Large And Medium Scale Projection Mapping Onto European Heritage Buildings

How to Apply Projection Mapping for Events

Practical considerations for using 3D projection mapping for your event.
https://annavalley.co.uk/project/5-steps-to-spectacular-3d-projection-mapping-for-events/
Besides your creative and brand goals, the two biggest practical considerations for deciding whether 3D projection mapping is right for your event are time and budget. Planning, creating and rigging the projection of content onto 3D surfaces takes time, skill and some pretty advanced technology. Just how much time and money your project will cost depends on the scale and complexity of your projection surface, and the content you're producing – but don't expect to produce an impressive 3D projection mapping project quickly, or on the cheap.

What's involved in the process of large scale 3D projection mapping?

Step 1 : Laser scan the building
The fundamental difference between 2D and 3D projection mapping is that 3D projection mapping accommodates the shape and contours of your projection surface. If up-to-date 3D CAD's are not available, then laser scanning the projection surface will provide the template to start the 3D process.

The laser scanner used to create the 3D map of your projection surface is a common tool used in the construction industry and, because the hardware is highly specialised and expensive, most AV companies will rely on a professional scanning company to provide this service and then construct the 3D model.

Laser scanning is normally done about a month before the event and can take anything from 4 hours to 2 days to complete – depending on how big the surface is and how complex the architecture of the object.   In the case of 3D mapping of a building, the scanning requires unobstructed views of the structure and is often done in the early hours of the morning, when there's likely to be less activity.

At the end of this step, the AV company will have a 3D CAD drawing of the projection surface that is accurate to within 1.9 microns – which is less than 2 millionths of a meter!

Step 2 : Apply the audience perspective
The audience's position is an important consideration when creating content to project onto a 3D surface – the content needs to be optimised for their perspective to ensure the best experience. Eg., if the audience is going to be looking up at the images projected, then video would be filmed from a low angle to emulate their point of view.

Your projection mapping specialist will convert the digital architectural drawing of the projection surface into a design format and then identify a position which will be used as the audience perspective reference. This is handed over to the content creators.

Step 3 : Create the content
Content might include graphic animations, video footage or a combination of the two –
created for the best experience based on the audience perspective. The final content is
rendered into movie files and returned to the projection mapping specialist.

Step 4 : Preview
Everything is now imported onto media servers where the flat movie files and are applied
directly onto the texture map of the projection surface to see how the content reads when
played out on the building's topography.

Virtual projectors are then added to map out their ideal position, rotation, size, lens ratio,
projection distance and lens size.

Step 5 : Adjust for real life
The projection mapping specialist now needs to marry the digitally-recommended
projector positioning with real life limitations. Ideally all the projectors used in a projection
mapping project should be in line with each other and equal spaces apart, but
circumstances at the venue seldom allow for this. Adjustments will need to be made
using a combination of the projectors warping facilities and the media server's mapping
controls. Detailed projection locations are plotted out in the media server with a 10-15%
overlap for blended projection, which gives a seamless edge between images displayed
from different projectors.

The future of projection mapping
We're still discovering applications for 3D projection mapping and, as the technology
develops, so the possibilities multiply – from printing 3D models of buildings and using
desktop projectors to provide clients with miniature real-life previews of their 3D projection
mapping projects, to creating interactive 3D projection mapping displays that change
based on the audience's actions, to projecting onto human faces – the possibilities, it
seems, are endless.

Large Scale Projects (3D) Videos and Descriptive Text

Moscow, Russia - 4th International Circle of Light Festival 2014 (4:30)
**Moscow International Circle of Lights Festival -- Bolshoi Theater The World theaters. 4 main
civilizations & theaters**
https://vimeo.com/217654061
3D Mapping on the Boslhoi Theater facade, in the frame of the " Circle of Light", Moscow
International Light Festival. 2014. lightfest.ru/en/. Theme: The World theaters. 4 main civilizations
& theaters will be revisited and explored. Bringing forward contrasting theatrical specialties,
milestones and breakthroughs of each Culture. It is a chronological cultural travel: " During 4
minutes and a half, we will immerse people in different Spaces & Times."
Content by H3O Snippets from full event 137.5 hours of series of light productions
https://www.rt.com/news/195008-circle-light-festival-moscow/

Moscow, Russia - Art of Science 2016 (6:30)
https://www.youtube.com/watch?v=BU5qqSdnmGw&ab_channel=SilaSveta
3D mapping on the facade of the Moscow State University was presented at the Moscow

International Festival "Circle of Light". History of the university, scientific discoveries and legends associated with the "world of science" — all these were shown to the audience on September 23, 24 and 25, 2016. The largest ever video projection was presented on the façade of a unique architectural landmark, the main tower of Moscow State University at the Vorobyovy Hills. The **projected area covered over 50 000 square meters and was over 0.5 km long, 212 projectors** were used for the show. The dynamic 9-minute multimedia story is not only a fascinating piece **about the Moscow State University's history, but an artwork representing contemporary styles of abstract graphics.** The show was created in partnership with LBL Communications Group — the authorized organizer of the festival by the order of the Government of Moscow.

Moscow, Russia - Swan Lake Bolshoi Theater 2016 (6:30)
https://www.youtube.com/watch?v=vULthsMkl7s&ab_channel=SilaSveta
Dancers start 2 mins, ballerinas at 3 mins 20 seconds

More Circle of Light Productions
Moscow International Festival "Circle of Light" web site http://lightfest.ru/en/
The Circle of Light festival kicked off with a stunning opening ceremony at Moscow's Rowing Canal on Friday, September 2019 - at 5 minutes it starts displaying science themed video
 https://www.youtube.com/watch?v=tQZzTXpdfPk
still images: http://lightfest.ru/en/gallery/photo/2019/
Bolshoi 2015 https://www.youtube.com/watch?v=QAWHIEG554k&ab_channel=RT
Bolshoi Theater production which is nearly monotone in color 2015
https://www.youtube.com/watch?v=2dh9Zl2vQZk&ab_channel=Maxin10sity

Bucharest, Romania "iMap555" Contest (6:00)
Celebrating Bucharest's's 555th anniversary in 2014. For this special purpose iMapp 555 performance was been created by selected international artists - Bucharest Parliament Building Projection Mapping by **Maxin10sity**. https://www.youtube.com/watch?v=rQMBAdHTYpQ&ab_channel=Maxin10sity iMapp Bucharest – WINNER at AV AWARDS – "AV IN ACTION" 2020 category
"One World. One Heart." https://www.imapp.ro/#1 iMapp Bucharest – one of the most important video mapping events in the world, organized by **Creart** – a public cultural institution subordinated to the Bucharest Municipality, was declared the winner of the "AV IN ACTION" category at the AV AWARDS Awards in London, in the online virtual ceremony that took place on November 20th, 2020.

Prague, Czech Republic "My Praha"
New Year's projection to light up the National Museum Historic Building on Wenceslas Square, Dec 29, 2019 Start at 2 min 20 seconds. A 10-minute projection mapping show about Prague accompanied by music.
https://www.praha.eu/jnp/en/news/new_year_s_projection_to_light_up_the.html

Paris, France, Notre Dame (images only)
November 8, 2018
video https://www.youtube.com/watch?v=-pMUShxhYmQ
images:https://www.barco.com/en/customer-stories/2018/q2/2018-04-06-notredame-mapping

Berlin, Germany – Festival of Lights

NOTE: Berlin - Festival of Lights began 2004

Brandenburg Gate Berlin 2019 https://www.youtube.com/watch?v=ArHejB5KQIg&ab_channel=FestivalofLights

Brandenburg Gate Berlin 2018 https://festival-of-lights.de/en/brandenburg-gate-3d-video-mapping/

Schloss Charlottenburg (Charlottenburg Palace) 2017

A Baroque palace in Berlin, located in Charlottenburg, a district of the Charlottenburg-Wilmersdorf borough. https://festival-of-lights.de/en/videos/

3D video mapping about the history of Byblos city, Lebanon

A free https://www.youtube.com/watch?v=ABlqhti8ptI Unesco World ... An I AM project for the .Oct 17, 2013 · Uploaded by EU NEIGHBOURS

Medium Scale Projects Videos and Descriptive Text

Lyon, France 2018 (NOTE:Lyon's Festival of Lights projection mapping is medium scale for the projection mapping projects but the festival is expansive)

Video https://www.thetravelmagazine.net/festival-of-lights-lyon.html projection map on everything https://www.installation-international.com/case-studies/lyon-light-festival-videomapping-showcases-colour-pigments-and-flowers

The technical set up featured 1**2 Christie 20,000 lumens WUXGA laser projectors,** with three new AV Stumpfl PIXERA one quad server clients controlled by a fourth one acting as a master. Calibration was ensured by VIOSO's camera based system, while an RME Fireface UC external audio interface was used for audio playout and to send SMPTE LTC time code to control and sync a laser plus a number of small lights. Two-line arrays each consisting of three T12 active speakers from dB Technologies coupled with a SB30 sub ensured the audio delivery to the crowd. "One of the most important features is that the software can show the project using 3D objects, and allows to adapt the film according to the 3D building and the position of the projectors in the space. NOTE: input from international projection mapping experts like OCUBO was used for this project.

Lyon, France Festival of Lights Lyon 2013

VIDEO: https://www.youtube.com/watch?v=iQ4TSxwgw_g&ab_channel=Maxin10sity

IMAGES: https://www.installation-international.com/case-studies/lyon-light-festival-videomapping-showcases-colour-pigments-and-flowers

Rennes, France Summer and Winter video mapping projects in Center City

Rennes Winter shows -- public building City Hall

2010   5:55 min   https://www.youtube.com/watch?v=jEBTuxMiMI4&ab_channel=hsintien

Rennes Parliament (Summer)

https://www.tourisme-rennes.com/en/discover-rennes/distract/parliament-illuminations/

"Attention au départ" also reflects Brittany's expertise when it comes to high technology. Based on video mapping, the show plays with each architectural detail of the buildings' façades. The company, Spectaculaires – Allumeurs d'Images, is well established in their field. Founded in 1987, it combines craftsmanship, art and cutting-edge technology, operating like a troupe. The sound and light are diffused by discreet free-standing beacons. These house the 30,000, 20,000 and 18,000 lumen HD video-projectors as well as speakers that give the sound a spatial effect.

Everything is linked up via fibre optic allowing it to be remote controlled in full HD. Spectaculaires invests heavily in research and development and also participates in collaborative projects related to tourism and heritage. Its expertise has been sought beyond Breton shores, for shows in Switzerland and Belgium as well as Italy, where it illuminated the façades of the Villa Medici in Rome for its 350th anniversary.

IMAGES: Several very good video mapping projects around the world
https://www.pinterest.fr/pin/374502525264042034/

Lyon Fête des Lumières -- public buildings
https://www.installation-international.com/case-studies/lyon-light-festival-videomapping-showcases-colour-pigments-and-flowers   2018
https://coolhunting.com/travel/2014-festival-of-lights-fete-des-lumieres-lyon/ 2014

Small Scale Videos and Descriptive Text and Tutorials

Tiger Runs Through the Streets of Paris (mobile projector)
https://www.youtube.com/watch?v=iLjdbemGNuU

How-tos for homes

First you will create a guide from one or more images of the house. Then see the videos video sets on projection mapping a house linked below:

Beginners Guide to Projection Mapping with a Quick Rundown on using a free video program VPT 8
https://www.youtube.com/watch?v=skU3T8bgEIM&ab_channel=Tinkernut
Download Program and Documentation and Start a Project
https://nervousvision.com/VPT8documentation/index.html

A little more complicated – 3D simulated
https://www.youtube.com/watch?v=bqjx9J6nPc8
https://www.youtube.com/watch?v=VGPrrRG-2I4
https://www.youtube.com/watch?v=Q-Qs7ARwEv4
https://www.youtube.com/watch?v=q12XzEa8bxw
https://www.youtube.com/watch?v=FWyZyVlJNso

1 hour how to video tutorial
https://www.youtube.com/watch?v=it2Haaam6U0

Five Part Tutorial on Mapping Houses
Steps 1 and 2 setting up projector
https://www.youtube.com/watch?v=Kpg0NqWiz-E

https://www.youtube.com/watch?v=Y4MdGBejBg4

Steps 3 , 4 and 5 Masking

https://www.youtube.com/watch?v=85jSMw8i65k

https://www.youtube.com/watch?v=dNwfZOreSMs

https://www.youtube.com/watch?v=NM8CTD8Dcjs

House Projection Mapping Tutorial 1/5 Introduction
NOTE: a lot of free software is referenced and many software programs are used including 3D modeling, video editing, vector graphics and many others
https://www.youtube.com/watch?v=bqjx9J6nPc8&ab_channel=LumaBox

Small events
Once available for only big-budget productions, recent advances in projector technology deliver affordable, high-quality, high-lumens projection that is within the reach of virtually any venue owner or manager.
https://www.projectorcentral.com/what-is-projection-mapping-2.htm

Software for Mapping

Keynote, After Effects, Mapping Matter - https://www.mappingmatter.com/ Meshroom (free), Zephyr (free), VPT 8 (Free): https://hcgilje.wordpress.com/vpt/ VPT 8 is the best free projection mapping software available. It's perfect for beginners who want something for personal use and small-scale projects, Lightform.   MadMapper. is the advanced tool for video and light mapping, Resolume, Arkaos GrandVJ XT, 7th Sense Design, Millumin, Scalable Display Technologies, HeavyM

list of projection Mapping Software
https://imageav.com/how-to-do-video-projection-mapping-like-a-pro/#:~:text=If%20you're%20projecting%20onto,2180%20(4K)%20native%20resolution.

Tutorial for mapping https://www.mappingmatter.com/tutorials.html (explains the software and benefits such as rapid prototyping).

Tutorial for mapping with Mad Mapper https://www.vice.com/en/article/535q73/map-projections-like-the-best-of-em-with-this-madmapper-tutorial

Here's one animation projection mapping tool for 9 year olds which resembles Paint . Connects to an ordinar projector.
https://ageofrevolution.org/education/activities/how-to-create-an-animated-projection-map/

Hands On with Lightform Projection Mapping
https://www.youtube.com/watch?v=zKAzVr8ULF4&ab_channel=AdamSavage%E2%80%99sTested

Projectors

Projector Central Everything you need to know about projectors
https://www.projectorcentral.com/

Definitions
https://lightform.com/blog/lightform-compatible-projector-how-to-pick-a-projector

Brightness (aka Lumens) – up to 60,000 lumens per projector NOTE:a 60-watt incandescent bulb produces approximately 800 lumens0

Throw - Throw Distance, Throw Ratio and Lenses. Throw distance is the distance from the tip of the projector's lens to the screen. This distance determines where the projector will sit relative to the projection screen. The most common throw distance indoors is 2.This means that for each foot of image width, the projector needs to be 2 feet away or D/W = 2/1 = 2.0. Projection Mapping Brightness and Throw Distance Calculator https://lightform.com/projection-mapping-calculator

Pixel Pitch (aka pixel density) - up to 5mm Pixel pitch refers to the density of pixels. A smaller pixel pitch indicates higher pixel density and higher resolution. Pixel pitch is important because it influences viewing distance. The smaller the pixel pitch, the closer the viewing distance. The optimal viewing distance of your screen informs the pixel pitch value

Resolution up to 4K resolution, most projectors for medium and small scale events are 1920x1080 4K resolution refers to a horizontal display resolution of approximately 4,000 pixels. ... In television and consumer media, 3840 × 2160 (4K UHD) is the dominant 4K standard, whereas the movie projection industry uses 4096 × 2160 (DCI 4K)

Photogrammetic surveys - Photogrammetry consists of making precise measurements from photographs and other imaging sources to determine the relative locations of points in space".
NOTE: - Best Photogrammetry Software For All Levels: Agisoft Metashape; AliceVision; Meshroom; PhotoModeler Technologies; RealityCapture; Regard3D; Trimble Inpho; WebODM.

More definitions in the blog: Lamps, Lasers, and LEDs; Imaging Chips   3LCD DLP; Vertical Offset; Contrast Ratio, Black Levels

Projectors for projection mapping are usually short-throw devices with a high lumen value, resolution, and contrast. As with every step of mapping work, it all comes down to the size of the displayed area. Depending on it, you may need to use multiple devices. However, in most cases, one projector is enough. If there is an LED projector, divide the stated number of lumens by 3 and you'll get the actual ANSI lumens.

Best Projectors for Projection Mapping All these are 1920x1080 or lower resolution. The projection mapping projectors are all 4K
https://fixthephoto.com/best-projectors-for-projection-mapping.html

Video mapping projectors for projection mapping shows.

Types of projectors
https://limeartgroup.com/best-video-projectors-for-projection-3d-video-mapping/

Lightform this page links to a Projector search tool
https://lightform.com/blog/lightform-compatible-projector-how-to-pick-a-projector

Projection Mapping Brightness Calculator https://lightform.com/projection-mapping-calculator
and Throw Distance Calculator

Tech advisor World Cuo Tech https://www.worldcuptech.com/best-projector-for-projection-mapping/

Best Projectors for Projection Mapping
Christie
One of the leading manufacturers of projectors, Christie provides a wide range of projectors to choose from. For a large scale event, we recommend the **Christie® 3DLP projectors**, using light more efficiently to display image, data or video, with clarity and brilliance. You can choose between a 5000 Lumen up to 45,000 Lumen. The brighter the better.
https://www.christiedigital.com/products/projectors/all-projectors/
Barco
Another leader in projection technology, Barco often goes head to head with Christie. Barco's are reliable professional grade projectors which are perfect for large scale projection mapping. **Barco XDL-4K60** gives you an impressive 60,000 Lumens to play with 4K, 3-chip DLP RGB laser. You can't go wrong with a Barco.
Benq
You could look at getting a BenQ projector for those medium size shows/club gigs. BenQ makes some good projectors with high brightness/contrast, which is what you want when looking for smaller projection mapping projectors. Again you can choose from a wide range of projectors, we recommend the **BenQ PX9710** which gives you 7000 lumens of brightness to play with.

Projectors you can use for a smaller video projection mapping setup.
These make a good choice for beginners who want to learn and experiment with projection mapping. Or use in projects that require smaller objects to be projected on.

Epson
Another leader in AV technology, Epson has been innovating and producing some great projection technology like the LightScene projector. However, for the purpose of projection mapping we could use any of their other projectors. Like the **PowerLite 2142W** WXGA 3LCD
BenQ
BenQ again as these have proven to be very realiable projectors, with good contrast/brightness and resolutions. Getting a clear image on output is important when projection mapping, therefore you could select from the BenQ W series or M series. We would recommend looking at the **BenQ HT2050A** with 2200 lumens and Full HD resolution 1920×1080 this can make a good projector for practice and experiments.
ViewSonic
ViiewSonic has been in the game for a long time, a reliable company who provide good quality products. You could look at **ViewSonic 3600 Lumens** WXGA projector, that gives you a 1280 x 800 output.

How much does a 4K projector cost?
Thousands but you can get a refurbished one for $150
how much do 4k projectors cost? - Bing

Best 4K projectors
Best projectors 2021: Full HD, 4K, portable, short throw | What Hi-Fi?

Some Content Creation Companies (there are others)

Maxin10sity Bucharest, Portfolio – Maxin10sity - *https://www.maxin10sity.net /portfolio*
3d Mapping | Maxin10sity Projection Mapping Company | Hungary show reel

4K video for projection mapping for television
https://www.youtube.com/watch?v=lNLeRmnkug8

Limeart Ukraine -video content – very similar to what John and I used to do and will do again.
https://www.youtube.com/watch?v=uWYyCCud4oU
https://www.youtube.com/watch?v=sXXaD3DYp9M

Projection on intricate wood art
top 11 video content -- https://www.youtube.com/channel/UCdG_V7q6pZj90m0_OuSi-Jw
Interconnection - Visionary Projection Mapping, Winner of iMapp 2016, Bucharest
https://www.youtube.com/watch?v=a1v4W95wJnM&ab_channel=Limelight

H3O Concepts, Dubai- video content
videos of work: https://vimeo.com/217644394
videos of work: https://vimeo.com/h3omc
images and videos of works: https://vimeo.com/tag:h3o

H3OMC is a Multimedia Content Production company based in Dubai , With an experience of more than 15 years, specialized in Creating Outstanding Concepts & producing Multimedia Content in the field of stage setup design, interior design, corporate events, royal weddings, permanent shows, & Large Scale shows. Email:: h3omcllc@gmail.com

Mad About Video, Malta -- video content
https://www.madaboutvideo.eu/largescaleevents

How tos

Tutorial for 4K mapping
https://imageav.com/how-to-do-video-projection-mapping-like-a-pro/#:~:text=If%20you're%20projecting%20onto,2180%20(4K)%20native%20resolution

Intro to video mapping and list of some of the world's spectacular video mapping installations
https://www.iberdrola.com/culture/videomapping

SOME OF OUR 4K ANIMATION CONTENT
Ruth's videos: https://www.shutterstock.com/fr/g/Unique3ddigital/video
Halloween https://www.shutterstock.com/fr/video/search/monster-smilies
Christmas: https://www.shutterstock.com/fr/video/clip-7682497-dancing-elf-jump-green--red-attired
John's videos: https://www.shutterstock.com/fr/g/john+j+lutheran/video?sort=popular&page=2
Abstract

VIDEO MAPPING IDEAS AND STUDIOS

260 Projection Mapping ideas in 2021
https://www.pinterest.fr/pin/723601865106571448/
See more ideas about projection mapping, 3d projection mapping, 3d mapping ... Colourful Gouda - City Hall, Holland, The Netherlands Places Around The World, Oh ... 1 million people have experienced the Virtual Reality activity across Europe. ... in a video spectacle, as well as the Yokohama Odyssey event at a historical ...

Projection Mapping | SEGD https://segd
.org › projection-mapping
Call it projection mapping, pixel mapping, video mapping, or even ... lighting and in Son et Lumiere (sound and light) shows mostly presented in Europe. ... This is particularly helpful when landmark or historic legacy buildings are involved.

Video Mapping: turning light into art – Iberdrola https://www.iberdrola.com/culture/videomapping
Discover what video mapping is, why it is so fashionable and how incredible artworks can be obtained. ... Video mapping, light that turns buildings into art ... Used to recreate historic scenes or create abstract shapes and volumes on geometric ... of the 19th century, has become the first permanent video mapping in Europe.

Projection Mapping Scotland - Double Take Projections https://doubletakeprojections.com/about
Jul 24, 2020 — Double Take Projections are a creative building projection mapping studio. We project ... RBS Logo. Historic Environment Scotland Logo.

Probing Light: Projection Mapping, Architectural ... - Érudit https://www.erudit.org/journals/2014-n24-25-im02279
Probing Light: Projection Mapping, Architectural Surface, and the Politics of Luminous ... Like early light architecture, contemporary projection mapping constantly ... Thus, the reader will notice something of a jump along the historical timeline, as I ... [3] Although the electrification of urban centres was common across Europe.

Cultural Sites

A Guideline for Virtual Reconstruction of Historical Facades 3D projection mapping Approach http://hdl.handle.net/11129/1670 download PDF
by BM Moghaddam · 2014 — During this study historical buildings and different types of lighting on historical facades are introduced, in general, and then specifically, 3D projection mapping on the facade of historical buildings, in order to create a context for proposing a new idea to apply this technique on the historical facade. Through the study the capabilities of 3D projection mapping on historical facades in artistic exhibitions was investigated. The researcher uses capabilities such as high quality of lighting, presenting realistic images, masking capabilities and high clarity images.

Research paper on Mapping for Cultural Heritage
https://www.researchgate.net/publication/325471232_REPRESENTING_WITH_LIGHT_VIDEO_PROJECTION_MAPPING_FOR_CULTURAL_HERITAGE (download PDF)

Projection Mapping in the United States

History of Projection Mapping in the US
http://projection-mapping.org/the-history-of-projection-mapping/

Projection Mapping by Industry in the US and around the world
https://insights.ges.com/us-blog/62-ideas-projection-mapping-ideas-by-industry

In the United States experimental video projection festivals have begun popping up on both coasts and in between. Ethan Vogt, producer of the Bring to Light: Nuit Blanche New York festival in Greenpoint, Brooklyn, says that this medium can play a critical role in the evolution of public art: "It is too important to exist in just a guerrilla way."
https://www.nytimes.com/2012/01/29/arts/design/video-mapping-artists-use-light-as-a-medium.html

Some video mapping art has an activist tinge. In November Mark Read, an artist and activist, organized the Occupy Wall Street projection, nicknamed the "Bat Signal," and recruited Mr. Nova and Mr. Skola for their large-scale projection savvy. Mr. Read said he is now helping to create a sort of "Batmobile" with projection capabilities that will visually spread the word that the Occupy movement is still alive. "It's like Commissioner Gordon sending out a call for aid and a call to arms," he said.

In what could be a major development for digital mapping in the United States, the New York City Economic Development Corporation is soliciting bids for a large-scale "interactive lighting initiative" in Lower Manhattan for late 2012, with $1 million in support. "We want to create a new attraction for Lower Manhattan that will draw people downtown, so that they can appreciate the incredible transformations occurring there," said Seth Pinsky, president of the Economic Development Corporation. "It's a relatively cost-effective way of reaching a large audience."

Some Projection Mapping Artists in the US
https://www.bookastreetartist.com/projection-mapping-artists
United Projection, Miami Beach, FL
Indoor projects   https://www.unitedprojection.com/
Candy Stations, Brooklyn NY
https://www.bookastreetartist.com/candystations#concert-design-live-visuals-projection-design
Allison Tanenhaus, Boston MA
https://www.bookastreetartist.com/allison-tanenhaus#projection-art
https://www.bookastreetartist.com/allison-tanenhaus#video-art
LD Systems, Houston, Austin, San Antonio TX
https://www.ldsystems.com/contact-us/
Ascend Studio Orlando FL
Projection Mapping Projection Mapping Educational Series
Part One: The History of Projection Mapping, Part Two: How Projection Mapping is

Accomplished, Part Three: Pros, Cons, and Alternatives to Projection Mapping. Part Four:

Projection Mapping Series Part Four: Use Cases & Examples

Some Projection Mapping exhibits in the US

St Louis Train Station
https://www.trendhunter.com/trends/projection-mapped-shows

Brooklyn Masonic Temple
https://www.nytimes.com/2012/01/29/arts/design/video-mapping-artists-use-light-as-a-medium.html

San Francisco Ballet Gala
https://www.modulo-pi.com/showcase/projection-mapping-san-francisco-city-hall/

Stadium Mapping
Video - Chicago Blackhawks Ice Hocky Stadium (very cool)
https://videomapping.blog/chicago-blackhawks-projection-show/
Some Images of Stadium Mappings in the US
Toyoto stadium and others
others in the US and some from elsewhere
There have been dozens of stadiums that have exhibited projection mapping displays in the US

Car Mapping Videos
some of these are from the US but most are not
Car Mapping Videos Set 1
Car Mapping Videos Set 2