



**IDEENWETTBEWERB  
Inszenierung Kapellbrücke/Wasserturm**

**Medienorientierung**

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FORUM - Messe Luzern

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## **The Particle Plan**

### **The bridge as a stage**

**The Particle Plan is a collaborative project developed by four Dutch studio's with various disciplines in the creative industry. It is the winning concept for a permanent interactive light installation that will illuminate the famous Chapel Bridge in Lucerne.**

For many years, one of the most prominent touristic attraction in Switzerland, disappeared from the stage by night blocking the stunning view on the city skyline. 'We urgently need light on the bridge!', acknowledged a group of prominent Lucerner. They founded a project group and set up an international contest amongst architects, artists and lighting specialists, to find a unique plan that illuminates the bridge in a way which satisfies the needs of the increasing flow of intercontinental tourists and at the same time do justice to the historical character of the city and its culturally aware citizens. Last July, the jury choose 'The Particle Plan' as the winner of the competition.

### **The winning concept**

The creative team noticed that crossing the bridge is something special. It connects to the history of not only the bridge, but also the city of Lucerne. Crossing the bridge is an act that should be seen from outside, and experienced in a special way while walking over the bridge. With 'The Particle Plan' the Chapel bridge becomes a public stage. A stroll over the bridge will generate every time a unique pattern of light on the bridge – illuminating the distinct particles the bridge is constituted of, as a canvas. In this manner we also highlight how the bridge, built in 1333 is being kept alive as a concept whilst its hand-crafted parts are continuously being rejuvenated.

### **The process**

'The Particle Plan' is inspired by the beautiful peculiarities that the dutch team members came accross, while studying all different aspects of this historical

wooden footbridge, but is also based on its function in the present and its past, seen from different perspectives. The concept is developed with a great respect towards the historical and natural background and honours the individuality of the environment. Besides the function of illumination, the intention of the project is to reconnect the people of Lucerne, inhabitants as well as tourists, with the bridge and give them 'act the presence' in the revived nocturnal city centre.

### **A huge interactive play**

By illuminating the bridge based on the activities of the passers, we implement the concept of an interactive play on the enormous scale of several 300 meters long, which is a novelty. The behaviour and position of people will directly influence the play of light on the wooden roof and body parts on the outside of the bridge. From a distance it will be obvious if there are few or many people walking on the bridge, if they run or stand still. The light projection will follow their movements, their place and their intensity. The people on the bridge will notice their influence on their environment and are invited to play with this aspect.

### **The ritual of the illuminator**

A daily ritual will be the moment that the lights are lit on the bridge. At a time determined by sunset, one visitor of the bridge, unconscious of his special role, will be the chosen person that activates the light that night for the first time. This principle refers to the genesis period of the bridge, a time in history when electric light did not exist and every night the street was lit with fire by a person called the illuminator of the city. Every night this will be the start of a spectacle that remains poetic and will make each touristic picture of the Chapel bridge unique.

### **Illuminated particles**

The Chapel Bridge is composed of unique crafted wooden elements. Every individual element has been replaced, since its first construction in 1333, while the bridge as a whole stands tall. Entire books are written in detail about all these handmade components and although during a regular stroll over the bridge one would not necessarily notice, each particle is a one of a kind.

The Particle Plan is based on the principle that each individual particle of the bridge can be illuminated selectively and will play a role as a pixel in a light animation.

### **The experience from the bridge itself.**

The historical paintings that are part of the interior of the bridge will only be illuminated in the places and moments where someone is present. Sufficient light will be provided to ensure the safety of visitors, but at the same time it is also important that the view of the historic city center from the bridge is not blocked by an excessive amount of light from within. The light from the projector is adjusted so that it does not shine in the eyes of visitors. People crossing the bridge will be aware of the fact that they evoke a performance because of the light that shines through the wooden planks on the floor of the bridge, and in this way will have an influence on their environment.

### **Colored by nature**

Perhaps a coincidence of nature, but the beautiful colors of the moss and the weathering by algae on the wooden bridge, were noticed by the team as an element to cherish and lead to the decision to use only natural white light to illuminate the particles. In this way the natural and seasonal changing colors of the bridge will paint the atmosphere of the lightplay, in the day and night time.

### **Unique technological innovation**

This concept is unique and was originally created by the team Particle Plan in the context of this competition. The development of the game engine for the interactive light animations, underlies the innovative nature of this project. A permanent installation with so many projectors on this scale has never been seen before. Novel sensing methods will be used to sense activity on the bridge. This is then translated into light patterns that are generated in real time.

With the aid of the latest lighting and projection systems, it is possible to illuminate the exact shapes of the various bridge particles. Each individual technique used within the Particle Plan has been around long enough to prove itself as reliable, but the combination of these techniques and how they are used is new.

Ultimately, the Particle Plan is not about technology, but about creating a beautiful poetic project, that can be truly enjoyed by the people of Lucerne and which will be able to develop itself in the future to the needs of the city.

### **Intelligent interactivity**

The light animations that will be developed for the Particle Plan are not pre-recorded films that start playing when someone enters the bridge. An advanced computer links all the projectors and sensors together and generates an algorithm in response to the presence of the people on the bridge. This animation is interactive and intelligent. It will always make its own choice within the framework that the creative team has designed. And therefore will be different every time. It can be compared to a computer game, but in the reality of a city environment with real actors.

### **Natural habitat**

The Chapel bridge is part of a natural habitat. In certain months protected bats and Alpen Sieglers live between the wooden beams and fish and swans houses in the waters underneath. The flowers hanging from its sides in summertime, will affect the attraction of bees and other insects as well as the tourists. With the seasons, the nightly animated projections will also change and adapt to the atmosphere and environmental needs in the interest of the inhabitants. As a result, unnecessary light spill will be prevented and the light will be programmed to never interfere with the personal living space of the animals.

### **Poetry the year round**

Team Particle Plan focusses on poetic animations, that reflect the seasons and special cultural and typical events that Lucerne is known for. Christmas time and important events will have their own program. These first light performances will be developed under the art direction of team Particle Plan. Part of the concept is that in the future, also other people can submit ideas for animations. In this way, the bridge will continue to hold a current and active role in the city. But always within the concept of illuminated bridge-particles, that are used as animated pixels in the interactive light show performed by the people of Lucerne themselves.