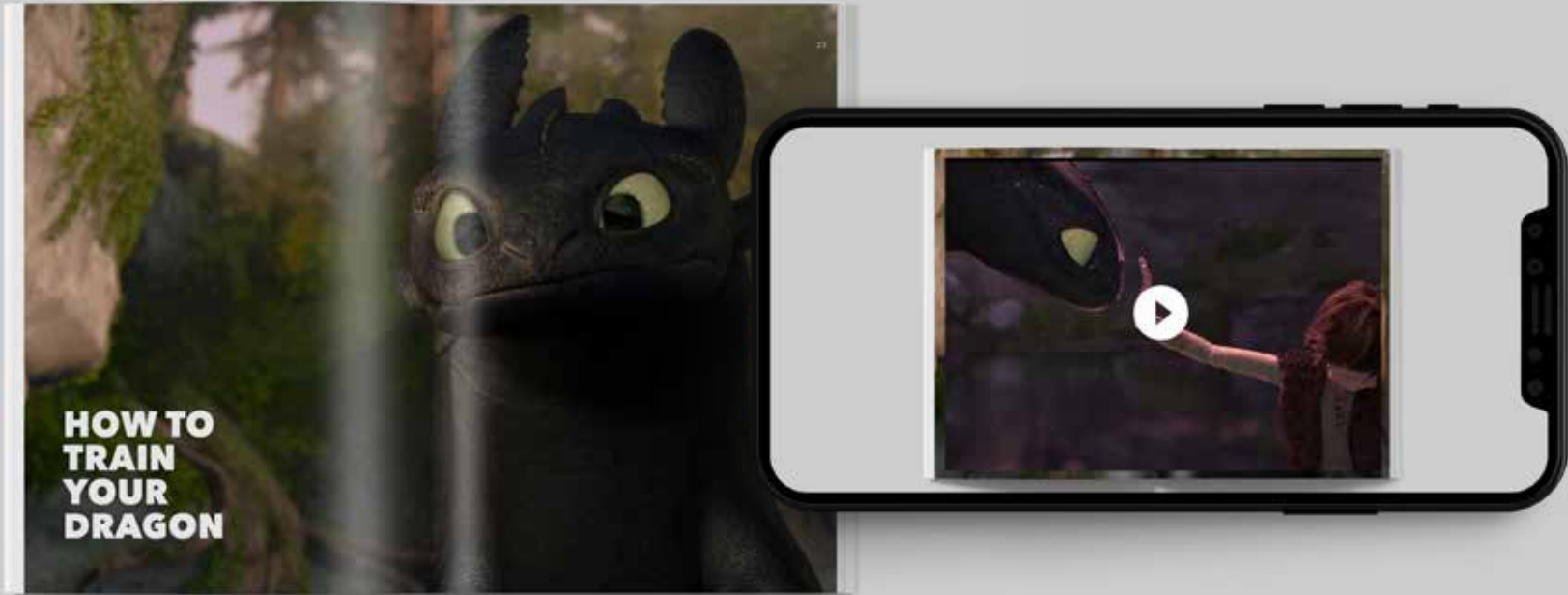
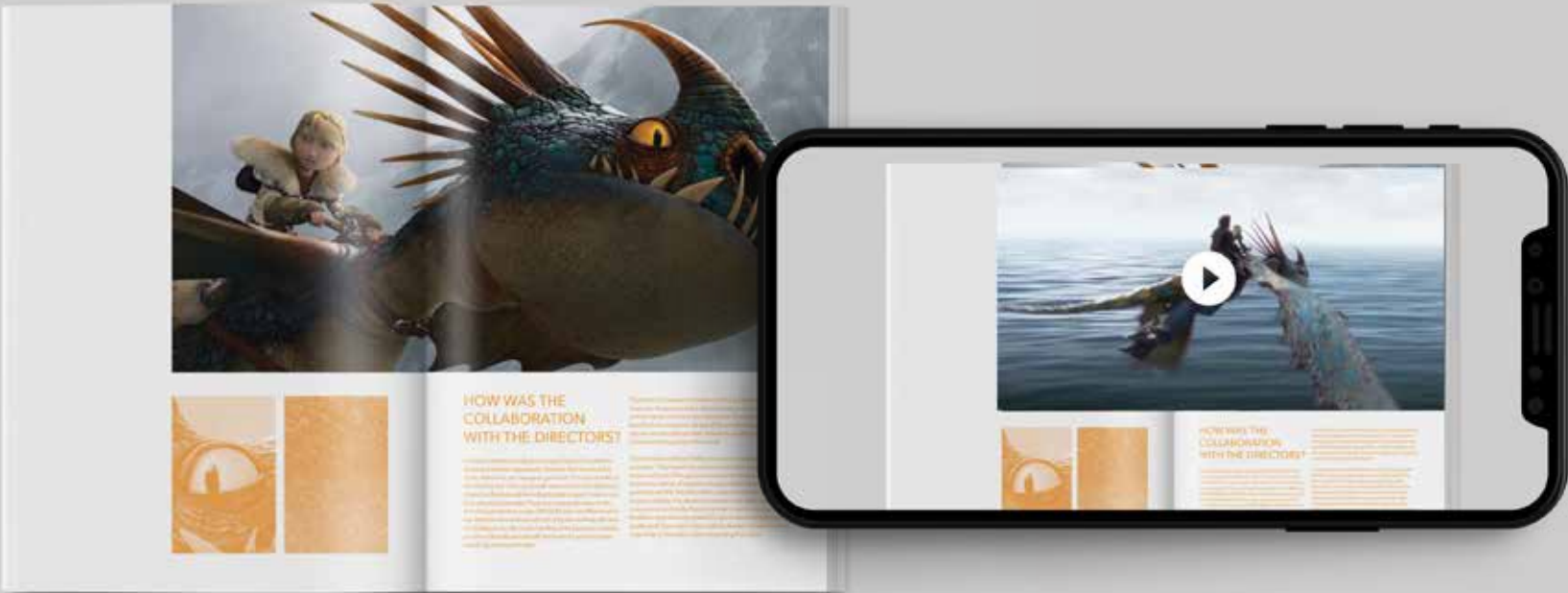
S 9: GALLERY 01
LAYOUT: FULL SPREAD ADD

FONTS USED

TITLES FONT: AVENIR NEXT MEDIUM
BODY TEXT FONT: AVENIR NEXT REGULAR



**AUGMENTED REALITY
FEATURE**
The visuals in the magazine are augmented with videos and supporting material.



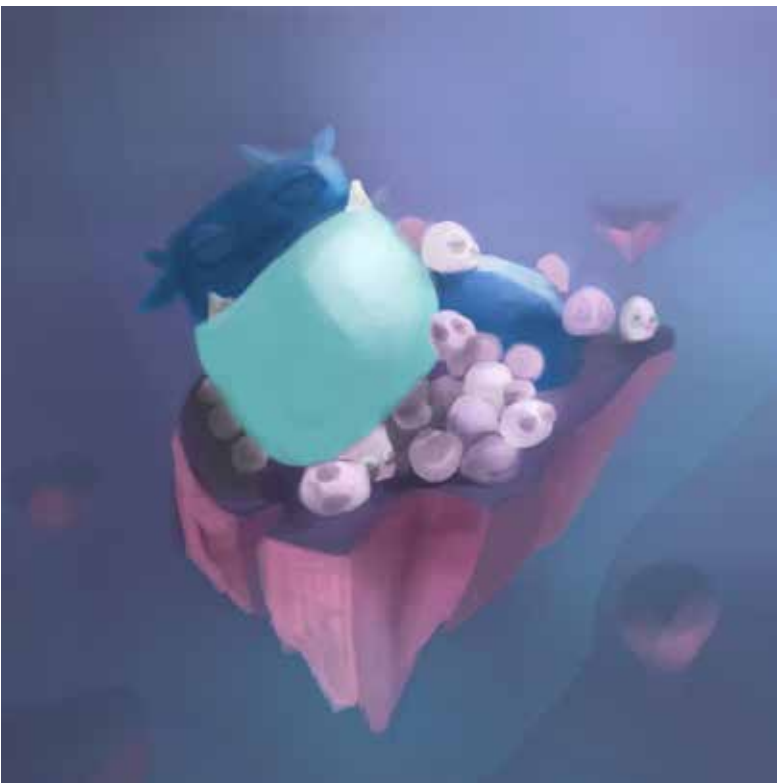
CHARACTER DESIGN:

Digitally painted a character for this issue of the magazine features the story of Glooky, the lonely dragon.

GLOOKY THE LONELY DRAGON

Once upon a time, in what was previously known as the Land of Dragon or Dragunos as they called it, a little playful dragon lived all alone after the tragic death of his tribe members. The land was almost deserted, or at least that is what he thought, except for his miniature neighbours, the lazy Pufpuffs.

He had set a daily schedule for himself. The activities of the day are split between eating, sleeping and contemplating flowers. He felt so lonely until ...





PARCEL FROM A PARALLEL UNIVERSE

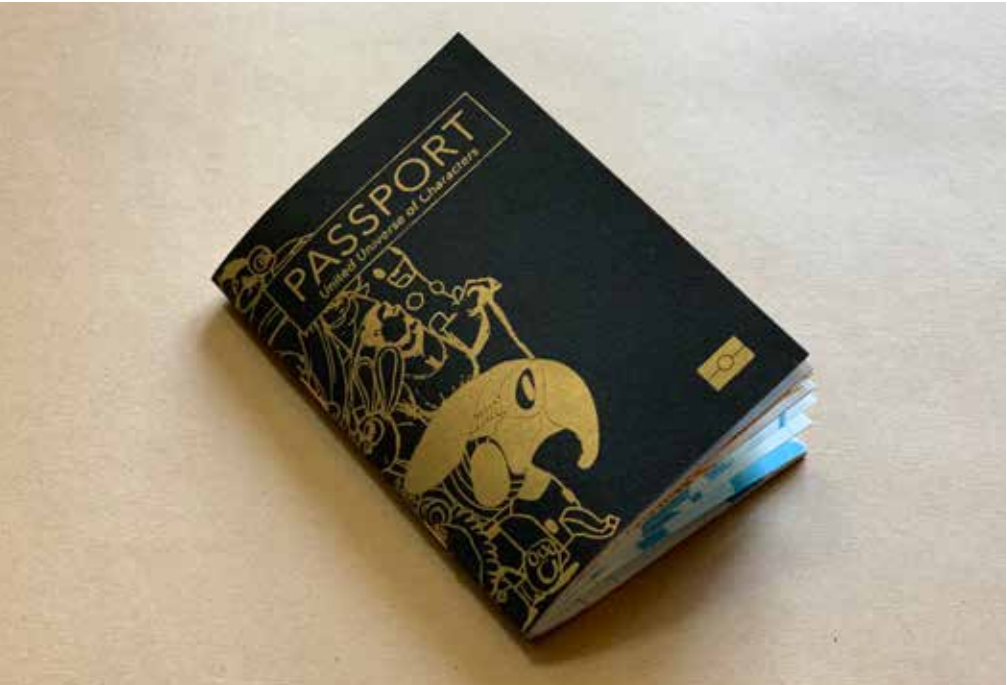
I conducted interviews with each of the designers. They always talked about how they drew inspiration from the real world to design their characters. That is why I created the United Universe of Characters kit; it let you travel to a parrallel universe. In each parcel, you will find a passport, plane tickets and visas.



PLANE TICKETS

In order to travel to the parallel universe of characters, you need a plane ticket. The ticket contains information about the world of each designer and the QR code actually links to their realistic Behance profiles.

CHARACTER DESIGN KIT: A special edition fanzine that comex with the magazine: it is destined to promote specific Egyptian character designers. This year's issue focuses on 4 Egyptian character designers.



PASSPORT

The passport is the main publication containing interview excerpts with the designers, tips and tricks when designing characters, how they draw inspiration ...etc



26 DIFFERENT PATTERNS

Each spread is a distinct pattern designed from the different characters . The paper used for the passport and plane tickets is actually sketchbook paper. The idea behind it is to mimic the starting point of character design: from a rough sketches.

VISAS

Visas are your official pass to this imaginary universe. They are created based on the most iconic character for each designer.

PASSPORT SPREADS



PLANE TICKETS

VISAS



LIFE BALANCE
CALENDAR
04

FALL 2017

As a starting point for creating balance, happiness and success in your life, **Life Balance Calendar** is the perfect tool to begin your journey. Using this tool, you will be able to **reflect** and **understand** the **patterns** of your daily lifestyle.



DATA VISUALISATION
TYPOGRAPHY
PRODUCT DESIGN

CATEGORY: PERSONAL DEVELOPMENT
LANGUAGE: ENGLISH

MOTIVATION:

Reflecting on my lifestyle, I realised that I was focusing too much on work while not giving enough attention to my health, wellbeing and social aspects of my life. I decided, as part of a typography course, to design a life balance calendar.

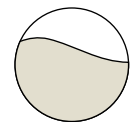
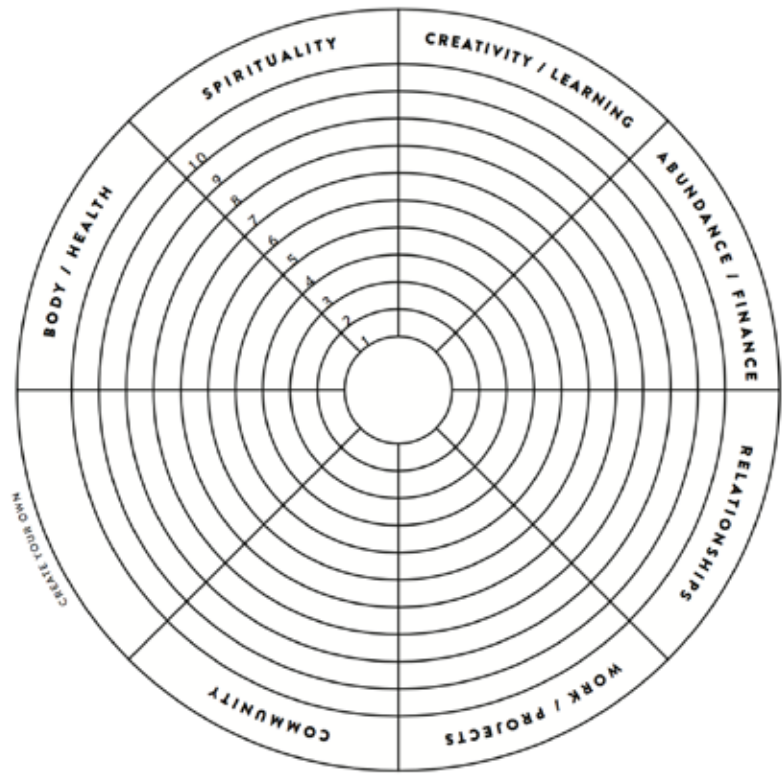


**VISUALISATION TOOL FOR SELF
ASSESSMENT USING COLORED SAND:**

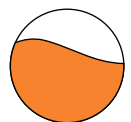
The idea is to fill each initially empty month bottle on a daily-basis with colored sand according to how you spend your day.

Each sand color represents a certain area in life (ex: Health/Fitness, Family, Career, Personal Growth & Fun)

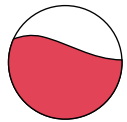
At the end of each month, you get a visualization of how balanced your life was during that month. Life balance wheels were the main inspiration of this project.



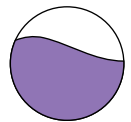
Career & Education



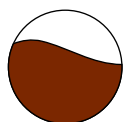
Health & Fitness



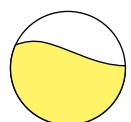
Fun & Entertainment



Personal Growth



Remaining Spaces



Family & Friends



PHYSICAL QUANTIZATION OF TIME

The idea is that by visualizing the color distribution across the sand bottle, we get a more concrete approximate measure of time.



Ancient Egyptian Clock & Calendar



Hourglass as a symbol of life



Colored sand as traditional egyptian craft

**A SIMPLE
1-STEP PROCESS:**

By the end of each day choose 1-2 sand color(s) that best reflect your major accomplishments.

Using the portion regulator facilitates this task. (1 day = 2 portions)

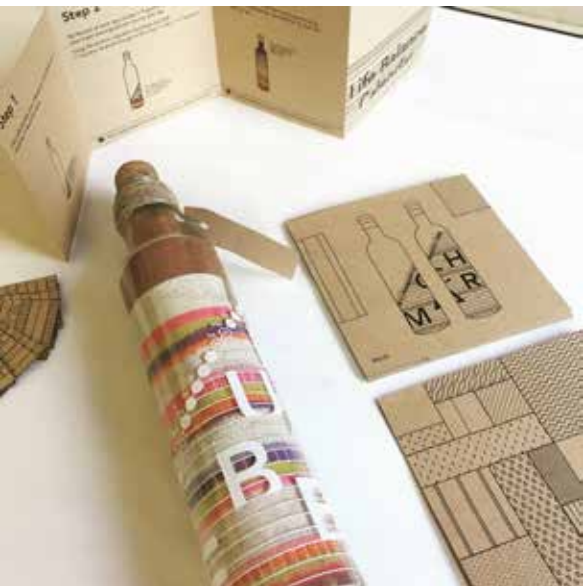
Keep on repeating untill reaching the last day of the month.



SUPPORTING
EGYPTIAN LOCAL
CRAFTS

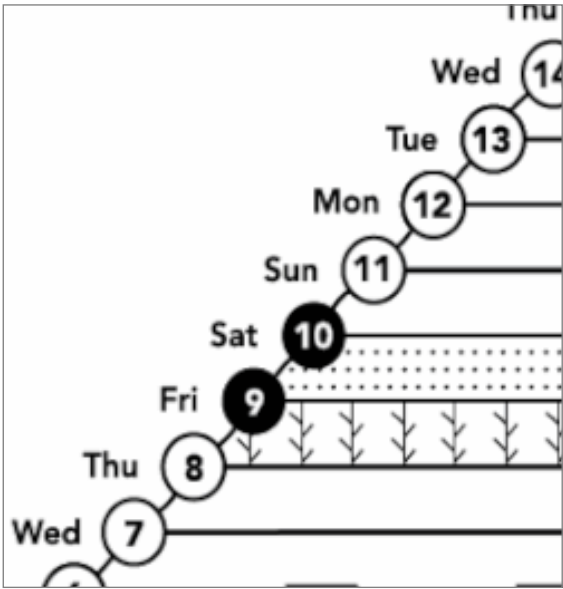
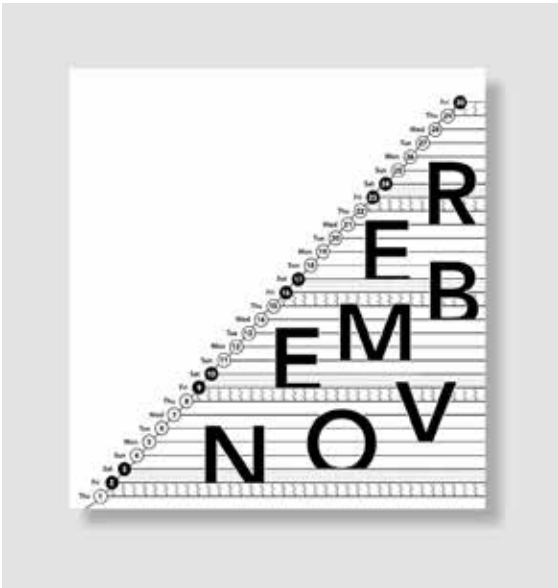
Materials: Colored Sand,
Wood, Recycled Glass Bottles

Production: Only worked with
local craftsmen to produce the
calendar.



1 BOTTLE FOR EACH
MONTH

12 Bottles wrapped with a
silkscreen white sticker that
acts as a monthly calendar.



PATTERNS USED TO
IDENTIFY HOLIDAYS

Designed 24 type-based
patterns using letters
counterforms (2 patterns/
month).

An Egyptian local brand that produces grapes and raisins. Its mission is to educate consumers about the **environment**, **cultural** and **historical** value of these crops.



MOTIVATION:

I noticed that there was so much emphasis on the commercial products in the food industry without shedding light on the process of how this product was made and the people that were working behind the scene. This inspired me to develop an entire brand from packaging, posters, installation and logo design.

RAISINS
VISUAL IDENTITY
05

SPRING 2017

PACKAGING DESIGN
VISUAL IDENTITY

CATEGORY: EDUCATIONAL | DESIGN
LANGUAGE: ARABIC | ENGLISH

18

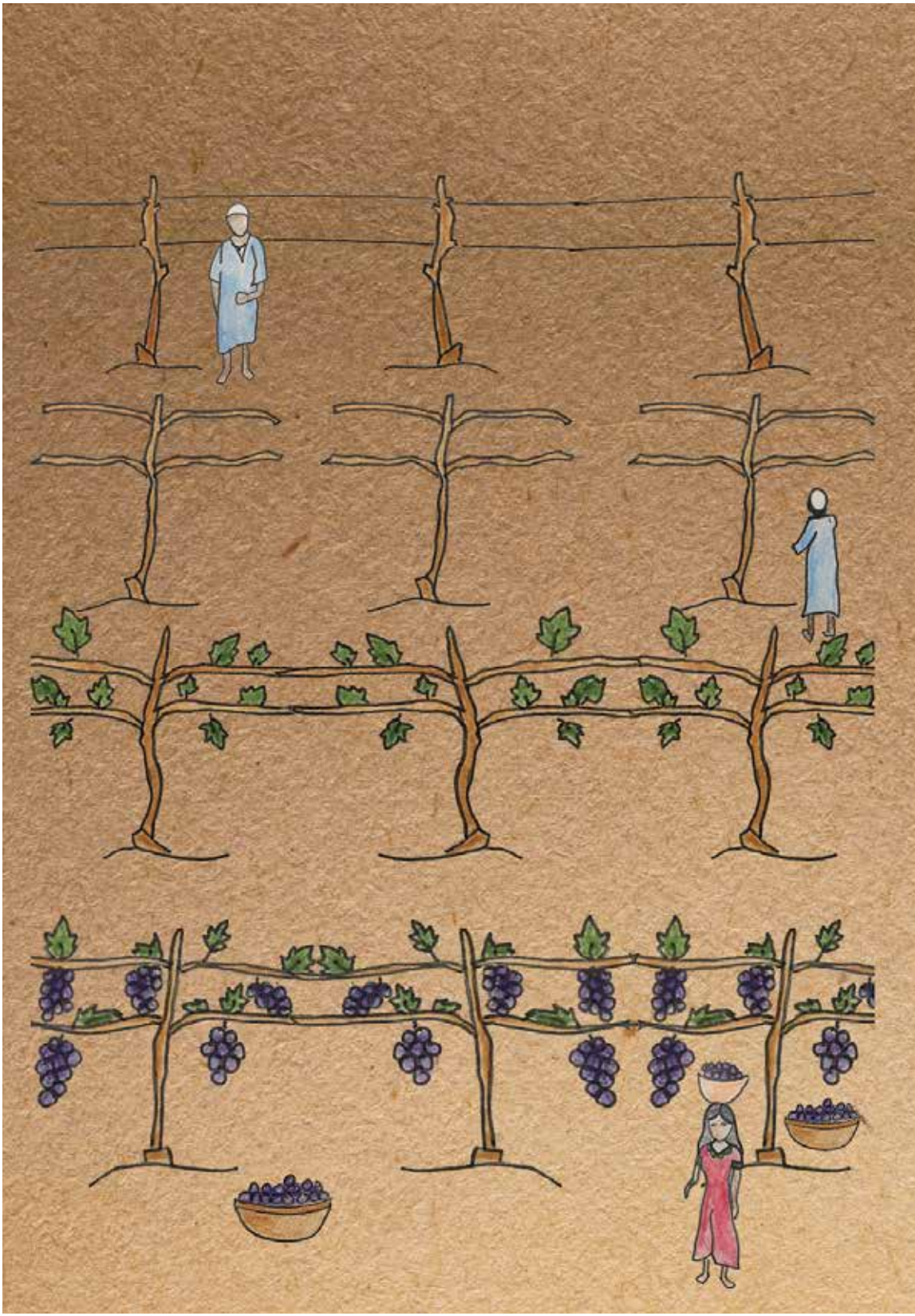
ALEY BARACAT | DESIGN PORTFOLIO

The main goal was to design packages with an **authentic** look and feel. The illustration style applied is inspired by ancient egyptian paintings, contemporary caricatures and photos taken during the conducted field trips.



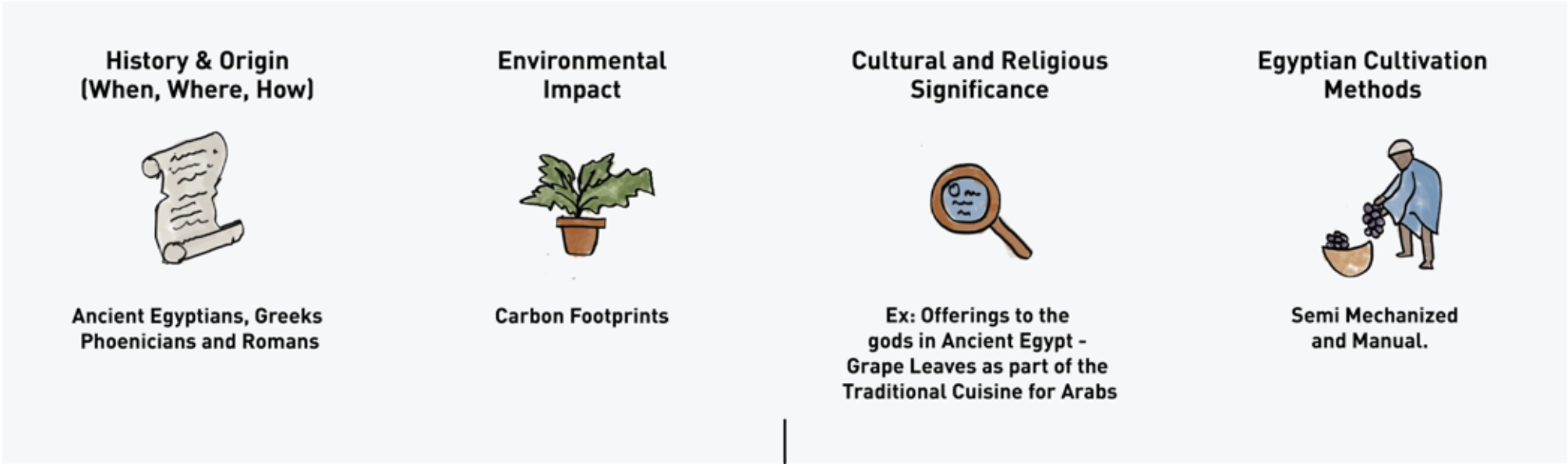
PATTERNS:

Inspired by the planting practices of vine grapes in Egypt which utilise decorative and functional trellises.

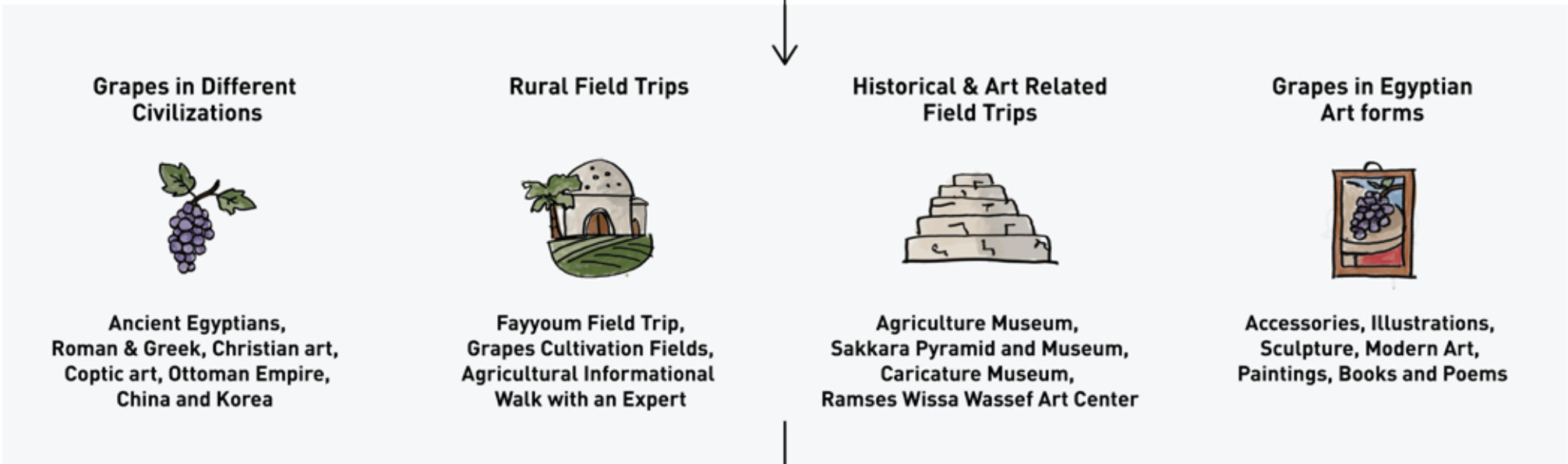




PHASE 1: STUDY AND RESEARCH OF GRAPES



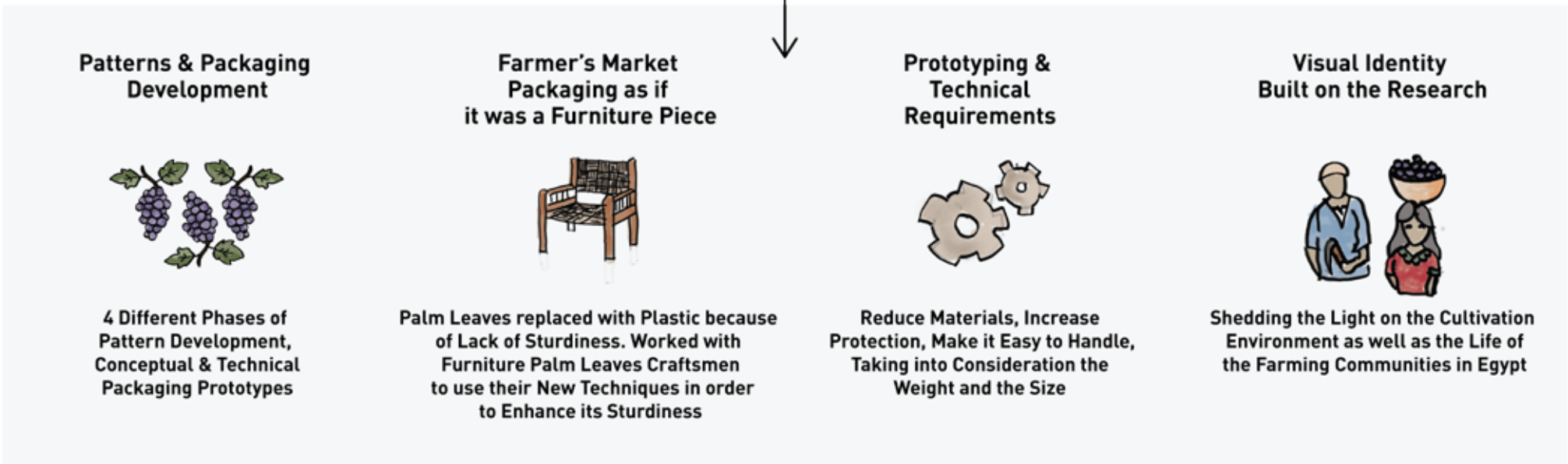
PHASE 2: VISUAL RESEARCH



PHASE 3: FIELD RESEARCH



PHASE 4: DESIGN PROCESS





**FUROSHIKI GIFT
PACKAGES:**

Furoshiki, a Japanese wrapping technique, gift bags dedicated for special customers. They come in different sizes, colours and prints.



**FARMERS MARKET
PACKAGING:**

Made of palm leaves and Egyptian threads efficiently arranged for minimal use of material. This lightweight packaging solution satisfies the protection and handling of grapes. Patterns are printed on wax paper and are used as separators.