



# LEAP BEYOND

INVEST IN SPACE EXPLORATION. INVEST IN MANKIND.

THE PROCESS

Josh Hill

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INVEST IN SPACE EXPLORATION. INVEST IN MANKIND.

## THE PROCESS

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**"THAT'S ONE SMALL STEP FOR MAN, ONE GIANT LEAP FOR MANKIND."**

*-Neil Armstrong-Astronaut*

LEAP BEYOND

Josh Hill

[joshhill.com](http://joshhill.com) | [josh@joshhill.com](mailto:josh@joshhill.com) | 513.379.3558

University of Cincinnati, School of Design, Architecture, Art, and Planning

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# TOPIC

Topic Selection, Problem Statement



**“THE INTANGIBLE DESIRE TO EXPLORE AND CHALLENGE THE BOUNDARIES OF WHAT WE KNOW AND WHERE WE HAVE BEEN HAS PROVIDED BENEFITS TO OUR SOCIETY FOR CENTURIES.”**

–NASA

#### TOPIC

I have always been intrigued by outer space, the vast open universe and how it puts into perspective just how tiny our planet is and just how small we are as individuals in this ecosystem. I wanted to create something that would inspire and drive people to discover and learn more about why space exploration is so important to mankind.

Space programs not only push the limits of technology and innovation but also push people to keep dreaming and remain inspired to discover what the future holds. The one great ability we as humans have is the power of imagination. Space exploration and space programs around the world allow human imagination to reach its full potential.

#### PROBLEM STATEMENT

In order for mankind to return to a thriving planet powered by innovation and discovery, we must regain support for space exploration, discard old misconceptions and become educated on the true benefits and cost of the space program.

A common misconception is that the space program is excessively expensive, but they are unaware of the true value. Many of the materials, objects and technologies used on a daily basis, were invented because of the space program.

If mankind continues to hold on to misconceptions, and remain uneducated, support for the space program will dwindle, and so will our ability to innovate.

We are in dire need of a campaign that will explain the facts and true benefits, and will drive support for space exploration. This knowledge will fuel education, science, discovery and the economy.



# RESEARCH

Overview, Audience, Benchmarking



**“OVER THE LAST FEW DECADES, AMERICANS DELUDED THEMSELVES INTO BELIEVING MISCONCEPTIONS ABOUT SPACE TRAVEL, AND, AS A RESULT, THE PURPOSE AND NECESSITIES OF A SPACE PROGRAM ARE NOW MISUNDERSTOOD.”**

*-Neil deGrasse Tyson-Astrophysicist*

## OVERVIEW

Currently, the US space program has a funding of \$18 billion which is just 0.5% of the federal budget. The common misconception by most people is that NASA and the space program are a needless or non-essential waste of our national budget. It has been said many times by people, “Why are we spending billions of dollars up there in space when we have plenty of problems down here on Earth?” In truth, lots of problems on earth can be and have been solved because of the space program. Not just technology advances, but also inspiring the public to dream of something larger than themselves. These dreams drive and inspire innovation and discovery.

NASA being one of the main contributors to the space program and space exploration has a long history of ups and downs that have caused many preconceived notions and misconceptions by Americans.

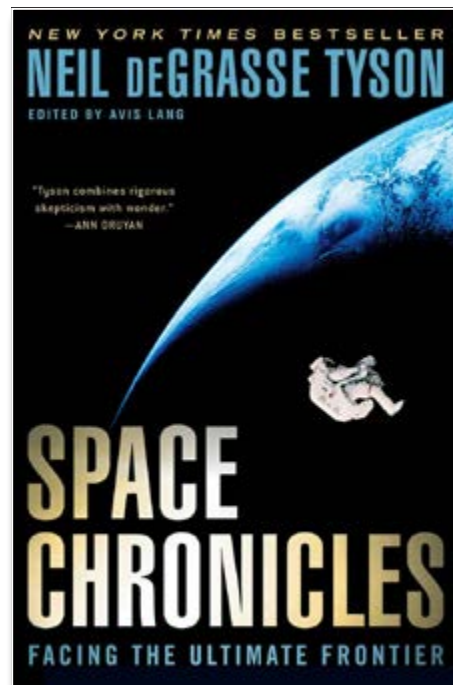
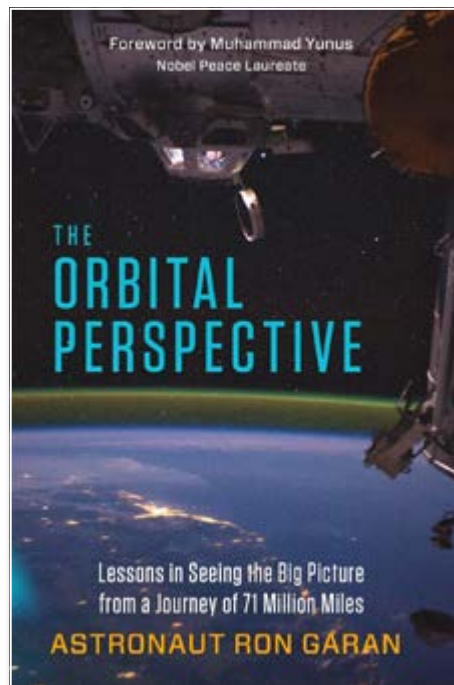
## AUDIENCE

Adult dreamers and doers.

Tax paying citizens who can affect change, offer support and educate others. Those who may have grown up with the space program but need a reminder of how important the innovations and discoveries are to each of us on earth.

**RESEARCH**

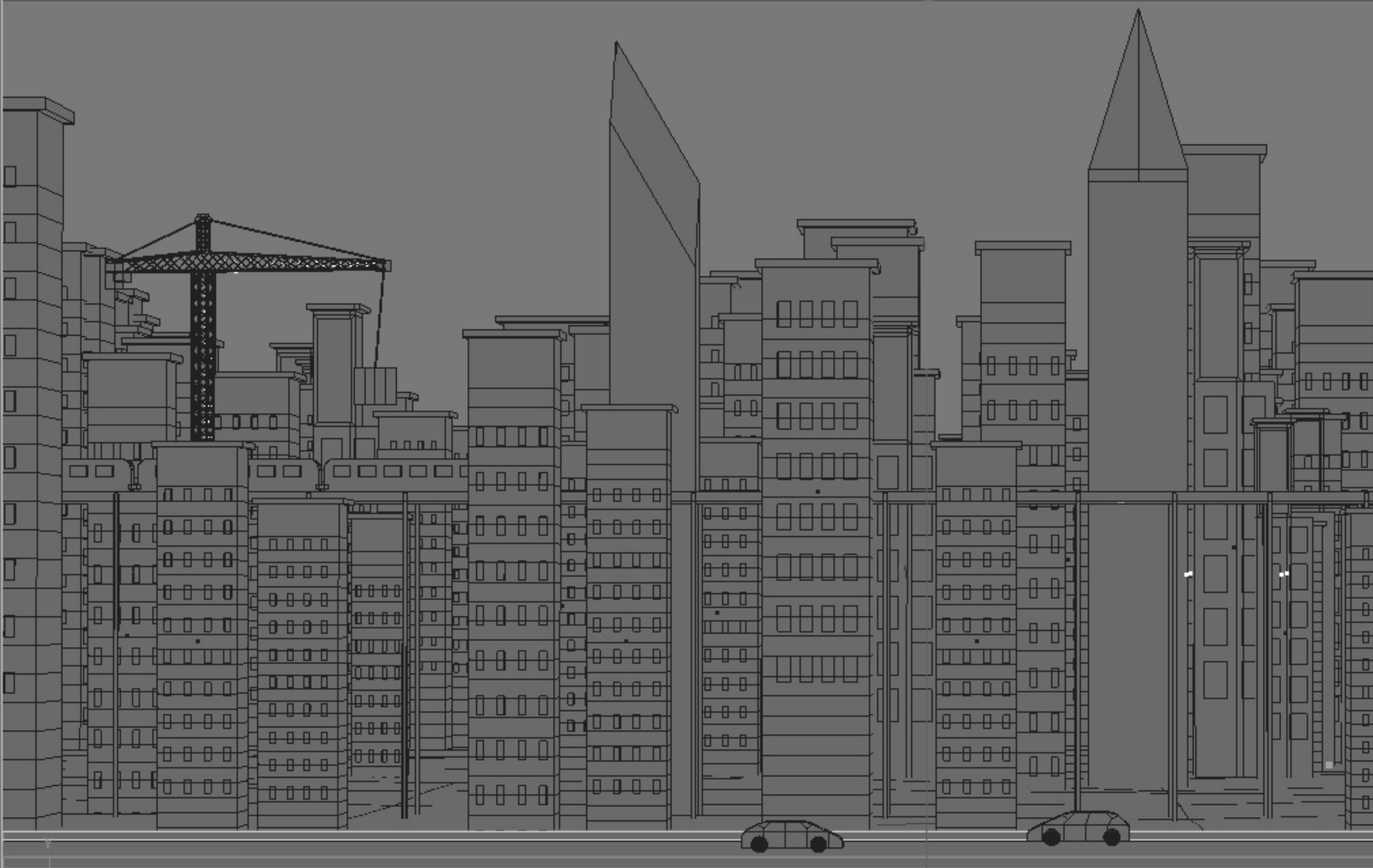
Many academic leaders and private organizations are at the forefront of science and space studies. Neil DeGrasse Tyson, NASA, SpaceX, and Mars One, to name a few. These leaders and organizations are driven by the goal of making a better future for themselves, their children, new generations, and all mankind.



**BENCHMARKING**

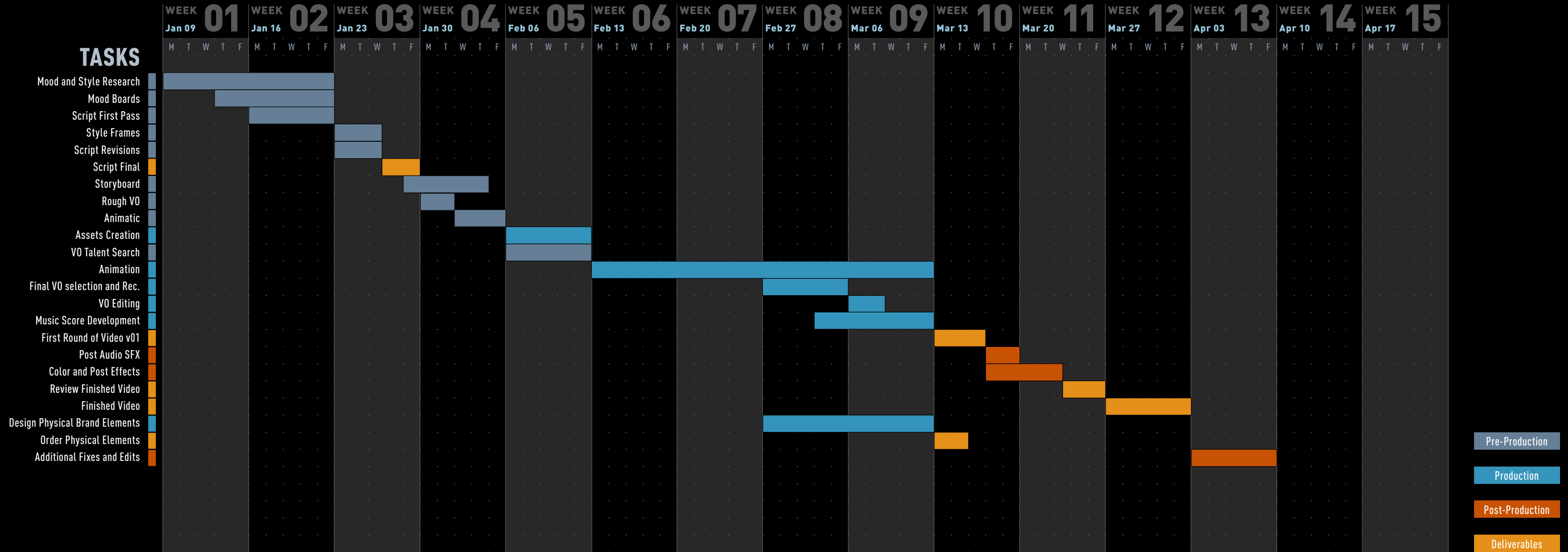
There are a few programs out there that aim to drive interest in space programs. Mars One is trying to motivate people by declaring that manned Mars missions are the next big step for the space program. NASA's eClips uses multimedia as a powerful way to engage audiences, but the production value and content is very outdated, so I think it can be improved upon by making it more engaging and interesting.





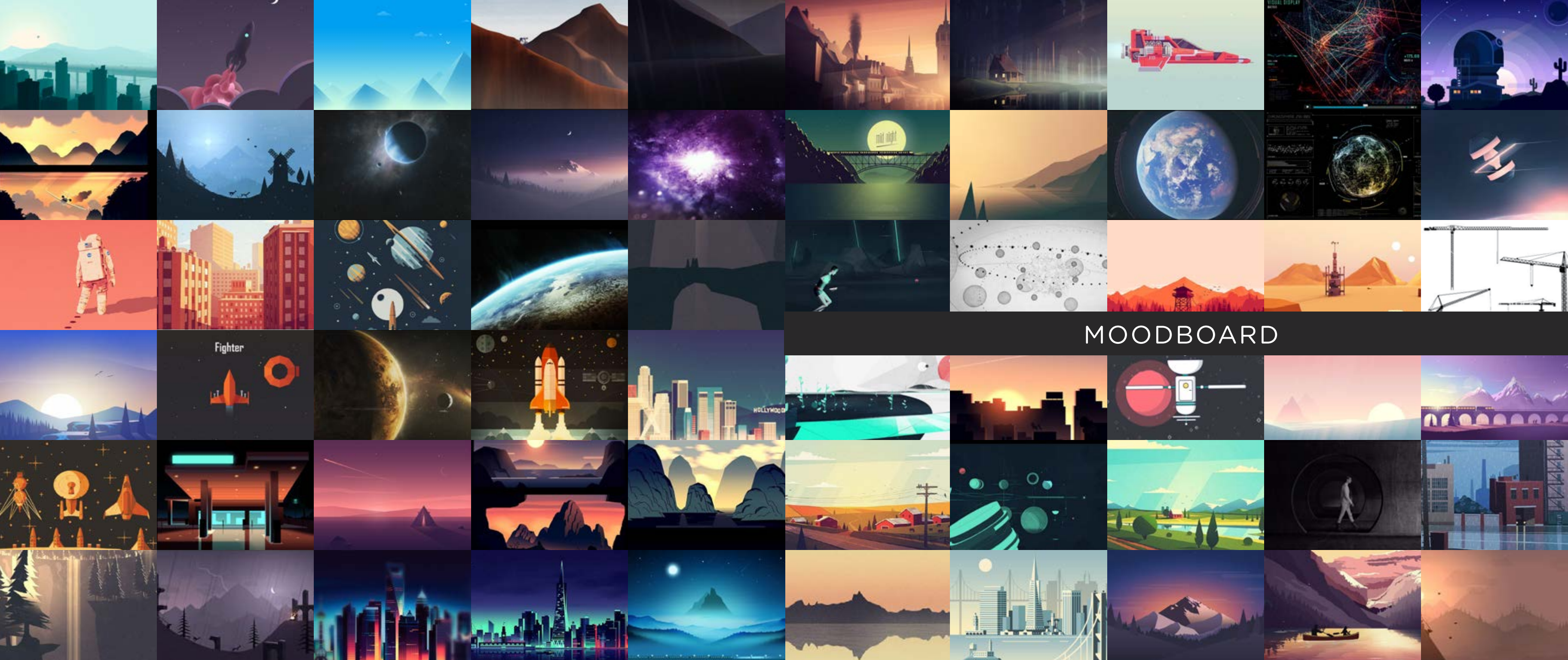
# PRE-PRODUCTION

Schedule, Script, Storyboard, Animatic



# 2017 Capstone Schedule

Josh Hill | Capstone 2017 | Graphic Communication Design



MOODBOARD

**NAMING EXPLORATION**

Discovery, Curiosity, Beauty, Wonder, Exploration

A clearer view of our universe

In Motion

Breaking Gravity

Defying Gravity

In Flight

A Leap Beyond

Leap BEyond

BEYOND curiosity

BEYOND

LEAP BEYOND

Invest in space exploration. Invest in mankind

Space Axiom

BEyond (The power of curiosity)

Unlock the potential of mankind

Intergalactic dreams

STAND UP FOR SPACE

A movement to refuel our potential

A movement to refuel our pursuit for invention

A movement to refuel our pursuit of a brighter tomorrow

A movement to refuel our quest for new discoveries

A movement to refuel invention

Dare to push new boundaries

Defy Gravity

Breaking Gravity

In motion – moving forward, momentum

Look Up to Space

Crusade

Limitless

Fight for Flight

Flight for the Future

Ignite Invention

Launch Now

Go For Launch

Stand up for space exploration,

GIANT LEAP

NEXT LEAP

NEW LEAP

Orbiting

Reentry

Spark

Support

Provoke

Propel

See Beyond

Dream Beyond

Look Beyond

Explore Beyond

Building Beyond

Beyond Believing

Beyond Belief

Fly Beyond

Beyond Ignition

Beyond the Stars

What's Beyond the Stars

Dreamquest

Passing Stars

Making Stars

Moving Stars

Home in the Stars

Shoot for the Stars

Invest in space exploration.

Invest in mankind.

A movement to stand up for space exploration and discovery

A quest to dream big and unlock human potential

**THE SCRIPT**

*This is the final script used in the video.*

**“Leap Beyond” The Intro Version Script**

**120 wpm x 2:30 = 300 words**

**21.9 / 1920x820 / 30 fps**

**INTRO**

We as human beings are inherently curious about the world around us, seeking to understand where we come from and find our place in the universe. We have an unquenchable thirst for discovery, curiosity, exploration and adventure. Yet one of the biggest mysteries of our existence remains unsolved:

Outer space, our vast universe made up of approximately 10 billion galaxies sits waiting to be discovered. In its prime, space programs from around the globe drove innovation and pushed technology forward. It fostered a nation of dreamers and doers who believed that if a man could land on the moon, there was no limit to what we could achieve. Many of the inventions we take for granted every day were discovered because we went to space, because we dared to do the impossible. But over the years research and funding has been cut dramatically, stifling advancements.

It's time to continue on this quest for knowledge by refueling humanity's passion and support for space exploration.

Take a LEAP BEYOND Invest in space exploration. Invest in mankind.

Leapbeyond.org

**“Leap Beyond” The Full Version Script**

120 wpm x 2:30 = 300 words

21.9 / 1920x820 / 30 fps

**INTRO**

We as human beings are inherently curious about the world around us, seeking to understand where we come from and find our place in the universe. We have an unquenchable thirst for discovery, curiosity, exploration and adventure. Yet one of the biggest mysteries of our existence remains unsolved:

Outer space, our vast universe made up of approximately 10 billion galaxies sits waiting to be discovered. In its prime, space programs from around the globe drove innovation and pushed technology forward. It fostered a nation of dreamers and doers who believed that if a man could land on the moon, there was no limit to what we could achieve. Many of the inventions we take for granted every day were discovered because we went to space, because we dared to do the impossible. But over the years research and funding has been cut dramatically, stifling advancements.

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Take a LEAP BEYOND Invest in space exploration. Invest in mankind.

**BENEFITS/WHY SPACE?**

Beyond gaining a better understanding of our universe, the innovations born of space missions improve our quality of life on earth. Vast and valuable, they have led to the discovery of new materials, tools, cures for diseases, and entirely new industries and technologies used around the world every day:

*This is the full length script that includes the Benefits section.*

Smoke detectors are now in every home because astronauts first used them to detect noxious gases. We also enjoy the convenience of cordless tools and appliances first developed for astronauts to gather rock and soil samples from the moon’s surface. And doctors can now detect breast cancer earlier using photo imaging software written for the Hubble space telescope. 21st century investments in science and technology are the greatest engines of economic growth and human accomplishments the world has seen. But currently in the US only half a penny of every tax dollar is spent on space programs, imagine how many more breakthroughs in science and technology we could uncover with more support and funding.

**CONCLUSION**

The next time you catch yourself gazing into the sky, remember to also look at the things that surround you everyday and know that most of what we take for granted was discovered because we went to space, because we dared to do the impossible.

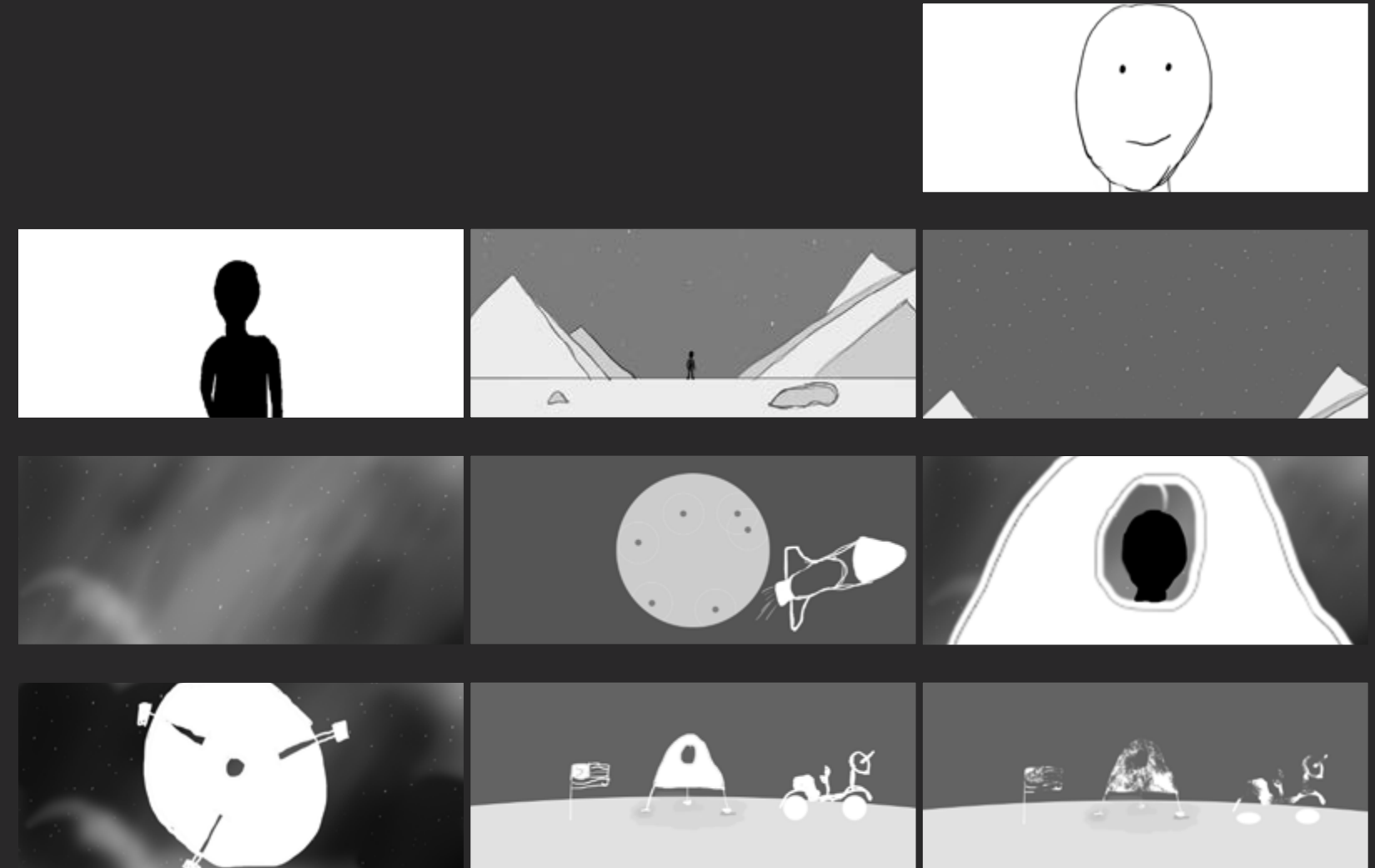
And now, I urge you to help us continue on this quest by supporting space exploration.

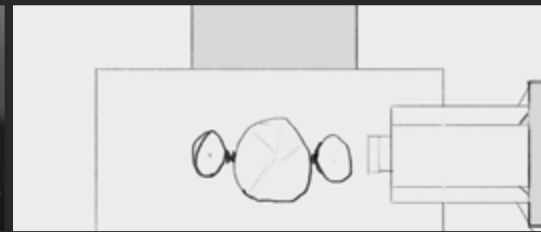
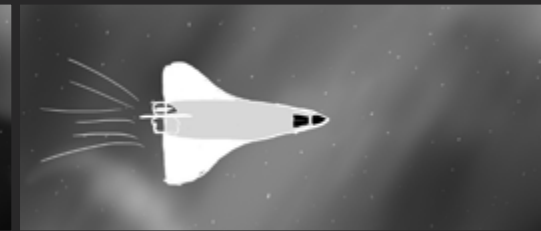
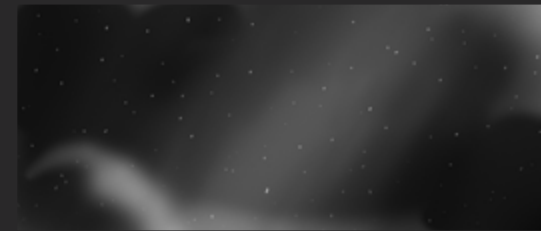
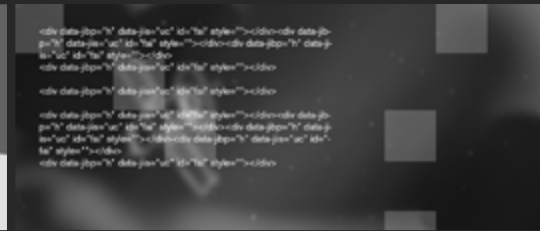
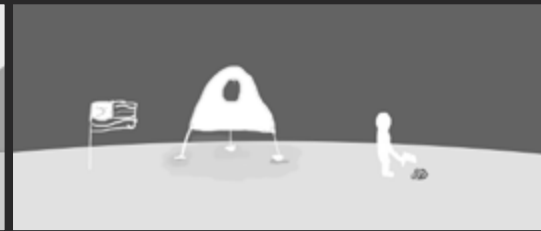
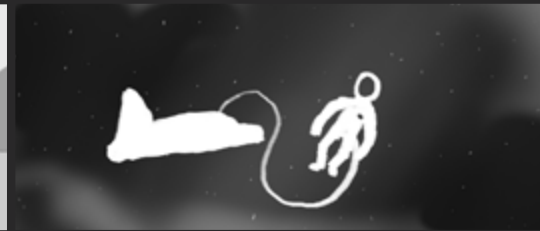
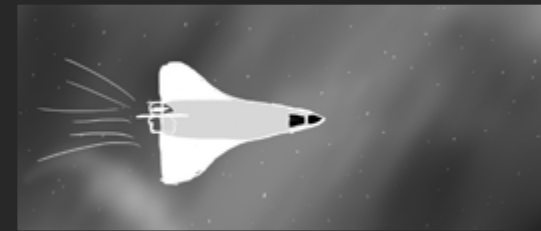
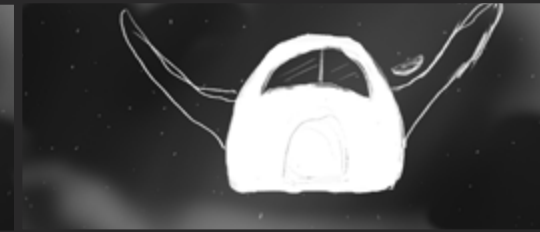
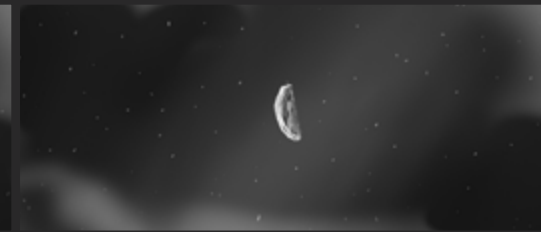
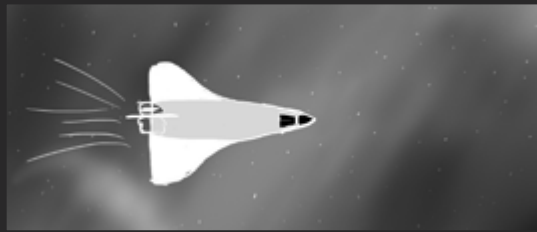
Take a LEAP BEYOND Invest in space exploration. Invest in mankind.

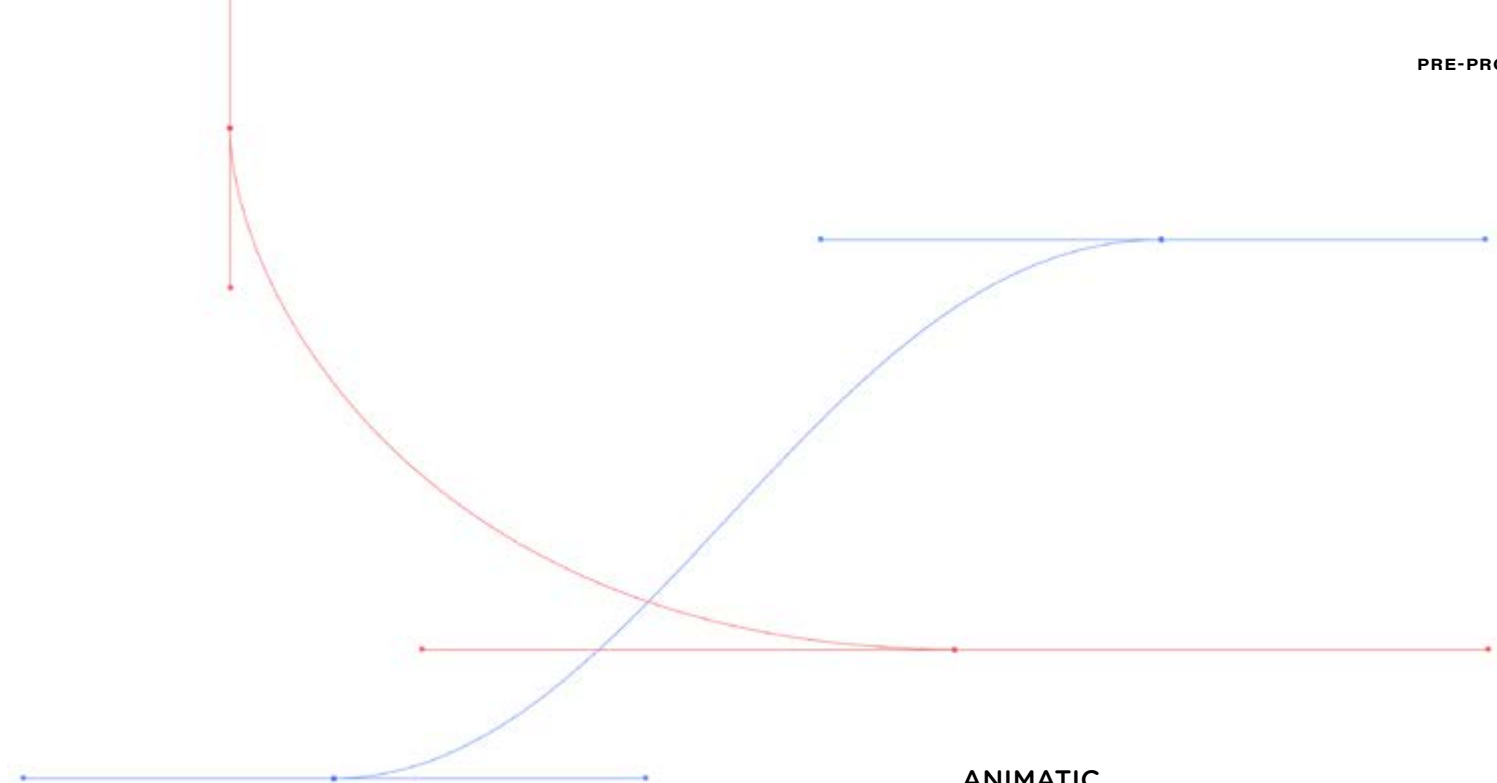
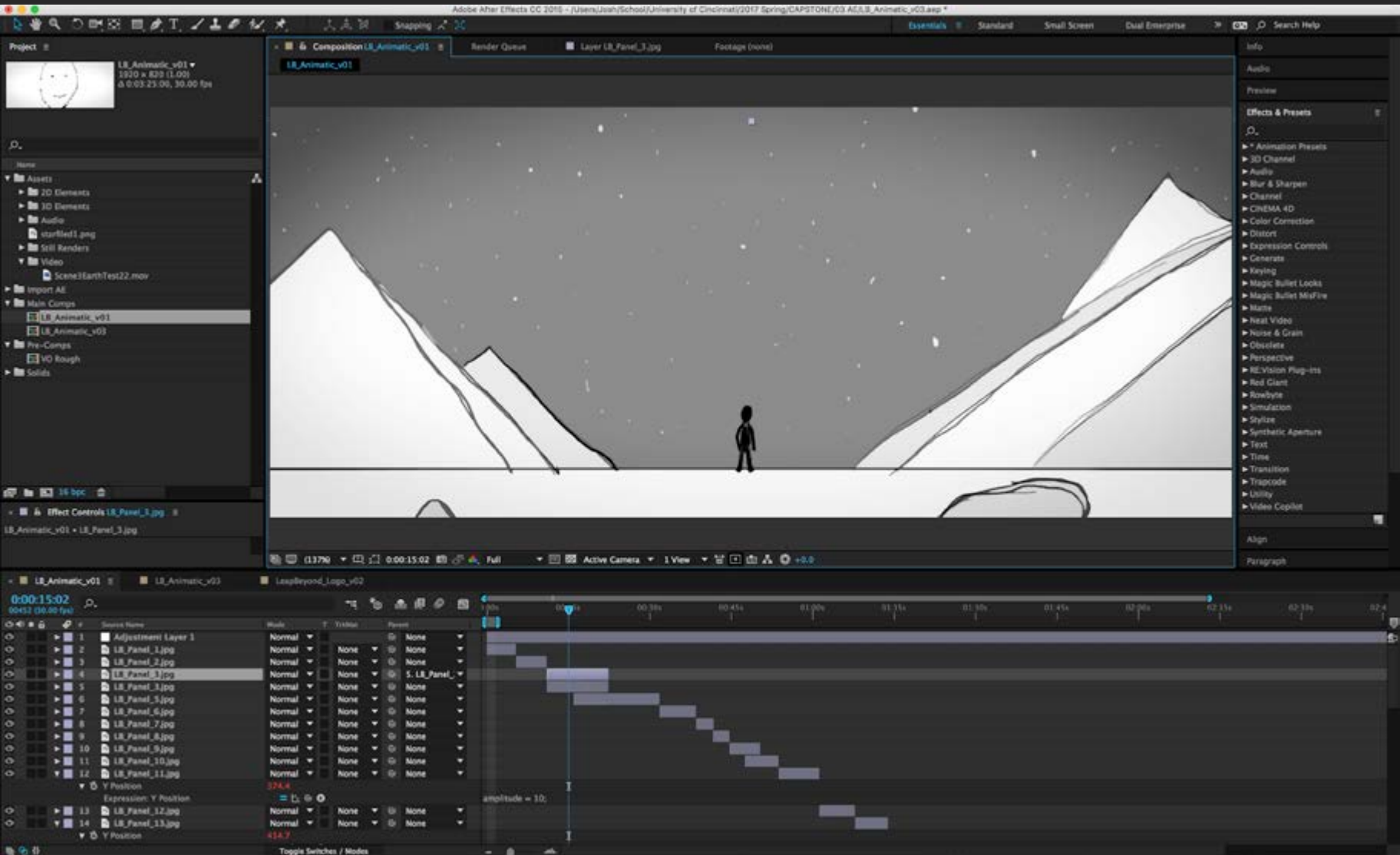
Leapbeyond.org

**STORYBOARD**

Using the finished script I created a sketched storyboard to frame shots and start to gain a sense of what characters, objects and scenes would best visualize the narrated storyline.

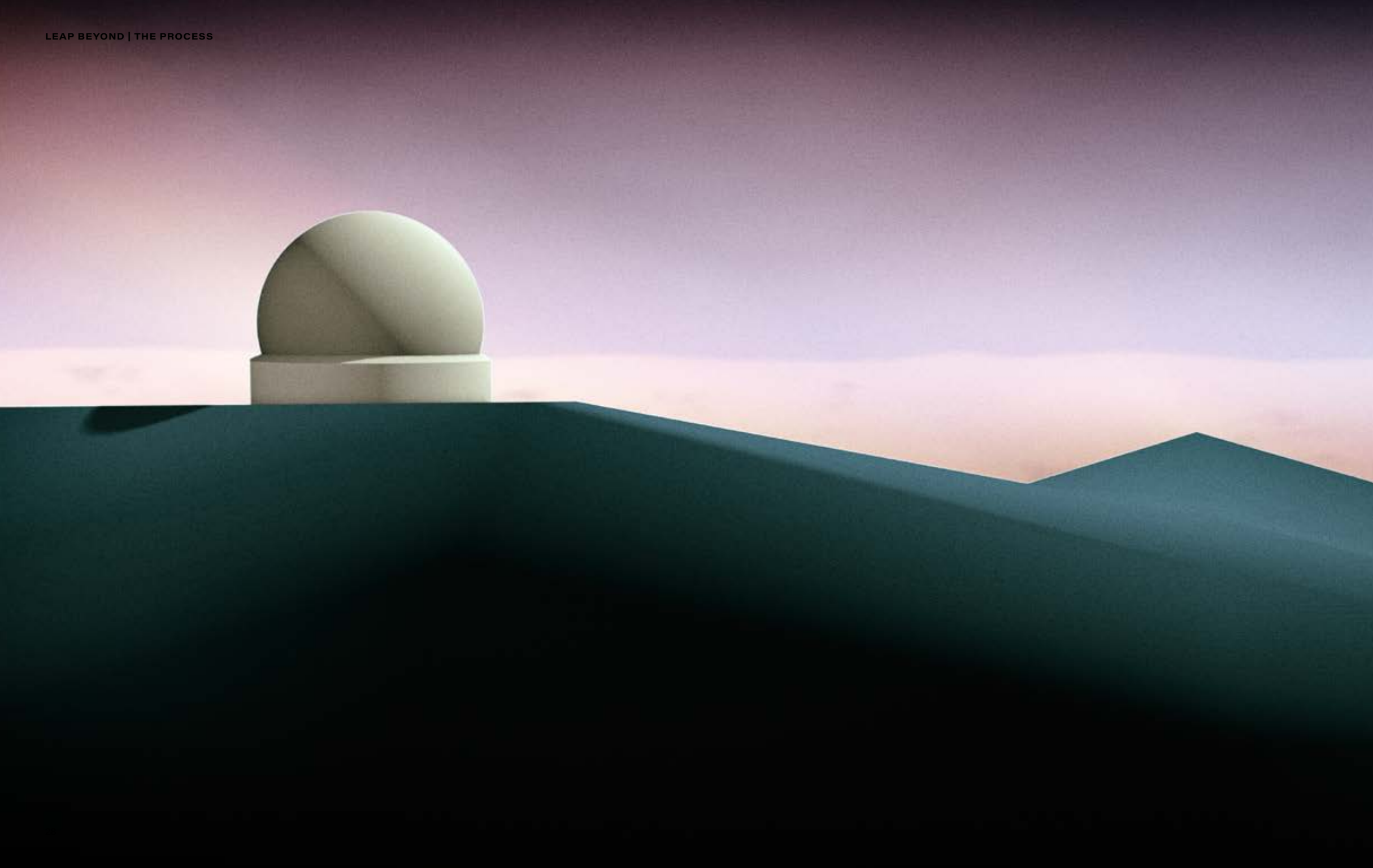






### ANIMATIC

Taking the storyboard frames and a rough version of the voice over into Adobe After Effects, I began to edit together scenes to get an idea of timing and length of shots. Adding simple animation and music turns the animatic into a rough version in order to get a sense of what the final video will look like.



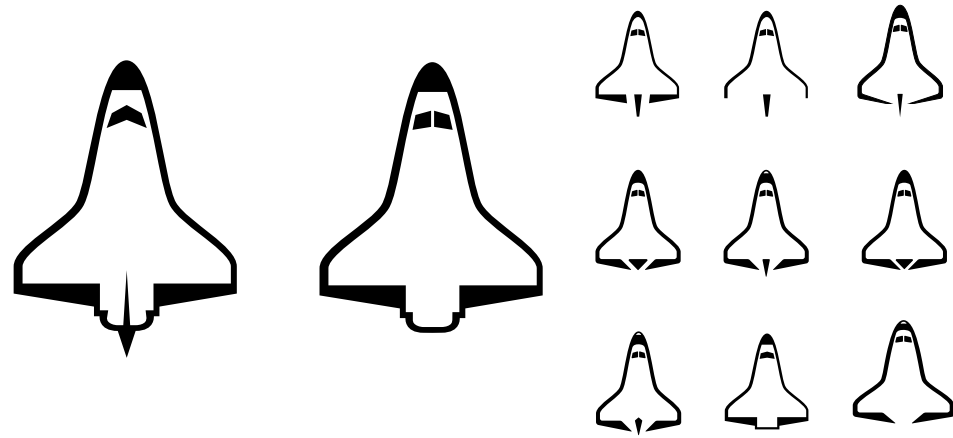
## PRODUCTION

Identity, Modeling, Texturing, Lighting, Animation



IDENTITY

Exploration of logo/wordmark for the "LEAP BEYOND" title. A combination of clean sans-serif typography for the wordmark along with various shuttle icons. This wordmark was designed to work across all other digital and print collateral.



LEAP BEYOND

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INVEST IN SPACE EXPLORATION. INVEST IN MANKIND.

LEAP BEYOND

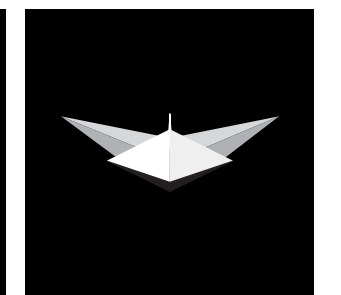
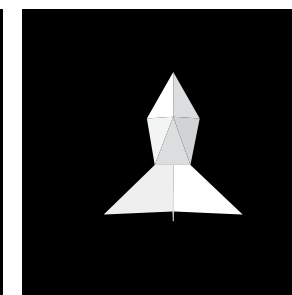
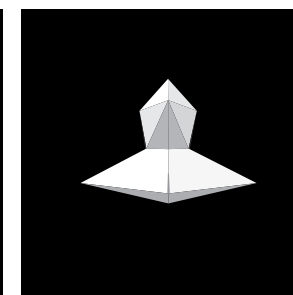
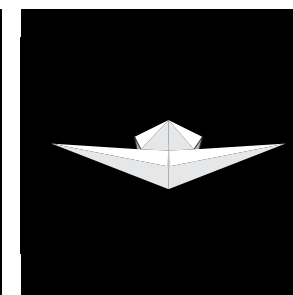
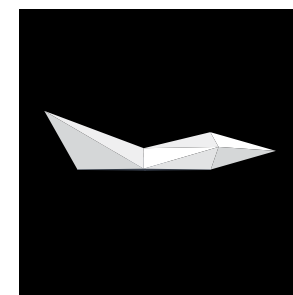
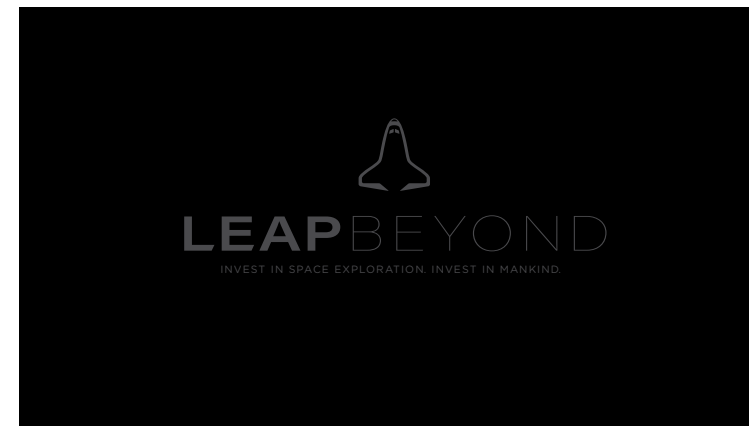
LEAP BEYOND

LEAP BEYOND  
Invest in space exploration Invest in mankind

L E A P  
BEYOND

LEAP BEYOND

LEAP BEYOND



TYPOGRAPHY

ACUMIN PRO WIDE SEMI-BOLD

ABCDEFGHIJKLMNOPQRSTUVWXYZ  
abcdefghijklmnopqrstuvwxyz  
0123456789?!@#\$%^&\*(),,."':]

ACUMIN PRO WIDE THIN

ABCDEFGHIJKLMNOPQRSTUVWXYZ  
abcdefghijklmnopqrstuvwxyz  
0123456789?!@#\$%^&\*(),,."':]

GOTHAM ROUNDED

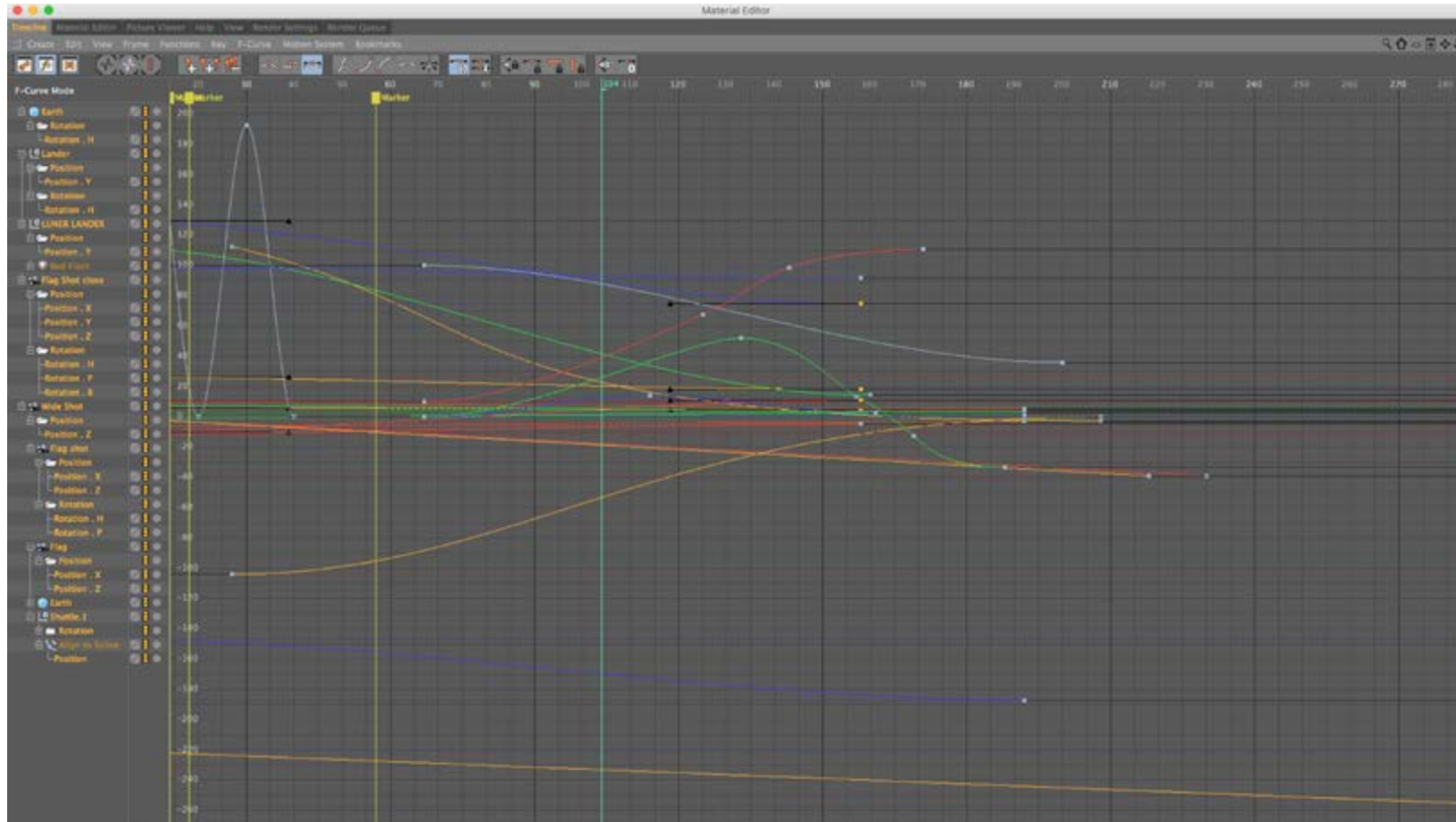
ABCDEFGHIJKLMNOPQRSTUVWXYZ  
abcdefghijklmnopqrstuvwxyz  
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LEAP BEYOND

INVEST IN SPACE EXPLORATION. INVEST IN MANKIND.

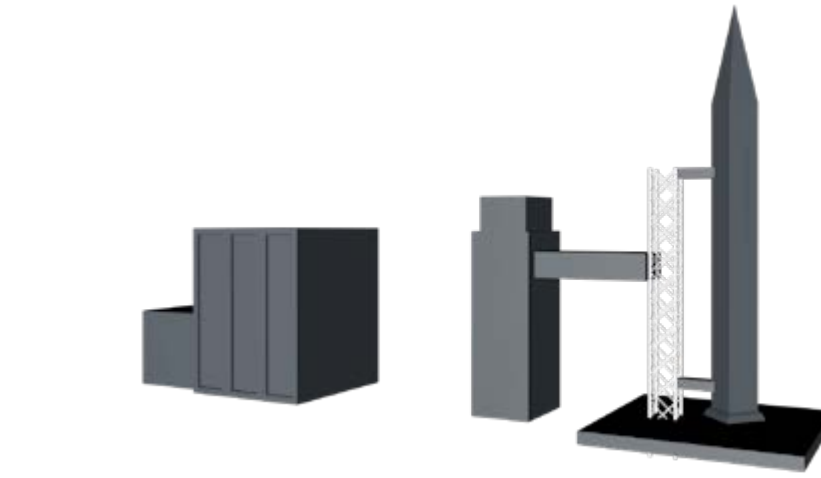
LEAP BEYOND

INVEST IN SPACE EXPLORATION. INVEST IN MANKIND.



### ANIMATION

The bulk of the animation was done in Cinema 4D, most of which was animating various paths for the space shuttle to follow, other object motions, and camera shots.

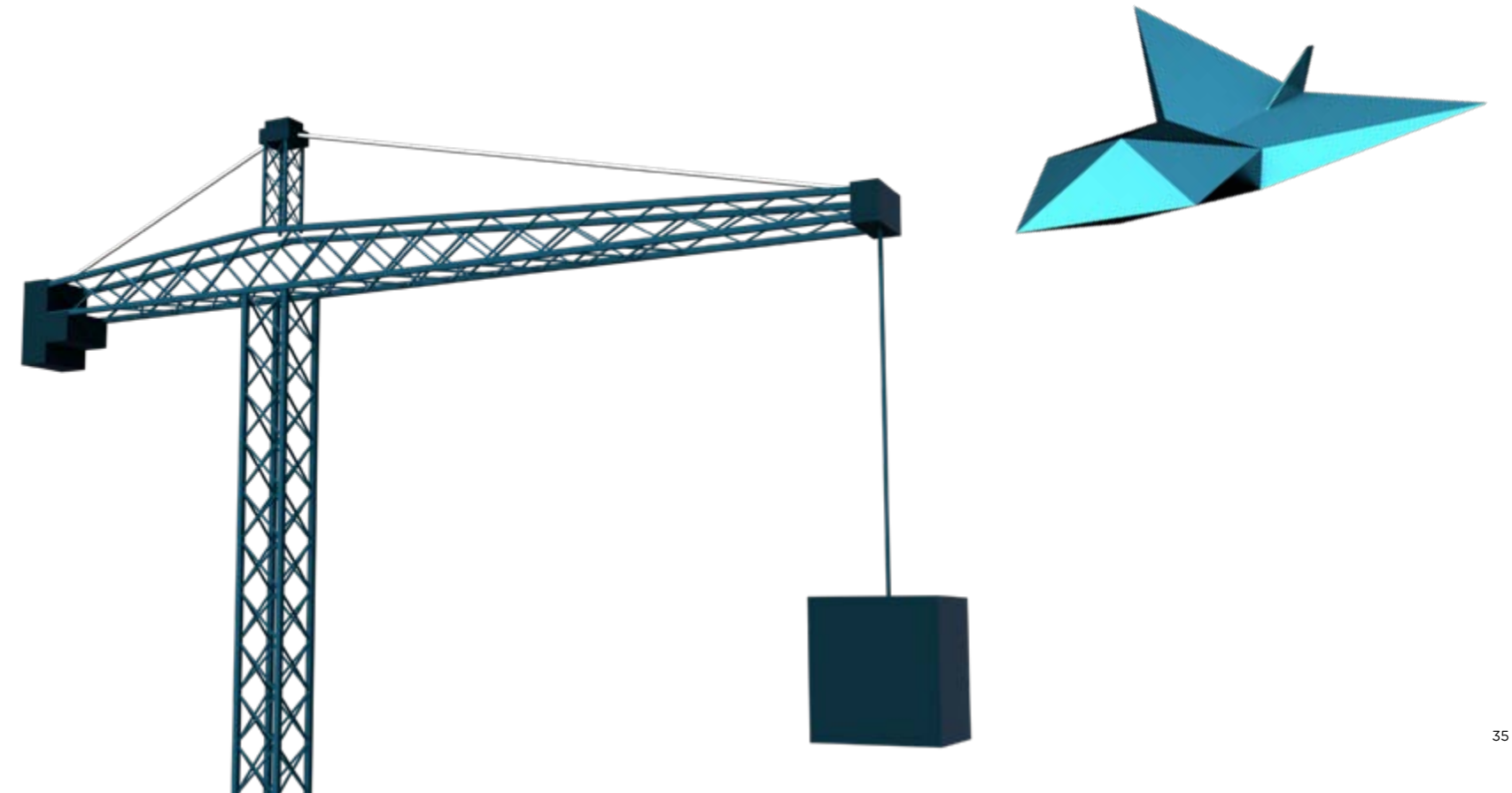


### MODELING, TEXTURING, LIGHTING

All objects and scenes were built with Cinema 4D, a 3D software. I used simple geometry and shapes to create a more abstract representation of objects.

Texturing objects with flat colors and using subtle gradients created a softer, more saturated material.

Lighting creates mood and adds depth to objects and scenes. A main single source of light was used to recreate sunlight, and additional lighting was used to highlight areas.



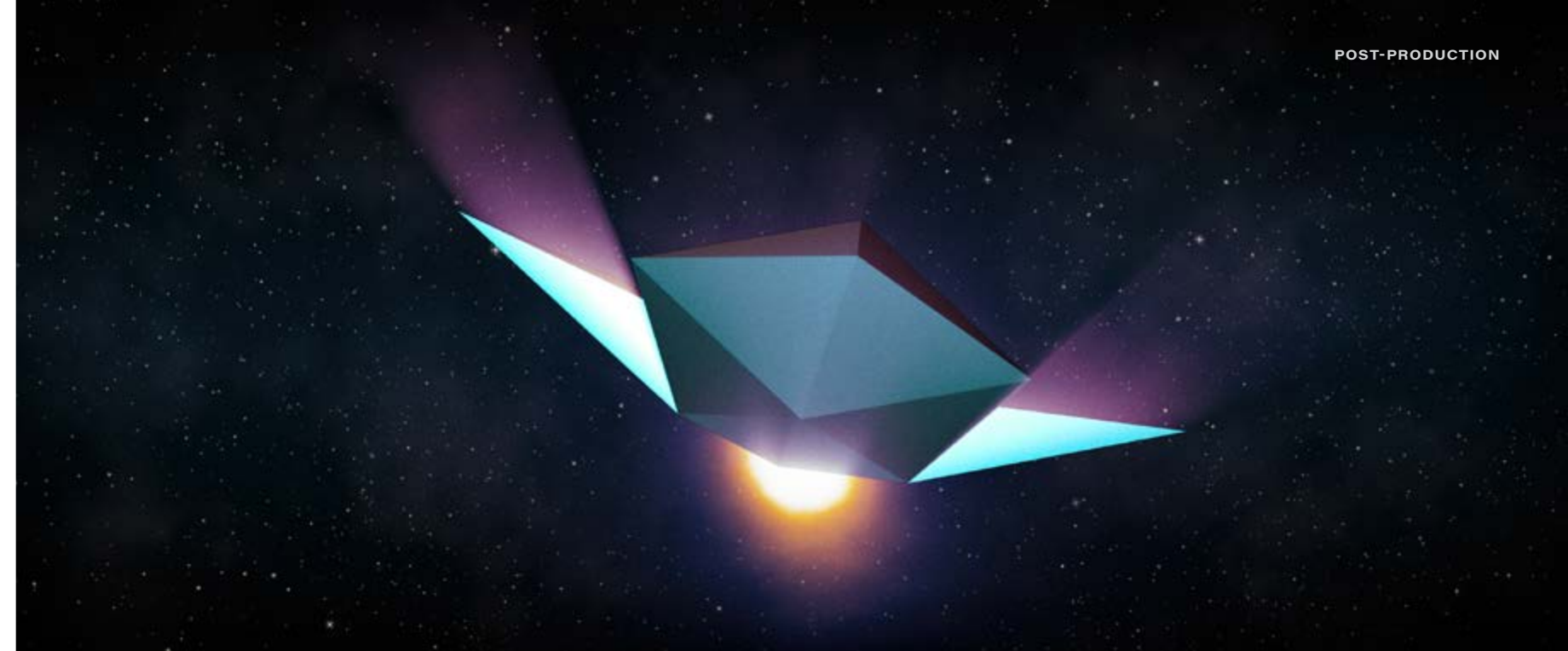


# POST-PRODUCTION

Compositing, Editing, Sound

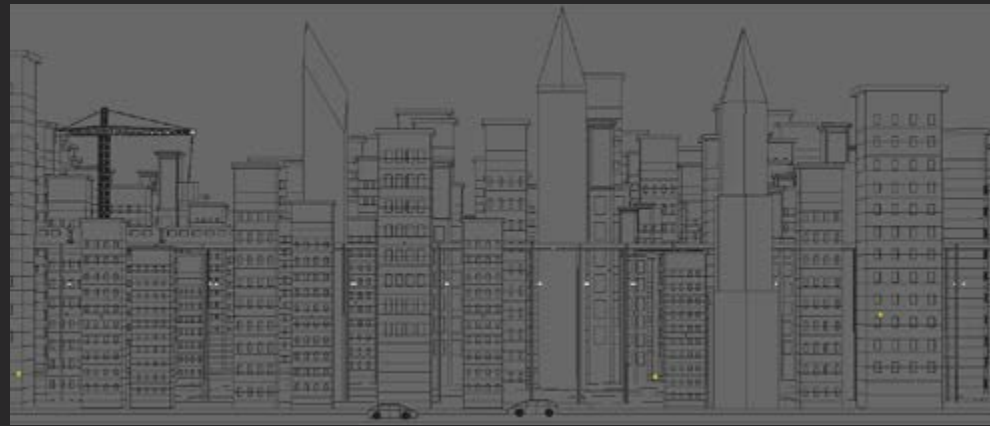
## COMPOSITING

With the final 3D renders from Cinema 4D, the image sequences were taken into Adobe After Effects and composited together with other elements. The backgrounds were created using gradients, and star fields in outer space were made using static and animated particle systems. Additional lighting and lens flares were added and the final layer of color correction and camera vignetting all add depth and a cinematic quality to the final animation.





City scene (wide)  
Wireframe



Multi-Layer  
Composite

Ambient  
Occlusion  
Pass



Additional  
Lighting

Diffuse  
Pass

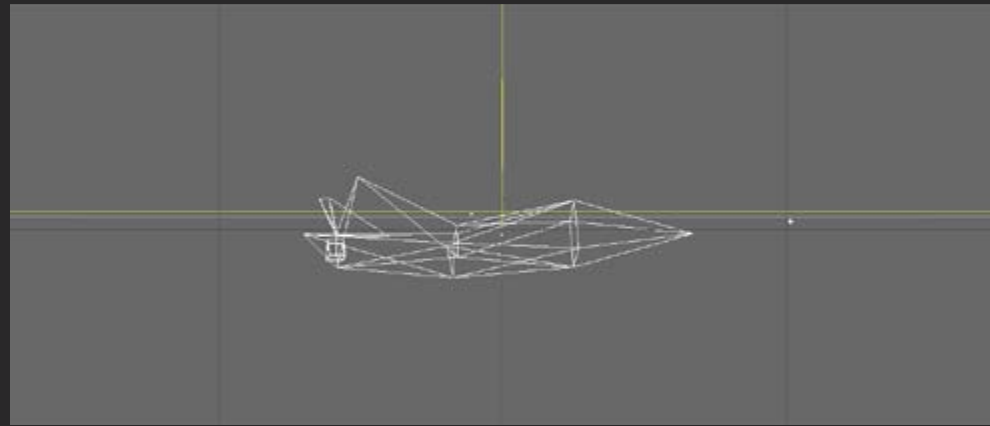


Final Render





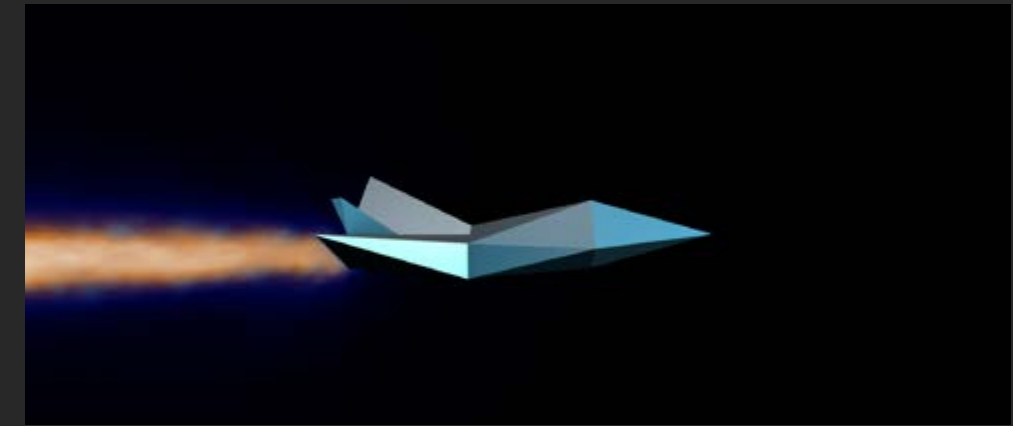
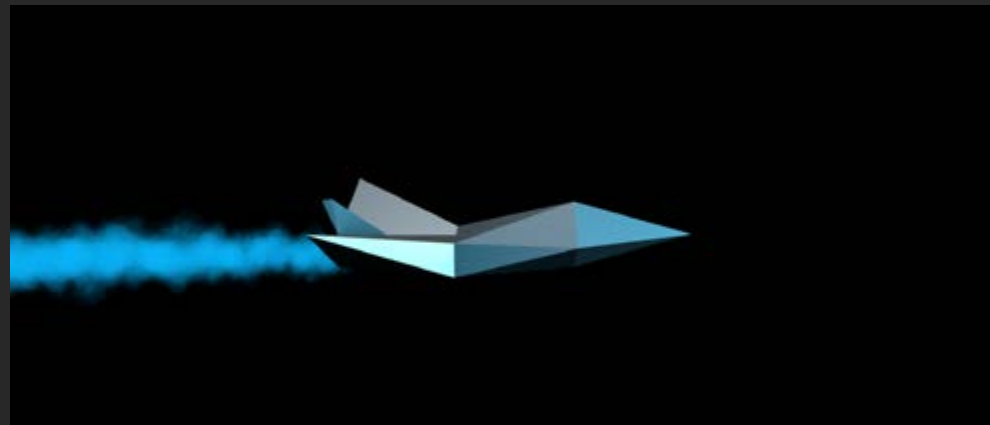
Shuttle Flying (side)  
Wireframe



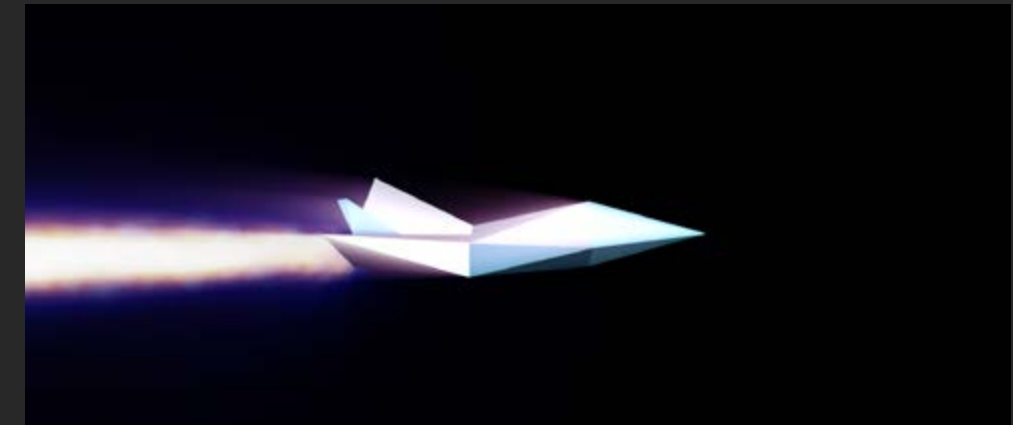
Ambient  
Occlusion  
Pass



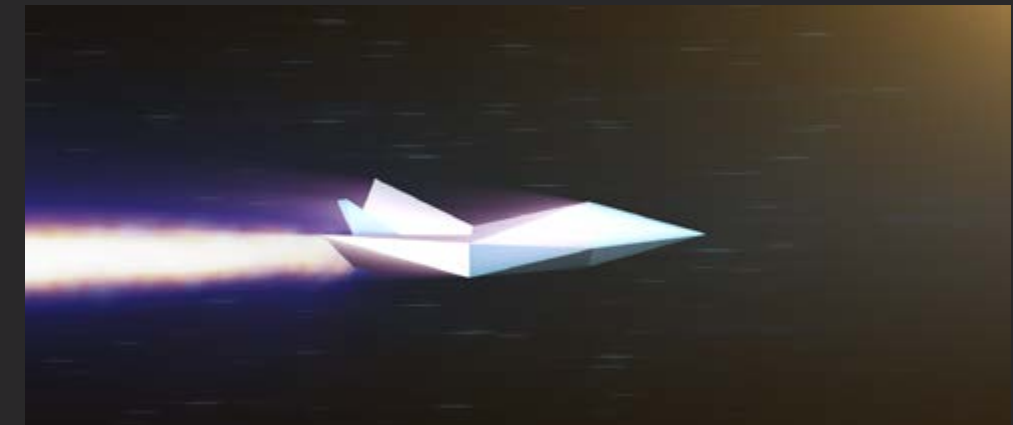
Particle  
Exhaust  
Trail



Particle Exhaust  
Trail with Added Light

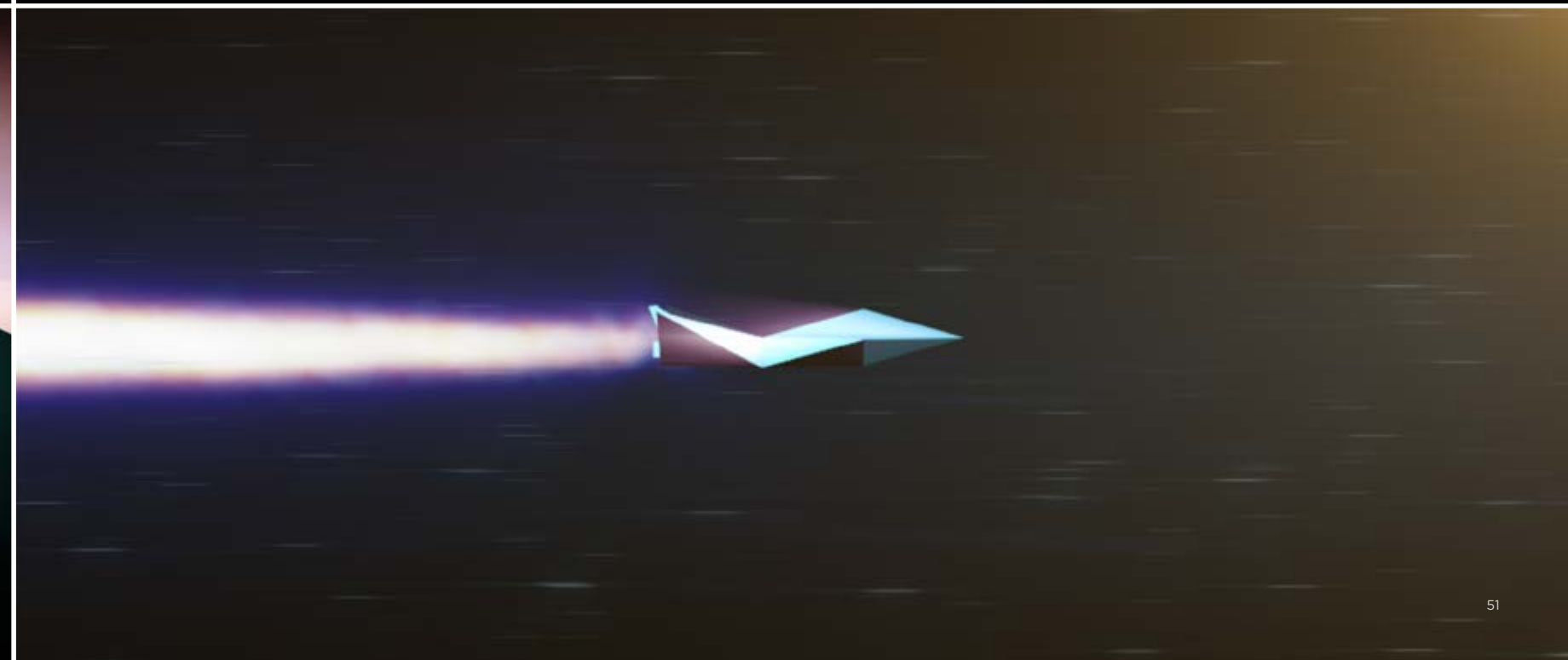
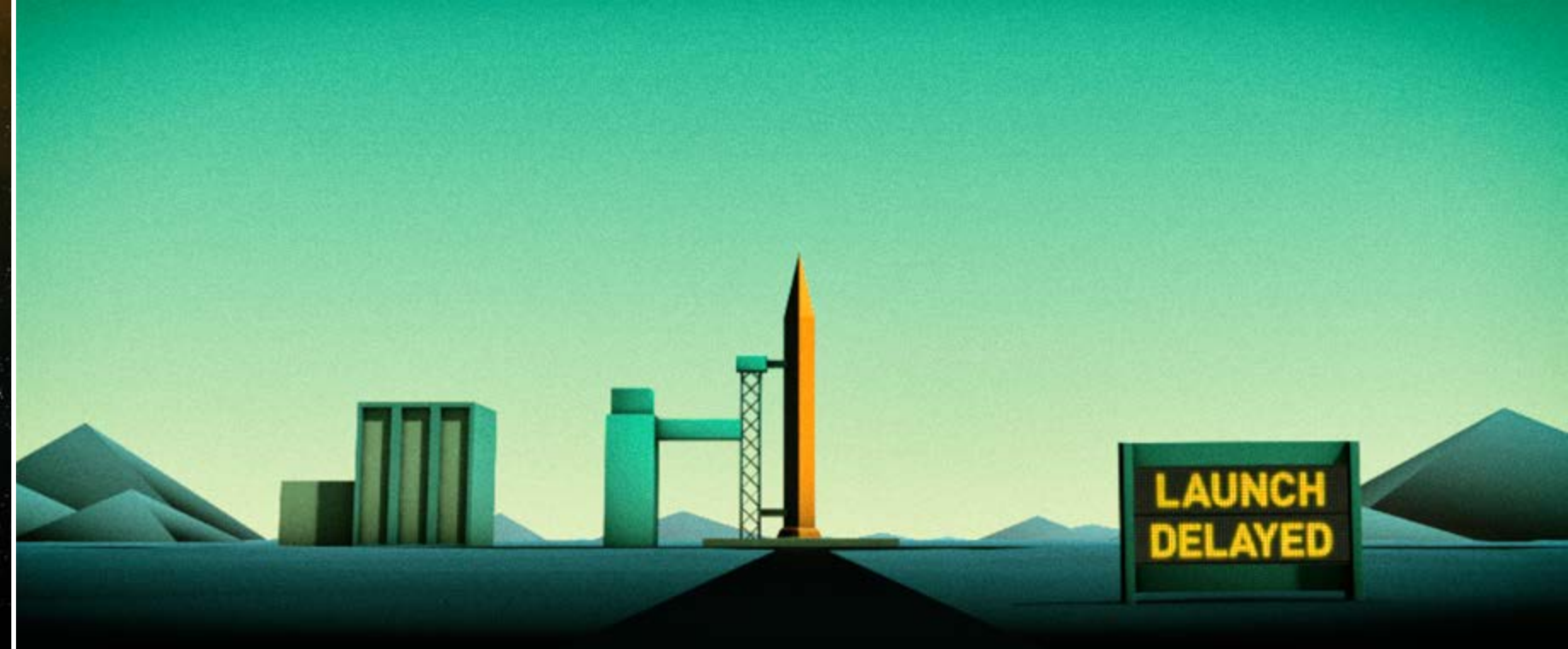


Additional  
Lighting

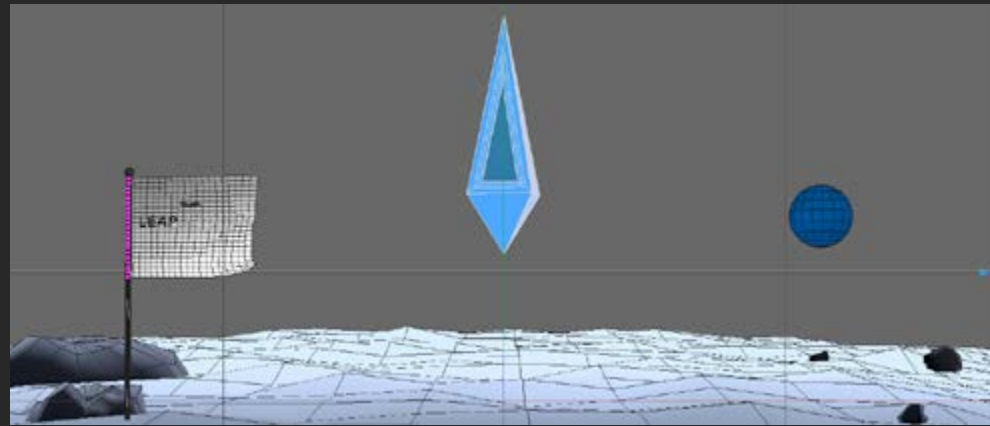


Final Render

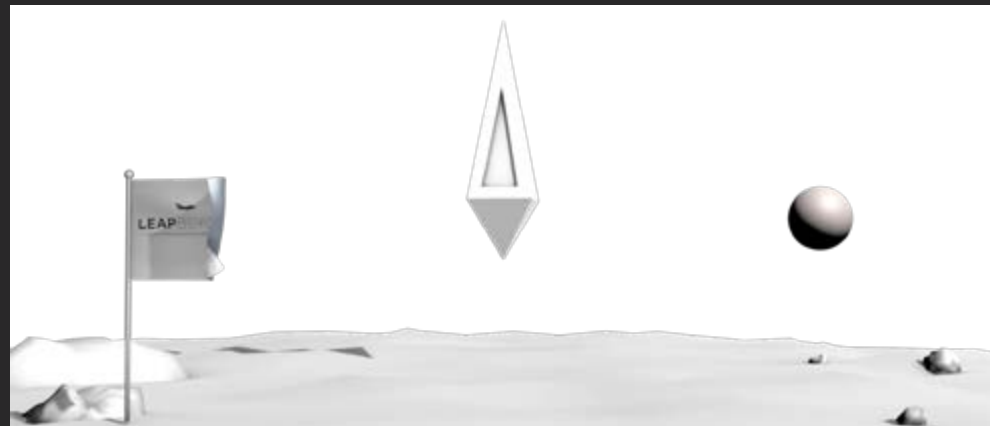




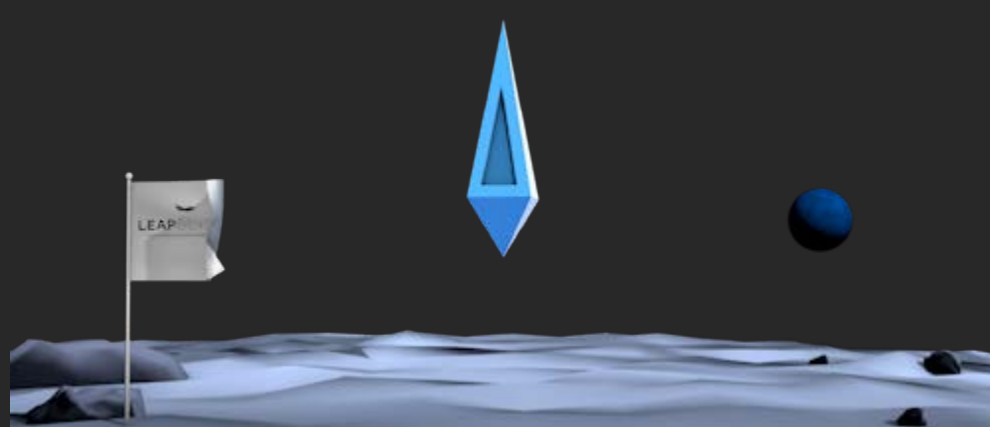
Moon Lander (wide)  
Wireframe



Ambient  
Occlusion  
Pass



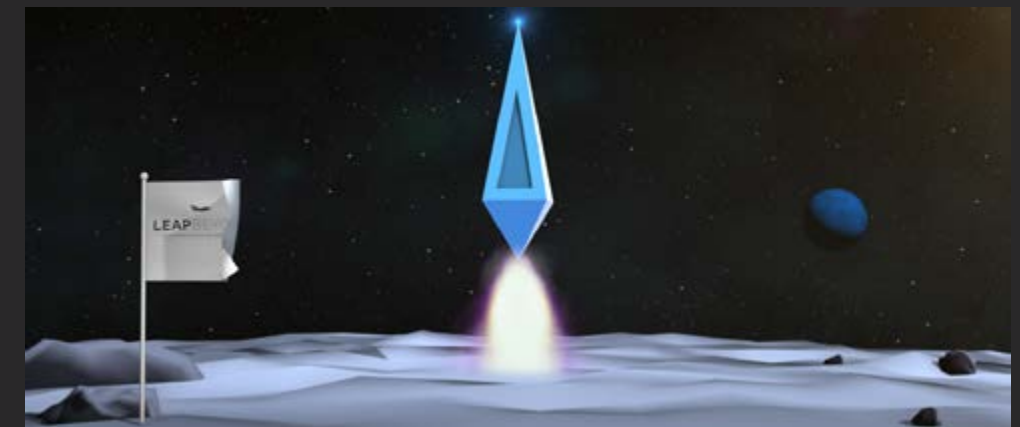
Final 3D  
Render



Added  
Flashing  
Light

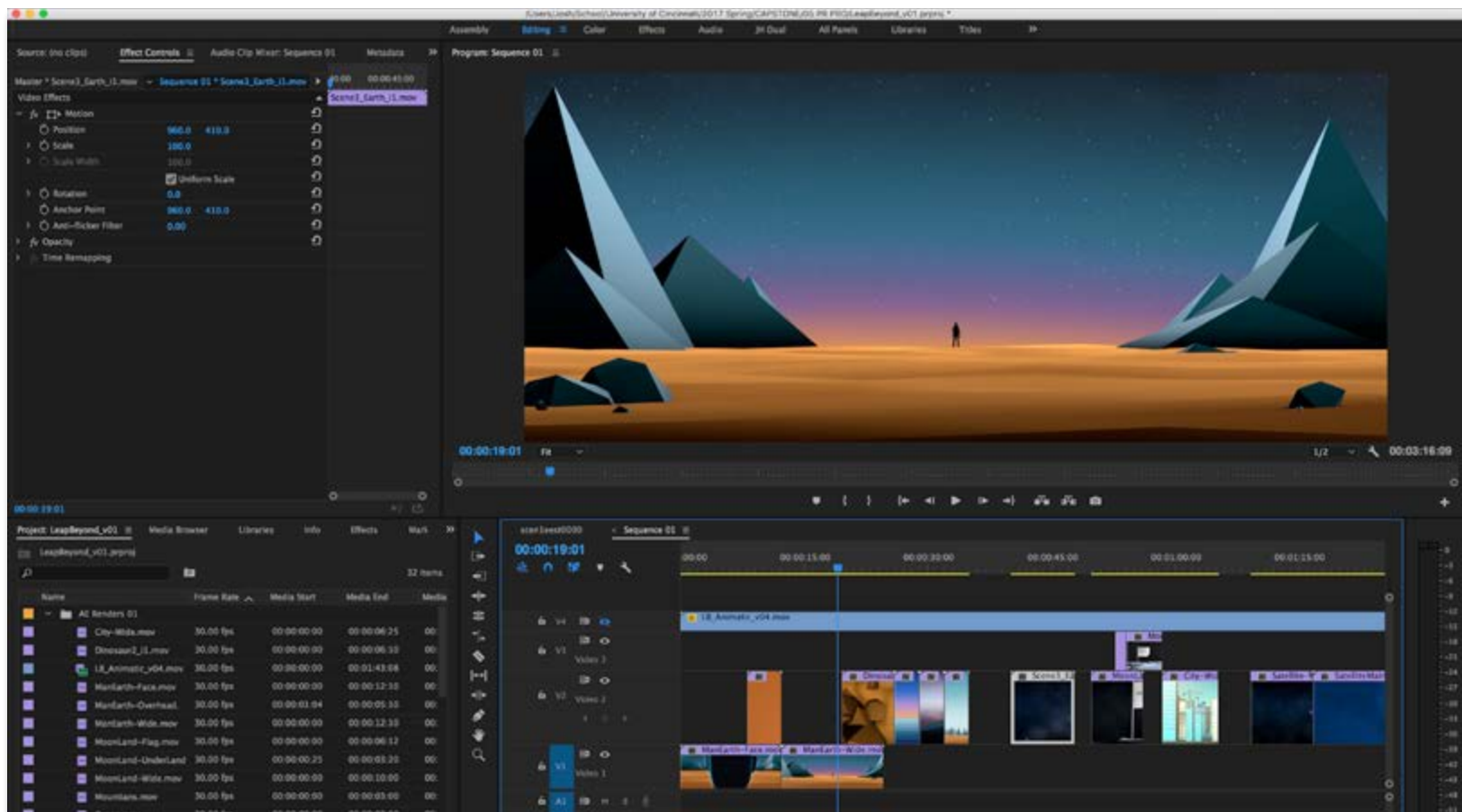


Background  
Added



Final Render





## EDITING

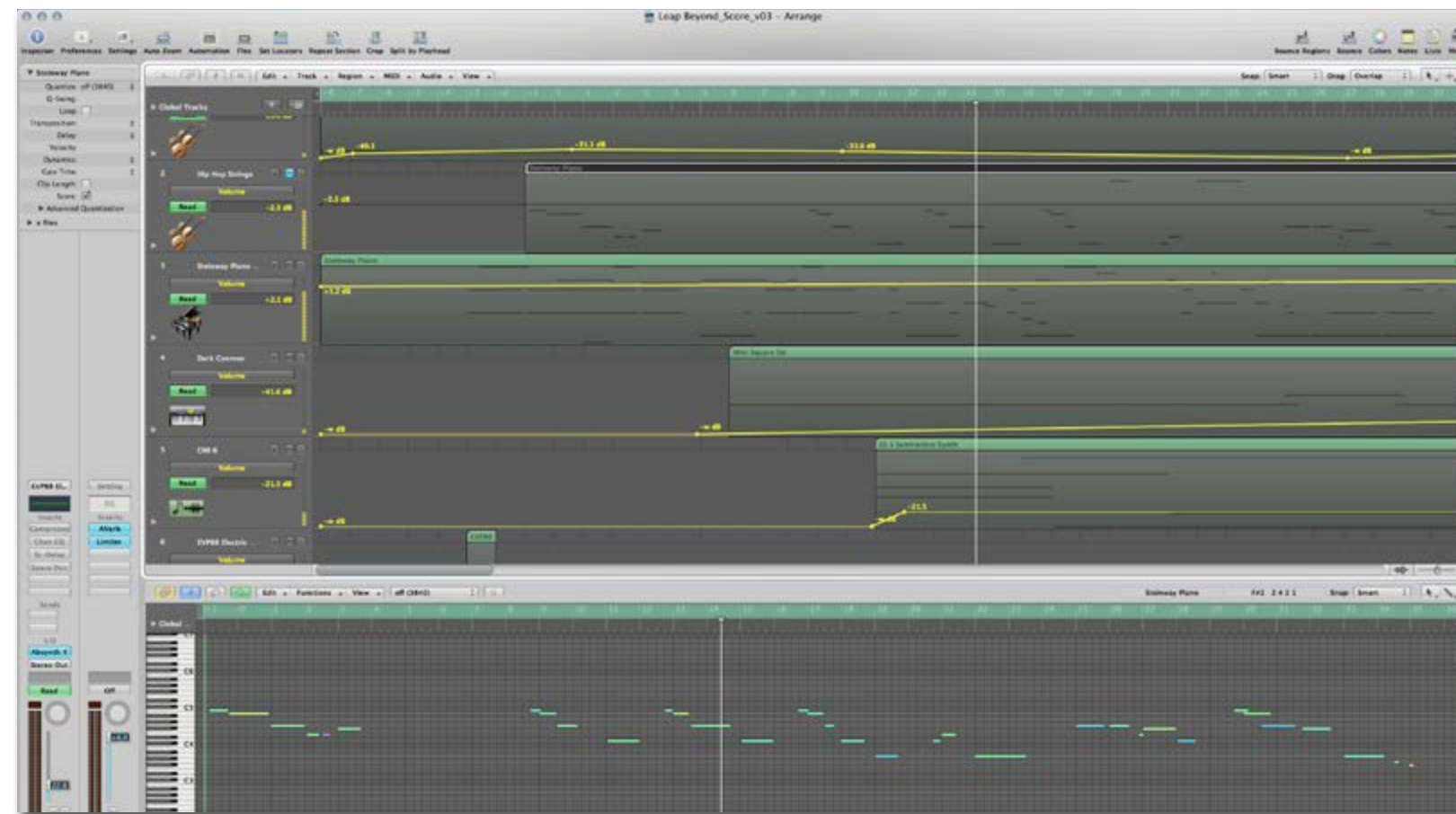
Upon completion, the rendered videos were taken into Adobe Premiere Pro to complete the final editing of the scenes. Cuts were lined up with the voice over and synced with sound effects to create the finished animation.

## SOUND

A professionally recorded voice over, music score and sound effects together take an animated video from ordinary to extraordinary. Sound adds an additional layer of emotion and helps further convey the visuals.

Using the audio software Logic Pro, I mixed together both a piece of music by Phillip Cuccias that matched the style and mood of the visuals perfectly, and a voice over done by Ross Huguet.

To further enhance the story, I layered in additional sound effects to animated objects ex. rocket thrust, ambient city noise, whooshes and beeps.



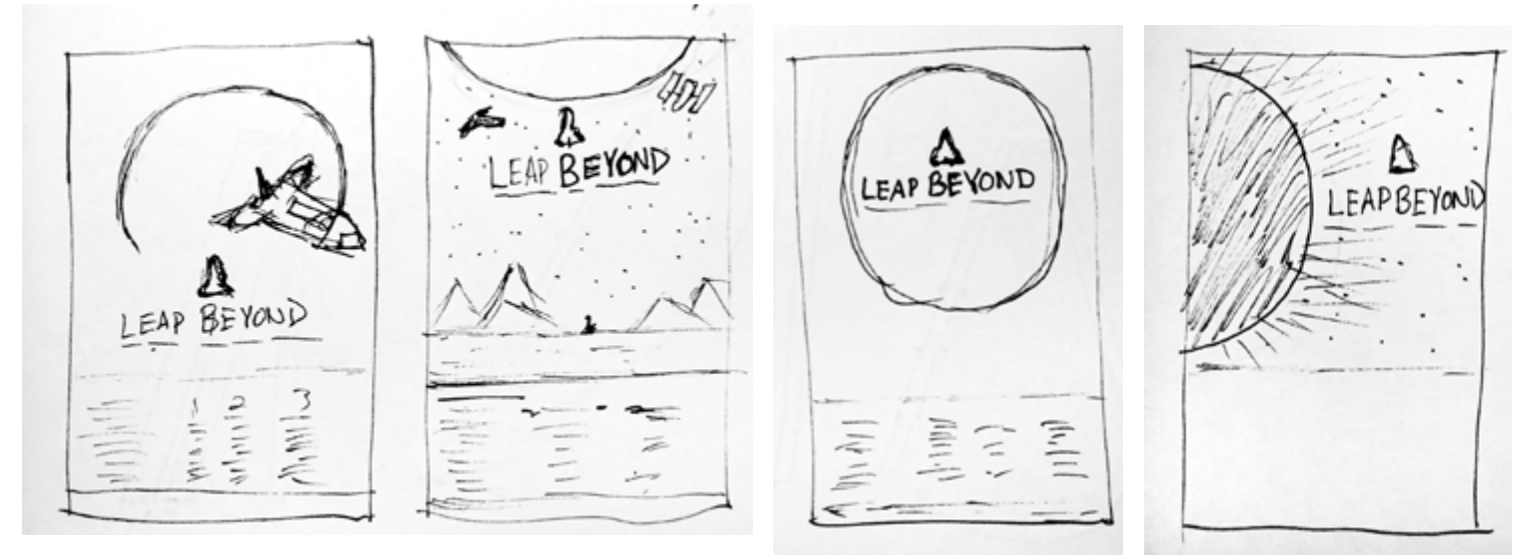


# PROMOTION

The Show Poster

**THE POSTER**

Displayed at the DAAP Works end of the year show, the goal of the poster is to draw viewers in and pique their interest so that they will want to see the full project. I used a combination of scenes from the video and created a visually stunning composition that takes the viewer on a journey from earth to space.



**POSTER CONTENT**

**TAG LINE**

An animated video to drive support for space exploration

**PROBLEM SPACE**

We as human beings are inherently curious about the world around us, and many of the inventions we take for granted every day were discovered because we went to space. Yet currently in the US only half a penny from every tax dollar is spent on space programs. Imagine how many more breakthroughs in science and technology we could uncover with more support and funding from you.

It's time to refuel humanity's passion and support for space exploration by continuing on the quest for knowledge.

**DESIGN CRITERIA**

This video is the first step at inspiring the audience to take action, become more educated on the facts and learn more about space exploration. Animation has the ability to show our universe in a way not typically seen with images from telescopes, and allows the story to be told in a more artistic and visually compelling way.

The design goal was to inspire, captivate and drive support for space exploration, which is a vital part of humanity's current and future existence.







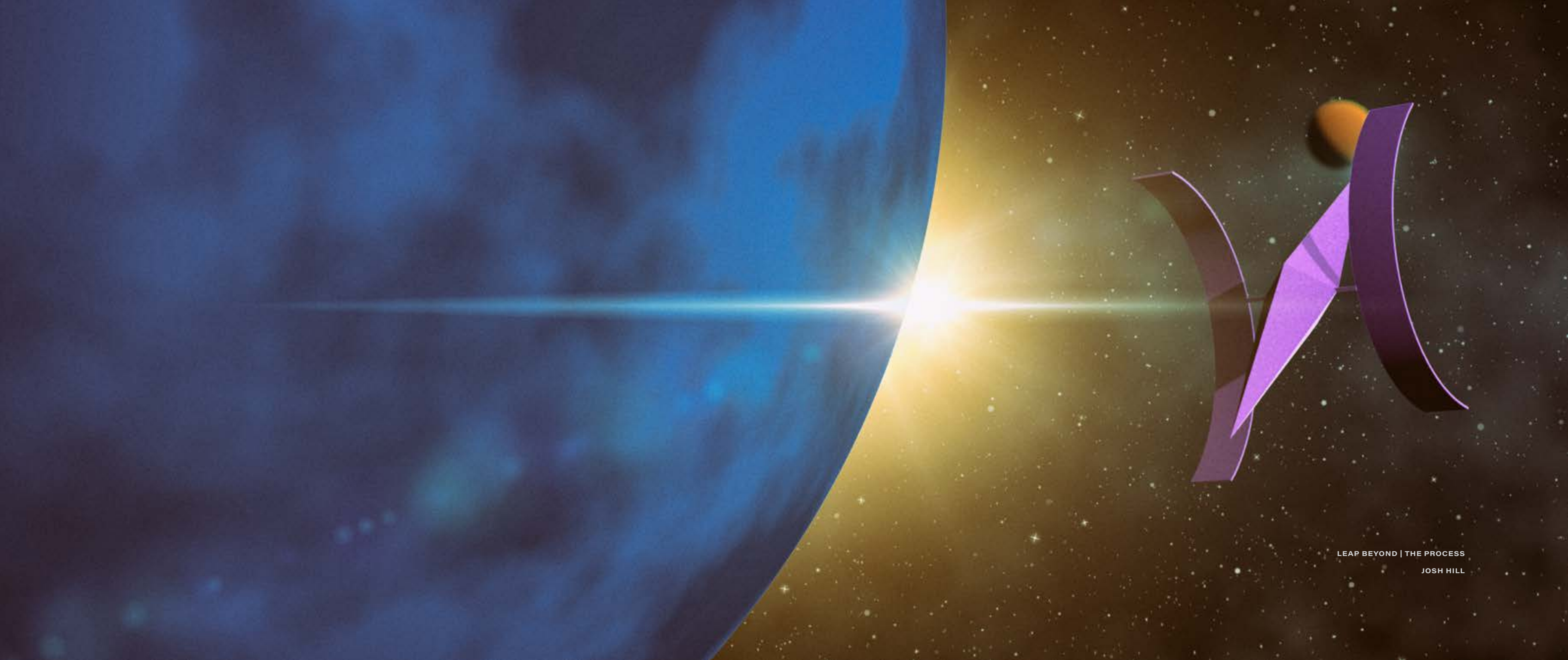
Version 1



Version 2

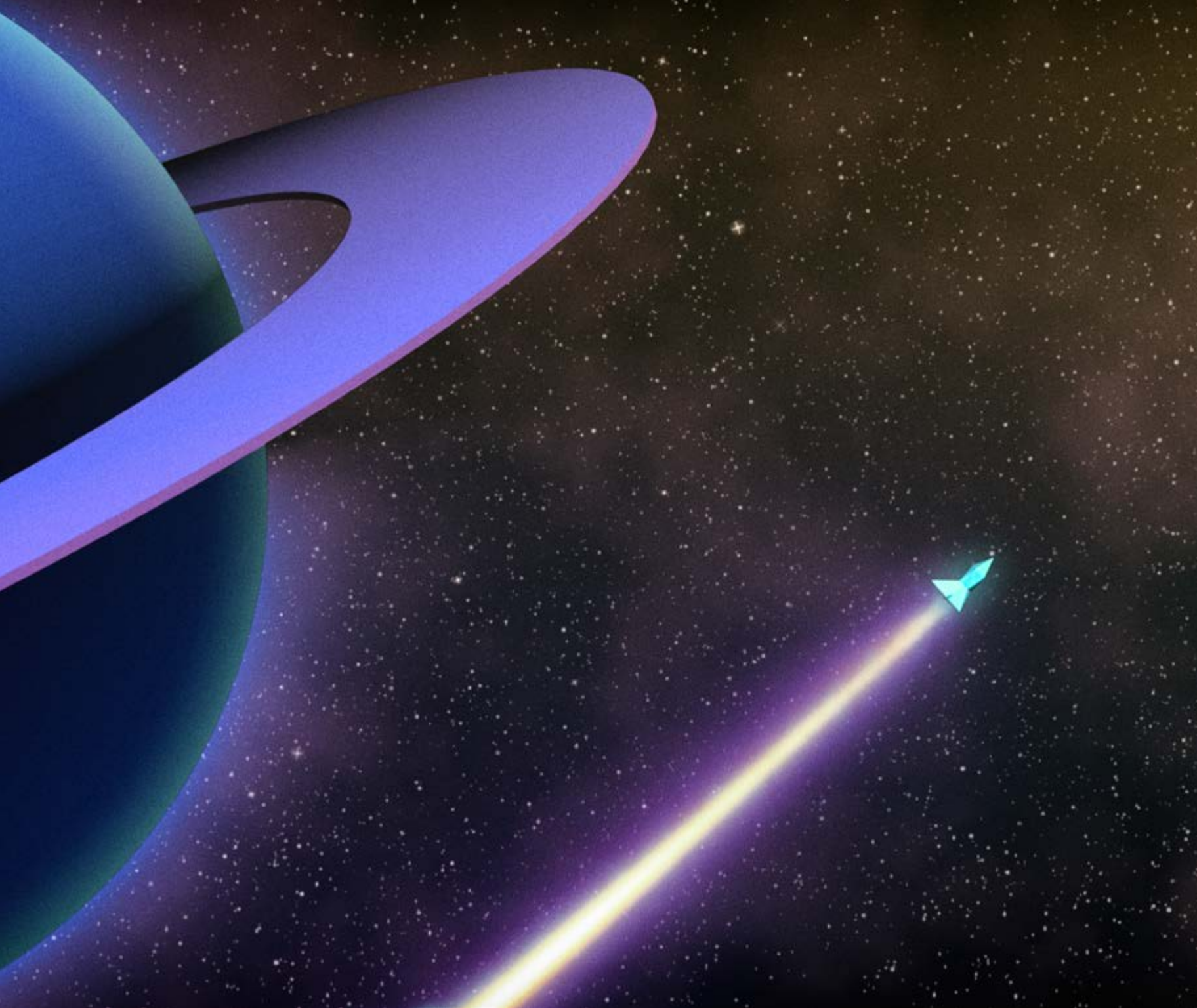


Final Version



LEAP BEYOND | THE PROCESS

JOSH HILL





## An animated video to drive support for space exploration

### Problem Space

We as human beings are inherently curious about the world around us, and many of the inventions we take for granted every day were discovered because we went to space. Yet currently in the US only half a penny from every tax dollar is spent on space programs. Imagine how many more breakthroughs in science and technology we could uncover with more support and funding from you.

It's time to refuel humanity's passion and support for space exploration by continuing on the quest for knowledge.

### Design Criteria

This video is the first step at inspiring the audience to take action, become more educated on the facts and learn more about space exploration. Animation has the ability to show our universe in a way not typically seen with images from telescopes, and allows the story to be told in a more artistic and visually compelling way.

The design goal was to inspire, captivate and drive support for space exploration, which is a vital part of humanity's current and future existence.

**Josh Hill**

[joshjhill.com](http://joshjhill.com)

[josh@joshjhill.com](mailto:josh@joshjhill.com)

513.379.3558

