



Analysis and Research

Goboservice by Sunland Optics developed the idea of using gobo-projectors in security services based on the Italian Legislative Decree 81/08, where a sign is defined as "a signal that, by means of combination of a geometric shape, colours and a symbol or pictogram, gives a determined indication, whose visibility is ensured by lighting of sufficient intensity".

The use of traditional graphic signs such as posters, adhesives or paint, has been shown to have clear limits, reducing its effectiveness and paradoxically increasing risks in the workplace.

These include:

- **LOW ATTENTION:** over-familiarity with a traditional sign can lead to indifference. They become ineffective when worn out.
- **TIME CONSUMING/HIGH COSTS:** classic signs are subject to wear and tear in pedestrian and vehicular traffic. On average, maintenance/replacement is required every 3-9 months meaning more work. The maintenance management of traditional signals (especially horizontal signals) is also expensive.
- **IMPACT MAINTENANCE:** maintenance of the visibility of traditional signs involves slowing down or even stopping production;
- **INFLEXIBILITY:** traditional signs cannot be repositioned or replaced rapidly;
- **ADAPTABILITY:** it is difficult to achieve a high-impact horizontal marking on uneven surfaces.

SIGNUM, a gobo-projector designed specifically for industrial security applications, based on the analysis of the limits listed above and the experience gained by Sunland Optics in various industrial and logistic environments of the North American and North European market.

An Effective Solution

The innovative gobo-projector **SIGNUM** perfectly adapts to industrial environments: made of lightweight but resistant material, watertight (IP65 certified) and with a passive system of heat dissipation, which prevents dust getting inside the machine through the use of fans.

The following features make SIGNUM the ideal solution:

- **EXCELLENT VISIBILITY**: a projection offers better visibility because the projected image could be transmitted in a "smart" mode with different options such as dynamism, alternation, intermittence and the possibility of integration with a motion sensor. The images thus projected are more noticeable by users. The SIGNUM is characterised by durable, high brightness.
- **LONG DURATION**: the lighting body made of COB LED guarantees the long life of the projector (up to 6 years). No wear and tear caused by pedestrian and vehicle traffic. Resists moisture, cold and dirt;
- **LOW COSTS**: the low energy consumption of COB LED greatly reduces overall costs by ensuring an average ROI of 1-2 years;
- **SIMPLE MAINTENANCE**: maintenance is quick and easy. It does not require any significant impact on the production organisation;
- **HIGH FLEXIBILITY**: small projectors are extremely easy to install and move. Simply replace the gobo to change the sign.
- **HIGH ADAPTABILITY**: the projection adapts to any surface however uneven it may be.

An Effective Solution

Projected Signage Vs.



	Projected	Traditional
Longevity	LONG Life of the projector (6+ yrs)	SHORT 3-9 months
Maintenance	LOW Inexpensive and fast. Minimal impact on production	HIGH Expensive and time intensive. Significantly slows or halts production
Cost	LOW \$500 to \$6k one-time investment. Typical ROI time 1-2yrs	HIGH \$1k to \$4k annually
Visibility	GREAT Active projection = better visibility. Interactive system with proximity sensor can further enhance visibility	LIMITED Workers become accustomed to traditional signage. Worn signage is hard to see
Durability	HIGH No wear and tear from foot or vehicle traffic. Stands up to humidity, cold, and dirt	LOW Foot and vehicle traffic wears off both adhesive and painted signage
Flexibility	HIGH Swap out the gobo to change signage or just reposition	LIMITED Signs must be scraped off and reapplied



Traditional Signage



DRINK OPENING
DO NOT COVER
OR OBSTRUCT





DRINK OPENING
DO NOT COVER
OR OBSTRUCT

