

## Green Lean Journey

### Industrial challenges

#### Increasing demands to develop ways of working to handle environmental requirements

“We have increasing demands on environmental performance on our products as well as on the production. Thus there is a need to develop methods and tools to consider environmental issues early in development processes”

“We need to find the most important green performance indicators to control upon within both small and large development projects that also engage our employees within different functions”

“There is large potential for recycling in production, e.g. by packaging design”

“We need to eliminate waste, e.g. by developing work procedures to shut down processes that are not in use and save energy”

#### Workplaces and operator work conditions need to be improved in an increasingly complex environment!

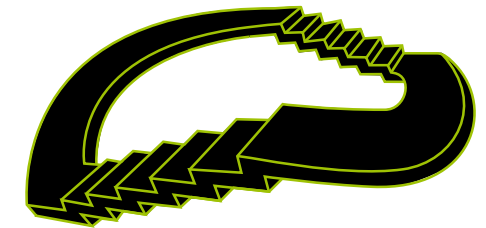
“Development of products and production processes are prioritized, while workplaces in production are not designed ‘as carefully’”

A project carried out in 2011–2013 within the Strategic Vehicle Research and Innovation Initiative programme (FFI), where VINNOVA (Sweden’s innovation agency) and participating industry invest 12,3 M SEK.



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“A project that integrates, economic, social/human and ecological aspects in daily improvement work, in development processes and by design of attractive workplaces”



## Green Lean Journey

Sustainable development  
of production systems



### Economic sustainability

We further develop production system to increase industrial competitiveness.

### Social/human sustainability

We develop optimized work stations in production, based on operator demands and needs.

### Ecological sustainability

We integrate environmental perspectives in daily improvement and development work.

# Green Lean Journey

## What do we want to achieve?

The project is based on a balanced view on sustainability where economic, social/human, and ecological factors are included to create long-term sustainable production systems and attractive workplaces.

We want to:

- Integrate an environmental perspective in daily improvement work.
- Further develop production system models with a "green" dimension.
- Develop optimized work stations in production (characterized by productivity, efficiency, a good work environment and an attractive work) by designing the workplaces 'as a product' with focus on the operator.

## Continuous information

The project is carried out in close collaboration with the Volvo Group, Volvo Cars Corporation, Finnveden Gjutal and research partners from Swerea IVF, Mälardalen University, University of Skövde, and Stockholm University.

The aim is to create available knowledge of how manufacturing companies can increase their competitiveness based on case studies and each partner's expertise.

### For your inspiration

- on [www.leanresan.se](http://www.leanresan.se) you can find results from this and other projects.

Accessible material (extract):

- A methodology and a user guide for a green value stream mapping (Green VSM).

- Work procedures for identification of essential environmental parameters to work with on a shop floor level.
- Education material for integration of environmental aspects in production systems.

Future material will include how "green dimensions" can be integrated in production system development and guidelines for work station optimization.