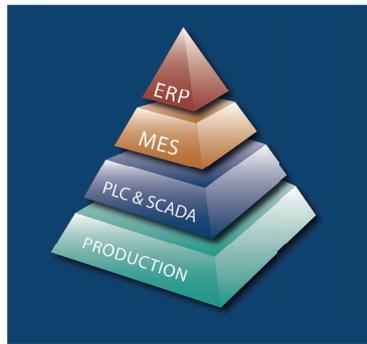




Hellebrekers
Industrial Automation

Henry Ford, founder of the Ford Motor Company, famously said that “any customer can have a car painted any colour that he wants, as long as it is black.” Nevertheless, the first cars to roll off of Ford’s assembly line were not black; they were available in various colours. However, the black paint dried much faster than the other colours. To optimise the speed of his production lines, Ford decided to make black the new standard. For fifteen years, Americans could purchase a Ford Model-T... in black.

In this day and age, Ford would not get away with a tactic like that, no matter how good their cars might be. The market calls for diversity, and any company that cannot meet that requirement will invariably lose out to its competitors who are capable of delivering custom-made products. In the same vein, a production company’s own growth and the need to comply with ever-changing and ever-stricter laws and regulations force the company to adopt a flexible approach.



To meet this need for flexibilisation, it would be near impossible to manually keep track of and implement the myriad changes. If you want your company to be able to react to changing demands, grow in the most optimal manner and continue to comply with applicable laws and regulations, automation and digitisation are important aspects to consider.

Visual Link Software’s Manufacturing Execution System solution (VLS|MES) is the ideal solution with which to optimise your entire production process. VLS|MES was developed by the software engineers at Hellebrekers Industrial Automation, the #1 system integrator in the process industry.

WHAT IS A MANUFACTURING EXECUTION SYSTEM?

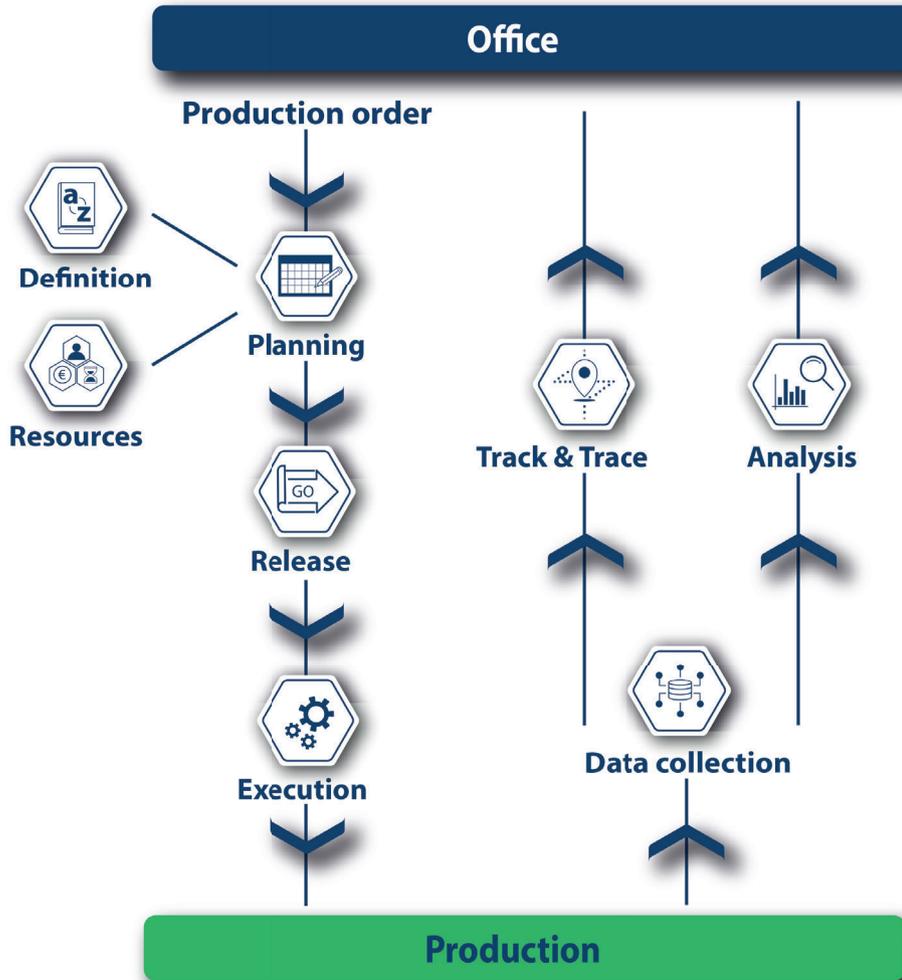
A Manufacturing Execution System (MES) is an information system used for planning, monitoring and controlling production processes of a continuous nature. It forms the vertical digital connection between the office environment (ERP) on the one hand and the production environment (staffing and machinery on the work floor) on the other. Production orders, usages, yields, quality information and inventory levels are monitored in real time using the MES and production processes are optimally controlled.

Due to the international standard (ISA-95) upon which VLS|MES is based, it can interface with any ERP system (e.g. SAP or Oracle). On the other hand, the open nature of VLS|MES makes it ideally suited to a changing production environment. In concrete terms, this means you can effortlessly expand your machine pool during or after the implementation of VLS|MES. With the extensive selection of communication protocols and available drivers, you can connect VLS|MES to any available PLC control system that uses the international ISA-95 standard.

THE STRUCTURE OF VISUAL LINK SOFTWARE | MES

VLS|MES consists of eight distinct functionalities. Although it is possible to implement all eight, it is not necessary to do so.

It all depends on your wishes, the extent to which you are already using other well-functioning digitisation solutions and - of course - your available resources. For example, you can begin by digitising your planning or inventory management. You can also opt for a digitised quality registration system without utilising any of the other functionalities.



Planning

translates the overall order into a detailed production planning, down to the hour and minute level. Alongside this order, all other orders are taken into account as well and the module will come up with the most efficient production method. Planning extracts all the information it needs from Definition and Resources.



Definition

records how a product is to be produced: the recipe and the machine settings to go with it.



Resources

combines and processes up-to-date information about staffing, material and assets and provides insight into inventory levels.



Release

releases the order for production after a final verification of the available resources and the necessary production guidelines by the operator.



Execution

is used to actually control the production floor. On the one hand, this is done via the direct interface with the machine controls; on the other hand, it uses the tablets linked to the production line and accessible to the operator and the production manager.



Data collection

gathers the available production data (either available directly from the production floor or entered by the operator). All data are structured in a database and stored in a compact format.



Track & Trace

presents all relevant information about the conditions under which a production batch was produced. Every batch is assigned a unique code that you can use to gather information about the history of each individual batch, down to the individual product. The current status of a production order and its traceability are uploaded to your office environment.



Analyse

combines all available data from Visual Link. This software offers two types of data-based feedback: real time and near-real time. An example of real-time feedback is directly controlling the production process based on e.g. E-standardisation, OEE, production progress, etcetera. Examples of near-real-time feedback are production reports and weekly reports.



AN OVERVIEW OF THE KEY BENEFITS

INCREASED FLEXIBILITY ON YOUR PRODUCTION FLOOR

VLS|MES allows you to implement product changes faster. Recipes for new products are entered and our intuitive planning software ensures that you can make optimal use of all resources (staffing, materials and assets).

LESS ADMINISTRATION ON THE WORK FLOOR

Since VLS|MES eliminates the need for myriad actions (e.g. manually inputting orders, entering the planning, tracking inventory levels or registering complaints on paper), the administrative workload on the work floor is greatly reduced. This allows the operator to focus their attention on ensuring the production process proceeds smoothly

MORE CONSISTENT QUALITY WITH A SINGLE DEFINITION

Since every article (SKU) is produced in exactly the same manner, the risk of quality loss or quality discrepancies is significantly reduced in both the short term (per production run) and the long term (every subsequent order).

EXPEDITED HANDLING OF COMPLAINTS

Whereas it used to be a time-consuming job to uncover the cause of a complaint, VLS|MES allows you to retrieve the relevant data in mere moments. Per complaint, this can save you hours of searching.

FEWER ERRORS WITH CLEAR INFORMATION

Doordat alle instellingen van ieder product (recepten, benodigde resources en machine-instellingen) centraal staan opgeslagen en worden beheerd, is de kans op menselijke fouten sterk gereduceerd. Iedere stap in het proces staat beschreven en de operator weet precies wat hij wanneer moet doen.

REAL-TIME INTERFACE WITH THE MACHINE POOL

A real-time interface with the machine pool grants you up-to-date insight into the progress of your production and therefore the planning. If the production falls behind, you can quickly uncover the cause and begin implementing the necessary improvements and optimisations in an effective manner.



DO YOU NOT HAVE AN INTERFACE WITH ERP (YET), BUT YOU DO WANT TO BEGIN DIGITISING YOUR OPERATIONS?

Although MES is designed to form a digital connection between your office and production environments, you can begin using VLS|MES even if you do not yet have office software in the form of an ERP system in place.

The modular design of VLS|MES makes it possible to digitise the production floor even without an ERP. You can easily begin strategically placing various (optical) sensors in your machine pool, reading their data in VLS|MES and using the Analysis function to gain insight into your Overall Equipment Efficiency or OEE.

GENERIEK & MAATWERK

VLS|MES is not a software package that can be installed with just a few clicks. Instead, it is a software solution that consists of both standard and custom-made components. The benefits of the standard components are that they are free of bugs, have already been successfully implemented at other organisations and are more affordable. The custom-made components ensure that your specific wishes and demands are met, and your possibilities are taken into account. ISA95 ensures that the foundation always remains structured.

WOULD YOU LIKE TO KNOW MORE?

Are you interested in learning more about the benefits of an MES implementation for your organisation? Send an email with your contact information to info@visuallink.nl. One of our Visual Link Software engineers will contact you within three working days.



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