2023 Productivity Benchmark Report
Fifth Biennial Edition

Productivity Results from 1,000 Manufacturers
90 Days After Adopting the QAD Redzone Connected Workforce Solution

Contents

01 EXECUTIVE INTRODUCTION

When we launched the QAD Redzone Connected Workforce Solution in 2013, we had the then-radical idea that by connecting and engaging frontline teams they could significantly drive factory productivity in as few as 90 days. We developed this report a year later to test our theories and provide quantitative feedback to the QAD Redzone Community. This fifth biennial QAD Redzone Productivity Benchmark Report includes performance data from 1,000 factories that have been measured across ten years of production history.

QAD Redzone helps manufacturers create a winning culture of continuous improvement (CI) by pairing Lean production techniques with a mobile app frontline teams use for collaboration, real-time performance monitoring, compliance, reliability, learning, and more. In addition, factories deploying the solution are coached by industry experts to ensure successful adoption of the platform and new standard work. Further, when teams win together, their accomplishments are celebrated in different ways, from virtual *high fives* and *good catches* on the QAD Redzone app to public acknowledgment on large-screen overhead TV displays and Town Halls.

The majority of our focus is on boosting productivity, quality, yield, and equipment reliability, while also enabling a sustainable CI culture. Companies also use QAD Redzone to achieve environmental sustainability gains, such as reducing product waste and utility usage.

1.1 How We Benchmark Factories That Use QAD Redzone

The report shows how large and small manufacturing teams around the world achieve significant productivity increases in just 90 days, creating excitement and momentum for building world-class CI cultures.

Report Scope and Summary of Results

1,000
factories globally*

458K
frontline workers

21.8M+
production runs

14 points
Average overall equipment effectiveness (OEE) uplifts

29%
Average productivity gain

$728K-$1.4M
Average annual labor savings**

*All factories are assessed within 90 days of implementing the solution and periodically thereafter.
**Varies based on baseline OEE and level of CI maturity.

This report provides results from all 1,000 factories around the world that adopted QAD Redzone through 2022 and completed our 90-day program. This standardized process, along with automated data gathering, provides consistent results we are able to benchmark. All participants follow the same 90-day coaching program to accomplish five measurable Lean journey goals:

1. Create a visual factory, which includes overall equipment effectiveness (OEE) measurements that are visible to all workers, factory-wide, and in real-time.
2. Coach operators and supervisors to adopt Lean production techniques and collaborative problem-solving skills.
3. Improve OEE by at least eight points by the end of day 90.
4. Achieve cost savings of $500K+ for smaller factories and $1M+ for larger factories, as verified by their finance functions.
5. Sustain all gains made in the first 90 days and improve on them in the months and years to come.

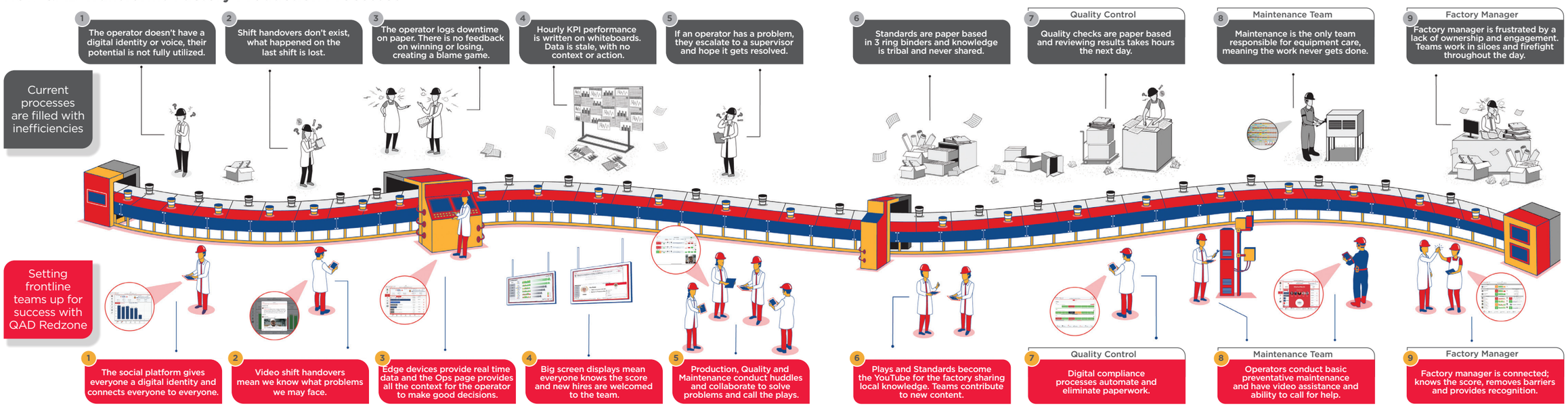
1.2 The Objective of Continuous Improvement

We know manufacturers are deeply committed to CI and are eager to increase value by optimizing processes. Collectively, manufacturers spend billions of dollars on technology, consulting, and training to streamline production and supply chain processes. Factories also use Six Sigma initiatives to reduce product variations, Total Quality Management to improve processes, Lean manufacturing to enable just-in-time production that reduces waste, 5S to organize and clean workspaces, and Kaizen to enable problem solving and incremental improvements. With the advent of next-generation digital solutions like QAD Redzone, managers and teams are now able to visualize tasks, workflows, and metrics making it easier to review progress and overcome obstacles before they harm production.

Companies that are best-in-class at quality production and CI include Amazon, Apple, Nestlé, Procter & Gamble, Toyota, and others. They have strong brand reputations for quality and consistency, are considered best-in-class in their industry, and have higher share prices than their peers.

Working in a lean, nimble manner has become even more important due to recent events. Manufacturers have been buffeted by multiple challenges, including supply chain and energy shortages; rising costs for raw materials, talent, and logistics; and workforce illness and attrition. As a result, just-in-time processes have faltered, and teams have had to problem-solve on the fly to keep production lines humming.

How QAD Transforms Factory Production Processes



1.3 Understanding Programs' High Failure Rates

Manufacturers spend time, effort, and money seeking to improve processes to reduce their cost structure, sell more goods, and increase their market competitiveness. ASQ estimates unnecessary costs due to quality issues can cost companies up to 25% of annual sales.[1] CI programs can unlock significant savings and new revenue, from driving equipment uptime and production throughput, to improving product quality and reducing returns. These cost savings can then be funneled into new Capex and Opex initiatives.

Unfortunately, despite high expectations and significant investments, between 70% and 95% of all digital transformation initiatives fail.[2] Companies often notch initial gains, only to see programs fail months later. The reasons vary: The technology is clunky. Consultants depart, taking knowledge with them. Goals may be unrealistic and poorly supported by processes. Workers feel programs are pushed on them, and they have no choice or voice in how they are implemented. As a result, they may resist long-term change. Business stakeholders lose interest, so results slip over time. They then redirect CI funding to other corporate priorities.

1.4 Why Teams Using QAD Redzone Avoid These Failure Rates

QAD Redzone sets up teams and companies for success by using process, technology, and other techniques to empower frontline workers to manage change and overcome obstacles to CI. QAD Redzone is a next-generation platform that uses mobile, social collaboration technology; automated data capture; IIoT devices; coaching; and team motivational techniques to unlock the creativity and drive of the frontline workforce.

Aligning and sharing goals: QAD Redzone provides an easy way to share corporate, department, and individual goals with workers and measure alignment and level of participation. Data, resources, and messages are stored on the platform, enabling workers to consult them frequently.

Addressing frontline workers motivations: QAD Redzone enables workers to easily review role-specific information, such as tasks, targets, current and future skills, to master new processes, gain manager feedback, and receive recognition for professional development. Celebration has often been the missing piece in CI programs. QAD Redzone hosts annual community awards and encourages customers to recognize team and individual efforts on an ongoing basis.

Providing seamless processes: The QAD Redzone Connected Workforce Solution provides embedded methodologies, like Lean manufacturing; tools to do daily work across functions; data; analytics for reporting; and forums to share best practices.

Equipping workers with ever-present technology: Frontline workers use the QAD Redzone app on their smartphones. It is easy for workers to access the data and experts they need to do their jobs and adopt new processes as well as suggest improvements. As just one example, with QAD Redzone, frontline workers take over some daily equipment maintenance tasks. As they use and maintain equipment, they share insights into maintenance needs, enabling technicians to proactively address issues and reduce equipment downtime.

Providing digital, just-in-time training: Digital technology ends reliance on hard-to-apply classroom training and brings learning into the real world. QAD Redzone provides an exceptional onboarding experience, with welcome videos, learning packs, and knowledge certifications.

All workers can review standards and *plays* on phones and tablets, rather than searching three-ring binders for information. Workers are encouraged to create their own video *plays* and share their knowledge with others. Training and mentorship is always available on-demand.

QAD Redzone aligns all employees – leadership, management, and frontline workers – to achieve CI goals and equips them with the tools and knowledge they need to achieve.

Enterprises benefit by reaping annualized savings of $1M or more per location in 90 days that they can return to the bottom line, while gaining a platform and processes that easily scale across networks of sites.

QAD Redzone also puts CI programs in reach for small and mid-size manufacturers that previously may not have been able to afford the time and expense of operational studies, consultants, training, and more. These companies can notch upfront gains and $500K+ savings in 90 days to fund yet more improvements.

1.5 Use This Data to Plan Your Own CI Program

Workers have often been blamed for the failure of CI programs. Yet QAD Redzone's experience is frontline teams are the key to unlocking and driving new business value. With the right tools, workers can not only handle change, but also will initiate it, driving their factory's performance to new heights.

As you read this report, you will review the results of 1,000 factories and countless teams who are working with purpose and *winning the day*. You will learn how they are using QAD Redzone to achieve a 100% success record of productivity in just 90 days and creating worker enthusiasm and motivation to sustain change for the long-term.

Imagine what your factory and workforce could accomplish with QAD Redzone. Imagine an operational reality where you are able to achieve greater machine uptime and productivity, resulting in improved product quality and throughput. We hope that you will be inspired by your peers' success with QAD Redzone and use these findings to advocate for change at your factory today. Let's get started.

Ken Fisher

SVP Product & Solutions, QAD Redzone

[1] 'Cost Of Quality: Finance For Continuous Improvement,' ASQ, webpage, undated, https://asq.org/training/cost-of-quality---finance-for-continuous-improvement-qpc
[2] Dr. Corrie Block, PhD, DBA, '12 Reasons Your Digital Transformation Will Fail,' Forbes, March 16, 2022, https://www.forbes.com/sitesforbescoachescouncil/2022/03/16/12-reasons-your-digital-transformation-will-fail/?sh=729e1c201f1e

02 STUDY BACKGROUND

2.1 QAD Redzone History and Growth

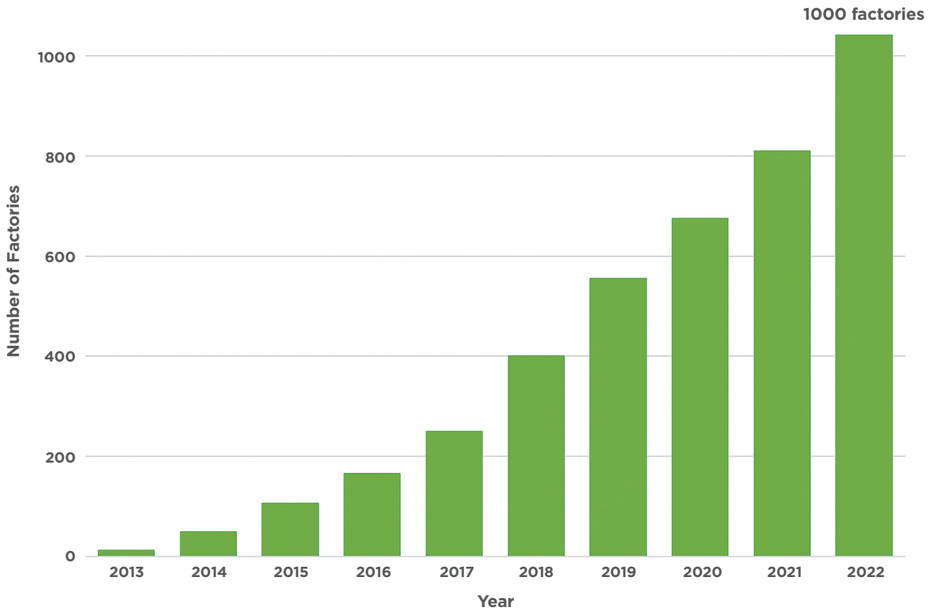
We began benchmarking manufacturing factories in 2014, a year after launching the QAD Redzone Connected Workforce Solution. This biennial survey report provides a wealth of insight into the performance of enterprise to medium-sized manufacturers and what frontline teams can achieve together when they adopt QAD Redzone.

10X growth: In factories benchmarked from 2014 to 2022, from 100 to 1,000 factories

Every factory benchmarked in this report actively uses the QAD Redzone solution and has completed our standardized onboarding program, which includes creating a visual factory, working with coaches, improving OEE, and more.

Fig 1: **Number of Factories Running QAD Redzone by Year**

There are more than 1,000 factories in the QAD Redzone Community, the first 1,000 are covered in this report.



2.2 The QAD Redzone Community

We refer to QAD Redzone customers as community members. That is because frontline teams and managers use our platform to share ideas, best practices, and lessons learned with each other. We will use this terminology for the remainder of the report.

The following charts provide insights into community member demographics by process type, market segment, and revenue.

QAD Redzone Community members include 1,000 factories using highly automated processes (19%) and semi-automated processes (17%), as well as those who rely on unit assembly lines (10%) and manual assembly (18%). Industries represented include food and beverage (41%), consumer products (25%), life sciences (13%), durable goods (12%), and technology (9%). Further, community members span the gamut from large enterprises making at least $1 billion (34%) down to smaller manufacturers making under $100M (26%). These metrics show the versatility of the QAD Redzone solution, which can be deployed and scaled across process types, industries, sites, and geographies.

Fig 2: **Factories by Process Type**

The 1,000 factories using QAD Redzone represent the following process types:

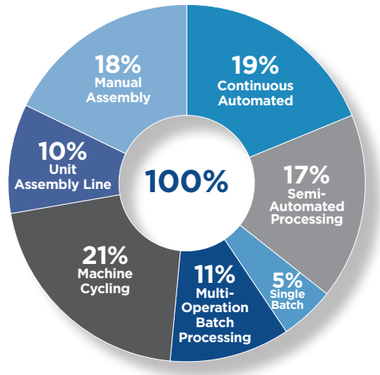


Fig 3: **Factories by Industry**

The 1,000 factories using QAD Redzone represent the following industries:

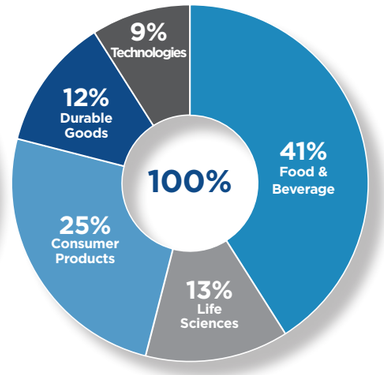
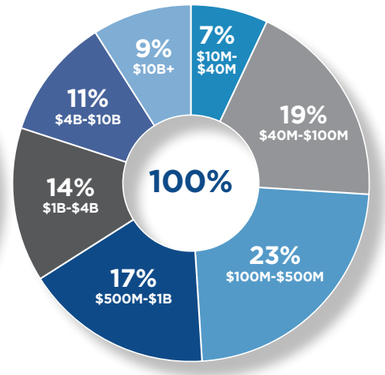


Fig 4: **Factory Revenue Metrics**

A majority (51%) of the 1,000 factories using QAD Redzone drive revenue increases in excess of $500M.



2.3 Scope of This Study

This study is completed every two years to provide an industry benchmark current and prospective customers, analysts, the media, and others may use to evaluate the impact of adopting QAD Redzone. As a cloud platform, QAD Redzone collects data directly from production lines and combines it with contextual input from frontline teams. As a result, the data is highly accurate and can be relied upon for developing business cases and other metrics-based documents.

As the chart below demonstrates, QAD Redzone uses multiple methodologies and tools to improve OEE and productivity. These systems continue to improve as QAD Redzone rolls out enhancements to its Connected Workforce Solution, and they are adopted by frontline teams. Community members thus sustain gains more easily, as improvements in one workstream helps drive forward improvements in others.

Cohort	Year	Description of Enhancements	# of Factories	Avg Points of OEE Uplift	Avg Improvement in Productivity
1	2013-2014	OEE visibility and social communications	50	6.6pts	11.8%
2	2015-2016	*Win the Day* routines and standard work	150	7.1pts	12.13%
3	2017-2018	Daily *vital signs*, problem solving and deliberate practice	200	7.8pts	14.5%
4	2019-2022	Re-tooled coaching and technology for frontline engagement, recognition, learning, and celebration	600	17.4pts	37.2%
	2013-2022	The entire QAD Redzone Community at the time of this study	1000	14pts	29%

Our 2021-2022 cohort is our largest to date. This report includes 1,000 factories that have deployed QAD Redzone, spanning 458 thousand frontline workers, and includes nearly 30 million production runs.

Metric	Count	Metric	Count
Factories	1,000	Production Shifts	9,429,710
People (Frontline Workers)	458,286	Production Runs	29,965,415
Production Lines	11,145		

03 BENCHMARK STUDY CRITERIA

This fifth edition of the productivity benchmarking report uses the following criteria:

Criteria	Key Performance Indicator
CI Maturity	CI maturity rating (1-10) based on assessment by qualified CI coach
Baseline OEE	Average starting OEE score on focus lines
Reporting Variance	The variance between the manually reported OEE and actual electronically captured and calculated OEE
OEE Uplift & Productivity Improvement	Percentage points of OEE uplift and corresponding productivity improvement
Sustainability	Percentage point of OEE uplift following the 90-day program
Financial Impact	Estimated annualized savings

3.1 Continuous Improvement Maturity

A factory's CI maturity rating is an audit score between 1-10. The audit is conducted by a qualified QAD Redzone coach, who uses shop floor observations and interviews with frontline employees and factory leaders to develop scores. The assessment considers both cultural and systematic elements, such as goal alignment, results, recognition, daily CI routines, Kaizen processes, and more. Scores are:

- **0 to 5** – Indicates frontline workers are laying the foundation for CI at their factory.
- **6 to 10** – Indicates frontline workers are rapidly enhancing CI maturity at their factory.

3.2 Baseline OEE

OEE is considered to be the 'gold standard' for measuring manufacturing productivity and gaining insights on how to systematically improve progress. According to OEE.com, it provides "the single best metric for identifying losses, benchmarking progress, and improving manufacturing equipment productivity." [3]

OEE is a non-financial calculation of production rate, quality, and line availability measuring actual output compared to the theoretical maximum (TMax) capability of a production process. OEE identifies the percentage of manufacturing time that is truly productive. An OEE of 100% signifies a perfect shift. Only good parts are produced at 100% quality; at the maximum speed, or 100% performance; and with no downtime (100% availability).[4]

OEE measures efficiency against a common set of standards. For the purposes of this report, OEE is calculated using automated signals directly from input and output sensors, programmable logic controllers (PLCs), and/or Industrial Internet of Things (IIoT) devices placed on each production line.

QAD Redzone does allow some flexibility in how OEE is calculated, as long as factories adhere to best practice guidelines. However, this report normalizes the method of calculation, ensuring benchmark data is accurately compared. The baseline OEE is always reviewed and agreed upon with factory leadership in the first 10 days of the deployment to ensure accurate measurement of improvements.

Using the factory's baseline OEE, QAD Redzone measures subsequent increases over a period of time, beginning with the first 90 days. The baseline number provides an industry benchmark and is compared between factories early in their improvement journey as well as more mature factories.

> 60%: Is considered a moderate to high OEE score, while 20% to 60% is a low to moderate OEE score

3.3 Variance Between Manually Reported and Actual OEE

QAD Redzone solves the problem of whether baseline OEE data can truly be trusted by collecting it automatically. Thus, when leaders and coaches baseline OEE metrics at a factory, they are calculating it on real-time, aggregated data, rather than on wishful thinking.

[3] 'Overall Equipment Effectiveness,' undated, webpage, OEE.com
[4] Please see Appendix 7.1 Overall Equipment Effectiveness (OEE) for additional information.

3.4 OEE Uplift and Productivity Improvements

OEE baseline data represents the starting point for ongoing trend data. Leaders obviously want to increase and sustain OEE to realize productivity gains, cost savings, and ROI for their investment in QAD Redzone.

This report benchmarks factories' progress from baseline OEE and 90-day OEE. In the interim, teams complete their first 90-day coaching program for high-volume focus lines. Coaches work with factory leadership to identify focus lines for this effort. While QAD Redzone is deployed factory-wide, coaches focus the majority of their time and effort on the focus lines.

80%+ volume: QAD Redzone focuses on driving CI of high-volume production lines

At the end of the 90-day program, coaches and leaders perform a detailed success assessment, analyzing key trends. Official results are signed off by factory leadership, including the finance leader. Once factory leaders have scrutinized and validated results, they hold a Town Hall meeting with the entire factory team. The goal is to share insights into what results were accomplished, how they were achieved, and who contributed to the success. The entire team celebrates results, and leaders recognize those workers who contributed most to the accomplishment.

One caution: While OEE metrics are common measures, they are not always useful for making comparisons between factories given process differences, product mixes, and other confounding factors. Instead, individuals should use productivity gains to make these comparisons. Productivity is a normalizing percentage which calculates the change in OEE, divided by the starting point for each factory.

Calculating Productivity

Example of calculating the productivity improvement for a 40% OEE with a 10pt uplift

$$\text{Productivity\%} = \frac{\text{OEE Uplift (10pts)}}{\text{Baseline OEE (40\%)}} = 25\%$$

Represents a 25% improvement in productivity

From a business perspective, it is this productivity improvement that is the important metric as it directly correlates with the additional *free capacity* that is unlocked. Alternatively, the labor + overhead costs can be dollars saved in non-capacity constrained environments.

3.4.1 Ensuring Sustainability

QAD Redzone's goal is to empower community members to advance their CI journey and achieve ongoing OEE uplifts and productivity gains. Frontline community members often complete additional 90-day programs for compliance and reliability, creating cross-functional, sustainable processes for the long-term.[5]

We also measure progress after one-year and three-year periods.[6] Companies continue driving gains because they have created unstoppable commitment to CI and a culture around driving results. With this culture, any worker can suggest process improvements, create tools to help others, and help their teams *win the day*.

3.4.2 Measuring Financial Impact

In this report, financial benefits are measured as cost savings, meaning a factory produces the same volume of products with fewer resources. Cost reductions are typically achieved by reducing worker overtime, running fewer or shorter shifts, using less temporary labor, and reducing variable overhead as a result of fewer production hours in one or more areas. For factories that are not capacity-constrained, cost savings demonstrate true financial impact.

Factories that are capacity-constrained can boost top-line revenues by increasing production throughout while avoiding additional capital expenditures. They can also improve gross margins by reducing the fixed cost of each unit and diluting it across the increased output. Factories can increase throughput by running the same number of production hours, but with higher rates, less product loss, and less planned or unplanned downtime.

[5] See Chapter 5: What the Most Successful Factories Do Differently for more information.
[6] See Section 4.4 Sustainability for more information.

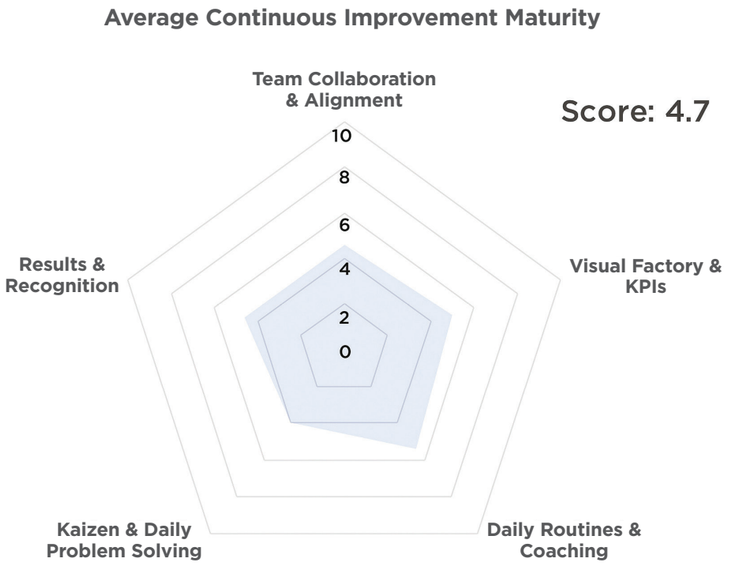
04 BENCHMARK RESULTS

4.1 Continuous Improvement Maturity

Like baseline metrics, community members' CI maturity is audited by a QAD Redzone certified coach before beginning their 90-day program. Coaches use a scale of 1-10, with 10 signifying a factory that demonstrates a comprehensive and advanced CI culture.

Coaches use five criteria to develop scores, as demonstrated by Figure 5 below. By measuring maturity, we are able to compare results between factories early in their CI journeys versus those who are well on their way. These methodologies are well-understood, easily applied, and deliver results that align with community member needs and business priorities.

Fig 5: **Example CI Maturity Rating Spider Chart**



Factories receive one of two scores:

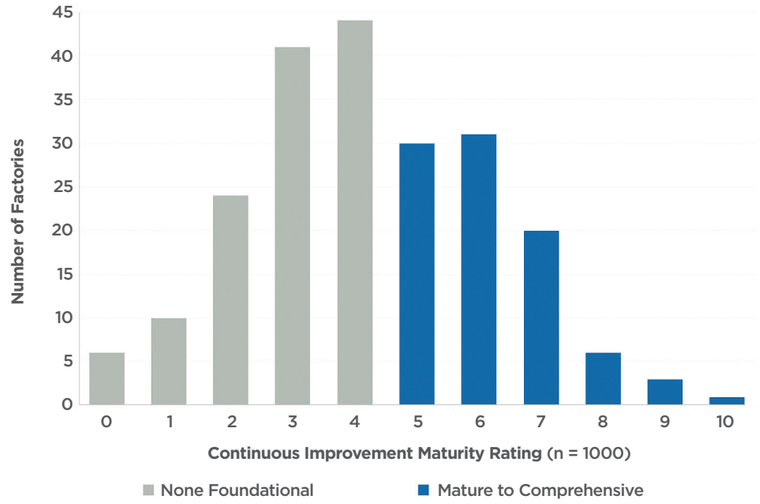
1-5: A none to foundational CI rating: The factory leadership team is familiar with the concepts of Lean manufacturing, Six Sigma, and other CI methodologies. However, these methodologies have not been significantly deployed throughout the organization. While the factory may have some tools in place to help frontline employees drive problem-solving and reduce waste, leaders acknowledge they need help beginning or accelerating their CI journey.

6-10: A mature to advanced CI rating: All factory employees are aligned around common goals. They view CI as part of their core responsibilities and proactively collaborate across functions to optimize processes. Visual management tools are clear, obvious, and easy to use, while well-established systems drive daily work and operational cadences. All employees, from managers to frontline workers, understand and possess common skills required to analyze root causes and solve problems, by using Kaizen, 5S, statistical process control, and other methodologies.

In our study sample, the majority of participants are in the early stages of their CI journey. We rated 186 factories as a three, whereas 199 factories scored a four. However, we also had factories that were more mature, with 154 receiving scores of five, 140 receiving scores of six, and 90 receiving scores of seven. These results should encourage other factory leaders who are either looking to begin their CI journeys or improve from a strong starting point.

Factories' CI maturity ratings are depicted in Figure 6.

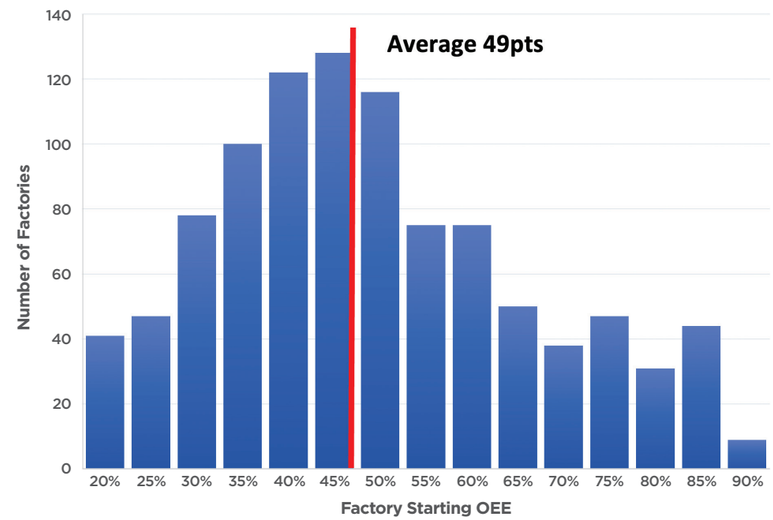
Fig 6: **Distribution of Factories' CI Maturity Rating**



4.2 Baseline Data – OEE Starting Points

Another way we protect against overly optimistic OEE reporting is by aggregating data. Our coaches observe OEE during the one to two weeks before launching QAD Redzone and then again for the two weeks following. Baseline OEE is the average of these numbers. Baseline OEE varied dramatically across community members. The average baseline OEE was 49 points, and the average OEE uplift was 14 points. We measure 90-day OEE across the final two weeks of the program with the same methods.

Fig 7: **Distribution of Baseline OEE Across 1,000 Factories**



04 BENCHMARK RESULTS (CONT'D)

We drilled down in the data to understand the underlying reason for the variability in baseline OEE. As Figure 8 below demonstrates, factories exhibiting a more mature CI program had a higher starting OEE, with an average of 57 points, versus those factories rated earlier in the CI maturity curve, which averaged 44 points.

Fig 8: **Distribution of OEE by CI Maturity**

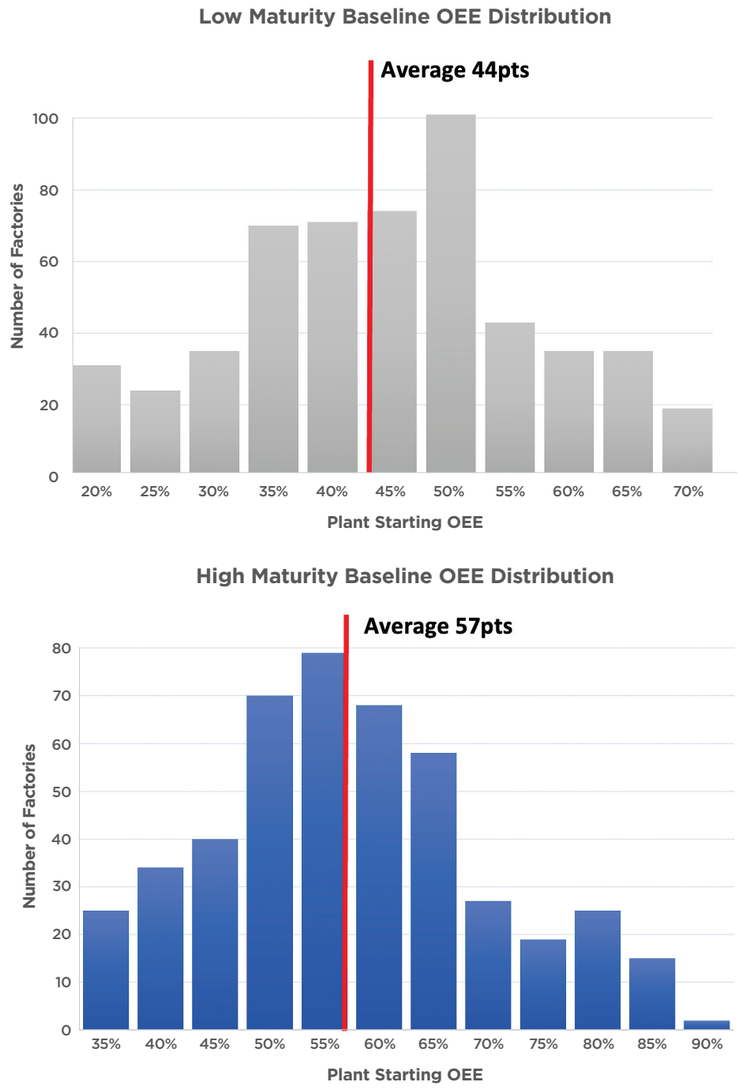


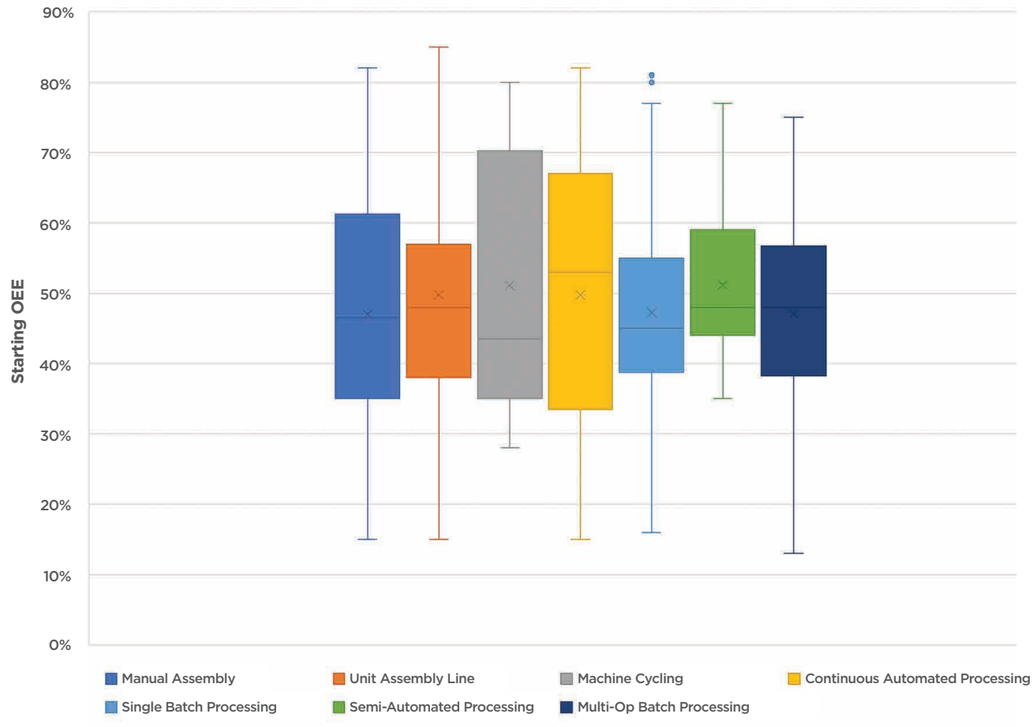
Figure 8 above demonstrates that firms early in their CI maturity journey can achieve a statistically material impact on their baseline OEE, using techniques such as implementing a visual factory, aligning teams to factory goals, and implementing Kaizen and problem-solving processes. Thus, there is no reason to wait to apply CI techniques if baseline OEE is low, as factories achieve improvement without mature CI programs in place. Similarly, those factories that have more mature CI programs and higher starting OEE also unlock value by committing to and accelerating improvements.

4.2.1 Baseline OEE by Process Type

This report benchmarks results by process type. There is, as the data shows, not much variation among starting OEE by process type, with a few exceptions. As one would expect, automation improves OEE. Remarkably, however, some semi-automated, manually intensive processes have a higher starting OEE than many fully automated processes.

There is variance in process performance within any particular process type, and this variation is seen across all major, defined processes. Further, the average OEE of each process type varies surprisingly little in respect to any other. This lack of variation in baseline OEE starting points may stand opposed to one's assumptions as it indeed demonstrates no statistically significant difference in the process type OEE averages at all!

Fig 9: **Baseline OEE by Process Type**



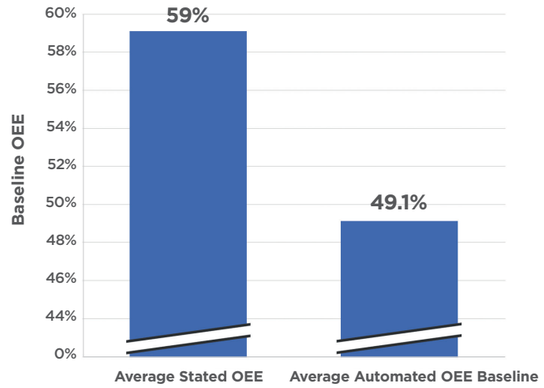
4.2.2 Variance Between Reported and Actual OEE

There is about a 10-point difference between a factory's self-reported average OEE and actual, measured baseline OEE for the 1,000 factories studied for this report. That is not unusual as factory managers may not have aggregated all data or potentially want to portray their baseline operations in the best possible light. However, it is critical to measure baseline OEE accurately, to ensure 90-day metrics around productivity gains and cost savings are accurately captured.

Across our reports, we have found the most common reasons for OEE discrepancies are due to:

- Overallocation of planned downtime;
- Understating theoretical max production;
- Providing an insufficient accounting of quality losses.

Fig 10: **Reported OEE vs. Actual Performance**



These error sources are related to a broader lack of true process understanding. Downtime, and speed loss in particular, is not always captured accurately. It must thus be assumed or guessed. Maximum production rates are not always set to engineered rates but rather financial, historically demonstrated, or some other non-process-related metric. The effects and effort of rework, scrap, and similar losses are also hidden by accepted levels of waste or an inability to effectively capture these losses in real time.

4.3 OEE Uplift and Productivity Improvement

Next, we measured OEE uplift, or the percentage gain between baseline OEE and concluding 90-day OEE. Across the 1,000 factories surveyed, the average OEE uplift was 14 points while the average productivity gain was 29%.

Fig 11: **Percentage Points of Productivity Improvement Distribution Across 1,000 Factories**

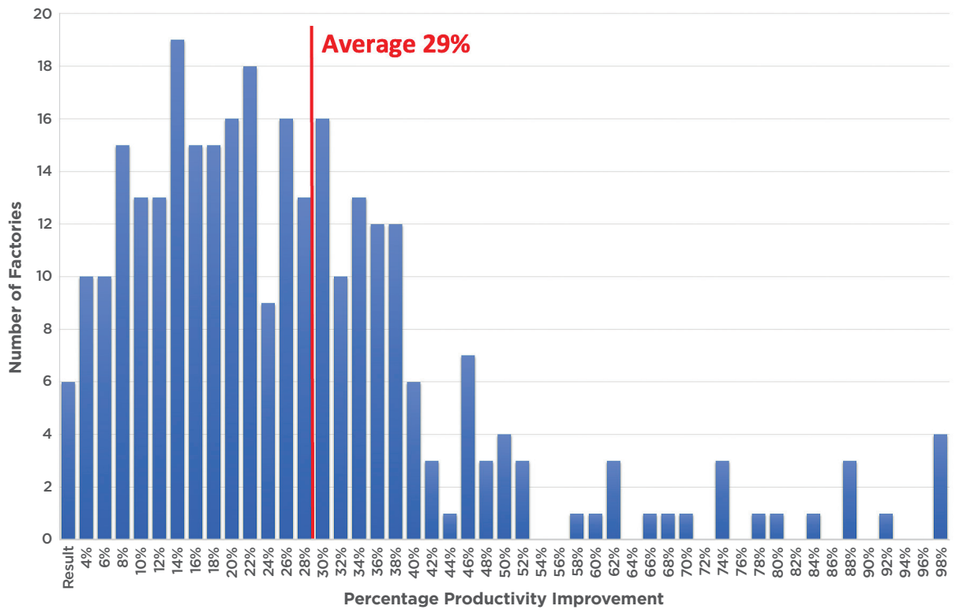
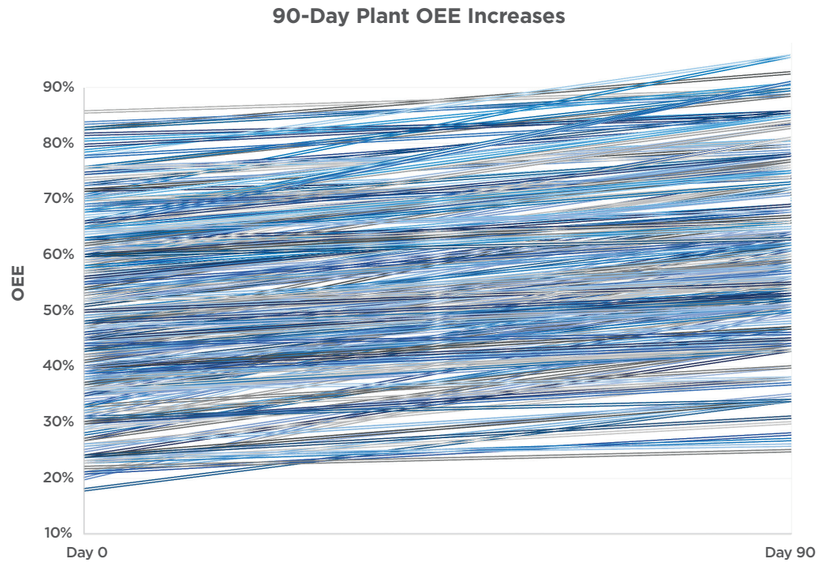
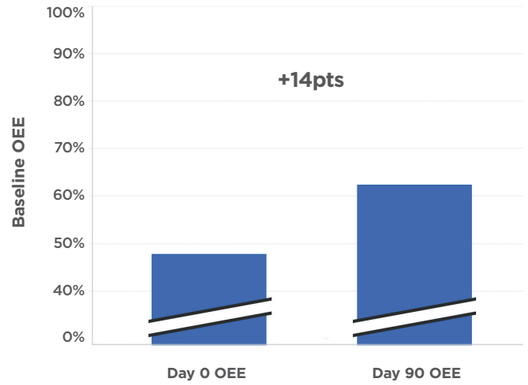


Fig 12: **Detailed and Actual OEE Uplift Across 1,000 Factories**





The 14 point OEE gain is impressive. Although all factories demonstrated significant improvement on their 90-day programs, CI maturity and baseline OEE were the two variables most highly correlated with OEE uplift.

04 BENCHMARK RESULTS (CONT'D)

The correlative analyses depicted in Figures 13a and 13b below demonstrate the strength of the relationship between achieved OEE uplift with CI maturity and achieved OEE uplift with baseline OEE starting point. Pearson's r coefficient, a measure of correlation strength, confirms this clear and direct relationship of these performance variables. The strength of fit is so strong, in fact, these variables are extremely effective in forecasting expected OEE uplifts when the CI maturity and baseline OEE measures are known.

Fig 13a: **Correlation Between Demonstrated OEE Uplift and Starting CI Maturity**

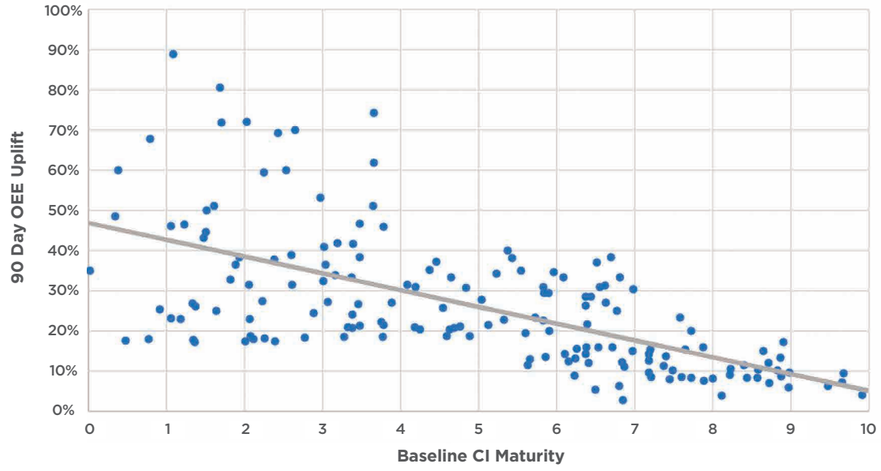


Fig 13b: **Correlation Between Demonstrated OEE Uplift and Starting OEE Baseline**

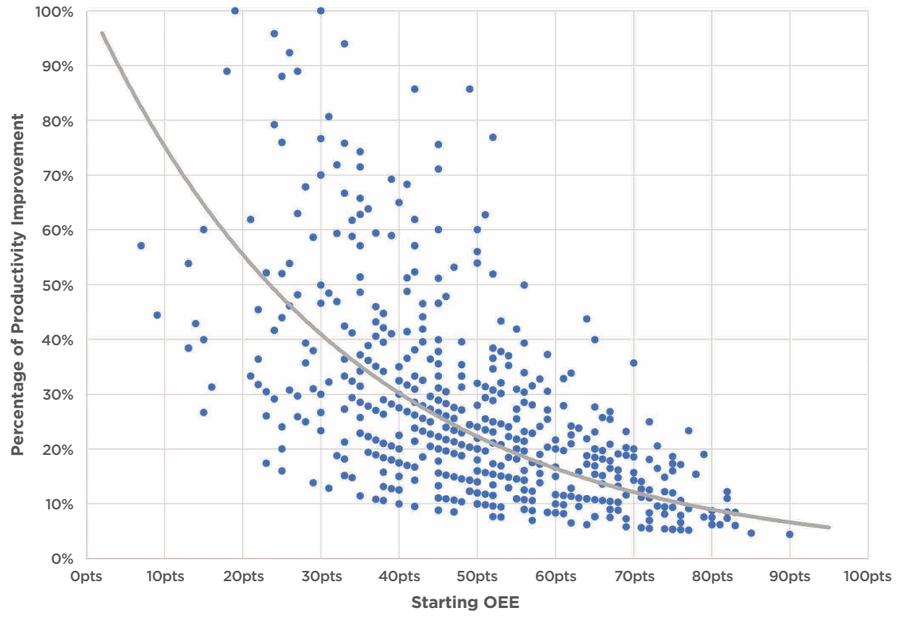
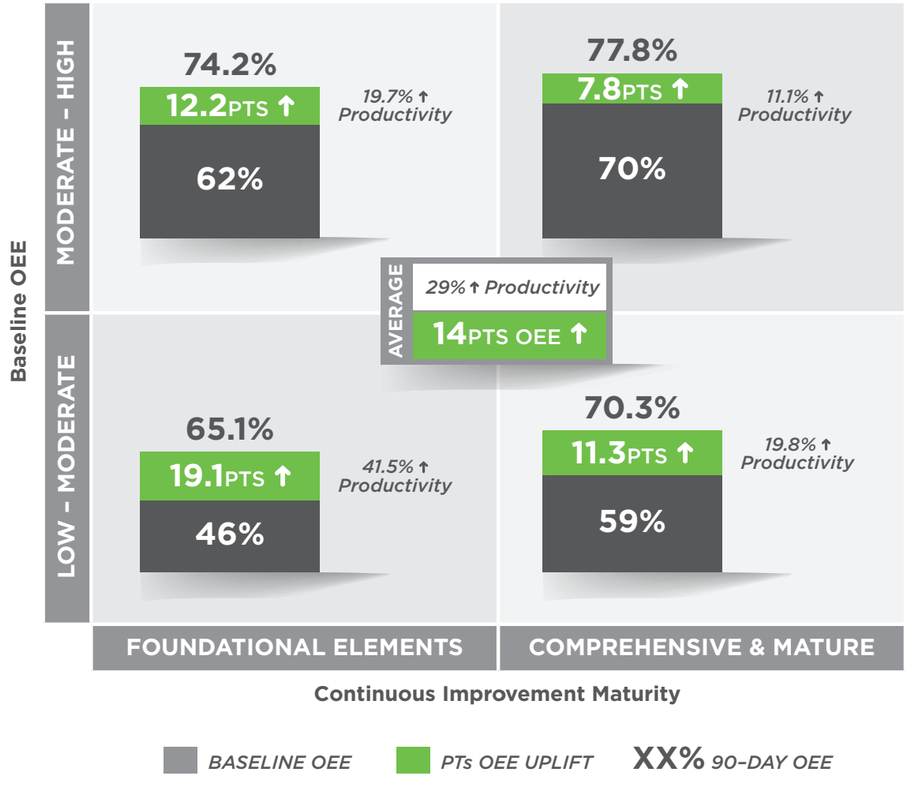


Figure 14 below depicts expected OEE uplift and productivity gain according to baseline OEE and CI maturity level. Low baseline CI maturity community members with low OEE starting points witness some of the greatest gains, achieving an incredible 19.1 points OEE uplift. Even more advanced factories, with higher baseline OEE and CI maturity starting points, achieve a 7.8 point OEE gain on average.

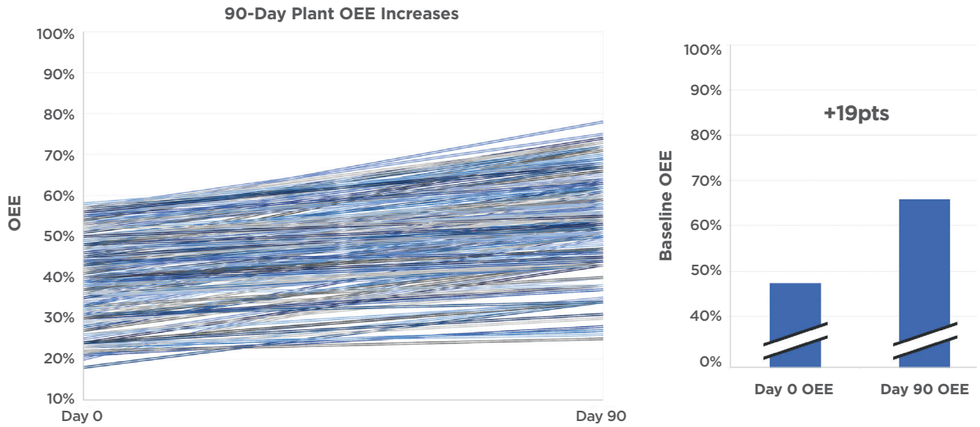
Fig 14: **Initial 90-Day Benchmark Results Matrix**



04 BENCHMARK RESULTS (CONT'D)

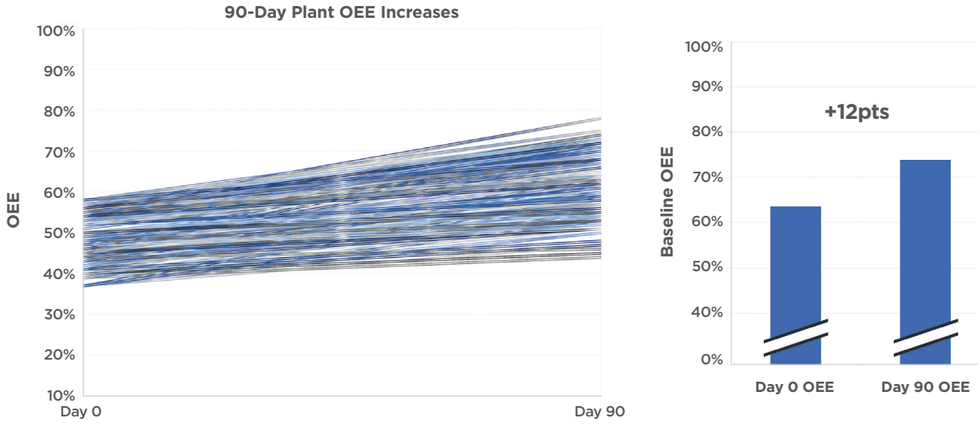
Figure 15 below depicts the average OEE increase for factories having a low baseline OEE and low CI maturity. This group included 458 factories.

Fig 15: **OEE Uplift for Low Baseline / Low Maturity – Group 1**



This group demonstrated the greatest level of OEE uplift at 19 points and a productivity improvement of 37.2%. These results reveal how factories who are at a relatively low starting point in their CI journey can notch sizable gains in 90 days by applying the QAD Redzone approach. There is no need to spend time and resources evolving CI maturity before beginning the program when teams can immediately make rapid progress using the QAD Redzone methodology and tools.

Fig 16: **OEE Uplift for Low Baseline / High Maturity – Group 2**

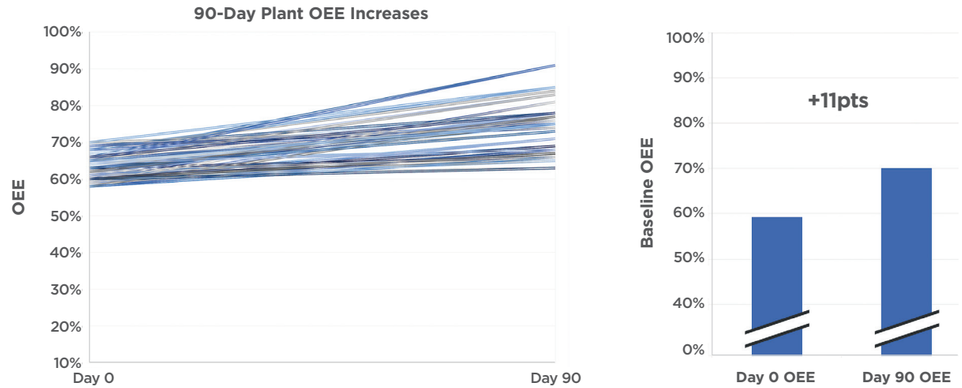


A smaller group in the study, Group 2, captures 282 factories with advanced CI maturity, yet relatively low OEE starting points. This often occurs with manufacturers having high changeover, short-run business models.

This group needed to refocus their CI programs to reap more business value from their efforts.

Group 2 achieved an average of 12 points in OEE uplift, a 19.7% increase in productivity, demonstrating what can be achieved by refocusing CI efforts on the right priorities. While the business model stays the same, frontline teams are able to improve changeover times and agility using QAD Redzone methods.

Fig 17: **OEE Uplift for High Baseline / Low Maturity – Group 3**

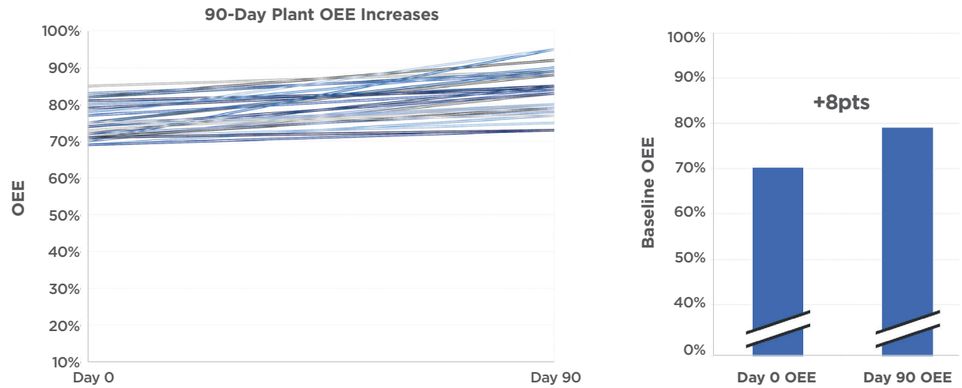


Group 3 features those 174 factories having a relatively high baseline OEE, but lacking comprehensive CI programs. In general, these manufacturers produce a lower number of SKUs, resulting in fewer changeovers between product formats and relatively straightforward manufacturing processes.

This group seeks to accelerate OEE by rapidly maturing CI. They can take such actions such as eliminating minor production stoppages, running lines at optimal rates, and creating a highly responsive problem-solving culture.

Group 3 achieved an average increase of 11 points OEE uplift, equivalent to a 20.8% productivity improvement.

Fig 18: **OEE Uplift for High Baseline / High Maturity – Group 4**



Group 4 includes those manufacturers who already have best-in-class CI cultures and high starting OEE. This group typically includes large, technologically advanced factories possessing significant CI expertise and a strong workforce commitment to improvement.

So why would these companies become QAD Redzone Community members? They often are plateauing in terms of productivity gains and want to boost OEE results from the mid-70s to the 80s and sustain these hard-won improvements.

Even with high starting OEE baselines, the 86 factories in Group 4 achieved sizable gains, generating an average OEE uplift of eight points, equal to productivity improvements of 11.1%. These accomplishments are all the more impressive when one compares the investment in QAD Redzone against the cost of other CI efforts, such as increasing automation and ever-more burdensome manual, traditional CI methodologies.

All together, all 1,000 factories achieved OEE uplifts averaging 14 points and productivity gains of 29%. Averages are depicted in the chart below.

Category	Baseline OEE	90-Day OEE	OEE Uplift	Productivity Improvement
All 1,000 Factories	49%	63%	14pts	29.0%
Group 1: Low Baseline OEE / Low Maturity	46%	65%	19pts	37.2%
Group 2: High Baseline OEE / Low Maturity	62%	74%	12pts	19.7%
Group 3: Low Baseline OEE / High Maturity	59%	70%	11pts	20.8%
Group 4: High Baseline OEE / High Maturity	70%	78%	8pts	11.1%

So, what could your factory achieve by deploying QAD Redzone? You can use our model to accurately forecast the OEE uplift your company can expect to achieve by adopting our methodology, platform, and workforce behaviors through the 90-day productivity program with coaching. This information can be relied on to prepare business cases and forecast projected ROI on solution deployment and win new investment for QAD Redzone deployment.

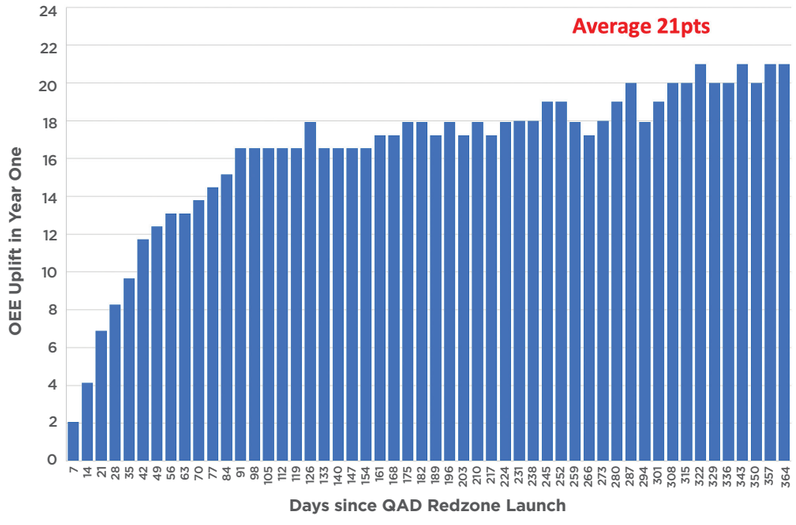
4.4 Sustainability

So, these 90-day gains are impressive. But how can your company ensure that it will continue to drive performance forward, year after year?

4.4.1 OEE Increase Over One Year

In addition to measuring progress at 90 days, QAD Redzone also evaluates factories' results at the one- and three-year marks. Since this is our fifth report, we have 10 years of insight into factory performance. Each benchmarking cohort has demonstrated its ability to increase OEE uplift at both the one- and three-year mark. Figure 19 below demonstrates how 700 factories with at least one year of QAD Redzone deployment history uplifted OEE by an average of 21 points one year later.

Fig 19: **Average OEE Point Uplift Over the First Year with QAD Redzone**



These results demonstrate to both business stakeholders and factory managers that it is possible to increase gains over time, regardless of process type, operational size, and starting OEE and CI maturity levels.[7]

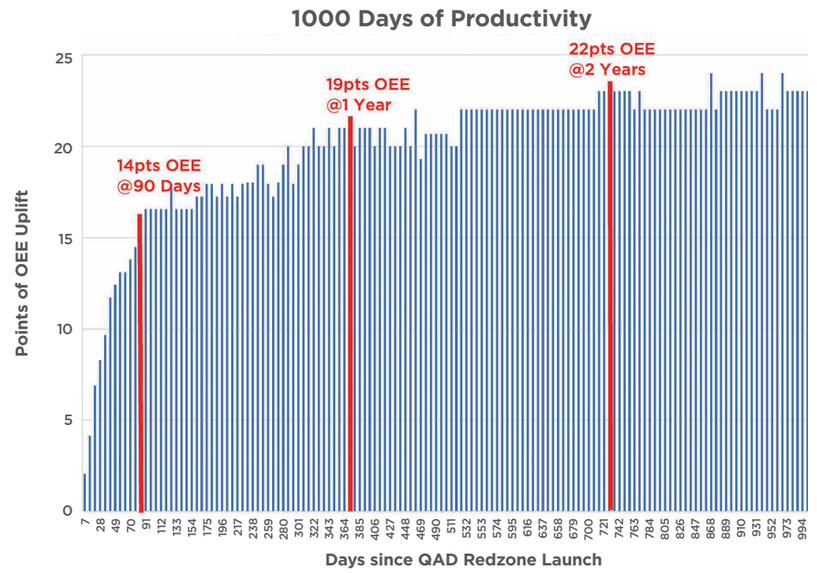
[7] Please see Appendix 7.4, What Is the QAD Redzone Connected Workforce Solution? for additional information on how you can transform your operational culture with our processes and tools.

4.4.2 OEE Increase Over Three Years

Next, we look at progress at the three-year, or 1,000-day, mark, analyzing the results of 500 factories that began their QAD Redzone deployments at least three years prior to the end of 2022.

Figure 20 below depicts the result of this group. At 90 days, factories on average boosted OEE by 14 points, driving gains to 19 points at the one-year mark. Factories then achieved further incremental gains to reach 22 points at year two and beyond.

Fig 20: **OEE Increase Over Three Years Using QAD Redzone**



4.5 Annualized Savings

Senior leaders care about cost savings, which they can channel into other CI programs or return to the business. OEE uplifts, when combined with existing labor and overhead costs, can easily be converted to ROI metrics to demonstrate potential impact. The table below illustrates average labor, overhead, and total savings opportunities for every one point gain in OEE as reported directly from the QAD Redzone Community.[8]

Factory Revenue	Labor Opportunity (per 1pt OEE)	Overhead Opportunity (per 1pt OEE)	Total Savings Opportunity (per 1pt OEE)
All Factories	$134,975	$40,030	$175,005
$10M - $40M	$34,312	$9,865	$44,177
$40M - $100M	$71,837	$16,204	$88,041
$100M - $1B	$94,247	$23,477	$117,724
$1B - $4B	$137,833	$41,350	$179,183
$4B - $10B	$184,409	$51,635	$236,044
$10B+	$287,211	$97,652	$384,863

[8] Please see the Appendix for details on how we calculate the impact per 1pt of OEE.

4.5.1 Illustration of Savings

Potential savings include both labor and overhead savings opportunities. The most important takeaway from the chart on the previous page is factories are in charge of their own financial destiny. By improving OEE they can continue to deliver greater cost savings over time.

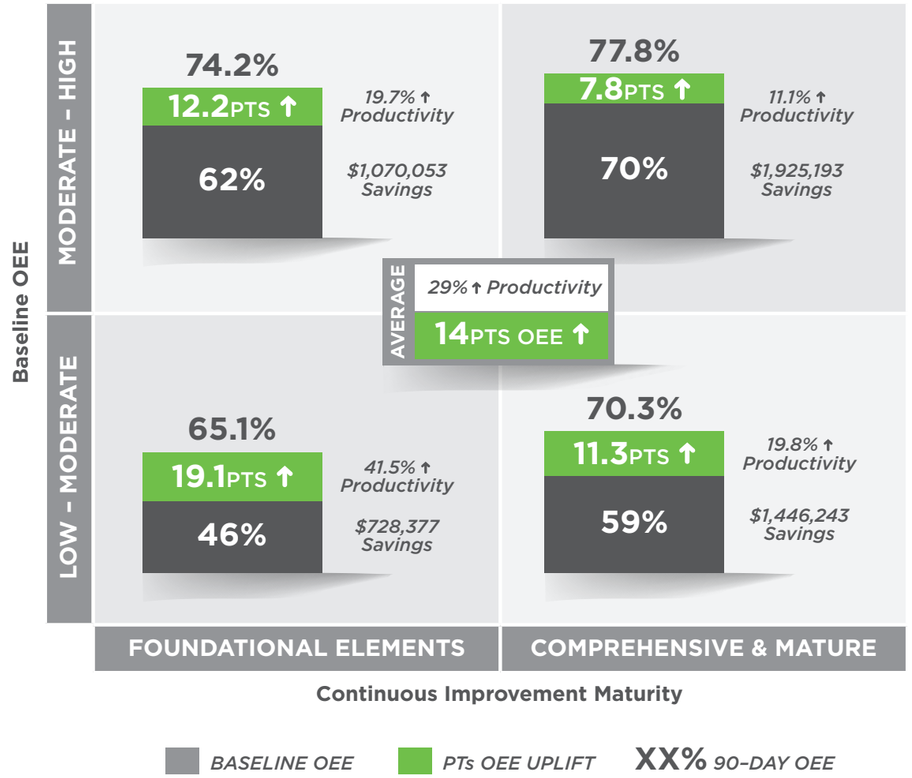
It is important to note these generalized savings are just a starting point. They do not consider other potential savings, such as reducing overtime hours, decreasing waste, or achieving further gains from Kaizen-style problem solving.

Bringing all of these results together, we accurately forecast average OEE and productivity gains across all manufacturing factory participants at the 90-day mark. The success of such a diverse mix of participants clearly shows true CI is demonstrably achievable, not a philosophy or aspirational methodology.

Our most recent cohort has achieved a step change improvement in OEE from our previous study groups. In 2020, study participants achieved an average OEE uplift of 12 points, whereas in 2022, they achieved a gain of 14 points, for an incremental OEE gain of two points. Similarly, in 2020, participants drove productivity by 22%, whereas in 2022, it was 29%, demonstrating how continuous improvement of the systems themselves delivers ever growing results.

We attribute these successes to the continued evolution of our platform and coaching methods. Since the publication of the last benchmark report in early 2021, the QAD Redzone Connected Workforce Solution has evolved significantly in two major directions. Comprehensive equipment reliability systems connecting operations with maintenance deliver greater equipment uptime than ever before. The platform also enables focused learning, development, and purposeful engagement on the job, with video-driven best practices, standard operating procedures, self-directed training, and formalized training certifications. These tools enable manufacturers to reduce turnover, transfer knowledge to ensure maximum employee effectiveness on the job, and extend connected worker benefits to every frontline team in a factory. Additionally, QAD Redzone coaches have further developed their vast wealth of experience in leveraging these systems and refining deployment strategies at the latest factories making critical CI improvements with QAD Redzone. As manufacturers deploy the extended solution, they have been able to achieve further OEE gains and sustain them through the most challenging operating conditions such as those experienced during the COVID-19 pandemic.

Fig 21: **Initial 90-Day Benchmark Results Matrix with Savings Estimates**



4.5.2 Intangible Benefits

Study participants also reported a host of intangible benefits, such as enhanced communication and collaboration, greater worker engagement and retention, lower absenteeism, enhanced operational flexibility and agility, and more.

Manufacturers are competing with other industries for talent. As a result, being able to point to a strong, engaged workforce; easy-to-use, enabling technologies; and a culture of collaboration and celebration can be a strong attractor for potential candidates.

4.5.3 Cultural Transformation

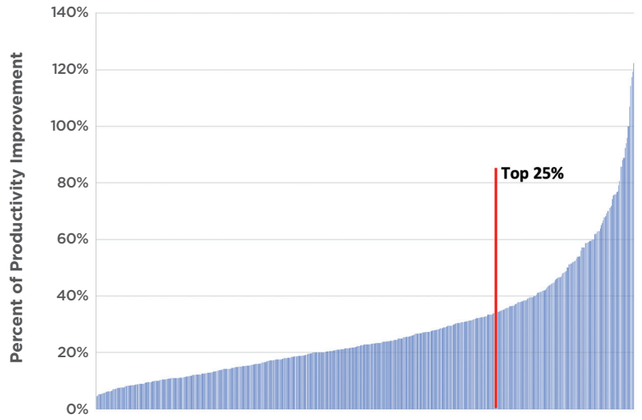
Frontline workers want to work with meaning and purpose, *winning the day* for their employers. Too often in the past, these valuable individuals have been on the receiving end of well-intentioned but impractical CI programs.

QAD Redzone unlocks the inner creativity of frontline workers, enabling them to provide ideas on process improvements, share the wisdom they've gained working in their roles, and socialize best practices. As a result, these workers become CI champions and agents of change.

05 WHAT THE MOST SUCCESSFUL FACTORIES DO DIFFERENTLY

Beyond the results we have shared, our coaches and community members share their own in-field observations around the QAD Redzone methodology and tools. We use these insights to continually evolve our platform and approach, benefiting both existing and new community members alike. As Figure 22 below demonstrates, OEE uplifts far greater than average are achieved by the top 25% of QAD Redzone factories. What can you do to become one of these leaders?

Fig 22: **Productivity Improvement Pareto Across the 1,000-Factory Community**



As we have worked with thousands of community members across the past decade, we have observed the following factors as key drivers in contributing to sustained CI success.

5.1 Leadership Team Participation

Winning and sustaining the senior leadership team's (SLT) sponsorship of CI programs is critical to their success. Leaders champion these programs, provide ongoing investment, and offer air cover as programs take flight and teams work through issues.

Across community members, we found SLTs who were highly involved with their immediate reports and frontline workers helped create collective will to win with CI. They engaged in structured interactions, such as participating in kick-offs, Town Halls, and video updates, and shared encouraging messages such as team wins via QAD Redzone communication tools. They also had unstructured interactions, such as holding informal conversations with individual workers or small groups. Leaders focused teams on the right priorities, listened to their ideas and incorporated the best ones, and gave them feedback and encouragement.

As a result of SLT involvement, workers trusted them, believed in the CI program, and felt recognized for their individual and team achievements. This was especially important during the pandemic, as many manufacturers struggled with staffing challenges and worker illness. Community members' ability to sustain CI gains during this difficult time was truly remarkable.

5.2 Rigorous Forum Discipline

Leading factories all maintained exceptional discipline around structured forums, both at an operational and leader level. Across these activities, factories consistently leveraged three types of key forums:

1. Shop floor huddles on each production line were held at predetermined points during shifts and involved representatives from each of the production, maintenance, and quality teams.
2. Daily operations meetings involved production, maintenance, and quality management.
3. Weekly process improvement meetings involved senior operational leadership and members of the management team.

Community members understood these forums were the primary vehicle to recognize top performers, raise and escalate issues interfering with *winning the day*, and follow up on ideas and actions to correct mistakes or boost performance further.

In addition, many of our community members held their daily operations meetings out on the floor, in front of a large screen displaying QAD Redzone. As a result, all involved team members and bystanders were aware of and involved with reviewing real-time performance data and that target actions were being completed.

5.2.1 Factory-wide Communications, Recognition, and Celebration

Leading factories had more open and frequent dialogue with frontline workers and made significantly more use of the social and unstructured communication capabilities in QAD Redzone. A typical example would be a manager giving a team a virtual *high five* in the app for boosting production on a shift or solving a thorny problem.

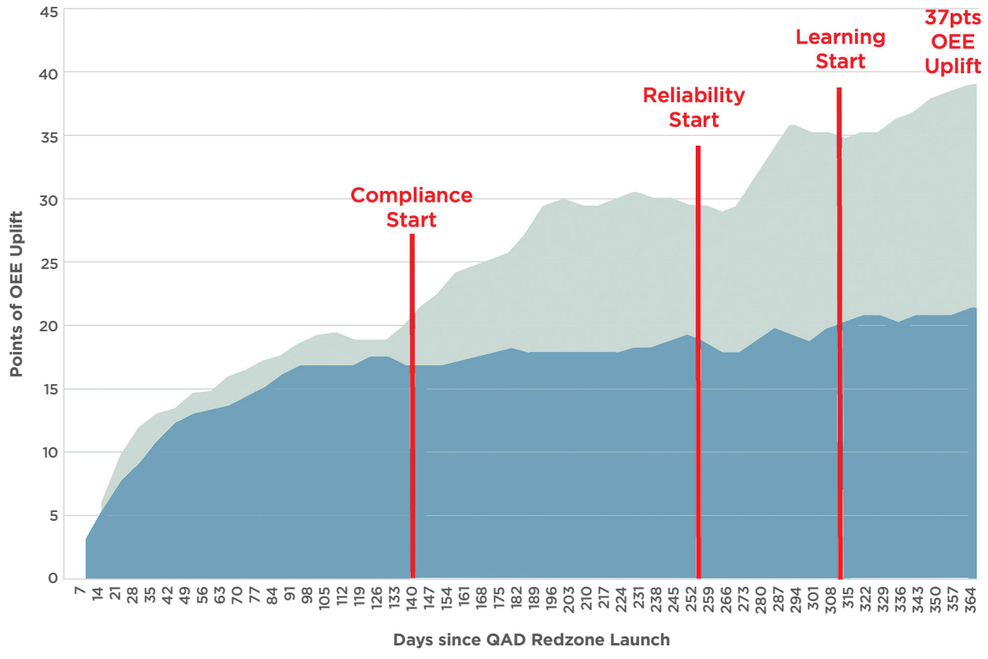
These factories were also significantly more frequent users of QAD Redzone chats, issues, and alerts, enabling greater team problem solving and on-the-spot decision making. Social, mobile communications created greater team cohesiveness, with members working better together to accomplish something significant.

These factories also took time to establish realistic, but challenging hourly performance targets and daily goals, which were then widely communicated on dashboards, leaderboards, and line-side tablets. As a result, all team members knew what was expected of them.

Leadership teams also knew how to celebrate. They created highly visible mechanisms to monitor and share progress reports on the most productive activities. These leaders knew that rewarded behavior is repeated behavior. Thus, they used more QAD Redzone recognition tools, such as *high fives* and *good catches*, catching frontline workers for doing the right things.

Through formalized channels these leaders publicly recognized individuals and team efforts, where appropriate, often coupled with concrete awards such as monetary bonuses. For example, they hosted competitions and ceremonies with financial rewards honoring those individuals or teams with outstanding ideas and performance. These workers and teams were also recognized at Town Halls, with their accomplishments tied to company goals and performance.

Fig 23: **OEE Uplifts Available from Continuing the QAD Redzone Journey**



As Figure 23 above depicts, firms continuing their CI journeys increase gains over time. After aligning frontline workforces to boost reliability and OEE, factories can tackle other functions with QAD Redzone, such as compliance and reliability enhancements, to drive long-term results far higher than even the sustained, average productivity gains alone.

06 CONCLUSION

We hope the results we have shared inspire you to accomplish more with QAD Redzone. If you want to boost factory OEE and productivity from low levels, or if you have a top-performing factory that has stagnated with CI, QAD Redzone will unlock more success for you.

And there is no reason to wait – you can start today and deliver stunning improvement within 90 days of implementing the solution.

When you deploy QAD Redzone, you reap the benefits of a highly engaged workforce, higher OEE and productivity, and data and tools that help you continue delivering CI gains, year after year.

Please contact us to learn more about how QAD Redzone will benefit your business this year.

Ken Fisher

SVP Product & Solutions, QAD Redzone
QAD Redzone

07 APPENDIX

7.1 Overall Equipment Effectiveness (OEE)

Manual calculations of OEE use recorded downtime and scrap figures to derive the performance losses from a perfect 100%. As downtime and scrap are often misrecorded in manual systems, collecting this data automatically using sensors, as the QAD Redzone Connected Workforce Solution does, is much more accurate.

OEE is made up of three components:

- **Availability** (uptime as a percentage of available time): A threshold percentage per minute is set, to define the level at which a line is considered to be running (uptime) or stopped (downtime) as compared to available time which represents all time where the production line or cell is scheduled to be running. This includes all changeover times and interruptions to the production floor. It does not include any time where the lines are not scheduled to run, such as non-productive shifts or non-working weekends.
- **Performance** (actual rate of production while running, as a percentage of theoretical maximum rate): This is measured by QAD Redzone every minute the line is running and compares the actual output quantity of material against the theoretical maximum rate (safe-running engineering capacity) of production output. This rate differs by SKU so Redzone records which product is running at all times, to allow comparison with the planned rate stored against each SKU, which can be additionally specified by production line.
- **Quality** (output quantity as a percentage of quantity produced on the line): QAD Redzone records scrap and rework on the line, including where the losses occurred, with reason codes, to enable the capture and analysis of losses and rework.

The standard calculation for OEE is:

OEE% = Availability% x Performance% x Quality%

By way of example, a 95% performance on each of these metrics results in what has been accepted as world-class OEE performance of ~85%: .95 x .95 x .95 = 85.7%.

7.2 Calculating Savings

The following tables summarize the assumptions made to calculate the impact of a one-point improvement in OEE across different sizes of facility. The savings are expressed as cost reductions for simplicity and are defined as labor and variable overhead reductions.

Labor was considered to include direct employees working on the line, costed at an average regular time rate, excluding any ancillary and indirect labor costs, such as warehouse, quality, and maintenance. Variable overhead was taken to be the portion of overhead that would be reduced if the factory ran fewer hours. Generally this is utilities and some minor additional overhead. Average numbers of production lines and numbers of people per line were listed per category, along with an average labor rate per direct employee. From these numbers it was possible to calculate the impact of a one-point uplift in OEE across a factory.

Estimated Labor Savings for Each 1pt of OEE Uplift per QAD Redzone Factory

Size of Factory (Revenue)	Avg # of Lines	Avg Run Hours	Avg Workers per Line	Avg Labor Hrs/Yr	Avg Wage/Hr	Avg OEE	Avg Labor Savings of 1pt OEE
All Factories	7	6,090	7	601,659	$17.65	49%	$134,975
$10M - $40M	3	5,000	7	120,750	$15.42	42%	$34,312
$40M - $100M	6	4,950	6	210,276	$15.25	39%	$71,837
$100M - $1B	8	6,468	8	442,929	$15.41	54%	$94,247
$1B - $4B	7	7,488	7	388,927	$16.06	65%	$137,833
$4B - $10B	14	8,100	9	1,051,218	$18.73	67%	$184,409
$10B+	22	7,210	8	1,395,856	$22.54	66%	$287,211

Similarly, by taking the average number of production hours, the same calculation is used to estimate the reduction in variable overhead associated with a 1pt uplift in OEE.

Estimated Variable Overhead Savings for Each 1pt of OEE Uplift per QAD Redzone Factory

Size of Factory	Avg # of Lines	Avg Run Hours	Avg Variable Overhead/Line	Avg OEE	Avg VOH* Savings of 1pt OEE
All Factories	7	6,090	$36.50	49%	$17.95
$10M - $40M	3	5,000	$26.31	42%	$9,177.91
$40M - $100M	6	4,950	$27.80	39%	$20,641.50
$100M - $1B	8	6,468	$28.00	54%	$26,342.40
$1B - $4B	7	7,488	$41.33	65%	$32,823.53
$4B - $10B	14	8,100	$51.80	67%	$86,384.12
$10B+	22	7,210	$55.71	66%	$131,891.35

*VOH = Variable overhead

7.3 Process Segment Definitions

Manufacturers benchmarked in this report are aligned by process types. Definitions include:

Continuous automated processing
Manufacturers use fully automated processes to ensure a continuous flow of material, production, and finishing processes. Automation can include mechanical, hydraulic, pneumatic, and electric systems, which are controlled all or in part by digital systems.

Semi-automated processing
With this type of manufacturing, some steps are automated, whereas others are performed manually by workers. A computer controller prompts workers to perform their steps and waits for feedback from a human machine-interface or electronic sensors that they have been executed, before beginning the next step.

Single-operation batch processing
Bulk material is processed as a single quantity. This may include blending and mixing operations, tank fermentation, baking, drying, curing, and similar.

Multi-operation batch processing
Batched product, as with single batch processing, undergoes value added steps as a set quantity with multiple, defined process stages. For example, a liquid slurry undergoes ingredient additions over a set period of time, a defined period of mixing and heating, followed by a timed dwell and discharge.

Machine cycling
Parts are produced singularly or as a group by a machine or machines undergoing operations with a defined cycle time, that is an operation with a clear start and end. Process examples would include blow molding operations and heavy sheet metal presses.

Unit assembly line
Parts are added sequentially as a semi-finished assembly is moved across workstations in true, Henry Ford-assembly line style.

Manual assembly
Humans perform all production steps, without any machine intervention. Manual assembly is typically used for low-volume manufacturing work or high speed, complex products unsuitable for simple automation.

7.4 What is the QAD Redzone Connected Workforce Solution?

The QAD Redzone Connected Workforce Solution defines a new category of solution for manufacturers. Community members achieve success and sustainability of their productivity improvements by using QAD Redzone as a platform to enhance their culture and to support their own CI strategies where such strategies exist or get them started where they do not. Unlike other factory floor technologies, the Connected Workforce Solution focuses on enabling and engaging frontline workers as a productivity engine.

The QAD Redzone Way is a unique combination of social/mobile technology resulting in a connected workforce solution. When paired with a highly immersive coaching program, QAD Redzone drives behavior change to make the uplifts *stick.*

The solution provides out-of-the-box functionality, such as dashboards, leaderboards, actions, issues, alerts, chats, logs, and blogs, which provide summarized content for structured meetings and forums. Together, these resources contribute to creating a powerful communication and collaboration platform for monitoring, documenting, reporting, analyzing and driving CI results. QAD Redzone creates an action-oriented environment where frontline workers are armed with the tools and support they need to make decisive and timely decisions at the point of activity: on the shop floor.

7.4.1 Rapid Time to Value

The QAD Redzone Connected Workforce Solution goes live with clean data and enables full utilization of the system within weeks. Most community members report being live and fully operational within two days of the coach coming onsite. Deployment timeframes compare favorably to other technology, such as a typical manufacturing execution system (MES) or computerized maintenance management system (CMMS), which may take from 6-18 months to implement and a veritable army to maintain. The QAD Redzone coaching team hits the ground running to initiate the shopfloor cultural environment that empowers frontline workers to make good decisions quickly and facilitate changes to improve performance. Implementation ROI is often six months or less.

7.4.2 Implementation Time

The QAD Redzone Connected Workforce Solution takes the connected worker concept one step further by automatically collecting real-time data about production and waste directly from production lines then making it instantly available to frontline workers. It utilizes typical off-the-shelf sensors, Wi-Fi networks, and edge gateway technology already in use in many production facilities, streamlining deployment.

Once data streams are established, all data is collected from the sensors and is communicated to the cloud over standard internet connections. This eliminates the need to purchase and manage servers and the associated IT footprint typical of legacy on-premise solutions. User access to the cloud applications and data are facilitated by using iOS iPads and iPhones over Wi-Fi for the most high-performing and user-friendly system on the market. All data is also available for access in external business intelligence applications.

7.4.3 Frontline Communication Platform

QAD Redzone is a digital communications and collaboration platform that enables frontline team members to instantly react to unplanned issues on the field of play and jointly problem-solve to significantly boost factory productivity. The solution delivers the following outcomes.

- *Everyone-to-everyone communication* – Harnessing the power of social/mobile communication to share ideas and processes, problem-solve, and more.
- *Team-of-teams collaboration* – Providing real-time data that enable production, quality, and maintenance teams to quickly work together to identify root causes, implement actions, and call *plays*.
- *Team celebration* – Recognizing excellent performance with *high fives* and *good catches* on the app and holding digital and in-person Town Halls to elevate the frontline's awareness and knowledge.

7.4.4 QAD Redzone Productivity Module

QAD Redzone's Productivity solution significantly increases factory productivity in 90 days by creating an environment for frontline teams to solve problems impacting the shift's performance, increasing throughput and reducing waste. The solution delivers the following outcomes for the production team as supported by the bulleted capability benefits.

Visual factory
Compelling, real-time dashboards built specifically for factory teams using data collected automatically from simple sensors, IIoT devices, and/or MES integration. This information is combined with context from your frontlines, providing everyone with actionable, key performance indicators (KPIs) and the ability to move the needle on production.

Problem solving
Tools such as automatically generated top-loss Pareto charts, digital fishbone diagrams, 5-why forms, and action items to help teams prioritize issues, diagnose and remediate root causes, and ensure that reported issues get addressed in a timely manner.

Digital Kaizen
Intuitive in-app reporting tools and advanced analytics to help frontline teams identify systemic problems and score them based on impact, cost, and effort of remediation. These tools and processes empower teams to focus on the highest-impact improvements and track results, creating sustainable processes and increasing value returned to the business.

7.4.5 QAD Redzone Compliance Module

QAD Redzone's Compliance solution transforms your quality assurance, environmental health and safety (EHS), CI, and materials programs from reactive to proactive functions. Teams use tools such as dashboards, triggers and alerts, and integrated quality records to rapidly identify and address product quality issues, reducing material waste and rework. Your frontline can improve quality outcomes, increasing customer satisfaction and your bottom line, by switching from a quality control mindset to that of quality assurance.

Paperless quality
Frontline workers perform digital quality checks, capture data easily, and use authentication methods in compliance with relevant regulations. Perform audits and answer customer questions in minutes, not days.

Statistical process control
Your team can reduce waste and variability by proactively adjusting processes when QAD Redzone predicts out-of-control conditions and alerts frontline workers. The solution automatically calculates real-time deep statistical parameters, keeping processes within specification control.

Audits and checklists
Your factory is always audit-ready with easy access to digital data. Your team can conduct audits with weighted scoring to ensure adherence to personnel safety, food safety, and internal management systems. Frontline workers use paperless processes for safety inspections, housekeeping, preflight checks, and more.

7.4.6 QAD Redzone Reliability Module

QAD Redzone's Reliability solution significantly enables operators to become more intimately involved in maintaining equipment. By doing so, they detect issues early so maintenance teams can conduct preventative maintenance, reducing unplanned downtime.

The solution delivers the following outcomes for the maintenance team, as supported by the bulleted capability benefits.

Operator equipment care
Factories transfer routine clean, inspect, and lubrication tasks to operators. In addition to upskilling operators, this frees up maintenance technicians to focus on higher-level issues and increase equipment uptime.

Enhanced maintenance collaboration
QAD Redzone removes the barrier between production and maintenance with equipment health reports. Together, these two functions allow for improved reliability outcomes, such as proactive defect notifications, service requests, and more.

Breakdown calls
Operators call maintenance when problems arise, providing early warnings of equipment issues and funneling the right information to the right person or team. Managers track incidents, to review data such as time to first contact and resolution timeframes, all of which reduce unplanned downtime and maximize asset availability.

7.4.7 QAD Redzone Learning Module

Manufacturers retain and develop talent by providing defined learning paths that start on Day 1. QAD Redzone helps manufacturers deliver an exceptional onboarding experience, with welcome videos, learning packs, and knowledge verifications to ensure new employees ramp up quickly, attain necessary skills, and begin delivering value.

A hallmark of the QAD Redzone experience is interactive, user-generated learning. Experts create multimedia work instructions with configurable work instructions. Anyone can develop a *play*, making a short video to contribute their knowledge about how to complete production processes, troubleshoot errors, and other issues.

With a real-time digital skills matrix and learning packs, workers drive their own development, acquiring new skills enabling them to progress their careers faster. They can also *tap* mentors on demand to gain insights into new production areas. Leads and supervisors can customize the skills matrix to flexibly meet their factory's production needs.

7.4.8 Expert Coaching

QAD Redzone solutions are different from traditional approaches in that coaching is a fundamental component of the platform deployment. Technology on its own changes little without ensuring users' behavior evolves to take advantage of the technological capabilities. Companies experience sustained results when they incorporate new skills in a way that enables teams to systematically improve their own performance. The QAD Redzone 90-Day Program includes:

- A short preparation phase to get you and your environment ready for improvement;
- Development of an agreed-upon success plan that is attainable and relevant;
- A *win the day* phase to align your teams on activities that deliver immediate improvement;
- A problem solving phase to implement skills that address the top recurring issues;
- Celebration for the whole company to reward your teams for their successes.

Learn more about the QAD Redzone Connected Workforce Solution at
https://rzsoftware.com/

Miami, FL (HQ) +1 305 374 6278
Denver, CO +1 720 223 6179
Birmingham, UK +44 121 740 0777

rzsoftware.com