

One crucial area that every plant can improve on is **EFFICIENCY**, and one of the best measures of efficiency is **OEE (Overall Equipment Efficiency)**

**OEE is calculated by multiplying each of these factors:**

**AVAILABILITY x PERFORMANCE x QUALITY**

If you don't know your OEE, then you don't truly know how efficient you are, but more importantly: **YOU DON'T KNOW HOW EFFICIENT YOU COULD BE!**

**FIVE QUESTIONS YOU MUST ANSWER TO REDUCE DOWNTIME AND INCREASE OEE**

**1. DO YOU KNOW HOW MUCH DOWNTIME IS OCCURRING THAT IT'SN'T BEING REPORTED?**

This seems like a trick question. Of course, if you knew what downtime wasn't being reported then it wouldn't be unknown anymore, and that's the point:

**IF YOU ARE UNAWARE OF A DOWNTIME ISSUE, YOU WON'T KNOW HOW MUCH IT'S COSTING YOU.**

**2. HOW ARE YOU CURRENTLY TRACKING YOUR OEE AND DOWNTIME?**

If your answer to this question is that you aren't tracking OEE or downtime at all, then chances are you are losing money every day. The question is not whether or not you have downtime occurring – every plant does – the question is how much do you have, and how can you decrease it and improve OEE?

**3. HOW ARE YOU CURRENTLY ANALYZING YOUR DOWNTIME DATA?**

No matter how much production and downtime information you collect, data without analysis is essentially useless. It's the story behind the numbers that you are looking for, and the only real way to find it is through the power of comparison.

**COMPARING MACHINES · COMPARING PEOPLE · COMPARING MATERIALS:**

**Effective Analysis is Dependent on Visual Presentation**

**4. HOW ARE YOU CURRENTLY CONDUCTING YOUR OPERATIONS REVIEW?**

Most companies review history: previous day or previous shift

**RESULTS ARE HISTORY: NO RELEVANT ACTION CAN CAUSE POSITIVE IMPACT**

**5. HOW CONFIDENT ARE YOU WHEN MAKING DECISIONS ABOUT INCREASING EFFICIENCY?**

When making the decision on which issues to focus your resources on, you'll want to be confident in your choice. If you lack confidence in your decision, then you are most likely missing one of three things:

**TOOLS FOR SUCCESS:**

- 1. INFORMATION**
- 2. PRIORITIES**
- 3. PLAN OF ACTION**

With a solid plan of action, set by your priorities and backed up with solid information, you can feel confident in your decisions to reduce downtime and increase OEE.

### HAYLARD – MANUFACTURING OF MEDICAL PRODUCTS (Magdalena, México)

**SCOPE:** IMPLEMENTATION OF AN AUTOMATIC REAL TIME OEE PLATFORM FOR: DATA COLLECTION, REAL TIME INFORMATION DISPLAY, HISTORICS ANALYSIS, AUTOMATIC ALERTS & ALARMS FOR OUT-OF-RANGE PARAMETERS FOR 20 AUTOMATIC PRODUCTION CELLS AND LINES.

**GLOBAL CONTEXT:** Every company's goal is to achieve more with less resources. In today's highly competitive environment the **SYNCHRO-nization** of efforts is critical for achieving success and the data coming from the processes and equipment is essential to make this a reality.

World Class enterprises have identified that the global competitive environment has changed and that competing on mere cost is no longer enough. Their cost reduction initiatives have therefore evolved to Cost AND Time Reduction!

Time-based competition empowers the enterprise with unprecedented levels of dynamism needed to face today's competitive environment.

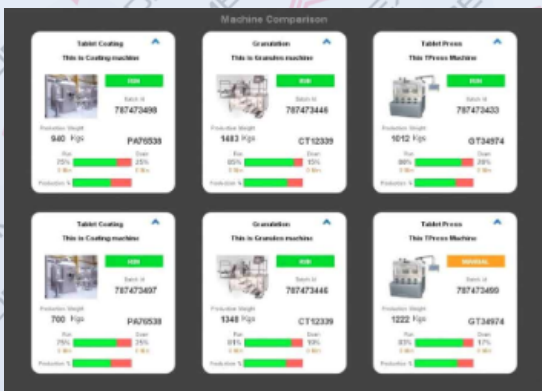
**OVERVIEW:** EMBEDDEX provides the real time OEE platform SYNCHRO which provides pertinent and timely data that is critical for good decision making across all levels of the organization which is needed to drive the company's day to day results to the best position possible.

SYNCHRO provides a perfect continuous improvement tool by ensuring that everyone in your organization knows 'the score in the game' and is empowered to identify areas of opportunity which **will help the team create a culture of continuous improvement** and an environment that will ultimately **increase your performance and customer service and reduce your costs**.

### Making every second count!

We provide a totally customizable and scalable Real Time Visibility IT Platform which interconnects your floor equipment and machinery with your databases and ERP.

### Real Time OPERATIONAL EXCELLENCE!

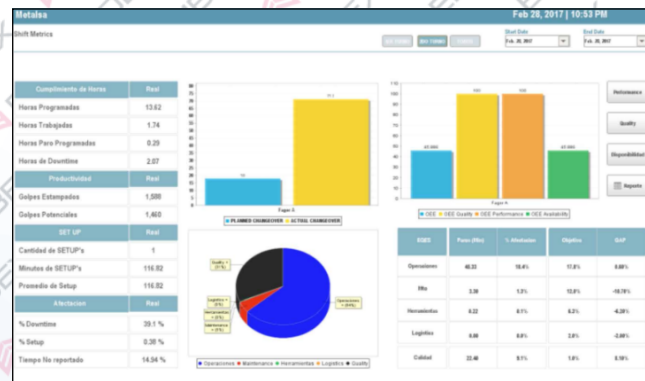
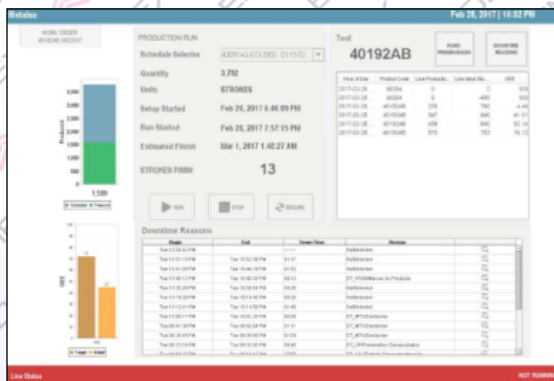


**SYNCHRO:** Real time and historic dashboards

The system can be accessed from **any computer** connected to the network to visualize real time metrics, access and store historic metrics generate and print pdf reports, send alerts and alarms in case of unexpected events among many other features.

**SYNCHRO** provides important metrics and information to all the enterprise levels giving a sense of ownership of the equipment and the production to the different levels of the organization:

- Operators
- Supervisors
- Technicians
- Managers



**SYNCHRO: Real time metrics**

### REAL TIME OPERATIONAL EXCELLENCE!

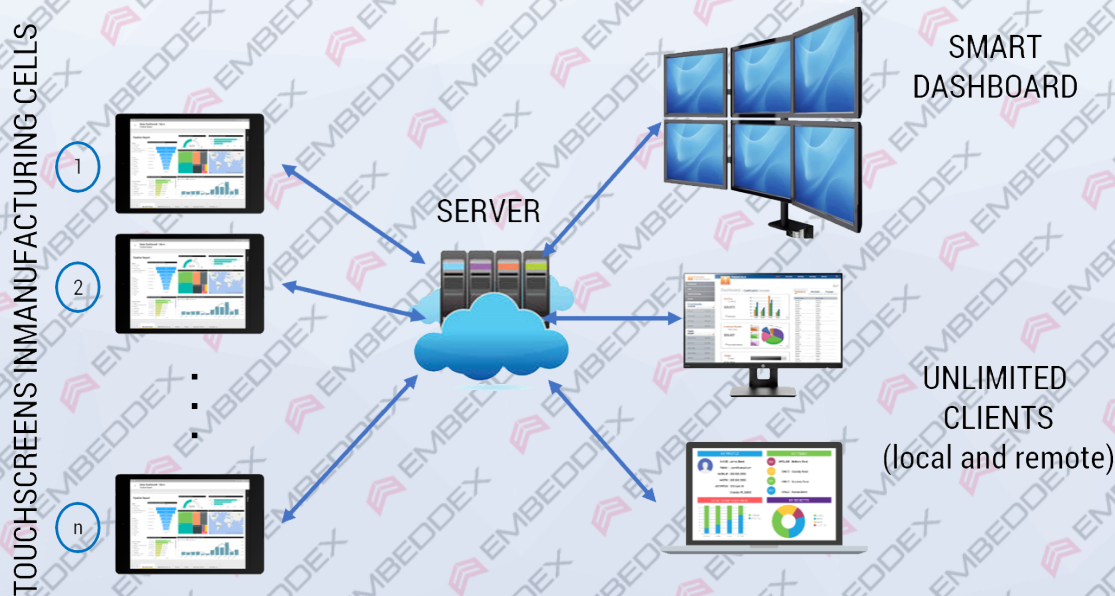
Real information in Real Time!

- Greater accuracy
- Automatic tracking of Production counts
- Automatic tracking of downtime events
- Automatic OEE tracking!
- Automatic Alerting!
- Automatic pdf Reporting!
- Orders scheduling and progress tracking
- Historical Storage
- Provides relevant actionable data to the people who can make a change
- Reduced labor by operators and data entry staff
- Accessible from anywhere in your network - mobile devices also possible!

- Creates a sense of ownership throughout the enterprise:
  - Operators
  - Supervisors
  - Managers
  - Directors
- Standard visual, interactive and intuitive scorecards and dashboards
- Creates a perfect tool for measuring your continuous improvement initiatives

**BENEFITS AND COMPETITIVE ADVANTAGE:**

- Real time data gives an opportunity to act and change the course of action when there is still time to act.
- Access to Real Time information is always possible from any computer on the network.
- Alarms and alerts are generated and sent automatically in case of not programmed events.
- A constant and visible measurement of the cells status is always possible directly and the cells in an intuitive manner (color code), which will give the operators and supervisors a proper visibility of their performance in real time.
- Automatically captured information for future reference which will facilitate the analysis and generation of business strategies.
- Automatically generated operations reports.
- Reduction of headcount directly associated with the collection of information.
- All processes and systems tend to improve by the simple fact of being measured.



**SYNCHRO: System Architecture**