DES

Environmental production

First concept

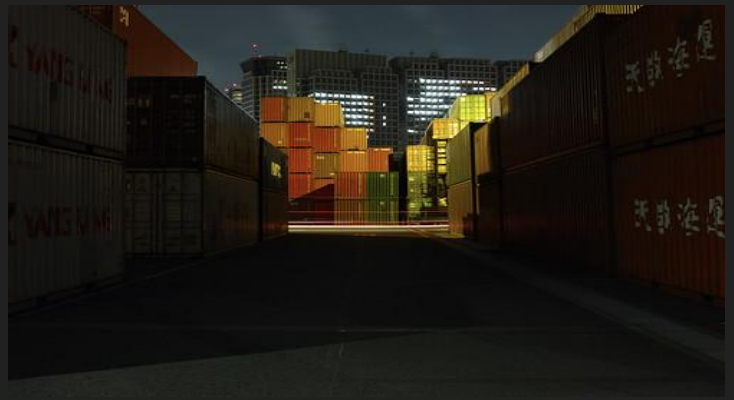
Technically in a game design, a level for a game was easier to approach.
So the first concept was a mission level where the player has two objectives : Find a specific hangar and one specific container.

So the all concept of the scene revolved around containers and hangars.

→ the scene would take place in a container yard / dock location.

Since I don’t have a lot of experience in modeling and texturing, container and hangar seems appropriate as they are simple geometry forms.
Moreover, setting the theme on night time allowed to “Cheat” and hide some potential imperfections of the assets
→ Docks and container during night time

References - real-life container yards



References - GTA V Docks

References - Artstation (Pearson Finlay)

References - Chelsea Piers (NY)

References - Spiderman (PS4)

Production process

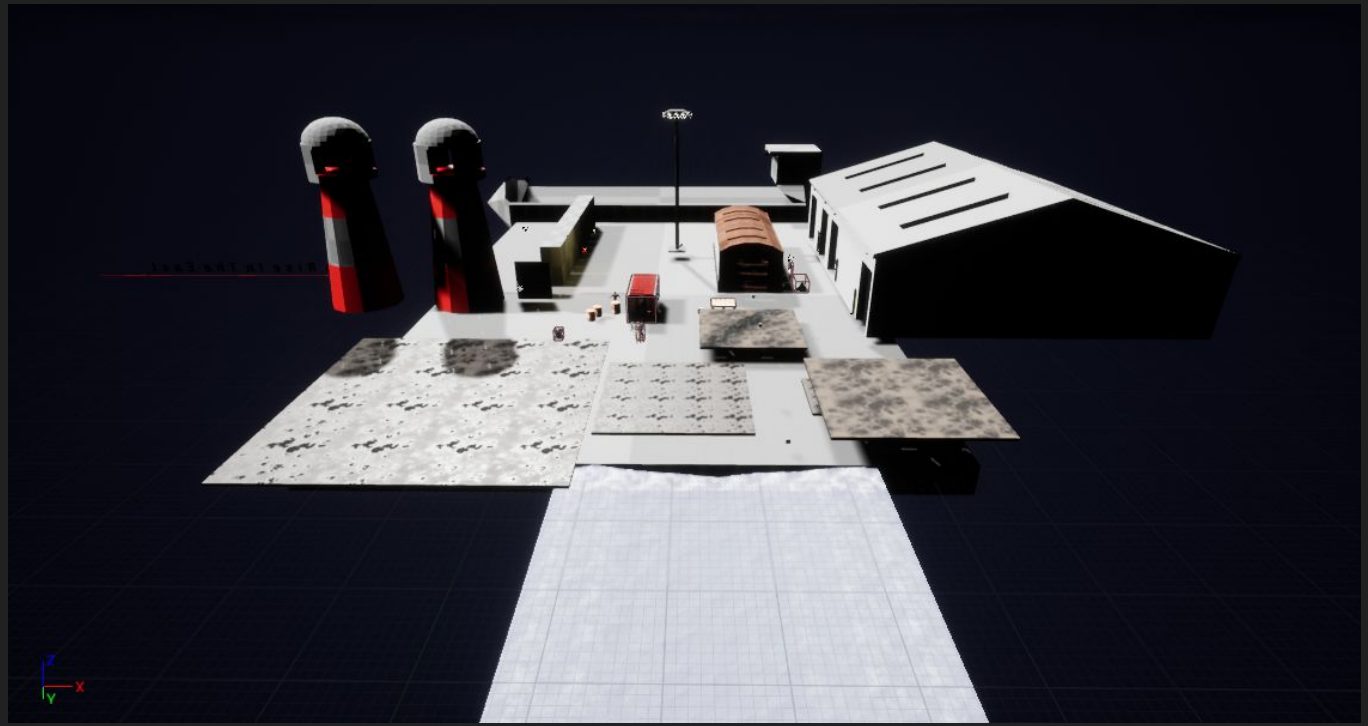
Any assets go through three scenes:

-”Construct scene” where the models are made / scaled and rotated.

-”Lighting scene” a small diorama with the lighting setting of the main scene. Texture are applied to see the render with the night lighting

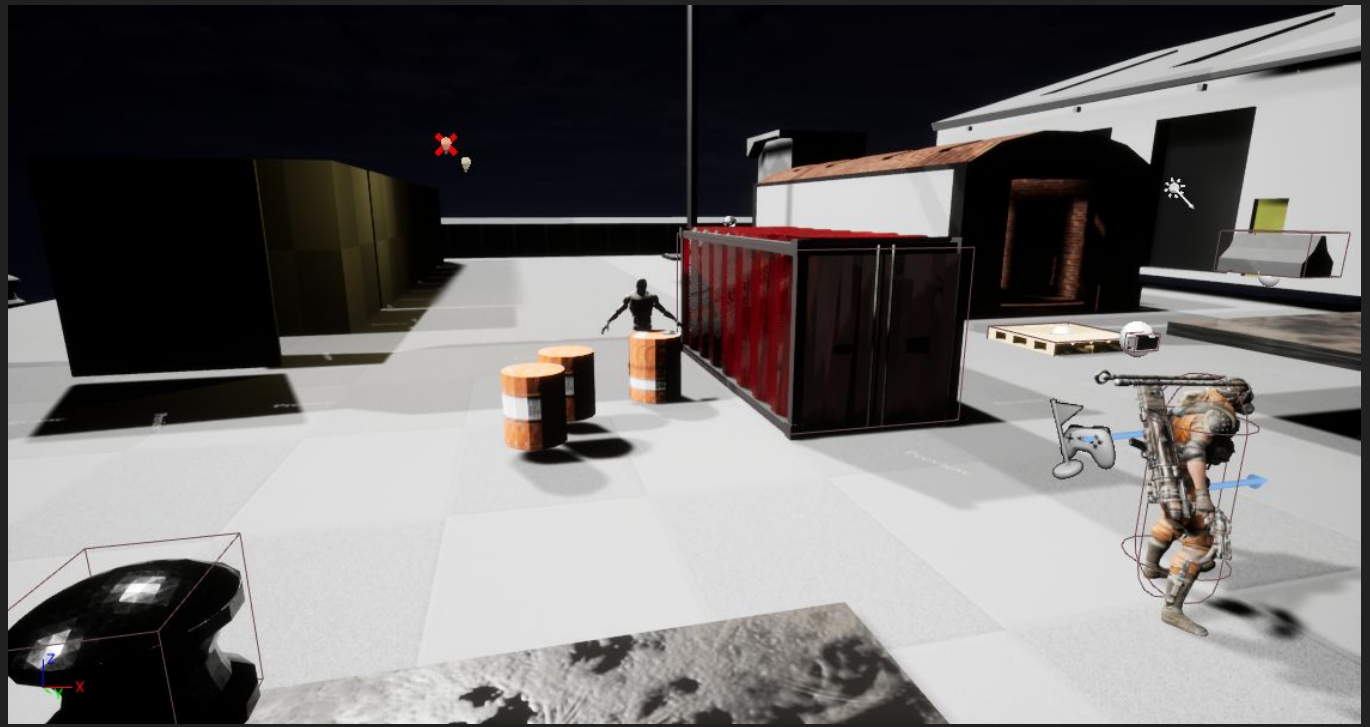
-The main scene where assets are positioned.

Production Process : Construct scene



- Create meshes from UE4 BSP
- Scale proportion with UE4 mannequin and containers
- Apply random texture to check the UV

Production Process : Construct scene



-Each assets is then converted into a static mesh

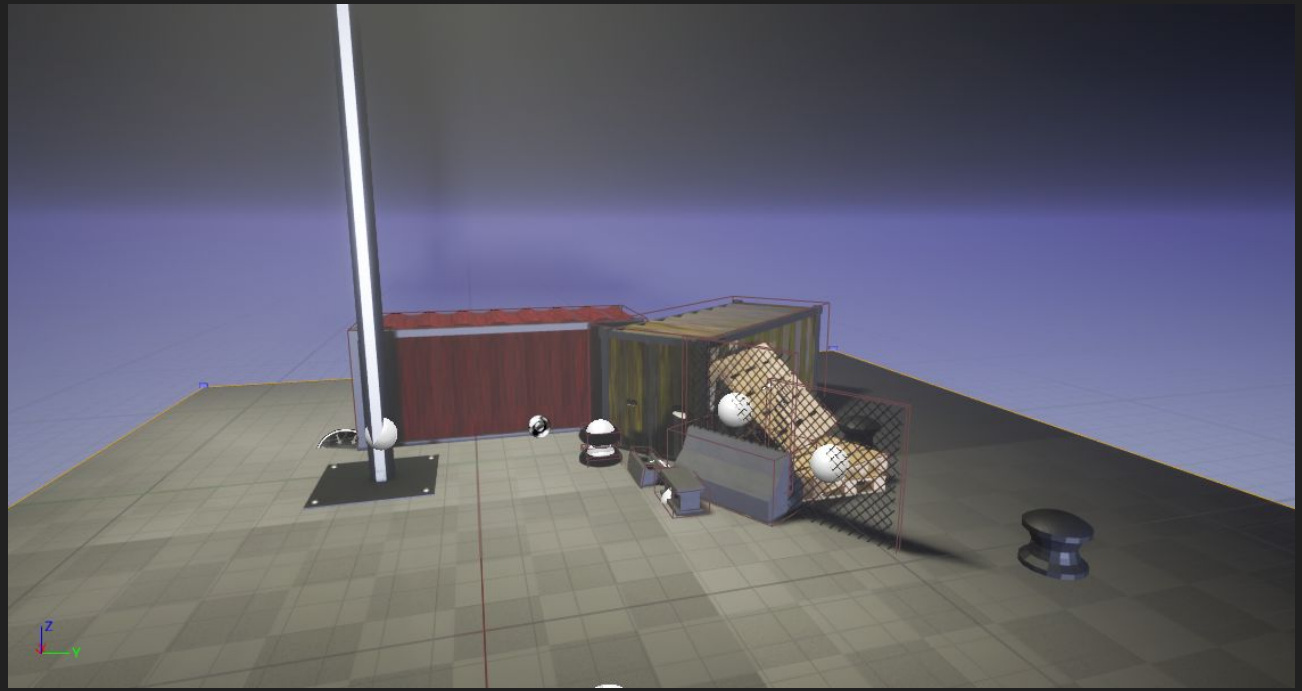
-Each assets get a collision box and turned into a prefab to make them easier to modify across the scene

Production Process : Lighting scene

On one side :

-The real textures are applied and modify according to the light.

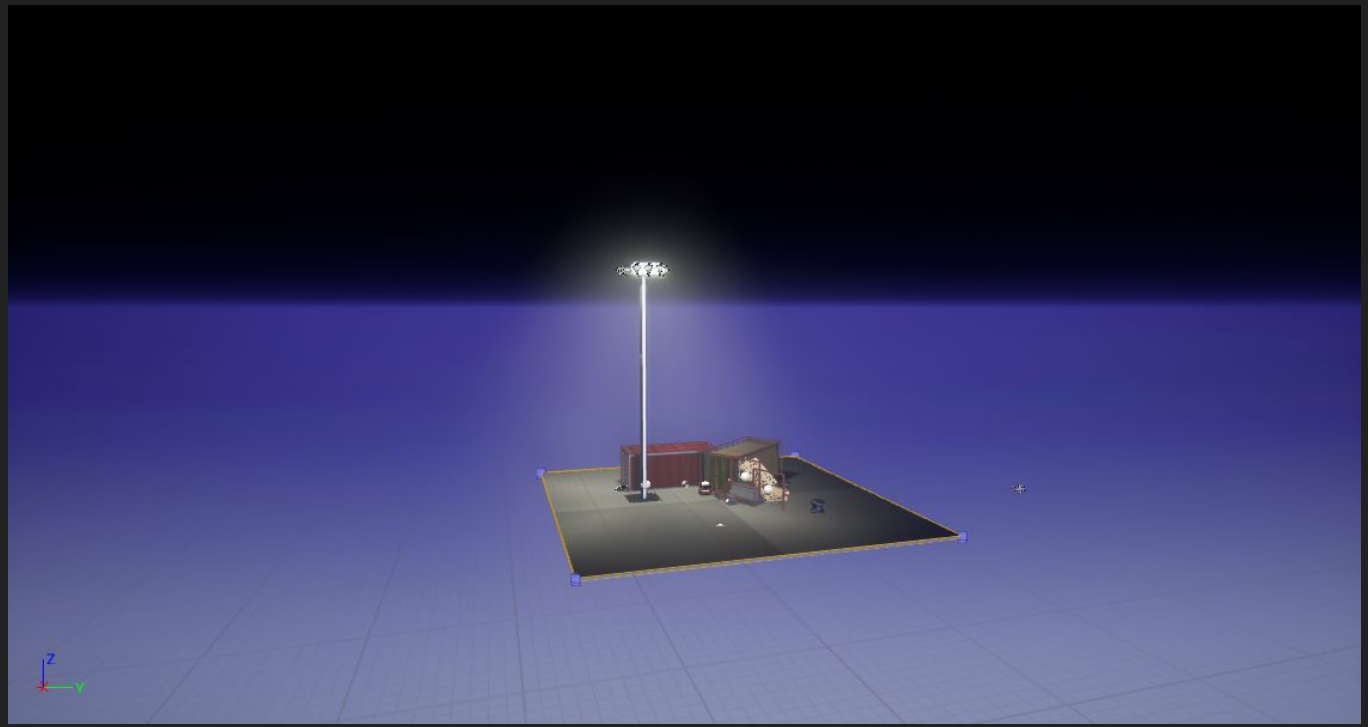
-All textures are a bit shinier than normal to stand out more.



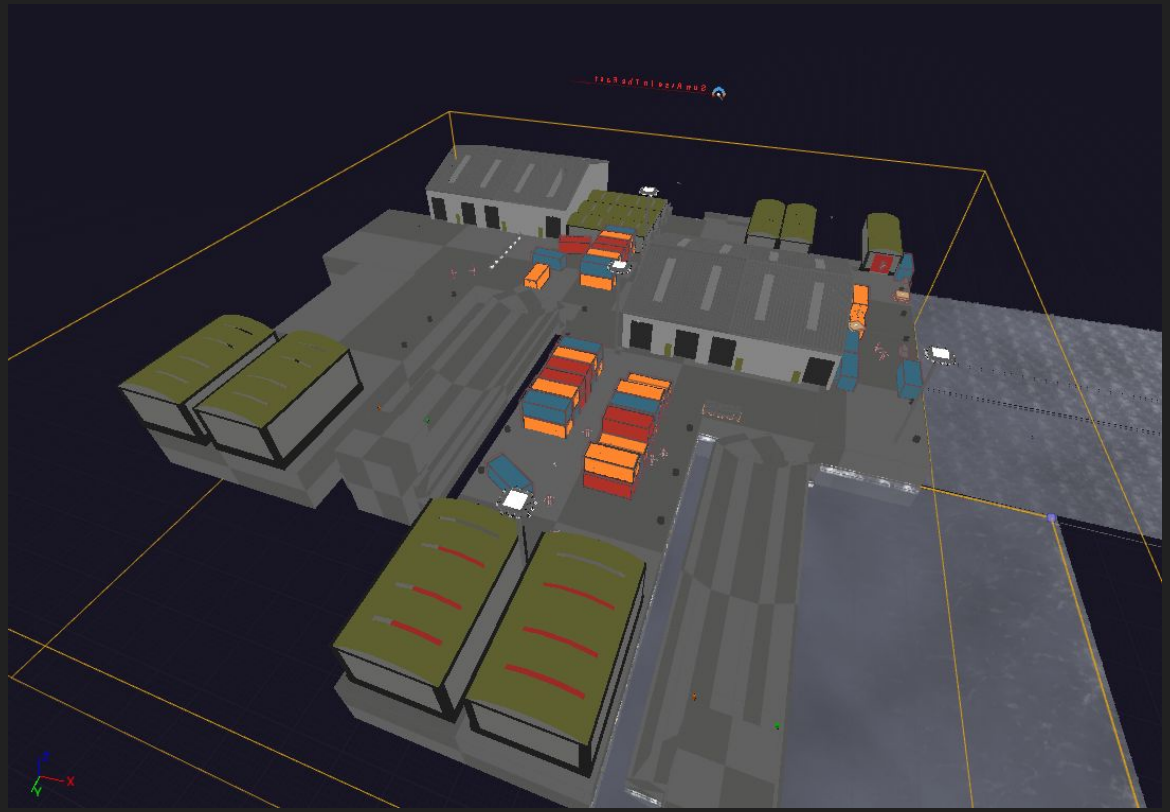
Production Process : Lighting scene

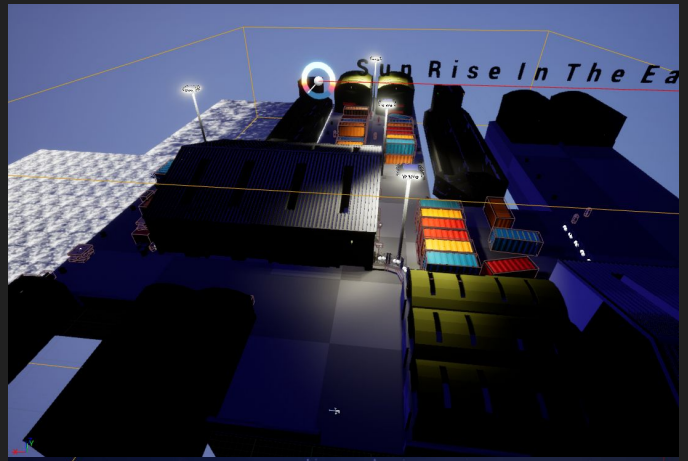
One the other side:

experimenting with lights and fog to get the halo around the light source

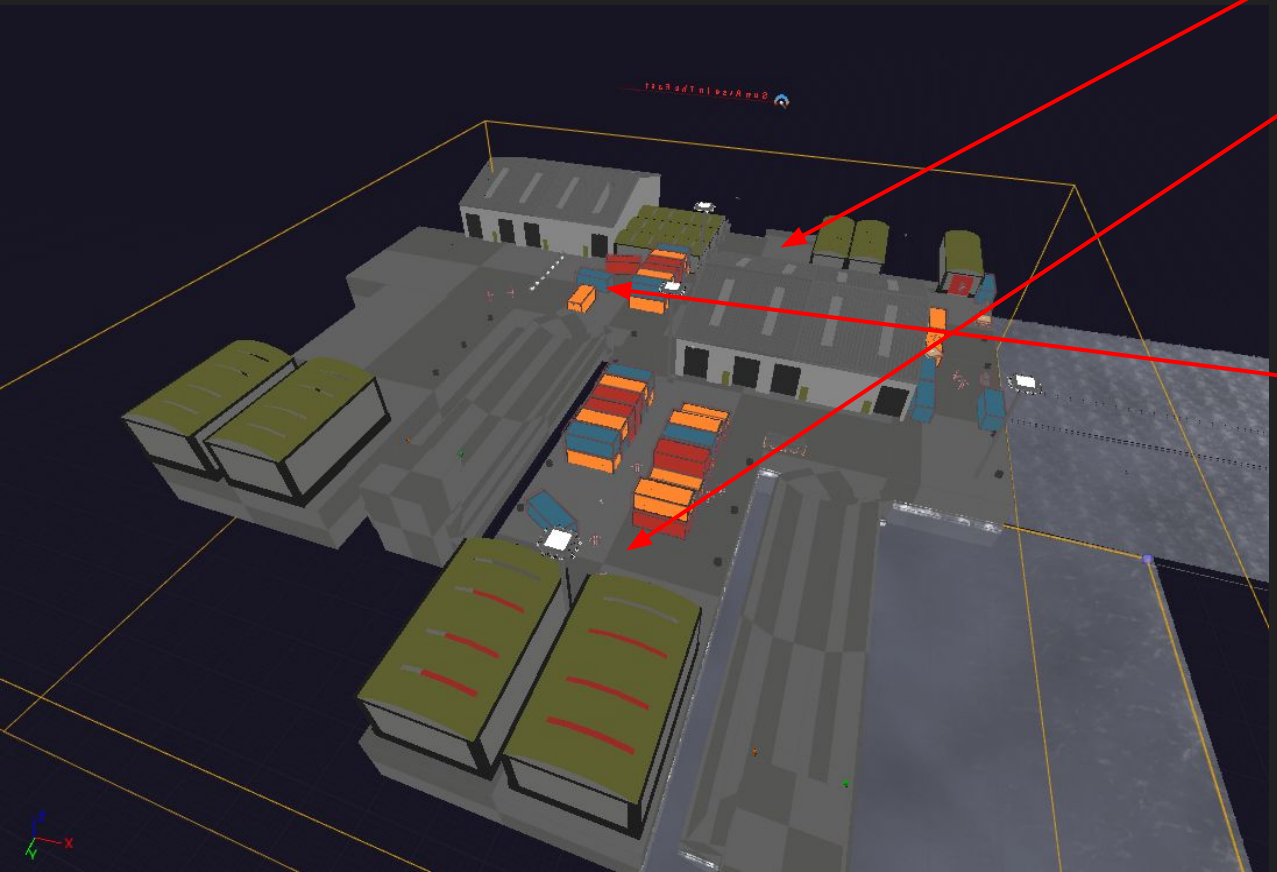


Production process : Main scene





Grey box - step 01 : Level design



Player start

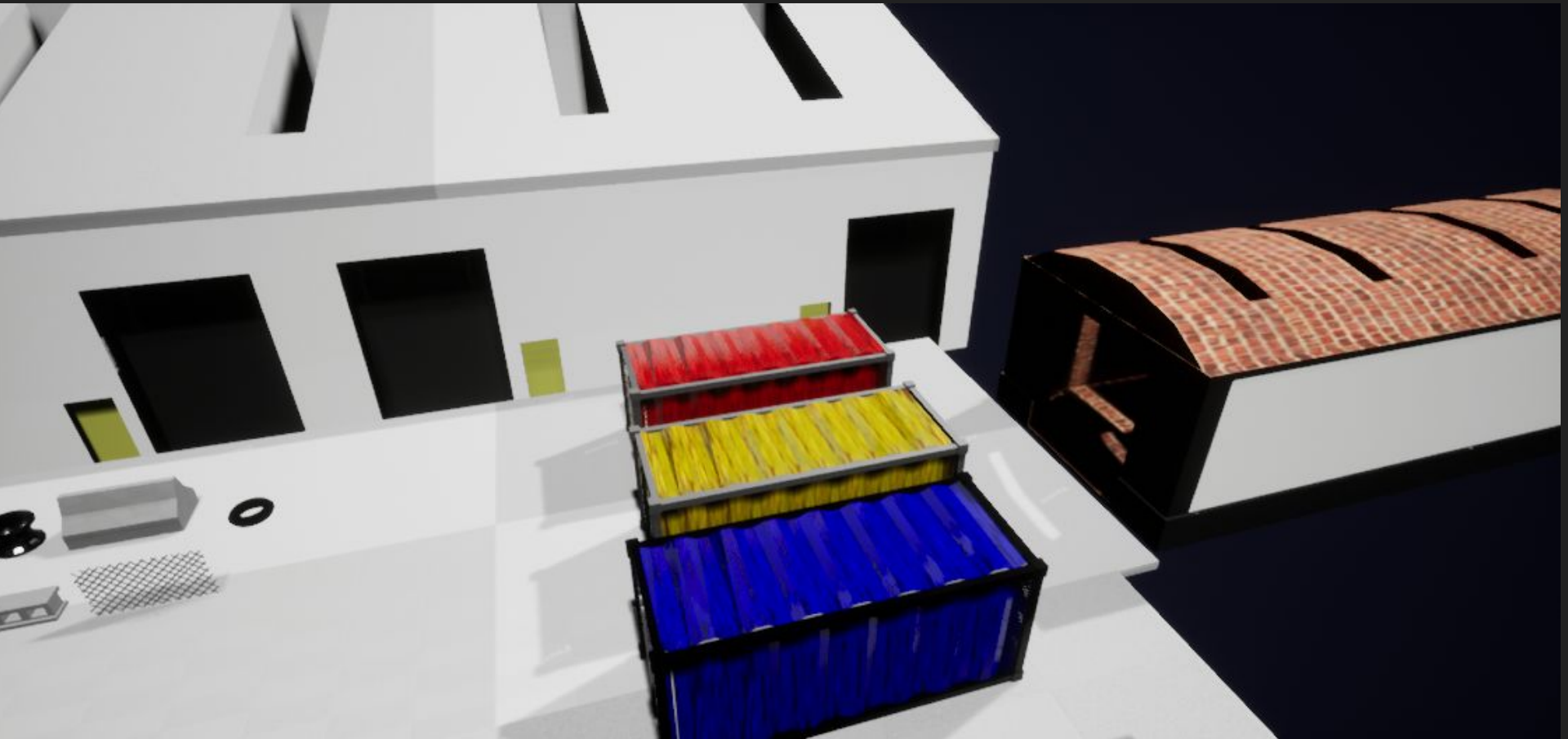
-First objective : find the hangar with the bad guy

→ obvious

-Second objective : find the container

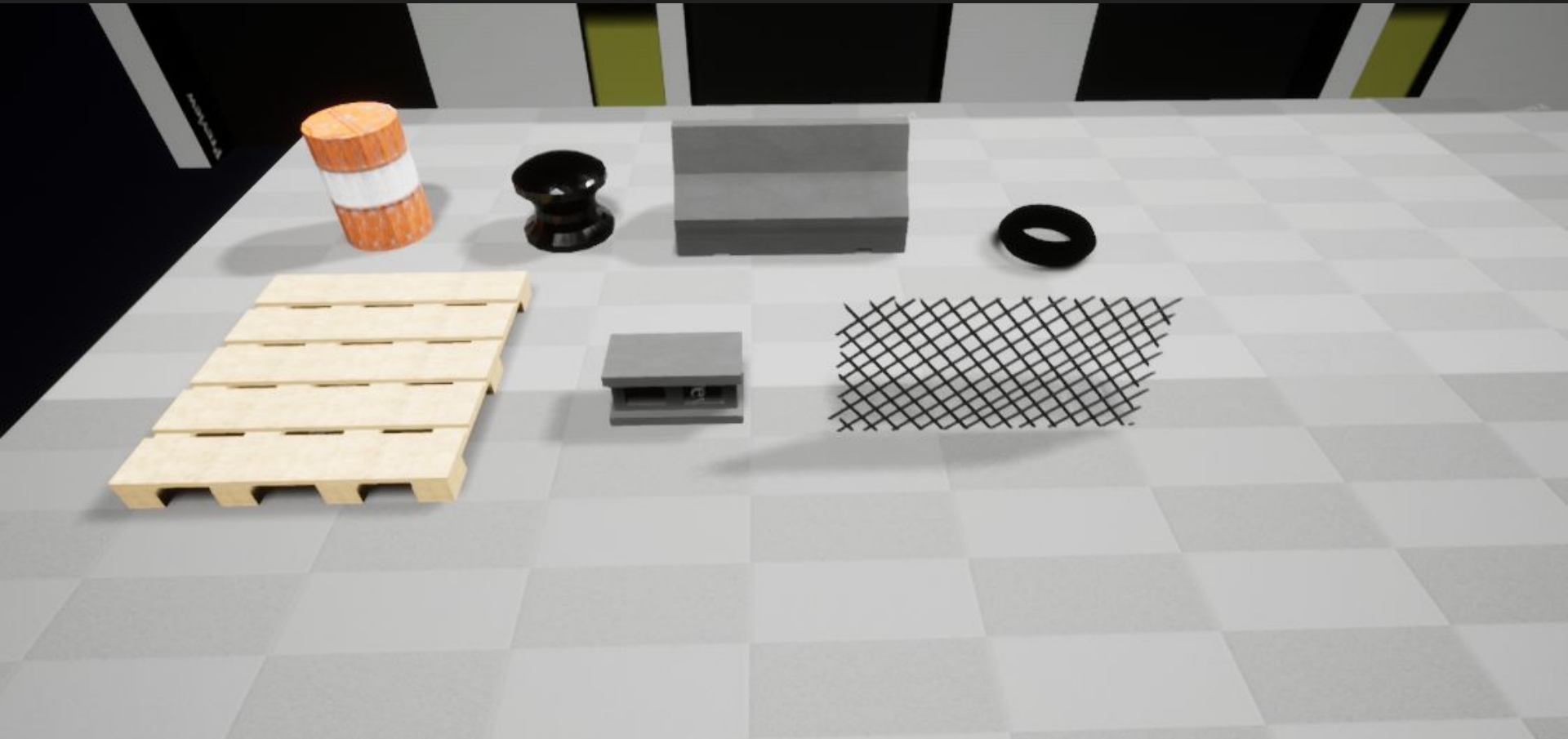
→ more hidden to encourage exploration

Grey box - step 02 : Containers and Hangars



Grey box - step 03 : Light poles

Grey box - step 04 : Props



Modeling process

-Made into Unreal

-In the construct scene, model with additive / subtractive geometry

-Then I grouped the BSP

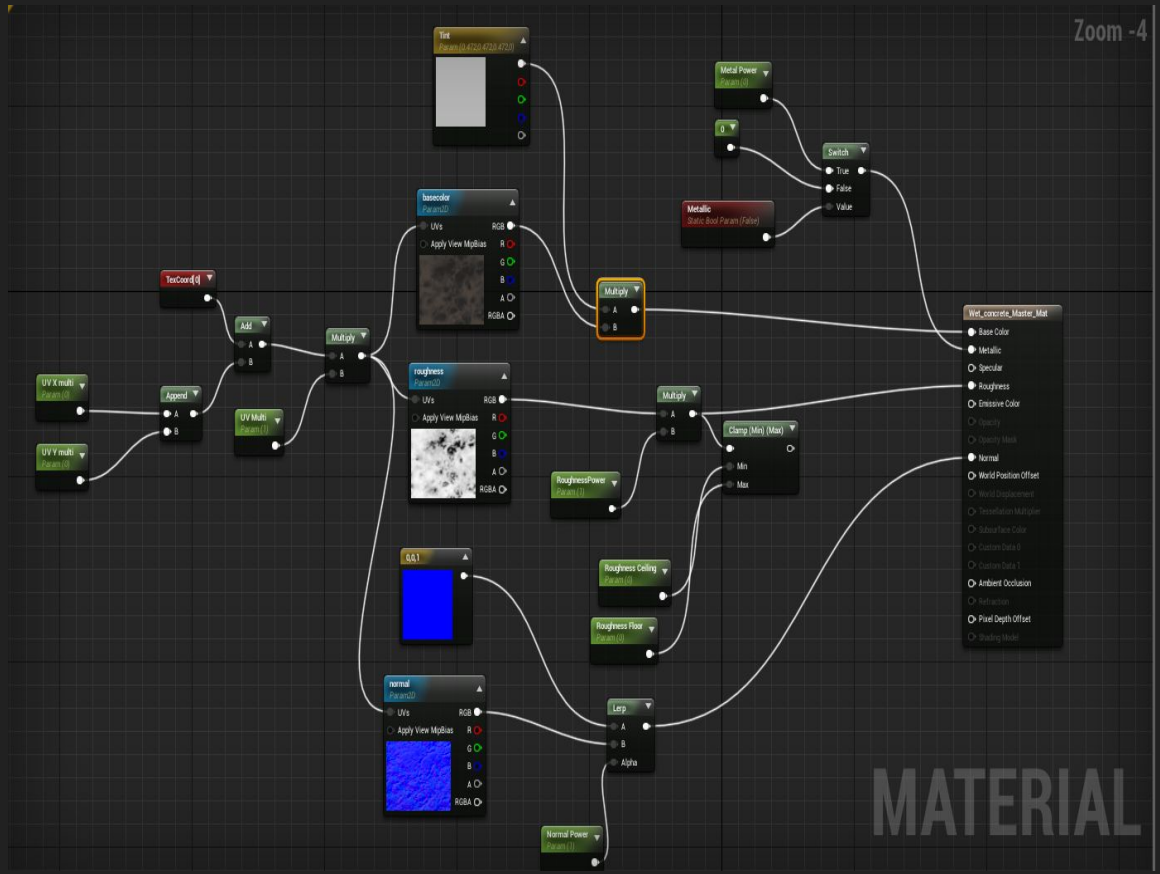
-I duplicate them and convert into static mesh

-If there is an issue,I go back to construct, take the original group, duplicate, modify and convert in a static meshes.

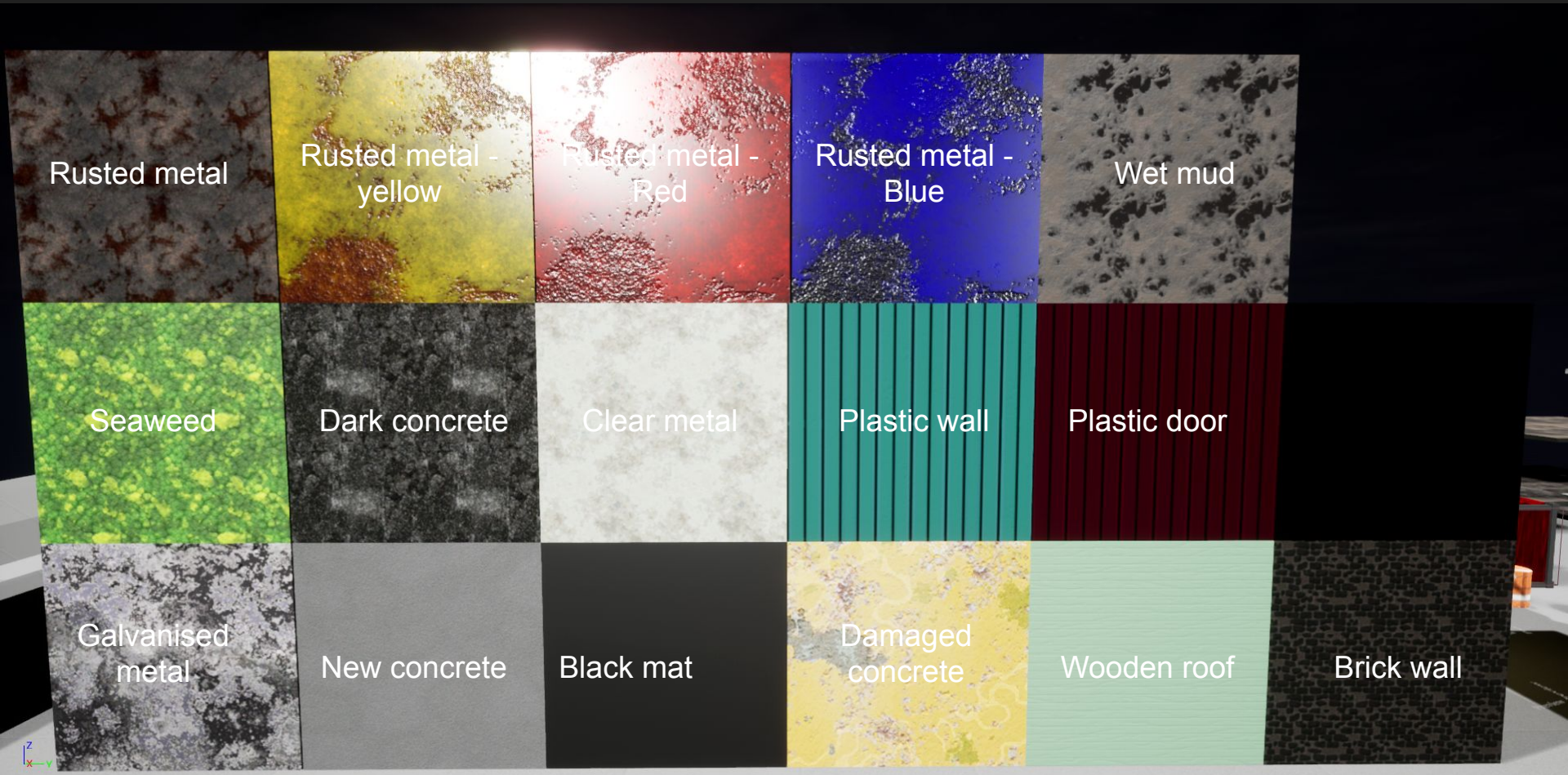
Textures - Process

Each textures are made into Substance designer, then export into Unreal Engine.

A master material is made of each of them, with the possibility to modify parameters (Normal/Roughness/Tint on the base color …) in the scene and instances of the materials easier.



Textures -


Rusted metal
Rusted metal - yellow
Rusted metal - Red
Rusted metal - Blue
Wet mud
Seaweed
Dark concrete
Clear metal
Plastic wall
Plastic door
Galvanised metal
New concrete
Black mat
Damaged concrete
Wooden roof
Brick wall

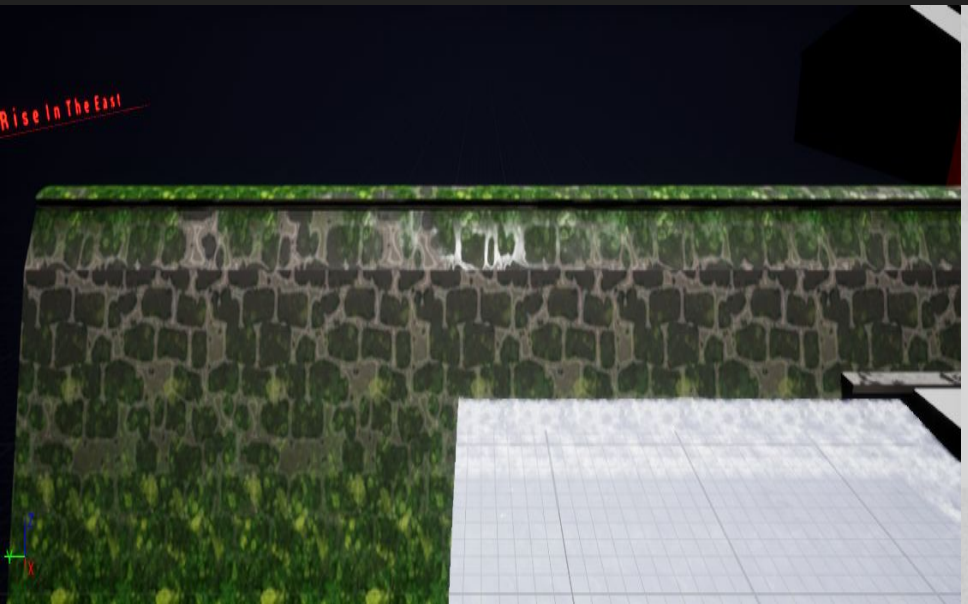
Vertex painting

Vertex painting need a high tessellation of the mesh, which weight heavy on the CPU.

So only 2 vertex painting in the scene :

-the ground with a asphalt way crossing a muddy concrete

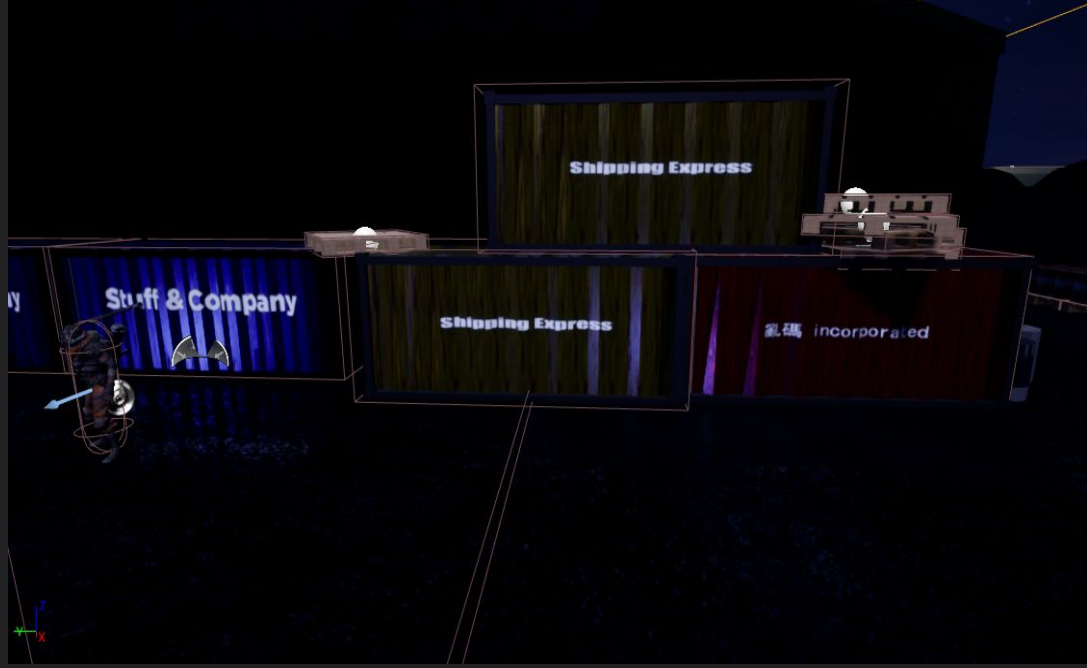
-The wall in the sea, with seaweeds on the brick wall



Decals

Two types of decals :

- “Background” decals : Text and logo for the hangars and containers. It give a backstory to the scene



- “Natural” decals: mostly bird feces to reinforce the ambiance, make the scene more credible

Lights

- Light pole : With only a spotlight, you can’t see the source (or I didn’t find the way to do it right) so for each spotlight is attached a point light.

- directional light : even if it’s night time, there is a directional light. This light has a grey-blue color (#393F65FF)

- The directional light has a small intensity of 1 lux : enough to see better in the dark, but not to much so it bright everything

External assets used

On Epic marketplace :

-”Water materials” By thearlfx
-Parangon characters Drongo and Lt.Belica by Epic games

From Freesound :

“Wave crashing on the shore in the Mediterranean sea” by flood-mix
“Seagulls / gaviotas clean wildtrack” by Soojay
“Horn in the harbor of Valparaiso” by Felix Blume.

Additional content

-Payable character, can move/crouch/shoot (Lt.Belica)

- Enemy pawns in idle animation

-Sounds effects of seagulls / wave and boats horn in the distance

Containers & Co

Pier 306
Shipping Express
Shipping Express