



# MANUFACTURING EXECUTION SYSTEM

## Discover Complete Production Management in Real-Time

With over 30 years developing and implementing countless Manufacturing Execution Systems behind it, MV2 delivers continuous results for the shop floor manager. MV2 provides a comprehensive solution to manage every aspect of your production processes.

Visibility  
Starts  
Here



# The Keystone of Shop Floor Control

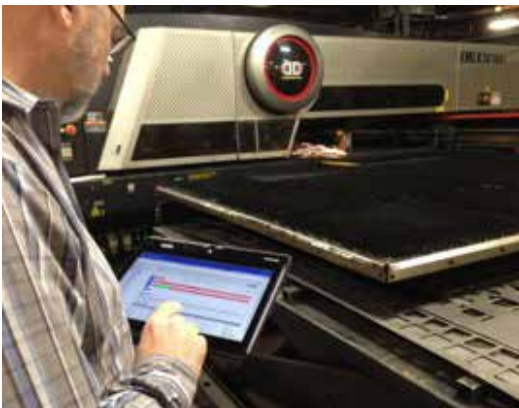
The MV2 manufacturing execution system brings together the disparate systems found on the plant floor. By being the central hub of information, MV2 increases production efficiency by coordinating functions and consolidating information in one system.



## Integration with ERP Systems

MV2 is designed to be compatible with Enterprise Resource Planning systems. The MES takes in order details, worker information, bills of materials, routings, schedules and warehouse & inventory information directly from the ERP system to help managers use the correct information to plan production operations as efficiently as possible.

The MV2 MES automatically returns shop activity information to the ERP system including labor and machine tracking, inventory usage & movements, receipts and production status. This information is critical for accurate costing and estimating, planning and scheduling jobs, purchasing and keep sales up to date on manufacturing performance.



## The First Step in Bringing Industry 4.0 to the Floor

As that central hub, MV2's shop floor data collection capabilities are designed to bring together sensor, human and machine data for a holistic analysis of plant operations.

The MES's inherent interconnection capabilities digitally unites departments with real-time data exchange.

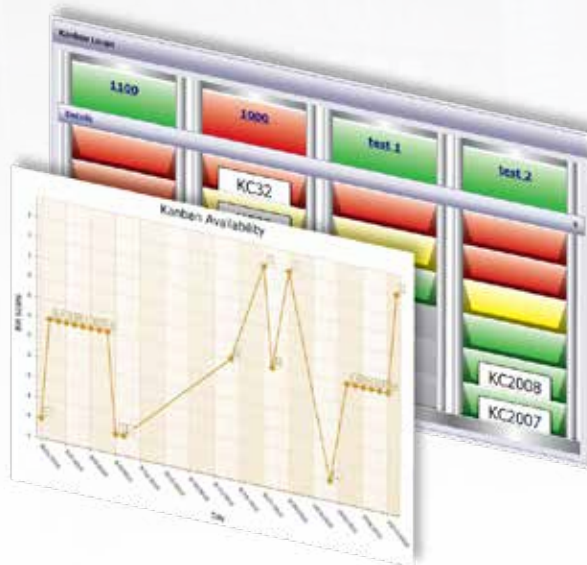
Behind the scenes, MV2 can automate reporting and processes to streamline reporting, scheduling and manufacturing operations management

## Real-time Manufacturing Management

Visually plan production operations with drag and drop capability

See job status as they move through production

Filter orders and operations to easily identify operational performance and identify issues with constantly updating shop floor data



## Electronic Kanban System

Manage entire pull process and analyze historical performance data

Digital Kanban boards updated in real time

Receive notifications immediately when thresholds or events are met

## Dashboards & KPIs

Monitor work center conditions and productivity in real time

See historical changes in production metrics to locate trends or issues as they develop

Dashboards can be viewed on desktop or on production boards throughout the facility





## On Demand Digital Work Instructions

MV2 provides the ability to manage work instructions from a single location to reduce errors and confusion.

Go beyond paper with electronic work instructions, 3D files, process or inspection videos, and other information that's available at the touch of a button.

Work instructions travel with the jobs automatically eliminating paperwork routing and version control



## Rapid Downtime Reporting

Downtime reporting can be done by end users or directly from machines

MV2 can notify key personnel immediately when downtime starts

MV2 retains historical records of downtime events for future analysis

## Integrated Quality Testing

MV2 Quality module is designed to record and manage testing operations across the shop floor, beginning with raw material and purchased components, throughout the production process, through to and including final inspection of finished goods.

The Quality module also has integrated non-conformance process functionality

MV2 can be set to notify personnel when testing metrics exceed thresholds



# Cloud-based for Reliability and Lower Operational Costs

Managing manufacturing operations doesn't have to be an on-site affair. Using the MV2 Manufacturing Execution System, it isn't. More specifically, MV2 is a cloud-based Software as a Service (SaaS) application that provides the benefits cloud-based systems offer. These include scalability that grows with you, software that's always up to date and always on. In short, MV2 takes one more worry out of the server room for IT professionals and executives.

## MV2 doesn't require on-site servers

A firm's MV2 MES instance resides on Microsoft's Azure cloud platform. That means there's no need to manage physical hardware at the plant for the software. It also means IT departments won't have to worry about maintaining uptime with on-site servers or plan for their eventual upgrade, failure and replacement. The hardware is kept up to date and in a highly functional state by Microsoft for as long as the firm uses MV2.

## The MV2 application is managed remotely

Just as the hardware is managed off-site, so is the MV2 software. Our in-house staff takes care of applying bug fixes and updates. This keeps the firm functioning as efficiently as possible. We also make sure the firm has access to all the latest features Paper-Less adds to the software – all without having to engage the firm's IT staff to train on, program or maintain the software.

## MV2 offers high availability

Keeping things running with the least amount of downtime is a key benefit of using the MV2 manufacturing execution system. Just as Azure remote servers offer some of the highest up-time numbers in the industry, Paper-Less brings over 30 years of experience developing manufacturing management systems that firms depend on. These combine to create a rock-solid shop floor management system that firms can trust.

# ERP Compatibility

The construction of the MV2 manufacturing execution system makes it easy to be compatible with a wide range of ERP systems. The MES is built with its own database rather than relying on an ERP system's data storage. This means interconnecting MV2 with the ERP system is simply a matter of mating database calls. It also means migrating to a new ERP system doesn't require changing out the MES.

Currently, MV2 is compatible with ERPs from Epicor, Infor, Microsoft, SAP, Oracle and the list is growing. Contact us today to ask about MV2 and your ERP system.

# Implementation: Trust Paper-Less to Get You Up and Running

Moving to a new Manufacturing Execution System (MES) is more than just installing software – especially if you want to get transformational results out of the system. Our goal is to make sure our customers are provided every opportunity for long-term success with our products. That pledge means going the extra mile to make sure not only is the software configured properly for the firm, but the company is ready to operate and extract the best possible results from the system. Doing it right takes a detailed plan. We've summarized the major aspects of our implementations for prospective customers.

## Doing the Groundwork

Our highly experienced consultants who can assess a firm's operations on-site. They build a plan to make sure the MES aligns as closely as possible to the current production processes. These changes are not just for better MES integration, but the recommendations can help streamline overall manufacturing efficiency.

## Installing the System

The next step is to install the software and interconnect its processes to the production floor. We vet the data to make sure the system is executing properly on the correct data and reporting information back to the firm's ERP system.

## Getting Prepared

Once the system is running as it should, our team moves forward with in-depth training for the firm's employees. We offer several ways this can be done, from training only key people to taking the entire production staff through the step-by-step operation of the system. Included with the training, detailed documentation is created. These materials provide the necessary information on how the system operates for later reference.

## Going Live

When the documentation is complete and a sufficient number of employees are trained how the MES operates, it's time to go live with the manufacturing execution system. This is when the system is transitioned to the customer's control. We are there at this critical time to make sure everything has gone to plan and the MES roll-out is a success.

## Supporting the Long-term

Getting to this point isn't where our assistance ends. We offer continuing service and support for our systems. From regular product service pack releases, feature updates and expansion packs, these help our customers get the most out of their systems for years into the future. Through our XTEND services, we also offer firms the capability to create custom modules that can help our manufacturing execution systems integrate more closely with a customer's specialized processes.

In summary, a good implementation of an MES is not just good software, it's properly integrating that system into a production facility. At Paper-Less, we've been providing not only shop floor management systems but the installation and management of these systems to manufacturers for over 30 years. **That's 30 years of experience you can trust.**



# What customers say about our Manufacturing Execution Systems:

"Paper-Less has allowed us to:  
reduce overhead by \$115,000  
reduced shop paper by over 28,000 pieces  
reduced labor processing by 83%" – *Trail King*

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"... using Paper-Less software, we've achieved:  
Reduced data entry 50%  
Reduced errors 66%  
Job Activity is real-time and accurate" – *Everbrite*

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"...we dramatically improved the accuracy and timeliness of shop data – daily, we collect over 4,500 transactions with only 1 or 2 errors per week."  
"...with Paper-Less, we significantly reduced cycle time enabling customer service to quote ship dates with greater precision."  
"...using Paper-Less, we increased productivity, decreased costs and were able to realize the ROI in 6 months..." – *LDI Industries*

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"Based on our analysis, the first phase of our project created annual savings of \$135,000 in labor and materials alone." –  
*Western States*

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## About Paper-Less

For nearly 40 years, Paper-Less has consistently helped discrete manufacturing companies gain a competitive edge in ever-evolving markets and meet industry and/or customer compliance requirements. We currently serve over 270 manufacturing customers worldwide with over 20,000 client users.

Contact us to learn how Paper-Less can move your operations to the next level of production profitability.



**MANUFACTURING  
EXECUTION SYSTEM**

**Accelerating Discrete Manufacturing  
with Digital Intelligence**

MV2 is the shop floor management system that can help solve manufacturing issues including:

- **Improving on-time delivery**
- **Decreasing scrap production**
- **Increasing material throughput**
- **Reducing downtime and other forms of waste**

Contact us today to learn more about how our MV2 Manufacturing Execution System can provide your facility with these benefits.

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