ACM Progressive Manufacturing Team Presents a Zoom Meeting

➢ Machine Monitoring - A Case Study
➢ DeepHow - Stanley X
Bridge the Skills Gap in Manufacturing
➢ Money for Manufacturing - Grant Programs Available

Zoom with Us

WEBINAR AGENDA

➢ Introductory Comments – Paul Murphy
➢ Introduction of Presenters – Eric Schneider

➢ Machine Monitoring - A Case Study
  Presenter: Mark Langlais – Langlais Computer Consultants
  Presenter: Tom Beach – Peening Technologies

➢ DeepHow – Stanley X
  Presenter: Rebecca Peredo, Director of Commercialization, Stanley X
  Presenter: Kristi Oki, Engineer, Automation & Material Lab CCAT

➢ Money for Manufacturing
  Presenter: Paul Striebel CCAT

➢ Closing Remarks and Updates – Paul Murphy

February 18, 2021 10:45am
Asset Monitor
Your Complete Machine Monitoring Web Portal
On-Premise Solution

The customer purchases and maintains servers, updates, and security…
Cloud Solution

Access anywhere, anytime, from any PC or mobile device with banking level security…

MyAssetMonitor.com
Start with a reliable and robust wired or wireless connection...
Customizable dashboard and report quickly identify problems on the shop floor.

Create custom reports and dashboard using Microsoft’s SSRS and Power BI Tools
Peening Technologies: Our Goals

- Wanted a way to get a big picture view of our machine utilization.
- We were fearful the solutions out there would be too costly and not fit within our budget.
- We were looking for something easy to implement.
- Interface with existing equipment (ADAM I/O Module).
- Dashboards.
- Could we offer this as an option with our equipment sales?
- We were introduced to Asset Monitor when it was being installed on a machine we sold to a local customer. That started a conversation with LCC and we subsequently became a customer and now a distributor.
Peening Technologies: How We Started

- Selected a single test machine using the ADAM Module.
- Identify signals. Utilize signals with discrete I/O – for us things like power on and blast air on were easy to grab.
- Stack lights are a good place to start.
- Faults were a little more difficult to differentiate since they did not always have a discrete I/O associated. For this we simply used the red LED fault light found on our stack lights.
- We took our time experimenting with different signals and configurations to get the data we felt was most useful before rolling out.
Peening Technologies: Where We Are

We settled on six signals: blast air on (2), power, red LED fault light, control hot, and a service switch.

We created some derived signals. Key for us was “Process Fault” which combines power on, blast air on, and red LED fault light on. Here we track faults only while in cycle (if we need to, we can dig deeper into the individual machines event log).

Our Maintenance Manager created the idea of a “Service Required” key switch. A Lead Operator from any shift can activate the switch which then shows up on the status board and emails maintenance.
Peening Technologies: Where We Are

- We use text and email notification for process faults.
- Currently building up our data, reviewing reports to identify those most beneficial.
- After a couple of false starts, we are implementing the Preventative Maintenance Schedules function.
Screens – Asset Details
Screens - PM
Install Basics
<table>
<thead>
<tr>
<th>Machine</th>
<th>Location</th>
<th>Status</th>
<th>RUNNING</th>
<th>%</th>
<th>Parts</th>
</tr>
</thead>
<tbody>
<tr>
<td>E-1</td>
<td>Main Shop 1</td>
<td>Not in Cycle</td>
<td></td>
<td>28.09%</td>
<td>NA</td>
</tr>
<tr>
<td>PTC-07</td>
<td>Main Shop 1</td>
<td>Not in Service</td>
<td></td>
<td>0.00%</td>
<td>NA</td>
</tr>
<tr>
<td>PTC-08</td>
<td>Main Shop 1</td>
<td>Not in Cycle</td>
<td></td>
<td>31.13%</td>
<td>NA</td>
</tr>
<tr>
<td>PTC-09</td>
<td>Manchester</td>
<td>Not in Cycle</td>
<td></td>
<td>22.22%</td>
<td>NA</td>
</tr>
<tr>
<td>PTC-10</td>
<td>Main Shop 1</td>
<td>Not in Cycle</td>
<td></td>
<td>22.63%</td>
<td>NA</td>
</tr>
<tr>
<td>PTC-11</td>
<td>Main Shop 1</td>
<td>Not in Cycle</td>
<td></td>
<td>9.46%</td>
<td>NA</td>
</tr>
<tr>
<td>PTC-12</td>
<td>Main Shop 2</td>
<td>In Cycle</td>
<td></td>
<td>2.15%</td>
<td>NA</td>
</tr>
<tr>
<td>PTC-13</td>
<td>Main Shop 2</td>
<td>Not in Cycle</td>
<td></td>
<td>14.69%</td>
<td>NA</td>
</tr>
<tr>
<td>PTC-15</td>
<td>Main Shop 2</td>
<td>Service Required</td>
<td></td>
<td>0.81%</td>
<td>NA</td>
</tr>
</tbody>
</table>
## Dashboard

<table>
<thead>
<tr>
<th>Machine</th>
<th>Location</th>
<th>Status</th>
<th>RUNNING</th>
<th>%</th>
<th>Faults</th>
</tr>
</thead>
<tbody>
<tr>
<td>E-1</td>
<td>Main Shop 1</td>
<td>Not in Cycle</td>
<td></td>
<td>43.12%</td>
<td>1</td>
</tr>
<tr>
<td>EA2</td>
<td>Main Shop 1</td>
<td>Not in Service</td>
<td></td>
<td>0.00%</td>
<td>NA</td>
</tr>
<tr>
<td>ID</td>
<td>Main Shop 1</td>
<td>Not in Service</td>
<td></td>
<td>0.00%</td>
<td>NA</td>
</tr>
<tr>
<td>PTC-03</td>
<td>Manchester</td>
<td>Not in Service</td>
<td></td>
<td>0.00%</td>
<td>NA</td>
</tr>
<tr>
<td>PTC-04</td>
<td>Manchester</td>
<td>Not in Cycle</td>
<td></td>
<td>25.03%</td>
<td>NA</td>
</tr>
<tr>
<td>PTC-05</td>
<td>Manchester</td>
<td>Not in Service</td>
<td></td>
<td>0.00%</td>
<td>NA</td>
</tr>
<tr>
<td>PTC-07</td>
<td>Main Shop 1</td>
<td>Not in Cycle</td>
<td></td>
<td>0.00%</td>
<td>1</td>
</tr>
<tr>
<td>PTC-08</td>
<td>Main Shop 1</td>
<td>In Cycle</td>
<td></td>
<td>28.34%</td>
<td>1</td>
</tr>
<tr>
<td>PTC-09</td>
<td>Manchester</td>
<td>In Cycle</td>
<td></td>
<td>10.58%</td>
<td>NA</td>
</tr>
<tr>
<td>PTC-10</td>
<td>Main Shop 1</td>
<td>Not in Cycle</td>
<td></td>
<td>0.00%</td>
<td>NA</td>
</tr>
<tr>
<td>PTC-11</td>
<td>Main Shop 1</td>
<td>In Cycle</td>
<td></td>
<td>17.78%</td>
<td>NA</td>
</tr>
<tr>
<td>PTC-12</td>
<td>Main Shop 2</td>
<td>Not in Cycle</td>
<td></td>
<td>0.00%</td>
<td>NA</td>
</tr>
<tr>
<td>PTC-13</td>
<td>Main Shop 2</td>
<td>Not in Cycle</td>
<td></td>
<td>20.59%</td>
<td>NA</td>
</tr>
<tr>
<td>PTC-15</td>
<td>Main Shop 1</td>
<td>Not in Cycle</td>
<td></td>
<td>2.90%</td>
<td>NA</td>
</tr>
<tr>
<td>R82-ID</td>
<td>Main Shop 2</td>
<td>Not in Service</td>
<td></td>
<td>0.00%</td>
<td>NA</td>
</tr>
</tbody>
</table>
Reports – Uptime / Downtime

CNC Machine Monitoring - Asset Monitor

- Machine: E-1 PTC-08
- Shift: 1st Shift
- Start Date: 11/16/2020
- End Date: 11/20/2020
- Uptime Signal: RUNNING
- Downtime Signal: NOT IN SERVICE, NOT RUNNING

Uptime/Downtime Summary Report

Date Range: Nov 16, 2020 to Nov 20, 2020

Machine #4
Name: E-1
- Downtime: 08:29:25
- Uptime: 00:03:38

Machine #7
Name: PTC-08
- Downtime: 02:19:26
- Uptime: 00:09:17
Additional Features

- Lights Out machining support.
- Part metrics reporting (counts, runtime).
- Stop reason tracking.
- Analog data capture (temp, flow, pressure, etc.).
Part Metric Reporting
Stop Reason Tracking Support

Report reasons for machine downtime
More Info:

myassetmonitor.com

tombeach@peentech.com
Presenter Profiles

Rebecca Peredo
Director of Commercialization, Stanley X Talent Solutions

Rebecca leads commercial strategy and customer success for Talent Solutions at Stanley X. She has a background in Industrial Engineering, facility operations and construction logistics, & brings those operations perspectives to emerging technology development and deployment. Rebecca is based in Chicago and enjoys triathlons and traveling in her free time.

Audrey Van De Castle
Manager, Industry 4.0 & Upskilling, Stanley Black & Decker Global Operations

Audrey Van de Castle is the Training Innovation and Maker Initiatives Manager at Stanley Black & Decker, Inc. She leads the deployment of DeepHow across the business – scaling the software in over 50 operation sites and various teams. Audrey is a Baltimore native and enjoys teaching others, using power tools, and fighting robots.
• **DeepHow** Demo & Product Highlights
• SBD Workforce Readiness Experience
  • Priorities & benefits
  • Commitments & Key Success Factors
• Partnership Roles & Responsibilities
• Program Overview
• Use case / Applications
• Program Requirements & Next Steps
DEMO VIDEO

Click Here
DEEPHow Solutions

- **Designed for the tradesperson**
  Intuitive interface is easy to use and geared towards manual activity training

- **Multi-language support**
  Platform automatically translates content

- **Tailored to your business**
  Capture *your* processes, equipment and standards

- **Cloud-based**
  No on-premise technology to buy or maintain & easily scalable to your entire organization
Learning & Development Focus in SBD Operations

PRIORITIES

- Standard Work & Cross Training
- 4.0 Upskilling
- Knowledge Transfer
- Social Distancing
- EHS & Quality

BENEFITS

- **Centralized Training** – Provide training and SOP documentation in a user friendly and consistent format
- **Scalability** – Easily scale and share videos, best practices, communications across sites
- **Risk Mitigation** – Capture knowledge of workforce veterans prior to retirement
- **New Way of Learning**

"YouTube [videos] is the newer way of training people, because people look up anything they want. First thing you want to do if you have a question is typically Google it. You don’t go in a handbook or anything like that anymore."

– SBD Technician
WHAT TO EXPECT

The most time-consuming part of implementation will be building your content. Focus on getting this right so that the training is easy!

Technology is great, but it is human powered. You need to devote the resources to make it a success.

KEY SUCCESS FACTORS

Strong use case is critical for early engagement
- Be specific & deliberate – don’t boil the ocean!
- Tie to KPI’s (Safety, Quality, Delivery, Cost)
- Leverage OEE data to direct efforts

Site champion or training expert boosts adoption
- Promotes visibility and use of application in projects

Standardize hardware procurement process
- Ease of adding new sites & teams

Integrate TWI & lean principles into video creation
- Major Steps
- Key Points
- Reasons Why

BY THE END OF 2020....

20+ Operations Sites
500+ Users
330+ Videos

OUR PILOT RESULTS

10x Time savings on video content creation
25% Performance Improvement
40% Reduction in Training Time

The most time-consuming part of implementation will be building your content. Focus on getting this right so that the training is easy!

Technology is great, but it is human powered. You need to devote the resources to make it a success.

BY THE END OF 2020....

20+ Operations Sites
500+ Users
330+ Videos

OUR PILOT RESULTS

10x Time savings on video content creation
25% Performance Improvement
40% Reduction in Training Time

The most time-consuming part of implementation will be building your content. Focus on getting this right so that the training is easy!

Technology is great, but it is human powered. You need to devote the resources to make it a success.

BY THE END OF 2020....

20+ Operations Sites
500+ Users
330+ Videos

OUR PILOT RESULTS

10x Time savings on video content creation
25% Performance Improvement
40% Reduction in Training Time

The most time-consuming part of implementation will be building your content. Focus on getting this right so that the training is easy!

Technology is great, but it is human powered. You need to devote the resources to make it a success.

BY THE END OF 2020....

20+ Operations Sites
500+ Users
330+ Videos

OUR PILOT RESULTS

10x Time savings on video content creation
25% Performance Improvement
40% Reduction in Training Time

The most time-consuming part of implementation will be building your content. Focus on getting this right so that the training is easy!

Technology is great, but it is human powered. You need to devote the resources to make it a success.

BY THE END OF 2020....

20+ Operations Sites
500+ Users
330+ Videos

OUR PILOT RESULTS

10x Time savings on video content creation
25% Performance Improvement
40% Reduction in Training Time

The most time-consuming part of implementation will be building your content. Focus on getting this right so that the training is easy!

Technology is great, but it is human powered. You need to devote the resources to make it a success.

BY THE END OF 2020....

20+ Operations Sites
500+ Users
330+ Videos

OUR PILOT RESULTS

10x Time savings on video content creation
25% Performance Improvement
40% Reduction in Training Time

The most time-consuming part of implementation will be building your content. Focus on getting this right so that the training is easy!

Technology is great, but it is human powered. You need to devote the resources to make it a success.

BY THE END OF 2020....

20+ Operations Sites
500+ Users
330+ Videos

OUR PILOT RESULTS

10x Time savings on video content creation
25% Performance Improvement
40% Reduction in Training Time

The most time-consuming part of implementation will be building your content. Focus on getting this right so that the training is easy!

Technology is great, but it is human powered. You need to devote the resources to make it a success.

BY THE END OF 2020....

20+ Operations Sites
500+ Users
330+ Videos

OUR PILOT RESULTS

10x Time savings on video content creation
25% Performance Improvement
40% Reduction in Training Time

The most time-consuming part of implementation will be building your content. Focus on getting this right so that the training is easy!

Technology is great, but it is human powered. You need to devote the resources to make it a success.

BY THE END OF 2020....

20+ Operations Sites
500+ Users
330+ Videos

OUR PILOT RESULTS

10x Time savings on video content creation
25% Performance Improvement
40% Reduction in Training Time

The most time-consuming part of implementation will be building your content. Focus on getting this right so that the training is easy!

Technology is great, but it is human powered. You need to devote the resources to make it a success.

BY THE END OF 2020....

20+ Operations Sites
500+ Users
330+ Videos

OUR PILOT RESULTS

10x Time savings on video content creation
25% Performance Improvement
40% Reduction in Training Time

The most time-consuming part of implementation will be building your content. Focus on getting this right so that the training is easy!

Technology is great, but it is human powered. You need to devote the resources to make it a success.

BY THE END OF 2020....

20+ Operations Sites
500+ Users
330+ Videos

OUR PILOT RESULTS

10x Time savings on video content creation
25% Performance Improvement
40% Reduction in Training Time

The most time-consuming part of implementation will be building your content. Focus on getting this right so that the training is easy!

Technology is great, but it is human powered. You need to devote the resources to make it a success.

BY THE END OF 2020....

20+ Operations Sites
500+ Users
330+ Videos

OUR PILOT RESULTS

10x Time savings on video content creation
25% Performance Improvement
40% Reduction in Training Time

The most time-consuming part of implementation will be building your content. Focus on getting this right so that the training is easy!

Technology is great, but it is human powered. You need to devote the resources to make it a success.
**PARTNER ROLES & COMMITMENTS**

- Program Sponsorship
- Program administration
- Partner selection

**EMPLOYER PARTNER**

- Dedicated resource time
- Use case and workflow selection
- Workflow documentation
- Survey participation

**SHARED OBJECTIVE:** Embrace New Technology To Enable Operational Success
2021 PILOT PROGRAM OVERVIEW

Participants get a 60-day, *risk free trial* of DeepHow with success focused *support* from Stanley X!

### 2021 Tentative Cohort Dates
- Feb 15 – April 16
- May 3 - July 2
- July 19 – Sept 17
- Oct 4 – Dec 3

### Each Cohort
- Up to 6 partner organizations
- Grouped by common use case
- 60-day full platform access
- Structured Pilot program with full support
PILOT OVERVIEW

PRE-PILOT
- Application & Review
- Outreach & use cases
- Cohort Selection
- Pilot Logistics (resource planning, hardware etc)

PILOT DEPLOYMENT
- Kickoff training
- Workflow prioritization
- Success metrics
- Support cadence & milestones
- Reporting needs

POST PILOT
- Cohort success review
- Participant Survey
- Key learnings incorporation
- Participant transition
IS THIS PROGRAM FOR ME?

SAMPLE SCENARIOS

You manufacture specialty products for your customers, but very few people on your team have this expertise – if they leave, you will struggle to support your customer

A significant portion of your workforce is or soon will be retirement ready. You need a scalable way to document their knowledge for the next in line.

You have a new asset, software or process that you need to train large groups of employees on

You have high turnover and spend high levels of unbillable time on onboarding & training

You want to boost productivity by freeing up your more seasoned employees from having to answer questions from junior staff

USE CASE / APPLICATION

Knowledge Transfer / Cross Training

Succession planning

Industry 4.0 / Change Management

Onboarding / Standard Work

Productivity Enhancement
REQUIREMENTS & NEXT STEPS

Connect with Paul Murphy of ACM with your interest or reach out to Eileen Candels of CCAT:

Ecdnels@ccat.us

Or Apply through the following link:

http://ccat.us/deephow

RECOMMENDED HARDWARE

Tablet or Smart Phone

• Apple iPad
• Samsung Galaxy Tablet
• iOS or Android smartphone

Computer with Chrome browser

Noise cancelling headphones

Blue Parrot 350 XT
Tripod / mounting device
Questions and Answers with

Rebecca Peredo
StanleyX – Talent Solutions
Director of Commercialization

CCAT TECHNICAL PERSPECTIVE

Kristi Oki
CCAT Mechanical Engineer,
Advanced Design, Automation & Metrology Lab

EMPLOYER PERSPECTIVE

Let’s Hear What You Think!!
2021 Mfg. Voucher Programs
Money for Manufacturing
Three Grants You Can’t Ignore

These manufacturing assistance programs are specifically aimed at helping Connecticut Manufacturers keep pace with state-of-the-art product development and manufacturing technology. To help accelerate the growth of your company tomorrow, apply for any of these matching grants today!

1. **IoT Integration Voucher Program (IVP)**
   - $20,000 to assist with the implementation of IoT solutions on your manufacturing floor.
   - Administered on a first-come first-served basis.
   - Program details can be found online at [https://ctivp.ccat.us/](https://ctivp.ccat.us/)

2. **Manufacturing Innovation Fund Voucher Program (MVP)**
   - $49,000 to conduct a project aimed at improving your manufacturing productivity, efficiency and competitiveness.
   - Administered on a first-come first-served basis.
   - Program details can be found online at [https://ctmvp.ccat.us/](https://ctmvp.ccat.us/)

3. **Additive Manufacturing Adoption Program (AMAP)**
   - $100,000 to help infuse additive manufacturing technologies into your production environment.
   - The window for accepting applications will run from April 1 to May 31, 2021.
   - Program details can be found online at [https://www.ccat.us/amap/](https://www.ccat.us/amap/)

See all of these technologies on display by visiting CCAT’s Advanced Manufacturing Center in East Hartford, CT. Call 860-610-0478 to make an appointment or visit us online at [https://www.ccat.us](https://www.ccat.us)