

NEW Manufacturing Alliance
INDUSTRY 4.0 TASK FORCE – WEBEX MEETING MINUTES
Thursday, August 26, 2021 – 1:30 to 3:00 PM

ATTENDEES: Adonica Randall-Abaxent, Ann Franz-NEWMA, Audrey Walby-SAFIO Solutions, Barb LaMue-New North, Beth Kneisler-Valley Packaging Industries, Bruce Wisnefske-Sargento, Casey O-Brien-UW-Milwaukee, Charles Mosley-UW-Milwaukee, Chris Lipski-Vantage/Abaxent, Dan Heiser-SNC, Debbie Thompson-NWTC, Gerry Aase-SNC, Jamie Lynch-SNC, Jela Trask-WEDC, Jennifer Abele-UW-Milwaukee, John Katers-UWGB, Jordyn Belmark, Kelsey Whitford-SAFIO Solutions, Mark Kralovec-PCMC, Matt Wolak-GSC, Mike Schlaugenhauer-Acuity, Sabrina Robins-Abaxent, Steve Straub-FVTC, Sunny Krishnon-AWS, Zach Kaiser-McClone

WELCOME & INTRODUCTIONS – ANN FRANZ

Abaxent Security Risk Management Solutions/Security Studio presented at the 7/29 Industry 4.0 meeting. They are teaming with NEWMA to reduce cybersecurity risk and avoid production disruptions. Ann will be sharing additional information with members regarding their offerings and upcoming pilot study.

NEWMA will also be working with Titledown Tech and some member companies on finding solutions to supply chain constraints and researching troubleshooting enhancements for service technicians who work remotely.

DATA ANALYTICS COURSE – ANN FRANZ

There has been a great response for the 4th Data Analytics cohort that will begin September 20. 81 people have registered, representing 24 member companies. The class consists of 23 hours of LinkedIn online training, a weekly content expert(s), and a final capstone project.

NWTC wrote a grant to offer an intermediate power BI and visualization class. This additional training will be college credit bearing and offered in fall 2021 and next June. The initial data analytics class needs to be successfully completed prior to taking the intermediate class.

INDUSTRY 4.0 STUDY – JAMIE LYNCH, SNC

Jamie is pleased to conduct round 2 of the data set for the industry 4.0 study. There are many comparison benefits to keeping the information similar to the previous study. Growth changes will be better indicated, in addition to collecting new information.

Three areas of improvement were discussed. Categories will be modified as needed. A new category was added for ‘How are you primarily planning to fill those roles?’ – ‘Google or online third-party?’. This will need to be clear, so it is not confused with outsourcing. A well-defined definition of what a manufacturing project manager role would entail will be added.

Members are encouraged to contact Jamie or Ann with any additional tweaks. They will be collaborating to launch the study in the next 2-3 weeks. Results will be shared at NEWMA’s quarterly full membership meeting in December.

MANUFACTURING FORECASTING: DATA PLANNING & DATA ANALYTICS – SAFIO SOLUTIONS

Presenters: Kelsey Whitford, Kelsey@SAFIOSolutions.com, & Audrey Walby <https://safiosolutions.com>

SAFIO Solutions helps companies with forecasting and data analytics to help them make well-informed strategic decisions. Systems that unite data each day will free up time to focus on high priority areas.

EIGHT WASTES OF LEAN
<ul style="list-style-type: none">● UNUSED POTENTIAL<ul style="list-style-type: none">○ Not using employee knowledge to its full potential (manually gathering data)

- Data Silos – inventory, finance, sales
- Time wasted building/sifting through data for the perfect report
- **UNDER / OVERPRODUCTION**
 - Forecast the optimum quantity reducing setup costs
 - Manufacture the best styles & colors
 - Produce the best flavors & packaging
- **INVENTORY**
 - The right: quantity, time & place
 - One of the costliest facets of a business
- **MOTION**
 - Strategically stage seasonal/best-selling items
 - Forecast warehouse usage
 - Identify peaks for receipts & shipments for optimum staffing
- **TRANSPORT**
- **WAITING**
- **EXTRA PROCESSING**
- **DEFECTS**

Areas of focus: Collaborate | Confidence | Clarity

Examples of generated reports, including forecasting generated by Tableau, were shared for:

- Bill of materials (& component details)
- Production reports – SAFIO Solutions can also produce production report levels to guide production and buying teams.
- Year to date performance dashboard (overstock/liabilities, understock/opportunities)
- Chart analysis and comparative graphs

All of the dashboards are customized, with the ability to show different timeframes and units of measure. Reports can be filtered at a specific SKU level. There is also the ability to flip between units and dollars to achieve a better analysis. These initiatives can reduce waste and inventory.

CONNECTED SYSTEMS INSTITUTE (CSI) AT UW MILWAUKEE

A Pipeline to Wisconsin's Manufacturing Industry - <https://uwm.edu/csi/>

Jennifer Abele, UW-Milwaukee, gonda@uwm.edu; Casey O'Brien, UW-Milwaukee, caseyo@uwm.edu

Jela Trask, WEDC

VISION – To be a specialized, multi-disciplinary institute focused on the Industrial IoT that will help companies prepare for the digital transformation through collaboration amongst industry, academia, and government.

MISSION – To provide education and research for the purposes of creating a talent pipeline educated in best practices for manufacturing as well as the technology specific to supporting a digital manufacturing enterprise.

CSI Focus Areas

Collaborate – Foster an ecosystem of like-minded members and collaborators. CSI has a large group of partners. How do we bring more parties to the table?

Innovate – Catalyze industry relevant research and thought leadership that leads to innovation.

Demonstrate – Provide a sophisticated digital manufacturing technology demonstration facility.

Educate – Expand the talent pipeline via advanced manufacturing degree programs and in-demand workforce training.

Areas of Research Interest

- Digital twins

- Industry Internet of Things (IIoT) & digital manufacturing
- Data analytics & artificial intelligence
- Operational cybersecurity
- Integrated robotics
- Digital supply chains
- Sensors & smart devices

They are working on a fully functioning manufacturing test bed 1: vial filling cell, in addition to educational programming for the workforce and students.

EDUCATIONAL PROGRAMMING	
Workforce <ul style="list-style-type: none"> • Digital Manufacturing Leadership (Available soon) • Integrated Robotics (Available July 2022) • Microsoft Azure for Manufacturing (Available January 2022) • OT Cybersecurity (planned) 	Students <ul style="list-style-type: none"> • Master’s Degree in Digital Supply Chain (Tentatively Available September 2022) • Master’s Degree in Connected Systems (Available September 2023) • Undergraduate & Graduate Certificate in Connected Systems • Over 20 specialized courses related to Connected Systems

Three Online Pathways in Development

- Robotics for Manufacturing
- Azure for Manufacturing
- **Digital Manufacturing Leadership (DML)** – A readiness quiz will be administered.
 - Nine online modules
 - 1 to 1.5 hours per module
 - 1 week per module – Modules 1-3: Assess IIoT Readiness, Modules 4-6: Operationalize Continuous Improvement, Modules 7-9: Plan an Implementation Strategy
 - Weekly discussion boards with industry SMEs
 - Three digital roundtable sessions with SMEs

Pathway Outcomes

- Complete readiness assessment.
- Practice using ROI tool for decision making.
- Prepare IIoT implementation strategy.
- Make connections with leaders in industry.

A DML pilot cohort (15 participants) start date will be announced soon. For more information or to enroll in DMS contact: Casey O’Brien, Pathway Production Manager, caseyo@uwm.edu.

AWS PRESENTATION

Sunny Krishnan, Amazon AWS

AWS offers a broad ecosystem of services to help companies build sophisticated applications with increased flexibility, scalability, and reliability. Utilizing tribal knowledge, they build platforms using AWS. The current state and challenges of manufacturing was discussed for quality control, maintenance / engineering, and warehouse / supply chain.

The biggest thing happening in the marketplace is digital innovation. Amazon offers digital innovation, envisioning a product and working backwards before building it. The data companies are utilizing must be monetized to drive revenue.

AI for Industrial Operations - Four main products are being launched.

- **Amazon Lookout for Vision** – Quality Control – Use cases for product defects and defect patterns were shared. Can be used across production processes.
- **Amazon Lookout for Equipment**
- **Amazon Monitron**
- **AWS Panorama**

The AWS ML Stack offers the broadest and most complete set of machine learning capabilities. Services include AI, ML, frameworks / infrastructure. Customers rely on Amazon’s Lookout for Vision for quality.

- Detect defects on new product types that included multiple toppings and foreign objects that were not possible to predict beforehand.
- Expanded quality assurance for new product types with minimal impact to operations.
- Did not require a data scientist building a custom model.

“Amazon Lookout for Vision automates and scales inspection of diverse product types such as a cheese pizza with vegetables using the same machine vision system.” Fredrik Dafgard, Head of Operational Excellence & Industrial IoT

AWS can find ways to reduce bottom line cost, while finding ways to innovate products.

UPCOMING ALLIANCE EVENTS

- October 5 – Get Real Math / Science Premiere at the Meyer Theatre
- October 12 – Virtual Boat Build
- October 26 – ACP Partnerships Meeting at the KI Convention Center
- October 26 – Excellence Awards Dinner at the KI Convention Center
- October 27 – Manufacturing First Expo & Conference at the KI Convention Center
- November 4 – Internship Draft Day at Lambeau Field

NEXT MEETING

The next Industry 4.0 Task Force meeting will be offered in-person at GSC and also via Webex on 9/23/2021, 1:30 p.m.

Agenda:

- ✓ Welcome & Updates
- ✓ GSC Presentation
- ✓ Cyber Security training programs
- ✓ Upcoming Alliance Events
- ✓ Next Meeting Date/Time/Agenda