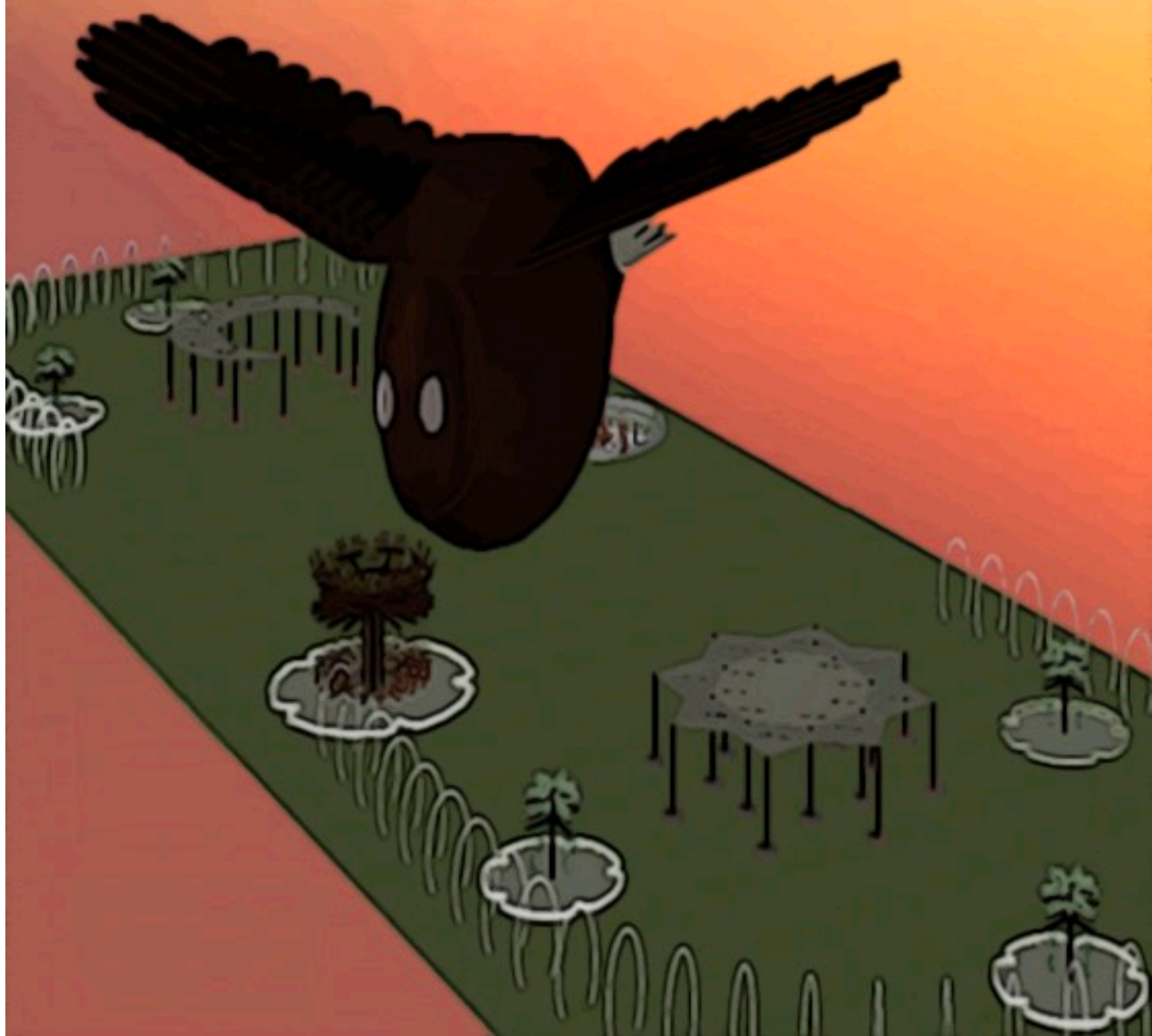
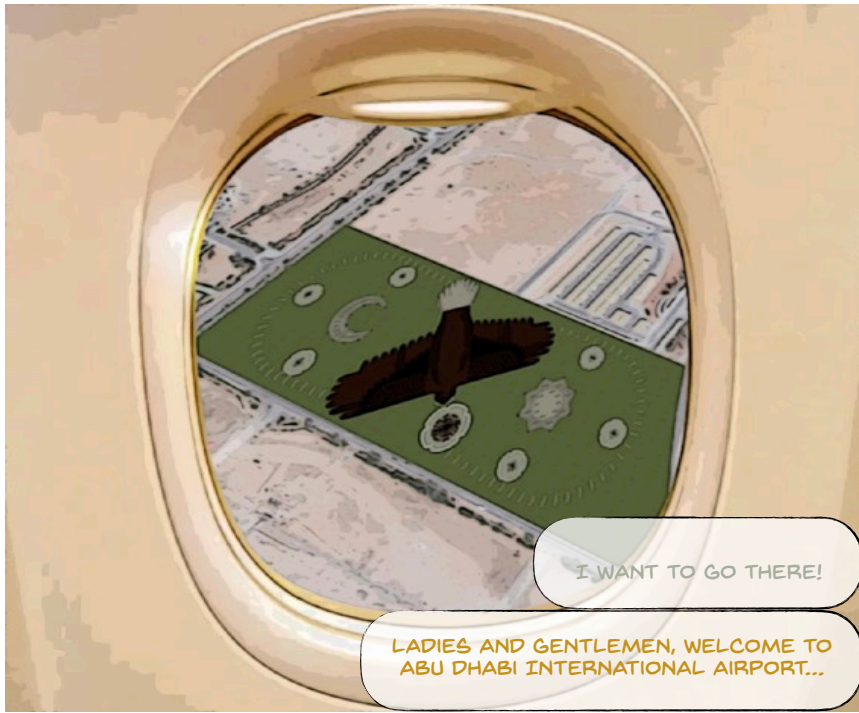


# BAWWABA AL TAQA

## بوابة الطاقة





I WANT TO GO THERE!

LADIES AND GENTLEMEN, WELCOME TO ABU DHABI INTERNATIONAL AIRPORT...

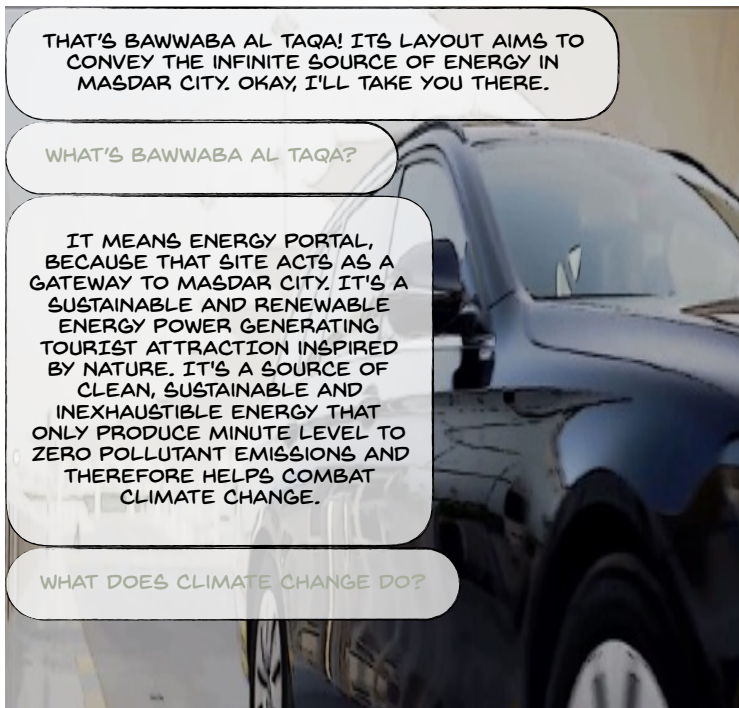


WELCOME TO ABU DHABI! MARHABA, HOW WAS YOUR FLIGHT? I'LL BE AT YOUR SERVICE DURING YOUR STAY.

IT WAS NICE!

DO YOU HAVE A PARTICULAR PLACE IN MIND?

SOMETHING CAUGHT MY ATTENTION BEFORE I LANDED, IT LOOKS LIKE AN INFINITY SYMBOL. WHAT IS IT?



THAT'S BAWWABA AL TAQA! ITS LAYOUT AIMS TO CONVEY THE INFINITE SOURCE OF ENERGY IN MASDAR CITY. OKAY, I'LL TAKE YOU THERE.

WHAT'S BAWWABA AL TAQA?

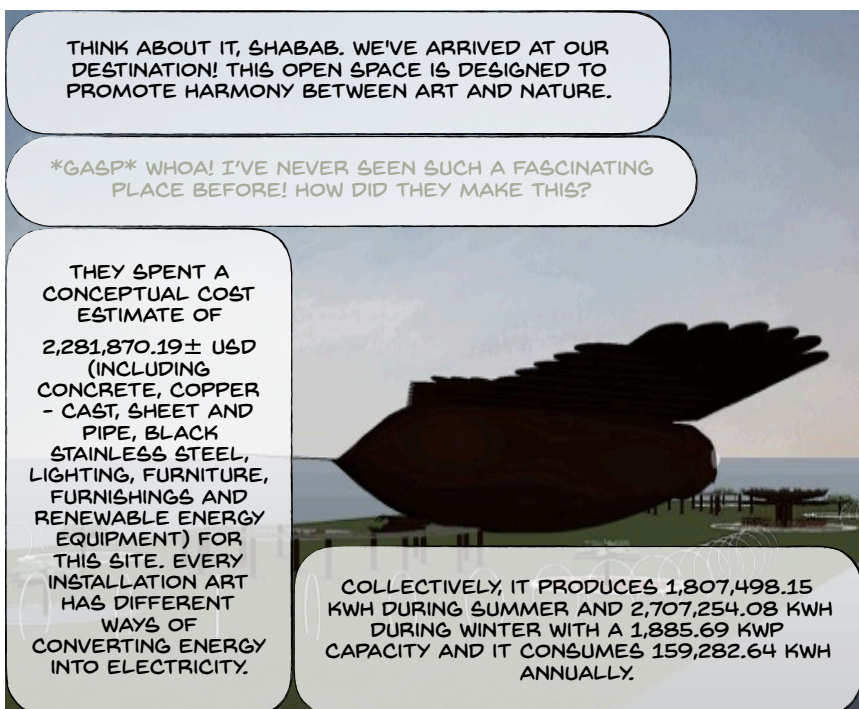
IT MEANS ENERGY PORTAL, BECAUSE THAT SITE ACTS AS A GATEWAY TO MASDAR CITY. IT'S A SUSTAINABLE AND RENEWABLE ENERGY POWER GENERATING TOURIST ATTRACTION INSPIRED BY NATURE. IT'S A SOURCE OF CLEAN, SUSTAINABLE AND INEXHAUSTIBLE ENERGY THAT ONLY PRODUCE MINUTE LEVEL TO ZERO POLLUTANT EMISSIONS AND THEREFORE HELPS COMBAT CLIMATE CHANGE.

WHAT DOES CLIMATE CHANGE DO?



THAT'S AN EXCELLENT QUESTION! I CANNOT RESIST WHAT IT CREATES OFTEN EXIST WHEN IT'S TOO LATE IT TRIGGERS FEAR WHENEVER IT'S THERE IT'S AN AFFAIR JUST BE AWARE IT CEASE PLEASURE IN SOME CREATURE CAN DESTROY NATURE AND OUR FUTURE. THAT'S ONE OF THE POTENTIAL EFFECT, WHAT IS IT?

WHAT IS IT?! THAT'S TOO HARD FOR ME



THINK ABOUT IT, SHABAB. WE'VE ARRIVED AT OUR DESTINATION! THIS OPEN SPACE IS DESIGNED TO PROMOTE HARMONY BETWEEN ART AND NATURE.

\*GASP\* WHOA! I'VE NEVER SEEN SUCH A FASCINATING PLACE BEFORE! HOW DID THEY MAKE THIS?

THEY SPENT A CONCEPTUAL COST ESTIMATE OF 2,281,870.19± USD (INCLUDING CONCRETE, COPPER - CAST, SHEET AND PIPE, BLACK STAINLESS STEEL, LIGHTING, FURNITURE, FURNISHINGS AND RENEWABLE ENERGY EQUIPMENT) FOR THIS SITE. EVERY INSTALLATION ART HAS DIFFERENT WAYS OF CONVERTING ENERGY INTO ELECTRICITY.

COLLECTIVELY, IT PRODUCES 1,807,498.15 KWH DURING SUMMER AND 2,707,254.08 KWH DURING WINTER WITH A 1,885.69 KWP CAPACITY AND IT CONSUMES 159,282.64 KWH ANNUALLY.



LET'S DOWNLOAD THE GUIDE BOOK APP, IT HAS ALL THE INFORMATION ABOUT THIS LANDMARK.



THE PATHWAY IS COMPOSED OF KINETIC TILES THAT BENEFIT FROM FOOT TRAFFIC. THIS IS IN FACT A MAJOR ARC WHICH ILLUMINATES AT NIGHT.

OH... IT LOOKS LIKE A PORTAL!



LET'S START OVER HERE. DID YOU KNOW THAT BIRDS ARE EXCELLENT INDICATORS OF ENVIRONMENTAL POLLUTION? THE NEGATIVE CHANGES IN BIRDS ARE EVIDENCE OF CLIMATE CHANGE AND ECOSYSTEM DETERIORATION. THIS IS A SAKER FALCON, THIS BIRD HAS PLAYED A FUNDAMENTAL ROLE IN THE CULTURE OF UAE.

I DIDN'T KNOW THAT!

THERE ARE PHOTOVOLTAIC SOLAR PANELS MOUNTED ON TOP OF THE CANTILEVER WINGS. THE CONTOUR OF THE UNDERWINGS ARE EMPHASISED BY WARM WHITE LIGHT-EMITTING DIODE PANELS.

THE TAIL CONTAINS THIN-FILM SOLAR CELLS EMBEDDED ON THE FABRIC THAT PROVIDES SHADE FOR THE NEST. THE DIMINISHING DESIGN OF THE SOLAR CELLS SIGNIFIES THE GRADUAL EXTINCTION OF BIRDS DUE TO CLIMATE CHANGE. IT'S ALLEGED THAT THEY'RE CURRENTLY ASSESSING THE CAPABILITY OF VERTICAL SINGLE-AXIS TRACKING DEVICE FOR THIS SECTION TO GUARANTEE SHADE DISTRIBUTION THROUGHOUT THE DAY.

WHAT... COOL! IS THAT THE NEST?

YES, THIS VENUE CAN HOST SMALL-SCALE FUNCTIONS SUCH AS CORPORATE AND SOCIAL EVENTS. A RAMP IS PROVIDED TO MAKE IT ACCESSIBLE FOR EVERYONE AND WARM WHITE LIGHT-EMITTING DIODE STRIP LIGHTS ARE INSTALLED UNDER THE BENCH TO HIGHLIGHT THE AREA.

LET'S HAVE A LOOK INSIDE! THE FLOOR TILES GENERATES ELECTRICITY BY HARNESSING KINETIC ENERGY FROM THE WEIGHT OF OUR FOOTSTEPS THAT COMPRESSES THE ELECTROMAGNETIC GENERATORS. THEY ALSO PROVIDED BAIDH (EGG) CHAIRS FOR ADDITIONAL SEATING.

HMM, INTERESTING...



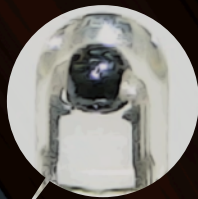
THERE'S A PLAY AREA TOO?!

YOU CAN SAY THAT. THIS AREA IS INSPIRED BY THE EVERGREEN GHAF TREES ACROSS THE DESERT. IT CONSISTS OF SEVEN ZONES THAT REPRESENTS THE SEVEN EMIRATES OF THE UAE. THE OUTLINE OF A TRIBULUS FLOWER IS USED TO ENCLOSE THESE ZONES AND THEY ARE ILLUMINATED BY LIGHT-EMITTING DIODE COLOURED STRIP LIGHTS. EVERY ZONES ARE FILLED WITH DIFFERENT HUES OF SANDS FROM EACH EMIRATES. LET'S TAKE A CLOSER LOOK AT THE BIG ONE FIRST.



THIS TREE SIGNIFIES ABU DHABI WHICH IS THE CAPITAL AND BIGGEST EMIRATE IN THE UAE. THERE ARE VARIOUS HEIGHTS OF HAMMOCK TO ACCOMMODATE CHILDREN AND ADULTS.

THE CROWN FUNCTIONS AS A SHADE TO THESE HAMMOCKS AND THOSE LEAVES ARE LOADED WITH SPHERICAL MICRO SOLAR CELL, IT HAS THE ABILITY TO CAPTURE THE LIGHT FROM ALL DIRECTIONS.



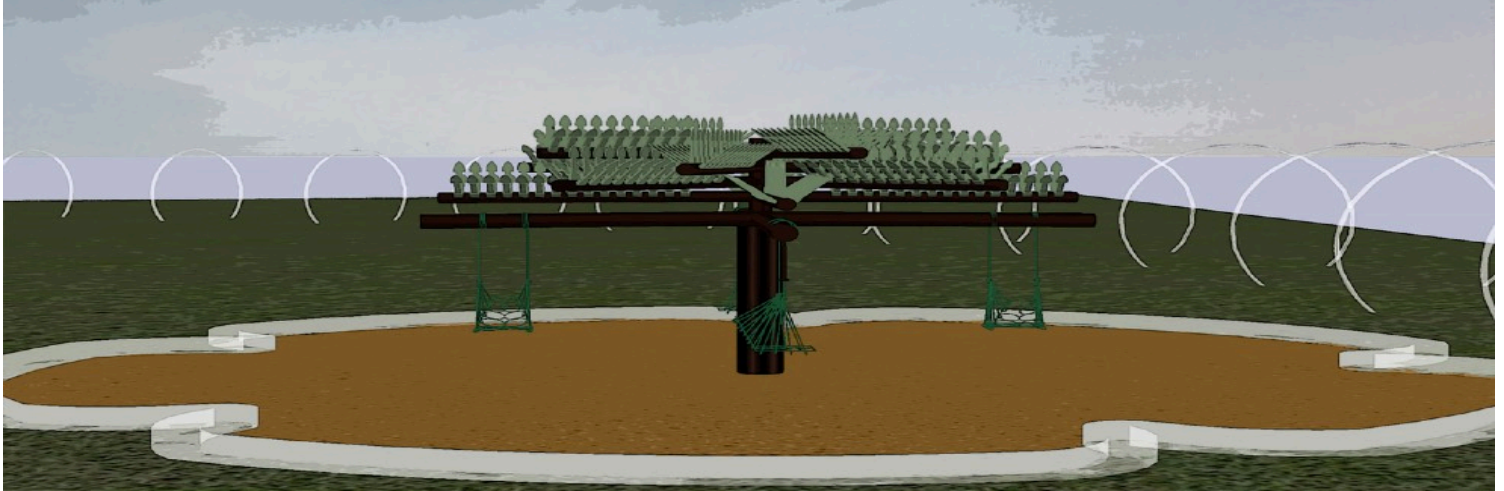
THESE HAMMOCKS ARE CRAFTED USING THE TRADITIONAL AL-SADU WEAVING TECHNIQUE. YOU CAN STAY HERE TO UNWIND OR CONTEMPLATE ABOUT LIFE.

CAN WE GO THERE ALREADY?!





Haha okay, as you wish. These trees are inspired by a swing carousel ride, this is created for the kids and also the kids at heart! The four swing seats stands for the values of Masdar which are:  
 AGILE - IT HAS THE ABILITY TO MOVE SWIFTLY  
 COMMERCIAL - IT DEMONSTRATES THAT CLEAN TECHNOLOGIES ARE COMMERCIALLY VIABLE  
 SUSTAINABLE - THE MATERIALS USED ARE SUSTAINABLE  
 GROUNDED - IT'S A SIMPLE EQUIPMENT WHICH MAKES IT TECHNICALLY AND FINANCIALLY FEASIBLE



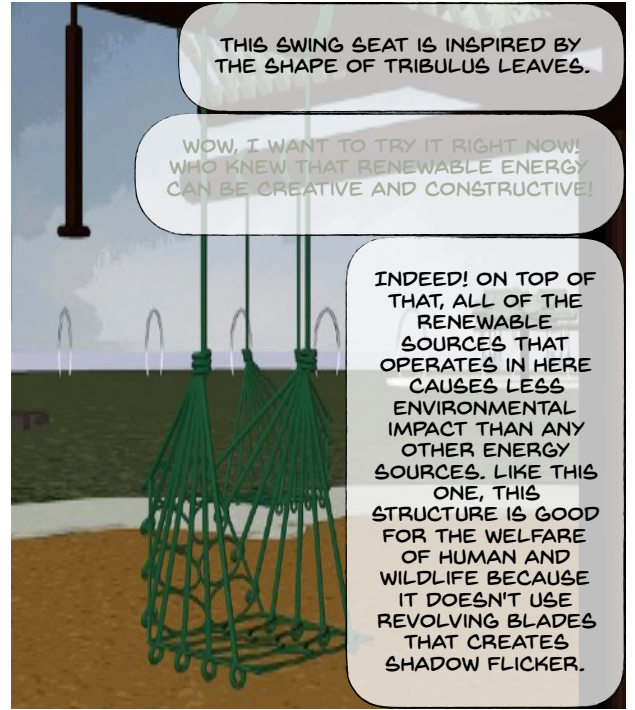
THE CROWN HARVESTS ENERGY UTILISING AMBIENT VIBRATIONS FROM AEROELASTIC FLUTTER, THIS WILL WORK WITH ANY WIND VELOCITY. THE BLUFF BODY MIMICS THE SILHOUETTE OF GHAF LEAVES WHICH IS ATTACHED TO THE PIEZOELECTRIC BEAM STALK.



THIS SWING SEAT IS INSPIRED BY THE SHAPE OF TRIBULUS LEAVES.

WOW, I WANT TO TRY IT RIGHT NOW!  
 WHO KNEW THAT RENEWABLE ENERGY CAN BE CREATIVE AND CONSTRUCTIVE!

INDEED! ON TOP OF THAT, ALL OF THE RENEWABLE SOURCES THAT OPERATES IN HERE CAUSES LESS ENVIRONMENTAL IMPACT THAN ANY OTHER ENERGY SOURCES. LIKE THIS ONE, THIS STRUCTURE IS GOOD FOR THE WELFARE OF HUMAN AND WILDLIFE BECAUSE IT DOESN'T USE REVOLVING BLADES THAT CREATES SHADOW FLICKER.



AS WELL AS THE PHOTOVOLTAIC SYSTEM, THE LAND IMPACT FROM IT IS MINIMISED BY MOUNTING THEM ON THE FALCON'S WINGS. FURTHERMORE, THE COMPONENTS ARE STATIONED WITHIN ITS BELLY WHICH CAN BE ACCESSED THROUGH THE RIGHT LEG. IT CAN BE CONNECTED TO A POWER GRID THROUGH THE FALCON'S LEFT LEG TO THE SOIL WITH UNDERGROUND TRANSMISSION CABLE, THIS INTENDS TO ACHIEVE SECURITY AND SAFETY FROM EXTREME WEATHER.





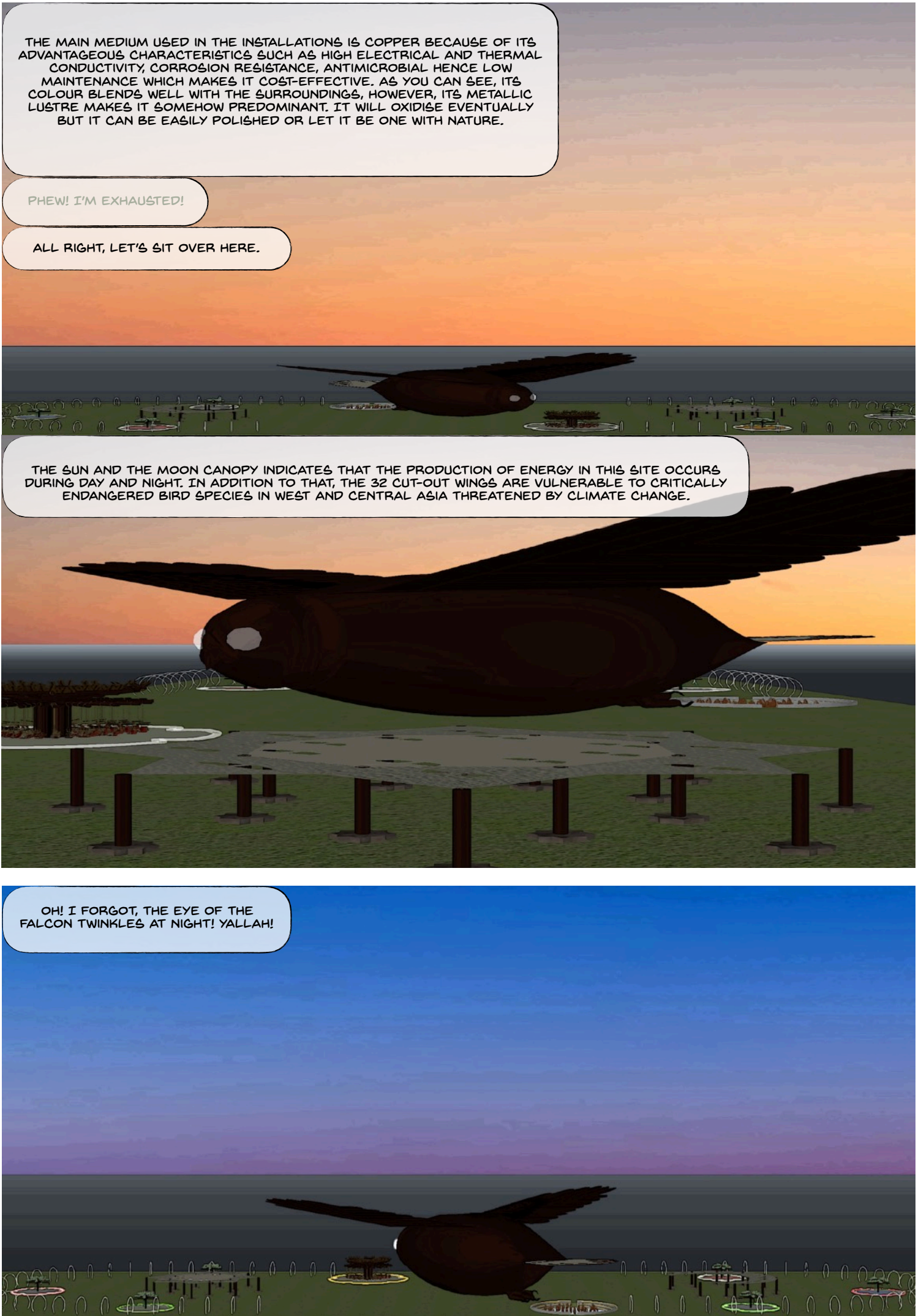
THE MAIN MEDIUM USED IN THE INSTALLATIONS IS COPPER BECAUSE OF ITS ADVANTAGEOUS CHARACTERISTICS SUCH AS HIGH ELECTRICAL AND THERMAL CONDUCTIVITY, CORROSION RESISTANCE, ANTIMICROBIAL HENCE LOW MAINTENANCE WHICH MAKES IT COST-EFFECTIVE. AS YOU CAN SEE, ITS COLOUR BLENDS WELL WITH THE SURROUNDINGS, HOWEVER, ITS METALLIC LUSTRE MAKES IT SOMEHOW PREDOMINANT. IT WILL OXIDISE EVENTUALLY BUT IT CAN BE EASILY POLISHED OR LET IT BE ONE WITH NATURE.

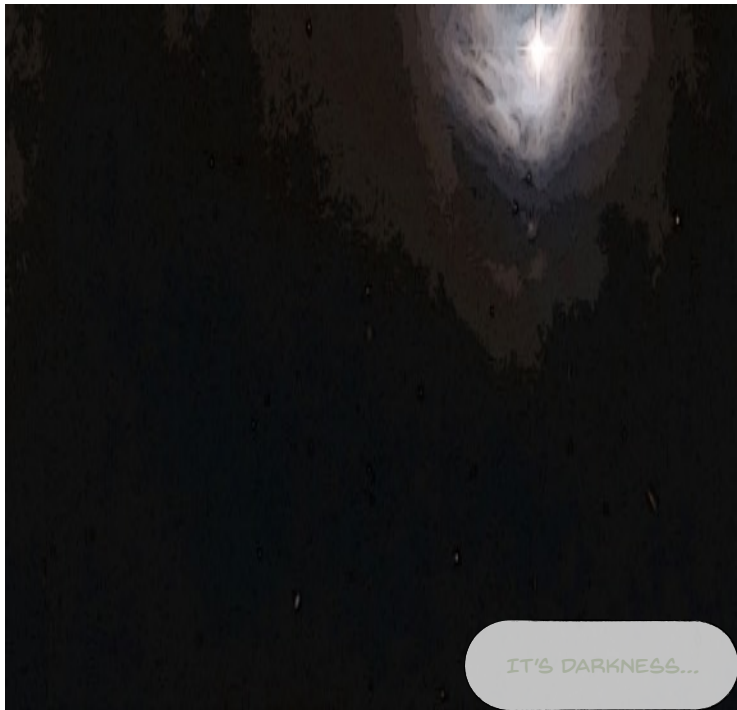
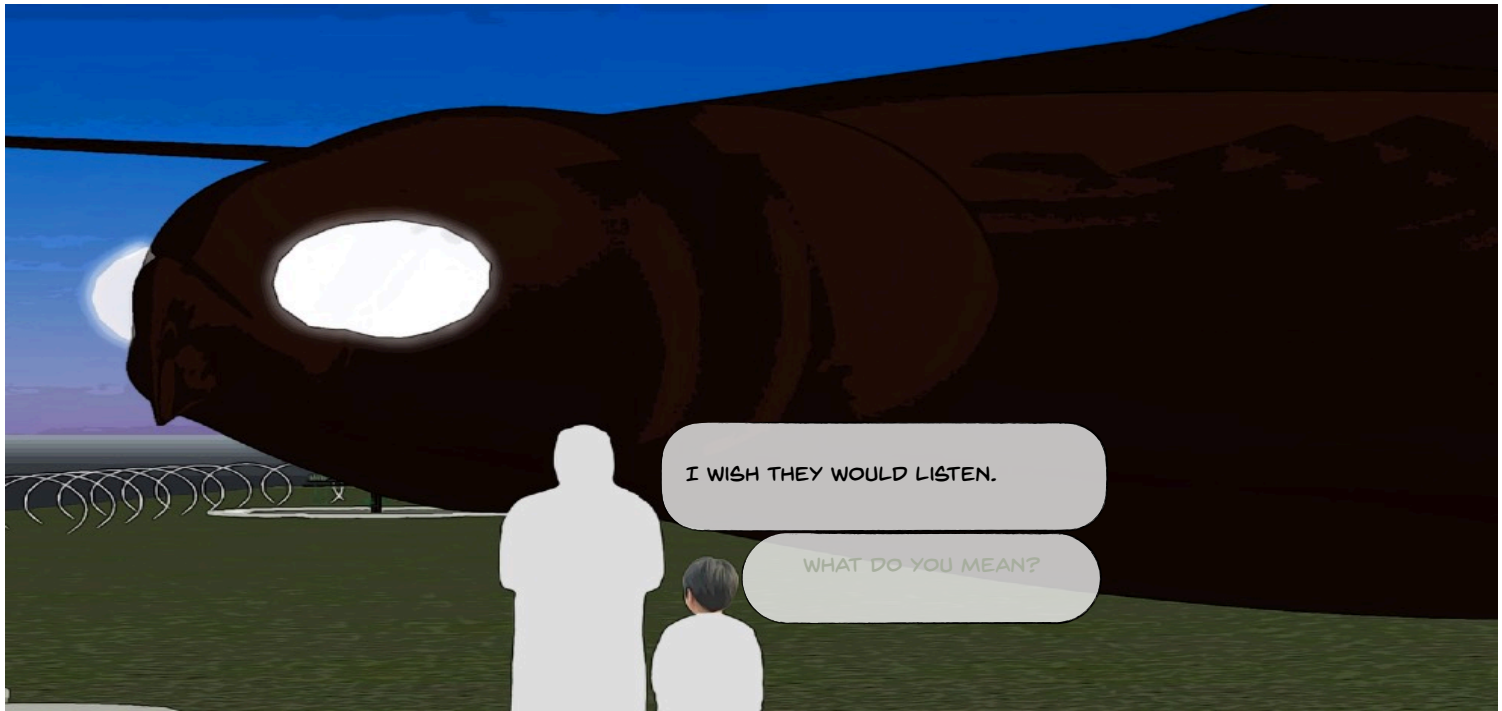
PHEW! I'M EXHAUSTED!

ALL RIGHT, LET'S SIT OVER HERE.

THE SUN AND THE MOON CANOPY INDICATES THAT THE PRODUCTION OF ENERGY IN THIS SITE OCCURS DURING DAY AND NIGHT. IN ADDITION TO THAT, THE 32 CUT-OUT WINGS ARE VULNERABLE TO CRITICALLY ENDANGERED BIRD SPECIES IN WEST AND CENTRAL ASIA THREATENED BY CLIMATE CHANGE.

OH! I FORGOT, THE EYE OF THE FALCON TWINKLES AT NIGHT! YALLAH!





THE END.