

# Information prospective students

---

Research theme:	Lean engineering
Research title:	Design, test and implementation of an effectiveness method in a high-mix-low-volume job shop machining environment
Researcher:	J.W. Borst (Jesper)
Research period:	From 17 February to 30 September 2014
Company:	VDL ETG Almelo
Supervisor:	Dr. ir. J.M. Jauregui-Becker (Juan)

## Background

The thesis is performed at VDL ETG Almelo, which is a company that operates in the business of system integration of mechatronic (sub) systems and modules for Original Equipment Manufacturers (OEM) in the high-tech capital equipment industry. The machining department of VDL ETG Almelo produces a large number of different parts that are required for the assembly of mechatronic (sub) systems. As the equipment is divided in cells, the machining department of VDL ETG Almelo satisfies the descriptions of HMLV and job shop.

## Assignment

In order to remain competitive with countries with a low hourly labor rate, VDL ETG Almelo has to increase their effectiveness. To do so, they want to implement a method for measuring and improving their equipment effectiveness. Unfortunately, the existing methods are developed for mass production environments and do not fit the situation of VDL ETG Almelo. The assignment was therefore to develop, test and implement an effectiveness method in a high-mix-low-volume environment.

## Results

Two new methods were designed, tested and compared at VDL ETG Almelo. Furthermore a beginning was made with the operational implementation. The test showed positive results for both methods and the implementation plan. The implementation was started and for two machines improvement actions were determined and carried out.

## Personal experience

At VDL ETG Almelo I gained insight in a complex high-tech manufacturing company. The people at VDL ETG Almelo were really helpful and supporting during my assignment. I would recommend future students to at least do their internship and/or master assignment at a company, not only because it is fun to work with a practical problem but also to determine your entry to the career-market. As the chair of OPM has many connections to industry it is easy to work and experience the things you are educated for in practice!