

OPERATIONAL EFFICIENCY AND

QUALITY IN INDUSTRIAL APPLICATION

OVERALL LANDSCAPE

High demand in production is forcing automation players to deliver maximum uptime, all the time while maintaining a high level of quality.

HOW TO TACKLE OPERATIONAL ISSUES

TO MAXIMIZE EFFICIENCIES AND COMPETITIVENESS

Inefficient processes and wasteful operations put a drain on the bottom line

- WORKAROUNDS
- ▲ RFWORK
- ▲ INEFFICIENT CHANGEOVER **PROCEDURES**

Some experts put "hidden factory" losses at as much as 40% of total company effort

"EXTREMELY/SOMEWHATSERIOUS"

% OF RESPONDENTS RATING AREAS AS



SOURCE: SCM WORLD SURVEY, JUNE 2015

BENEFITS OF OPTIMUM OPERATIONAL EFFICIENCIES



DATA AGGREGATION & ANALYSIS **ENABLES**:

Smart capital expense optimization

right amount – replacing "do more with less" mentality

Doing the right things with the

CUSTOMER JOURNEY INTELLIGENT PROCESS

AUTOMATION, ROBOTICS AND

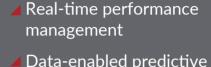
END-TO-END DIGITIZATION OF PROCESSES ENABLES:

Values-driven changes to be made more quickly, easily & sustainably



BUDGETING (ZBB)





MANUFACTURING

YIELD, ENERGY & THROUGHPUT

Data-enabled predictive

ANALYTICS ENABLES:

maintenance





machine learning

PRODUCT

DATA SOURCES WITH NEW **TECHNOLOGIES ENABLES:** Complexity management Design-based optimization R&D productivity through

CONNECT NEW AND EXISTING

ADAPTED FROM: MCKINSEY & COMPANY

BEST PRACTICES

WITH KEY PERFORMANCE INDICATORS

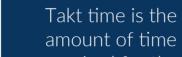
CONNECT OPERATORS TO ORGANIZATIONAL GOALS

that monitor and reward operator behaviors aligned with lean goals are more successful, sooner.

Experts agree that changing from a reactive to proactive culture is challenging, but achievable. Operations

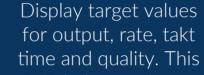


COUNT & REJECT RATIO



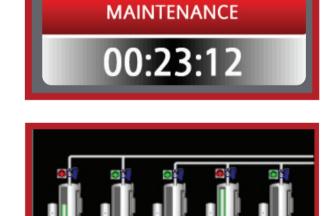
TAKT TIME

required for the completion of a task or the cycle time of a specific operation.



TARGET

KPI helps motivate employees to meet specific performance targets.



LINE DOWN!





Whether the result

of a breakdown or

simply a changeover,



by performance and quality to determine utilization. The higher

OEE

the number, the more efficient the operation.

OEE is a metric that multiplies availability

LOWER THE TOTAL COST OF **DEPLOYMENT AND OWNERSHIP**

Red Lion Crimson 3.x-enabled products can collect data from virtually any source Simultaneous protocol conversion simplifies networks by passing data to almost any device without external

Gain insight into what equipment is doing anytime,

time with point-and-click simplicity

protocol converters

anywhere, any way while also reducing development



JOB



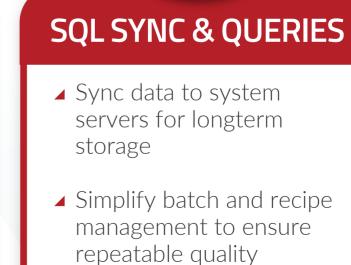
- ▲ Monitor productivity from anywhere
- Display trends in real time



deliver to upstream systems for reporting

▲ Address regulatory requirements ▲ Enhance troubleshooting

and improve uptime



IMPROVE PERFORMANCE & DRIVE PRODUCTIVITY



