



# CASE STUDY

Animating an Office Fire Scene for  
an LED Video Wall



**TILT LABS**  
A PRODUCT REALIZATION COMPANY



# EXECUTIVE SUMMARY

In a groundbreaking collaboration, TILTLABS partnered with Metacube to deliver an awe-inspiring 3D office fire animation for their state-of-the-art LED video wall. This case study explores how cutting-edge technology, innovative methodologies, and a meticulous approach transformed the LED display into a canvas for unparalleled visual storytelling.



## CLIENT BACKGROUND

Founded in 2005, Metacube is an industry leader in animation, VFX and post-production in Mexico. Their animated feature films, commercials, and other projects are known for creative storytelling and technical innovation. Metacube wanted to install an impressive LED video wall for their new office workspace to showcase their capabilities to visitors and employees. They engaged Tiltlabs to create next-level immersive 3D content for the display.



# PROJECT CHALLENGES



## Asset Complexity

Intricate 3D modeling of office elements, demanding meticulous attention to detail.



## Realistic Visual Effects

Achieving photorealistic fire, smoke, and lighting effects to create an immersive narrative.



## Animation Quality

Crafting realistic reactions for 10+ characters to convey a sense of panic authentically.



## Performance Optimization

Ensuring seamless 60 fps playback on the LED wall for an uninterrupted viewer experience.







# GOALS & OBJECTIVES

## **Showcase LED Wall**

Create content that not only demonstrates but elevates the capabilities of Metacube's LED video wall.

## **Cinematic Quality**

Strive for cinematic visuals and animations that resonate with the audience.

## **Optimization**

Maintain a consistent 60 fps performance to bring the narrative to life seamlessly.







# SOLUTIONS & METHODOLOGY

## 3D Modelling

Utilizing industry-standard tools such as Maya, Autodesk 3ds Max, Substance Painter, and Photoshop for intricate detailing.

## VFX and Lighting

Implementation of bespoke fire, smoke, and embers effects using Lightmass and IES lights for realistic lighting dynamics.

## Animation Techniques

Employing custom character rigs, dynamic simulations, and Maya nCloth to imbue characters with lifelike reactions.

## Performance Optimization

Utilizing Level of Detail (LOD) systems, occlusion culling, texture atlasing, instancing, and shader LODs tailored for optimal LED wall performance.



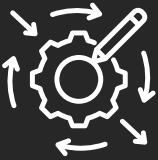


# PROJECT EXECUTION



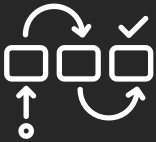
## Timely Delivery

Completed within an agile 25-day timeline.



## Iterative Process

Collaborative, iterative reviews ensured alignment with both creative and technical objectives.



## Holistic Workflow

Seamless integration of assets, meticulous scene setup, precise lighting, visually stunning VFX, and final rendering.





# OUTCOMES & RESULTS

## Visual Realism

Achieved hyperrealistic fire and smoke simulations that rivaled live-action.

## Character Animations

Brought over 10 characters to life with panic-inducing, lifelike reactions.

## Fully Animated Environment

Detailed and well-lit 3D office environment providing a rich narrative backdrop.

## Optimized Playback

Delivered flawless 60 fps performance on Metacube's cutting-edge LED video wall.



[Sample Video Link](#)



[Sample Video Link](#)





# TOOLS WE USE



UNREAL ENGINE



AUTODESK  
MAYA



BLENDER



3DS MAX



ZBRUSH



SUBSTANCE  
PAINTER



ADOBE  
PHOTOSHOP





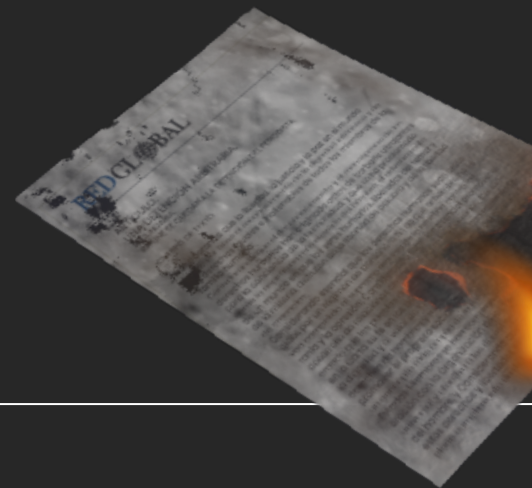
# TESTIMONIAL

"The final animation takes our LED wall capabilities to the next level. Viewers are bound to be impressed by the realism achieved in the fire effects and chaos across the office."

- METACUBE CTO

# CONCLUSION

In this transformative collaboration, TILTLABS seamlessly blended technical artistry with optimization finesse, delivering a sensational 3D animation that exceeded expectations. This project showcased the prowess of Metacube's LED video wall and set a new industry standard for immersive visual experiences. TILTLABS and Metacube have forged a new path in the animation and VFX landscape through meticulous attention to detail and a commitment to pushing the boundaries of storytelling.



# THANK YOU!



India

Ground Floor, Carnival Technopark  
Technopark Campus, Trivandrum

Pin - 695581, Kerala

Phone +91 9037737788

---

United Arab Emirates

Phone: +971 58505 6222

---

Singapore

Phone: +65 8359 4878



Email - [business@tiltlabs.io](mailto:business@tiltlabs.io)

[WWW.TILTLABS.IO](http://WWW.TILTLABS.IO)