

## Projection: Superb Image Quality and Longevity

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### ABSTRACT

In this paper Norxe discuss the importance of projector technology which has been designed specifically for superb image quality and longevity.

In the mission critical environment of training and simulation, color and brightness stability during lifetime is the most important factor. Solutions are often multi-channel where color and brightness deviation between adjacent projectors must be kept to a minimum. The target is to create projectors that can operate for 50,000 hours without maintenance. This must be achievable without imposing operational limitation, and whilst being 24/7 operation compatible.

Norxe is constantly researching various aspects of micro display technology, illumination technology and other critical components for longevity. We have studied the advantages of using hermetically sealed imaging devices, as well as the importance of providing a completely sealed optical engine (including TIR Prism and illumination sources) and projection lens.

No air filter is needed. Semiconductors are very sensitive to temperature. If the semiconductor is over heated, there will be a rapid failure of the component. On the flip side, with good thermal management, lifetime can be extended far beyond, 50,000 hours operation. Stay cool, live long!

### BIO

#### *PRIMARY AUTHOR*

**Kjell Einar Olsen** is CEO of Norxe AS which he co-founded in 2015. Kjell has a Master's degree in Optics and Laser Physics from the University of Bergen. He started working in the projection industry in 1996 as a designer and manager of optical development in ASK/PROXIMA/InFocus. Kjell co-founded projectiondesign AS in 2001 and held the position of Director of R&D. During his years in the projection industry he has developed more than 20 different projection platforms including LCD, LCoS and DLP (single chip and 3 chip) technology. Kjell is inventor of 11 patents within the display field, and he has a position as an expert at The Research Council of Norway.