





WEEK 1: MAR 4-8 / WEEK 2: APR 15-19 / WEEK 3: MAY 13-17 / WEEK 4: JUN 10-13 HELD ON THE CAMPUS OF THE OHIO STATE UNIVERSITY IN COLUMBUS, OHIO



# TOTAL PRODUCTIVE MAINTENANCE MANAGER CERTIFICATION – SPRING SESSION – COLUMBUS, OH

#### Because Your Lean Manager Can't do it Alone!

Created to develop resources capable of leading/managing a dynamic maintenance management and equipment improvement process using Total Productive Maintenance. Fully accredited certification for TPM managers and reliability leaders since 2010.















#### **Event Details**

#### Course Objective

- Become a Certified TPM Manager
- Learn TPM

#### m Business Sector

Manufacturing Transportation Municipalities

#### You Should Attend

- Maintenance Leaders and Managers
- Engineers process, industrial, reliability
- Production Managers
- Operations Managers
- Lean Managers

#### Duration

4 weeks

Dates & Location **2024 Spring** Session Columbus, OH





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# TOTAL PRODUCTIVE MAINTENANCE MANAGER CERT

Designed for those looking to lead a maintenance management and equipment improvement process using Total Productive Maintenance.

#### PROGRAM DESCRIPTION

If your value-streams are capital equipment intensive, developing an internal Total Productive Maintenance (TPM) resource will help you eliminate the equipment reliability issues breakdowns, minor stops, long changeover adjustments, and other inefficiencies that are hurting your competitiveness.

When moving from 40% OEE to 85% OEE you can double your capacity with no capital investment. And that's just one benefit of successful implementation of Total Productive Maintenance (TPM), other gains include:

#### Technical benefits such as...

- Productivity improvement of more than 35%.
- Increased equipment effectiveness from 50-70% to 80-90%.
- Unplanned downtime (breakdown & minor stoppages, etc.) reduced by about 80%.
- Reduced quality defects by up to 50%.
- Scrap reductions of approximately 65%.

#### Social benefits such as...

- Motivated workers committed to improvement.
- Goal oriented efficient teams.
- Pro-active, solution oriented thinking and acting.
- Safe and stable operating environment.

Equipment and process reliability are too important to your business success not to have a TPM effort and a well-trained TPM Manager to guide the implementation.

This highly interactive, fully accredited program is designed for corporate and plant personnel looking to learn, launch, and lead a proven, systemic, equipment and maintenance management improvement process—Total Productive Maintenance (TPM). Combining classroom learning with simulations, group exercises, targeted discussion sessions, and shopfloor application, TPM practitioners deep dive the concepts and tools of TPM and share lessons from their implementation experiences.

Participants learn how to establish the daily management behaviors that will sustain TPM and ensure alignment with overall improvement and Environmental, Health, and Safety goals.

#### Fully accredited certification for TPM managers and reliability leaders since 2010.

Over four non-consecutive weeks, attendees participate in a series of learning modules focused on the three critical areas for success: PLANNING, DOING, and LEADING.

Between session weeks on the campus of The Ohio State University's, students implement TPM projects at their own companies and present results during the next session week.

#### QUALIFICATION REQUIREMENTS

To qualify, all participants must have a management sponsor, who will attest to the results achieved in on-the-job assignments. Participants must be affiliated with a manufacturing or service organization actively pursuing process improvement techniques, and should have a fundamental understanding of TPM and lean techniques.

Participants who successfully complete the four-week training and mentoring program, pass the certification exam, and demonstrate successful implementation in their own facility are certified by Productivity Inc. and the Fisher College of Business as TPM Managers and earn 16 CEUs.







#### **PROGRAM OBJECTIVES**

#### TPMC graduates will gain overall knowledge of the eight pillars of TPM and will be able to:

- Establish and customize a strategy for implementing TPM.
- Properly use machine performance data to identify and execute a tactical action plan.
- Justify and implement a complete maintenance planning and scheduling process.
- Conduct and lead autonomous maintenance kaizen events.
- Design and perform site-specific TPM auditing processes.
- Establish a baseline data collection process and understand how to use the OEE metric.
- Conduct breakdown analysis reviews, and grasp their importance.
- Organize and control spare parts.
- Use the principles of Early Equipment Management.

#### PROGRAM CURRICULUM

|  | <b>WEEK 1</b><br>Plan  |                         | WEEK 2<br>Implement  |                         | WEEK 3<br>Implement  |             | WEEK 4<br>Lead  |
|--|--|-------------------------|--|-------------------------|--|-------------|---|
| MONDAY<br>8AM-5PM *  | Context and Strategy—     TPM as an Enabler                      | In-plant Implementation | Homework Reports     TPM Leadership                                    | In-plant Implementation | Homework Reports     Maintenance Improvement   |             | TPM Manager—Facilitator and Coaching Skills Final Project Reports   |
| TUESDAY<br>8AM-5PM   | The Zero Failure Principle<br>and the Pillars of TPM             |                         | 5S/Visual Workplace<br>and Mistake Proofing     Autonomous Maintenance |                         | Maintenance Improvement<br>Continued   | lementation | <ul> <li>Quality Maintenance<br/>Round Table</li> <li>Environmental Health and<br/>Safety, and Going Green</li> <li>Office TPM and Support<br/>Systems</li> </ul> |
| <b>WEDNESDAY</b><br>8AM-5PM  | • The Master Plan  |                         | Standard Work for TPM Six Sigma and TPM (DMAIC, SIPOC, CEDAC)          |                         | Maintenance Improvement<br>Continued   | -plant Impl | Early Equipment     Management     TPM Audit and Accountability   |
| THURSDAY<br>8AM-5PM  | Value Stream Analysis     Focused Improvement                    |                         | Plant Application  |                         | Plant Application  | Ė           | Certification Exam     Graduation Dinner  |
| FRIDAY<br>8AM-12PM   | Project Chartering and<br>Project Management     Quiz & Homework |                         | Set-Up Reduction (The SMED System) Week in Review Quiz & Homework      |                         | <ul><li>Training and Skills Development</li><li>Week in Review</li><li>Quiz &amp; Homework</li></ul> |             |   |
| *Note that the program's first day (Monday of Week 1) begins with registration at 12:30, followed by class at 1:00 pm. |  |                         |  |                         |  |             |   |

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#### WHAT PAST ATTENDEES ARE SAYING...

"The TPM Certification training was one of the most rewarding accomplishments of our professional careers. It has given us the knowledge, skills, and inspiration needed to make some positive changes in the way maintenance is carried out at Miba. We are also looking forward to continuing our Lean training with Productivity Inc at Ohio State University this Spring."

Troy Adams and Brent Graham - Production Support Engineers - Miba Bearings US

"It is the most useful education for my career to date."

Keith Dimpsey - TPM Manager - MI Windows & Doors

"Well planned and delivered in both theory and application. I felt the plant visits were critical to providing the experiential knowledge needed to truly understand the concepts."

Michael Smith - Black Belt - Delta Airlines









### TOTAL PRODUCTIVE MAINTENANCE MANAGER CERTIFICATION

The TPMC curriculum is divided into four, 1-week sessions focused on planning, implementing, and leading a TPM initiative.

These week-long sessions are spaced over approximately 4 months. During the three intervening weeks between each session week on the campus of The Ohio State University, participants apply learning on the job and present results at the following session.

#### PROGRAM CURRICULUM

#### Week 1 - Plan

In TPMC Week 1, essential concepts and foundations of TPM and managing a TPM rollout are instilled in participants. Learn the eight pillars of TPM, how TPM integrates with and builds upon improvement strategies, and how to assess the current state and create a TPM roadmap and 12-step TPM rollout process.

#### Modules include:

Context and Strategy—TPM as an Enabler / The Zero Failure Principle and the Pillars of TPM / The Master Plan / Value Stream Analysis / Focused Improvement / Project Chartering and Project Management.

#### Week 2 - Implement

The success of your TPM initiative depends on skillful leadership of the change process at all levels. TPMC Week 2 kicks off with the best ways to build an initiative that will become ingrained in the organizational culture. The week continues with more in-depth training and practice in TPM methods and tools.

#### Modules include

TPM Leadership / 5S/Visual Workplace and Mistake Proofing / Autonomous Maintenance / Standard Work for TPM / Six Sigma (DMAIC, SIPOC) / Plant Application Exercise / Set-Up Reduction / Quick Changeover (The SMED System).

#### Week 3 - Implement

The maintenance improvement and training/skills development pillars of TPM are covered during TPMC Week 3. The goals are to move away from reactive to proactive or planned maintenance, and to train staff in an effective way that increases capabilities while reducing training costs.

#### Modules include:

Maintenance Improvement (including Stores Management / Maintenance Planning and Scheduling / Maintenance Skills Development / Predictive Maintenance Tools, Maintenance Scorecards, and the Computerized Maintenance Management System, or CMMS) / Plant Application Exercise / Training and Skills Development.

#### Week 4 - Lead

The final week of TPMC delves into the critical role of the TPM manager in the change process, teaches a system for auditing and accountability, and covers the last four pillars that extend the TPM process beyond the basics and off the production shop floor: quality maintenance, EHS, administrative TPM, and early equipment management. Final project summaries are presented, bringing the learning back to the reality of on-the-job application.

#### Modules include:

Machine Failure Analysis, TPM Manager – Facilitator and Coaching Skills / Quality Maintenance Round Table / Environmental Health and Safety, and Going Green / Office TPM and Support Systems / Early Equipment Management / TPM Audit and Accountability.







#### TPM Manager Certification program – module summary – week 1 – Plan

#### REGISTRATION:12:30PM PROGRAM:1PM-5PM

#### Context and Strategy—TPM as an Enabler

TPM is not a maintenance program. TPM must be an integral part of your organization's business improvement strategy. It is the most effective way to hit critical plant performance metrics like yield, cost, customer service, velocity and safety.

Chances are you will fall short of these strategic performance targets absent a meaningful TPM effort.

In this session, discover how TPM builds upon established equipment-management approaches that foster team work, improve quality, delivery, enhance safety, and build robust processes enabling you to maximize your production system's overall performance and cost effectiveness.

We will explore TPM in the context of overall operations improvement and how it integrates with an organization's improvement strategy.

#### **TUESDAY 8AM-5PM**

#### The Zero Failure Principle and the Pillars of TPM

The goal of TPM is to minimize equipment life cycle cost and achieve zero-zero speed losses, zero unplanned downtime, zero safety incidents, zero quality issues, etc.

The principle of zero failures states that abnormalities that go unnoticed or are ignored eventually lead to some type of failure.

During this session, we will carefully explain each of the basic TPM Pillars and how they relate to each other to create a natural synergy enabling you to achieve the goal of zero.

Gain a good understanding of the pillars and how and when you implement them to get the greatest return in the shortest possible time.

Actual case studies will be explored to show the rates of sustained improvements and to illustrate the relationship between TPM and the roots of Lean manufacturing.

#### WEDNESDAY 8AM-5PM

#### The Master Plan

In this module we will introduce a generic TPM roadmap and a twelve step roll-out implementation process.

We will discuss how to customize a plan for your individual environment, what you need to do to establish internal organizational pull and a structure to support the process.

We will also review tools such as the TPM Scan and Site Readiness Assessment, used to assess your current state.

#### **THURSDAY 8AM-5PM**

#### Value Stream Analysis

Many organization's value stream mapping efforts provide them with a cloudy picture of current state because they lack information about the state of their equipment process needs.

In this module, students will learn the skill of VSA to probe deep into the data to find the weaknesses within the organization. This information will then guide the Tactical plan for implementation.

#### Focused Improvement

As a part of implementing your plan you will need to identify areas and specific pieces of equipment where you will begin your improvement efforts.

Focused Improvement is the process of using overall equipment effectiveness and other machine data to identify a launch point as well as a tool to pinpoint weakness identified in your value stream map.

In this session we will define the true calculation of OEE and the methods for reporting the data and show you how to use the Focused Improvement Diagram (a visual systematic approach to the DMAIC process) to document, monitor, and trend equipment related losses, and to create a process for determining the remedial actions necessary for loss control/ elimination

#### FRIDAY 8AM-11AM

#### Project Chartering and Project Management

Project chartering and project management are central to continuous improvement.

This module introduces the A3 framework which provides the documentation and guidelines that govern the successful identification, monitoring, opening and closing of TPM projects.

We will also explore project management principles, success factors, management guidelines, the easy to use practices of monitoring project status, and the aggregate contribution to the company's improvement strategy/initiatives.

#### Homework Assignments

At the conclusion of the week 1 training session, several homework assignments will be made. These assignments are structured to reinforce the learning that takes place in the classroom sessions.

Homework assignments may include items such as assessing your current state, collecting and analyzing information to facilitate master planning, creating a project charter, and selecting an initial application (pilot) area









#### TPM Manager Certification program - module summary - week 2 - Implement

#### **MONDAY 8AM-5PM**

#### Homework Reports

Each participant will be required to prepare and make a brief presentation explaining the learning and discoveries made by completing their week 1 homework assignment. The focus on the report-out is solely on sharing learning, not presentation skills.

These report-out sessions offer great opportunities to address real-world TPM implementation issues, so questions and "yeah buts" are strongly encouraged.

#### **TPM Leadership**

The overall success of your TPM initiative depends on your leadership and your ability to lead the change process.

In this module we look at the fundamental challenges of leading a TPM transformation, how to build a network of "assistants", address the most common transformational issues, and discuss the options and alternatives to proving remedial corrective-actions and countermeasures.

#### **TUESDAY 8AM-5PM**

#### 5S/Visual Workplace and Mistake Proofing

This module covers the principles and techniques needed to apply 5S and establish visual management systems to improve equipment process reliability, workplace communication and adherence to standards.

Learn how to implement visual controls, visual displays, and mistake proofing to ensure normal operating conditions are monitored, standard work is adhered to, and abnormalities are recognized immediately.

#### Autonomous Maintenance

Autonomous Maintenance is the foundational pillar of TPM and when properly implemented can eliminate the causes of 40-60% of unplanned downtime.

In this module, we will guide you through the seven steps of autonomous maintenance, how to transform the relationship between operators and maintenance, and how to implement operator-based maintenance activities that contribute to overall equipment effectiveness.

#### WEDNESDAY 8AM-5PM

#### Standard Work for TPM

Standard work is a key element in the elimination of waste and a critical component of both operator based maintenance (Autonomous Maintenance Pillar) and maintenance improvement (Maintenance Improvement Pillar).

In this module, you will learn a proven methodology to develop a standard procedure, and then apply document control and visual workplace principles and techniques to train others in their new best practice.

#### Six Sigma and TPM (DMAIC, SIPOC, CEDAC)

A recent study showed that 60% to 80% of all Six Sigma projects had equipment reliability issues as either a root cause or a significant contributing cause. Therefore, to reduce overall process variation, it is imperative to improve equipment process reliability.

In this module we will discuss the relationship between Six Sigma and TPM. We will explore the fundamentals of Six Sigma and review how to determine the appropriate place to conduct Six Sigma analysis of a process.

Learn to discover significant variables and how knowledge of variation enhances management decisions and value to the customer. Through simulations you will get a firsthand demonstration of the Six Sigma methodology in action.

An overview of the DMAIC and CEDAC methodologies as well as the SIPOC process will be presented.

#### **THURSDAY 8AM-5PM**

#### Plant Application

Participants will travel to a local manufacturing facility for a real-time, hands-on application exercise. While at the facility you will be assigned specific project areas where you will work with a team to execute a variety of TPM applications taken from the classroom learning.

Teams will apply the various process improvement tools, make recommendations for improvement, and report on their findings.

#### FRIDAY 8AM-11AM

#### Set-Up Reduction (The SMED System)

TPM addresses the concept of the Six Big Losses, defined by Nakajima as formidable obstacles to equipment effectiveness.

Implementation of the Quick Changeover methodology directly addresses one of these losses—set up and adjustment—and will help you dramatically reduce the downtime associated with set-ups and other machine changeovers resulting in increased flexibility and customer responsiveness.

The changeover methodology can also play a major role in reducing the time to complete major machine repairs, PM's, and many more similar applications.

This module will demonstrate how you can use the principles of Quick Changeover to greatly improve a variety of maintenance and other activities found anywhere people and processes interact.

#### Homework Assignments

At the conclusion of the week 2 training session, several homework assignments will be made.

These assignments are structured to further reinforce the learning that takes place in the classroom sessions.







#### TPM Manager Certification program – module summary – week 3 – Implement

#### **MONDAY 8AM-5PM**

#### Homework Reports

Each participant will be required to prepare and make a brief presentation explaining the learning and discoveries made by completing their week 2 homework assignment. The focus on the report-out is solely on sharing learning, not presentation skills.

These report-out sessions offer great opportunities to address real-world lean implementation issues, so questions and "yeah buts"are strongly encouraged.

#### Maintenance Improvement

The goal of the Maintenance Improvement Pillar of TPM is to move away from reactive to a proactive or planned maintenance process.

As part of this process, maintenance personnel analyze breakdowns to reveal equipment weaknesses and then modify equipment to improve its operation, maintainability, and lengthen equipment life.

In this module we will discuss the activities embedded in the four maintenance techniques-preventative, corrective, prevention, and breakdown and how and when to use them.

#### Sub-modules to this topic include:

- The importance of stores management.
- Proper implementation of maintenance planning and scheduling.
- Maintenance skills development.
- Lubrication management, predictive maintenance tools, documentation management, etc.
- Establishing the Maintenance Scorecard.
- Establishment and usage of the Computerized Maintenance Management System.

#### **TUESDAY 8AM-5PM**

#### Maintenance Improvement Continued

#### WEDNESDAY 8AM-5PM

#### Maintenance Improvement Continued

#### **THURSDAY 8AM-5PM**

#### Plant Application

Participants will travel to a local manufacturing facility for a hands-on application. While at the facility, participants will be assigned to specific project areas where they will work as a team to execute a variety of Lean applications taken from the classroom learning.

Teams will apply the various process improvement tools, make recommendations for improvement, and report on their findings

#### FRIDAY 8AM-11AM

#### Training and Skills Development

This often overlooked Pillar of TPM usually gets put aside because conventional wisdom tells us each of the other TPM pillars require training, therefore we must already be performing the Training and Skills pillar.

This module will show that having a specific focus on the Training and Skills pillar will enhance building your capabilities and reduce training cost at the same time.

You will learn tools and techniques that will increase your training effectiveness in both hard and soft skills critical to an effective TPM implementation.

#### Homework Assignments

At the conclusion of the week 3 training session, several homework assignments will be made.

These assignments are structured to further reinforce the learning that takes place in the classroom sessions.

#### Lean Resources on our web site



#### What's Missing From Your Lean Initiative?

Most business owners and general managers recognize just how critically important proper equipment maintenance is...

→ Read more at <u>www.productivityinc.com</u>







#### TPM Certification - week 4 - Lead

#### **MONDAY 8AM-5PM**

#### Machine Failure Analysis

Key to ensuring a maintenance process that continually strives for Zero Failures is the skill to analyze those failures and eliminate them from ever reoccurring in the future. Machine Failure Analysis incorporates standard problem solving methods with maintenance system outcomes to produce a problem solving technique designed specifically to analyze and eliminate machine failure.

This team based approach to maintenance improvement looks at the failure on a physical systemic level. Mechanical attributes, spare parts, preventative maintenance procedures and employee skills are all analyzed and reworked to ensure the failure never returns.

#### TPM Manager—Facilitator and Coaching Skills

The experts say that a key person in the organizational structure for TPM implementation is the TPM Manager. They are critical links between management hierarchy and the people out in the work place. TPM Managers bridge the gap between the current and desired culture.

In this module you will learn a variety of techniques to coach and facilitate team members, whose support will be vital to the change process. These techniques will allow you to effectively communicate the TPM plan, overcome resistance to change, plus gain and sustain support for the initiative.

#### Homework Reports and Final Project Summaries

Each participant will be required to prepare and make a brief presentation explaining the learning and discoveries made by completing the week 3 homework assignment.

The focus on the report-out is solely on sharing learning, not presentation skills. These report-out sessions offer great opportunities to address real-world lean implementation issues, so questions and "yeah buts" are strongly encouraged.

Each participant will be required to revisit their initial project charters and business impacts in a final presentation that explains their journey from initial current state to future state and the discoveries made along the way

#### **TUESDAY 8AM-5PM**

#### Quality Maintenance Round Table

The overall goal of the Quality Maintenance Pillar of TPM is to maintain your equipment in perfect condition in order to produce a perfect product. It is like moving from quality control to quality assurance!

The Quality Maintenance pillar of TPM focuses on establishing and monitoring equipment conditions in order to preclude quality defects. To accomplish this, the Quality Maintenance Pillar uses the tools of Six Sigma to identify conditions that affect quality, establish a baseline for those conditions, and to create a process for periodic monitoring of those conditions.

In this roundtable discussion we will explore the integration of TPM and the tools of Six Sigma and learn how applying both of these methodologies in tandem presents today's most powerful means of achieving your equipment performance goals of "zero breakdown" and "zero defects" with minimum maintenance costs.

#### Environmental Health and Safety, and Going Green

Safety, reducing injuries and accidents, and negative environmental impacts are basic tenets of TPM.

In this module we will explore how the TPM Pillars can be used in a collaborative context with your company's EHS initiatives. Learn how to effectively link TPM and EHS to achieve safety and environmental, chemical, and energy waste reduction, ensure compliance, and maximize improvement opportunities.

#### Office TPM and Support Systems

Unlike the production department, administrative and support functions such as planning, R & D, customer service, and accounting do not add value directly to the product. Yet they play a vital role in the organizations overall value chain. These functions must be flexible in order to respond to a rapidly changing business environment, outperform the competition, and win customer confidence.

To accomplish these goals these functions must understand their role in support of the TPM process in the production area, and ask how they use the TPM principles and practices to enhance their own effectiveness? In this module we will learn the importance of educating, training and involving your administrative areas in TPM, as well as looking at actual examples of office TPM improvements and their associated cost/time savings.

#### WEDNESDAY 8AM-5PM

#### Early Equipment Management

Early Equipment Management (EEM) is a structured process, which mandates a collaborative partnership between production, maintenance, and engineering that focuses on reducing the complexity associated with the real-time operation and maintenance of equipment. EEM brings the principles of Lean to the design and manufacture of equipment. The Early Equipment Management strategy consists of three elements:

- 1. Design for Quality Assurance
- 2. Design for Maintainability
- 3. Life Cycle Costing

In this module, you will learn how to develop a powerful EEM strategy ideal for your specific production environment which will result in equipment that is easy to operate, easy to maintain, and "right-sized" to aid in establishing flow and increasing your value add.

#### TPM Audit and Accountability

The success of your TPM implementation is often measured by the change in critical internal measurements such as throughput, quality and even safety. These numbers reflect how well TPM is working to improve the overall company, but those who are tasked with implementing TPM need quicker, real-time data to steer the implementation effort. Setting up a proper TPM auditing process can be the catalyst to improving the speed and quality of your implementation process.

This session will teach you how to design, conduct, report and use the TPM audit to improve your implementation effort.

THURSDAY 8AM-7:30PM

CERTIFICATION EXAM 8A GRADUATION DINNER 5:3

8AM-12:30PM 5:30PM-7:30PM









Productivity Inc. is a leading consulting and education firm that helps organizations build new capabilities, create better customer experiences, and grow. We focus on three progressive strategies: Operational Excellence, Innovation and Leadership Development.

Working together, these strategies provide the means to continually refresh a company's value proposition while making the organizational changes needed for daily improvement and sustainable growth.

We pioneered the implementation of Lean and TPM methodologies in manufacturing in the late 1970s. Since then, we have extended these methodologies across a wide range of industries, including finance, public works and other service industries. Our time-tested Lean Management System - motion™ The Management System by Productivity - provides a uniquely comprehensive approach to implementing lean across an entire enterprise.

Our Innovation System, developed from years of research into proven, leading-edge practices for innovation management and top-line growth, helps organizations in both service and manufacturing industries to develop an organization-wide capability to innovate. More than simply a lean consulting firm, Productivity Inc. can provide a variety of methodologies to keep your business in motion™.

Learn more at www.productivityinc.com



#### motion<sup>™</sup> – The Management System by Productivity

#### Imagine...

- Your customers are your best supporters,
- employees at all levels know their customers and actively solve problems to better serve them,
- leaders team-up to prepare their long-term plans and translate them into annual objectives and work place initiatives,
- leaders and managers work closely together to set direction and provide sense of purpose,
- continuous improvement and innovation in action,
- an organization of networked teams fully integrated and enabled...

What you are imagining is an organization in motion™, and we can help you get there!



Live the experience of motion™, the Management System by Productivity

#### The Innovation System™ by Productivity

In a rapidly changing environment, current value propositions are not enough to ensure your organization's long-term survival. You'll need reliable pathways for creating new value. In our experience we've found that the traditional value creation functions are not structured for this type of innovation effort.

This effort – the development of an organization-wide capability to reliably, repeatably and predictably create new value – requires the building of an Innovation System to provide the means to explore outside the confines of your existing business model.

Productivity has developed a systemic process for creating an organization-wide Innovation capability — developing your own Innovation System™.

Live the experience of The Innovation System™ by Productivity









# On-Site Training and Skill Development for Manufacturing and Service Industries

Actionable, Proven, Results-Oriented...

As stand-alone training sessions or combined into a multi-session curriculum, our proven training programs will provide the knowledge transfer and skill you need to participate and add value to your organization's Operational Excellence effort.

All our on-site training programs are taught using a Learn-by-Doing approach that translates theory into action providing your organization with an immediate return.

We can work with you to collaboratively build a curriculum that fits your specific training needs, allowing you to achieve short-term results while developing long-term organizational capabilities.

We have provided customized training curricula to organizations throughout the Global 1000 including: adidas AG, BNP Paribas, The Emerson Electric Company, Kaiser Aluminum Company, Gannett NJ Media Group, Oldcastle BuildingEnvelope, Suncor Energy, and Whirlpool Corporation. We would welcome the opportunity to collaboratively develop a curriculum that fits your specific training needs.



#### LEADERSHIP DEVELOPMENT EXPERIENCE

Training and coaching for leaders and managers to plan, deploy, lead and support a sustainable, company-wide, improvement and growth program.



#### **LEAN IN SERVICES**

Developed for all service environments, learn how the application of Lean techniques improves customer service and develops strategic competitive advantage.





#### TPM AND LEAN

Learn the TPM Pillars and Lean techniques necessary to implement a TPM and Operational Excellence program in your facility.

#### All Our On-site Training Programs

#### We Educate – We Certify

In the change process, everyone needs to understand how they can contribute. This understanding begins with education.

Get everyone speaking (and practicing) the same "language"! That's what our educational programs are designed to do. In the 1980's, we were the first organization to introduce Lean educational workshops and learn-by-doing kaizen events. Over the years, we have continuously upgraded and improved our training curricula.

Productivity has partnered with **The Ohio State University's Fisher College of Business** to offer Lean Certifications and Certificates.



#### LEAN MANAGER CERTIFICATION - LMAC - COLUMBUS, OH

Designed for leaders and managers seeking the knowledge and confidence necessary to drive Lean principles throughout their organizations.



#### LEAN MANAGEMENT CERTIFICATION FOR SERVICES - LMAC SERVICE - COLUMBUS, OH

Designed for leaders and managers seeking the knowledge and confidence necessary to drive Lean principles throughout their organizations.

All Our Public Educational Events









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Please print. Copy this form for additional registrations.

# TOTAL PRODUCTIVE MAINTENANCE MANAGER CERTIFICATION SPRING SESSION COLUMBUS, OH

NAME TITLE COMPANY **ADDRESS** STATE CITY ZIP **PHONE EMAIL PAYMENT OPTIONS** Payment must be received BEFORE the event. This event fills up quickly therefore we cannot confirm your registration until payment is received. PROGRAM TUITION: \$16,500.00 For larger groups please call for special rates 1-800-966-5423 or (203) 225-0451 OENCLOSED IS MY CHECK FOR \$ PAYABLE TO: PRODUCTIVITY INC., DRAWN ON A U.S. BANK. CHARGE MY OVISA OMASTERCARD OAMERICAN EXPRESS CARD # (include 3 or 4 digit security code) BILLING ADDRESS FOR CARD NAME ON CARD CARD HOLDER SIGNATURE

Qualification Requirements: To qualify, all participants must have a management sponsor, who will attest to the results achieved in the assignments completed back in their own facilities. Participants must be affiliated with a manufacturing or service organization actively pursuing process improvement techniques.

Payment Options: Payment must be received BEFORE the event. This event fills up quickly therefore we cannot confirm reservations until payment is received. Payment installments available. (This option includes a \$150 processing fee.)

Attendee Substitutions: Prior to the start of the program, registrations may be transferred to a colleague without charge. Once the program is underway, substitutions cannot be made. Attendance: Attendees must attend all modules to qualify for certification. Cancellation Policy: to be considered for a refund, we must receive notification of cancellation in writing no later than 60 days prior to the start of the program. Cancellations received within 60 days of the start of the program are subject to the full registration fee; this money will be held on account for up to one year for use at a future program. Cancellations received within 20 business days of the start of a program will be assessed a fee equal to 30% of the registration fee; the remainder of the fee will be held on account for up to one year for use at a future program. If no notification of cancellation is provided, registration fees will be forfeited. In addition to the aforementioned, there is a \$200 processing fee for all cancellations. No refunds or credits will be issued once a program is underway. On rare occasions, circumstances may make it necessary to cancel or postpone an event. We encourage attendees to book refundable/reusable airline tickets. We will not be responsible for incidental costs incurred by registrants.

By registering for this event, the registrant hereby acknowledges and agrees that any photographs or videos taken during the event may be used in marketing efforts, including but not limited to news and promotions (web/print) without compensation to the registrant.

ACCOMMODATIONS: A block of rooms is being held for Productivity Inc. TPMC attendees at the Blackwell Hotel on The Ohio State University campus. The address is 2110 Tuttle Park Place, Columbus, OH 43210. Productivity Inc. attendees have been given a reduced rate of \$159.00 per night single or double occupancy. Please call 614-247-4000 or toll free 866-247-4003 for reservations and identify yourself as a Productivity TPMC attendee. The special rate is available up to four weeks prior to the event / after this date the hotel cannot guarantee availability. For more information on the Blackwell Hotel, please visit www.theblackwell.com. The hotel is approximately 8 miles from the Columbus International Airport.

Note: All registrant applications will be evaluated for acceptance into the program. Consultants may not attend.

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