



**CELLFUSION**  
Lean Enterprise Solutions

www.cellfusion.com

VALUE STREAM TECHNOLOGY™

## Medical Equipment Manufacturing

*Enabling Total Quality & Zero Tolerance in Quality-Focused Manufacturing Environments*

INNOVATIVE

### Zero Defect Strategies— enabling Total Quality

Besides the AeroSpace industry no other industry must focus on **Total Quality** and **Zero Defect** like the **Medical Equipment** industry. Any failure, negligence, error, or quality issue could result in serious, even life-threatening consequences.

Complex manufacturing processes in the Medical Equipment Manufacturing industry require a **maximum in accuracy and quality control**. Any issue is to be detected, analyzed, and corrected systematically and immediately during the manufacturing process.

A significant step towards **Total Accuracy** and **Zero Tolerance** are visual assembly and quality instructions. Each assembly and quality assurance process and action is controlled visually; process images explain what to do.

For a long time these visual instructions were provided to the assembly areas using traditional tools, such as CAD drawings. The instructions were printed and manually distributed. Some companies have developed applications or used MS Word® or MS PowerPoint® to electronically display photos and drawings on the shop floor. However, this process has limitations and requires high efforts in preparation, management and handling in operations. Even more importantly this method provides only visual instructions, not capturing any manufacturing and actual product information for traceability, operations alerts or strategic improvements.

CellFusion's **Visual Manufacturing Operations™** is the ideal application suite to not only develop these visual instructions, but **control the entire manufacturing process** for each product, each process, and **enable traceability** for all related actions. Value Stream Technology ensures **accuracy** and **Zero Defect** in assembly operations, every second of the work.

REAL-TIME  
FPY



FULL TRACEABILITY



## Visual & Interactive Applications in Paperless Operations

Visual instructions are quickly developed in CellFusion's integrated application suite **Lean Manufacturing Engineering**, leveraging 'drag & drop' technology, electronic distribution and controlled Engineering Change Management.

Products to be manufactured at any workstation are displayed with **Visual Factory**, sequenced and color-coded. A simple 'point & click' selects the product information and configuration according to customer specifications in ERP, and displays visual assembly and quality instructions, step by step. The focus certainly is the **visual process information**; however, all required additional information is made available; from components, tools and equipment to visual performance information.

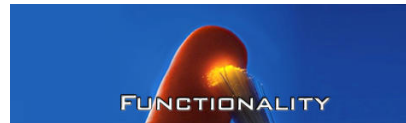
All visual instructions are **fully interactive** with drawing, pictures, photo combinations and even streaming video. Interactive applications allow **simple 'point & click'** reporting of any quality issues, metrics or any workstation issues occurring. **Instant information flow** enables all related operations to monitor any issue in **Early Warning Portals**, to react immediately, resolving issues before they cause any impact. In the background, all information about product and process, even actual cycle times and data automatically detected is captured and made available for **traceability and improvement**. The **Traceability Portal** answers what you want to know! 'what?', 'when?', 'where?', 'why?', 'who?', and 'how?' - no problem...! All information is available at your fingertips; during and after manufacturing, even in after-sales and off-site maintenance.

Furthermore, order location, product status, manufacturing status, even **e-Performance Andon Boards** and **e-Supply Kanban Boards** and their corresponding workflow are integrated in **Visual Manufacturing Operations**.

- Standard **Lean Manufacturing** business applications **tailored to the needs** and requirements of the **Medical Equipment Manufacturing** industry
- Visual assembly and quality instructions **created within a fraction of the time** it takes today
- **Electronic distribution** to operations w/ integration in Engineering and Process Change Management
- Visual instructions **guide assembly teams** through all assembly & quality processes, step by step and on-line
- **Increasing assembly accuracy** significantly, turning the shop floor into **Zero Defect** operations
- **Bridging** language & understanding barriers, **accelerating** engineering change processes and new hire training
- **Increasing assembly speed & improving quality**, First Passed Yield (FPY) & productivity
- Visual TQC & Visual Change Control **ensure Total Quality** and feedback
- eSupply Kanban & eAndon Boards **ensure on-time** supply & performance
- End-to-end product & process **traceability at your fingertips**
- **Strategic improvement** with comprehensive actual manufacturing & product cycle information
- **Reducing operational costs & efforts**

### ➤ Visual assembly & quality process guidance

- Fast development & electronic distribution of visual instructions & manufacturing information
- Visual assembly & visual quality assurance
- Visual packaging, change over and set up
- Visual engineering change and process guidance



### ➤ Multi-media interactive process viewer capabilities

- Process drawings/ pictograms/ libraries
- Picture & photo/ drawing combinations
- Streaming video and document links

### ➤ Simple and fast 'point & click' reporting of any product information

- Metrics/ measurements/ checklists
- Quality control results
- Material serial numbers & lot numbers
- Automatic tracking of workstations & personnel, manufacturing times & actual cycle times
- Visual eKanban signals and eKanban boards
- Functions enabling paperless operations

### ➤ Simple and fast 'point & click' reporting of any issues during assembly processes

- Quality issues/ Visual TQC
- Equipment issues & downtimes
- Supply issues & material shortages
- Change over processes
- Real-time information flow to Early Warning Portals

### ➤ Real-time information flow to Early Warning and Manufacturing Information Portals

- Product location and manufacturing information
- Pro-active Issue Monitoring

### ➤ End-to-end product, process and manufacturing environment traceability



For more information

www.cellfusion.com  
lean@cellfusion.com

North America

USA/ Canada: +1.650.347.4000  
Mexico/Latin America: +52.222.225.5100

Europe

United Kingdom: +44.20.7193.7060  
Germany: +49.40.3203.1460