

Northern Lights

Case study



▲ Projection mapping transforms the Canadian Parliament Buildings into a giant Canadian flag.

Northern Lights shine bright on Canadian Parliament

For more than 30 years, sound and light shows have been a staple attraction every summer at the Canadian Parliament Buildings. Illuminating the Gothic-inspired towers, spires and façade of the Centre Block with large-scale visuals, these shows have entertained and educated countless visitors to Canada's capital.

The most recent iteration, titled *Northern Lights*, continues this multi-decade tradition of sharing Canadian history and identity through the innovative use of narration and audiovisual technology, including an impressive fleet of Christie® projectors.

"The first sound and light show was presented in 1967 for the Canadian Centennial," says Jean-Marc Beauvalet, Manager, Technical Services, Capital Celebrations and Program Operations, adding: "you can imagine the technical

evolution from 1967 to now. It's quite staggering."

Since joining the production team, Beauvalet has witnessed the parliament show transform in scope from using conventional lighting fixtures to bathe the Centre Block in different colors, to employing high-brightness digital projectors to projection map the building with a variety of rich and dynamic content. In fact, this is the second parliament show that took advantage of projection mapping, the first being *Mosaika*, which used nine Christie projectors.

"When we did *Mosaika*," explains Beauvalet "that was the first time we were video mapping the entire building. That was something special. When people saw the show, it really created an effect with them and allowed us to tell a fuller, more visual story."

Customer:
Government of Canada – Heritage
Canada

Location:
Ottawa, ON

Industry/Market:
Travel and tourism

Partners:
• Idées au cube
• Neo6

Requirements:
• Large-scale projection mapping
• High-brightness and contrast
• Reliable, consistent performance
• Color matching and calibration

Summary:
For more than 30 years, sound and light shows have been presented on Canada's Parliament. For the most recent edition, *Northern Lights*, an impressive inventory of lighting products, including 17 Christie Roadster HD20K-J projectors, were used to projection map the entire Centre Block building.

Products:
• Christie Roadster HD20K-J (17)

Results:
Telling the history and sharing the identity of Canada through the innovative use of audiovisual technologies, *Northern Lights* successfully stirs the emotions and invokes the pride of countless visitors to Canada's capital.



▲ Chapter 5 of *Northern Lights* celebrates the natural grandeur and the diversity of Canada through stained glass inspired visuals.

For *Northern Lights*, audiovisual design firm Neo6, put together a system that comprises more than 150 moving and static lights, several LED accent fixtures and tiles, a 30W RGB laser, 7.1 surround sound audio system and 17 Christie Roadster HD20K-J 3DLP® projectors. Altogether, this arsenal of lumen-emitting products produce over 5 billion different hues of color and 35 million pixels across the Centre Block and Peace Tower – a considerable task considering the building being illuminated stretches 470 ft. (143 meters) long and 30 stories high.

“The trick is to bring everything together and work in a theme,” comments Beauvalet speaking to the challenge of ensuring all these different light sources are performing in concert. “With all the products that were chosen, we’re able to

calibrate the colors properly; even in the depths of tone and the warmth of the projection compared to the warmth of the lighting. The uniformity of brightness of the projectors is a big plus.” The higher contrast ratio of the projectors also helped define the video aspect of the production against the rest of the lighting, notes Beauvalet: “The yellows and oranges against the blacks really come through much sharper because of the higher contrast we now have.”

During the development stages of *Northern Lights*, it was decided to replace the old fleet of Christie projectors with 17 new ones. “By creating a brand new inventory of projectors for this show, we’re good for the next 10 years and the next iteration of the show as well,” says Beauvalet. An added benefit of

choosing Christie was that although the performance capabilities have been increased, the physical chassis of the projectors did not change, allowing the production team to reuse much of the mounting hardware from the last parliament show, saving time and money. “For us, when we saw the new projectors had the exact same outer enclosure, we said ‘that’s brilliant, we can reuse so much stuff’”.

Content for the show, created by Montreal-based Idées au cube, weaves together aspects of Canadian history in five distinct chapters. “Each chapter is so different and conveys a unique mood through the visuals,” says Beauvalet. “You can really see it with some of the more succinct images or the distinct visuals that are used and the capacity of the projector to reproduce the images and colors that were chosen. It’s a big plus in order to capture and translate that mood to our visitors.”

“Projection mapping is such a great tool to be able to tell great stories that have never been able to be told before,” says Beauvalet. “What we’ve noticed with *Northern Lights*, especially at the end of the show when we play ‘O Canada’, people actually stand up. They used to just sit. Now, there is a swell of pride that overcomes people, whether they are Canadian or not, they all stand up. It’s quite magical to see.”

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