

CONNECT

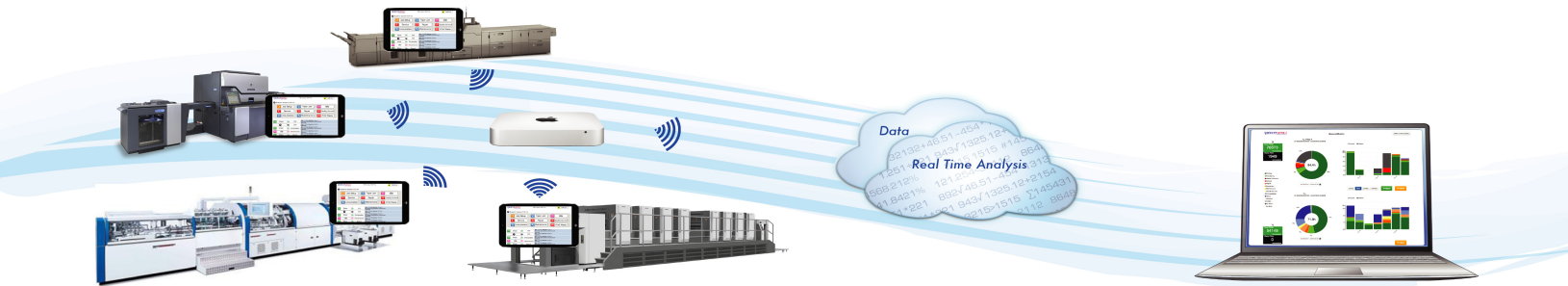
Automatic Production Analytics
for productivity & cost reduction

Data and Metrics for
Operational Excellence



Automatically capture and analyze production metrics with **CONNECT**[®]

Capture Multi-Vendor Equipment & Shopfloor Data – Breakthrough Ease, Accuracy
Reduce Downtime Costs & Maximize Productivity with Actionable Information



Production Analytics

Automatically collecting and analyzing machine data and reason codes, CONNECT provides real-time actionable information with root-cause analytics – enabling production management to improve productivity and reduce cost.

AUTOMATER[™] module makes data collection on analog Legacy equipment just as simple. Any machine is seamlessly integrated into the CONNECT software.

Assure Downtime isn't Wasted Time

Know when and why your equipment is not running, not generating revenue. Identify downtime activities that steal valuable time. Gain insight into shop floor activities – with real metrics.

Is time being wasted? Is money being lost?

Improve On-time Delivery

Gain insight into details of your workflow. Find bottlenecks and identify obstacles that may impact schedule. Understand where additional training may enhance your workforce.

Shorten cycle times. Optimize scheduling.

Replace Feelings with Knowledge

Take emotion out. Get real data; Make effective decisions.

Improve Job Estimating

Compare actual production cost with job cost estimates – increase accuracy. Improve your bottom line.

Connect to MIS/ERP with available API.

Optimize Equipment Assets

Look across your production facilities to understand under- and overloaded assets. Confirm preventative maintenance schedules and consumable replacement procedures. Gain insight into repair and service activities. Maximize ROI and increase saleable output.

Reduce Total Operating Costs

CONNECT provides in-depth comparisons among operators, shifts, equipment types, and sites – clearly highlighting cost-saving opportunities. Reduce overtime and unnecessary waste, eliminate a shift, and save on CapX.

Continuous Improvement – OEE

Clear graphics bring Operational Equipment Effectiveness to life with real time analytics.

Compare quality, workflow, waste, utilization, and more with productivity metrics. Support Lean, Six Sigma initiatives, and monitor Continuous Improvement strategies.

– Reduce

- Cost
- Waste
- Downtime

+ Increase

- Productivity
- Utilization
- ROI

📈 Improve

- OEE
- Efficiency
- Quality

Multi-Vendor Support

Integrate digital and conventional presses, pressroom, mail room, and other finishing/binding equipment with comprehensive analytics.

Installation and Setup in Days

Start collecting data with powerful analytics within days. CONNECT is easy to install and use across multiple equipment brands and sites.

Designed with IT/Security in Mind

CONNECT can deploy in financial, health-care, and other secure environments.

Productivity Optimization

Easily Manage People, Process, and Equipment



SaaS

CONNECT is cloud-based with an on-site Virtual Server. It is offered as a subscription per machine, with a low one-time setup fee that includes installation, training, hardware, updates, etc. A one-time purchase option with low monthly maintenance is available.

NO HIDDEN COSTS.



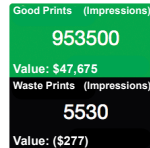
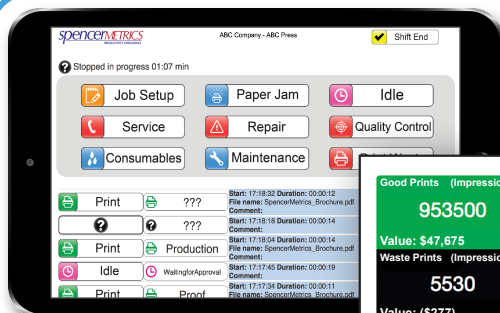
Ease-of-Use

CONNECT's fast deployment gets the system up and running within days. Automatic machine data collection combined with breakthrough operator usability makes data collection a breeze. Accessible from any browser, the Management Portal provides reports on demand and/or periodically with full graphics and real-time analyses.

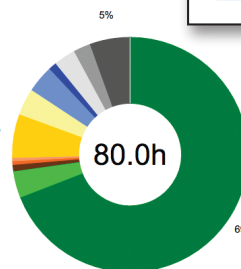
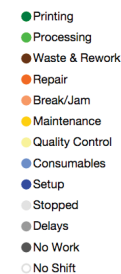


Simple, yet Powerful

Intuitive and graphical analytics dashboard gives management powerful insights with actionable information facilitating root cause identification of productivity bottlenecks. Comparisons, drill-downs, operator logs, and job cost analysis features enable users to maximize their utilization and ROI.



spencerMETRICS
PRODUCTIVITY INTELLIGENCE



Select Date Range: 02/01/2016 - 02/29/2016 ☐ Show subevents Timeline Export to CSV

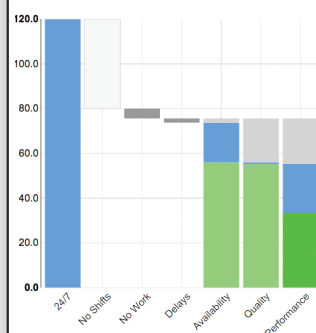
Job Name: file1.PDF

| Start Time | End Time | Duration | Avg Speed |
|---------------------|---------------------|----------|-------------|
| 2016-02-01 08:04:56 | 2016-02-01 19:45:19 | 11:24:28 | 163.27 |
| Chargeable | | Duration | Impressions |
| Printing | | 08:48:25 | 89934 |
| Processing | | 00:22:24 | 0 |
| Unchargeable | | Duration | Impressions |
| Print Waste | | 00:02:02 | 388 |
| Setup | | 00:03:20 | 0 |
| Delays | | 00:03:21 | 2 |
| Break/Jam | | 01:04:47 | 0 |
| Consumables | | 00:46:32 | 444 |
| Quality Control | | 00:13:33 | 366 |

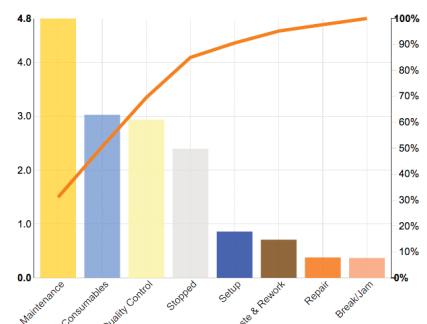
AUTOMATIC DATA COLLECTION
Enhanced with Operator Knowledge

REAL-TIME ANALYTICS
Actionable Information

JOB COST ANALYSIS
Improve Cost Accuracy

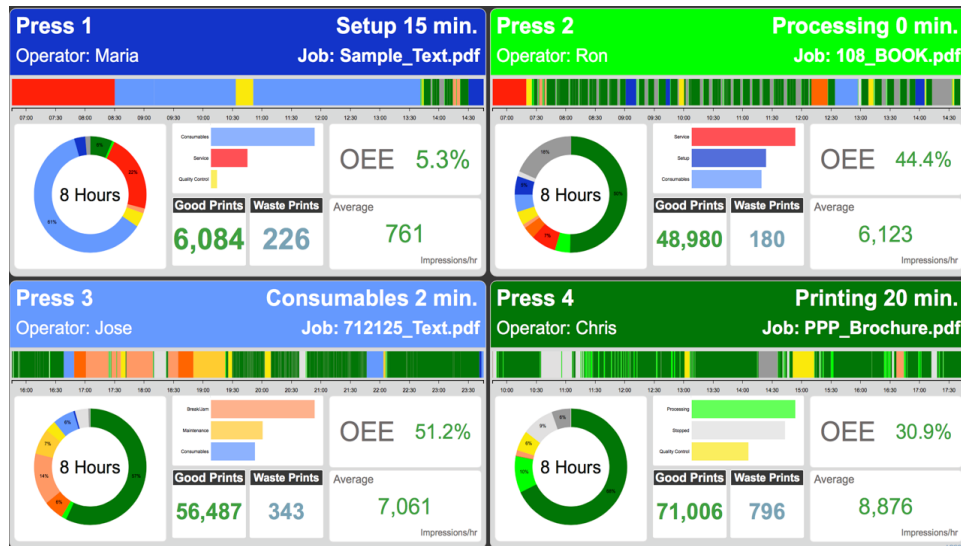


| | |
|-------------------------|-------|
| Productivity | 75.0% |
| OEE (Top) | 73.1% |
| Utilization | 69.1% |
| Availability | 74.1% |
| Quality | 98.7% |
| Performance | 60.4% |
| OEE | 44.1% |
| OEE Solitaire | 45.3% |
| NetUtilization(TEEP) | 27.8% |
| OperationsEffectiveness | 42.2% |
| AssetUtilization | 46.7% |
| CapacityUtilization | 63.0% |



Real-time Multi-vendor

Track and Display all your production equipment and shopfloor/KPI status
Motivate operators, inform management remotely, send programmed alerts



Maximize Your ROI

Reduce Cost, increase Efficiency and Profitability
Get the Productivity that your equipment is designed to deliver

>10000%

SpencerMetrics CONNECT
can deliver over 10 times
Return on Investment!
Ask to see your ROI opportunity

Increased Annual Revenue Opportunity

\$138,000

for each 1% improvement
of a 150 ppm press operating
2 shifts, 5½ days/week at 35¢/print

5% to 30%

SpencerMetrics CONNECT users
have achieved 5-30%
productivity improvements
– Ask us about case studies! –

These illustrative examples are not guaranteed; your results may vary significantly depending on various factors.

“...SpencerMetrics data-based analyses to enhance digital printing operations, supporting our continuous improvement efforts. We particularly appreciate its scalability, depth of analysis and ease-of-use.”

Mike Stark, Director of Continuous Improvement, Quad/Graphics

About SpencerMetrics

SPENCERMETRICS LLC is part of the Spencer Associates Group, which has provided a boutique digital imaging and printing consultancy since 1989. The group bridges the boundary between technology and usability, working with organizations for which printing is mission-critical – optimizing digital printing workflow, color quality, performance and productivity.

For more information, please visit www.spencermetrics.com

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Spencer Associates Group: Service with Integrity since 1989