



NOVEMBER 2019

Welcome to CMTC's *News for Manufacturers* eNewsletter!

In this Issue

- Technology is Key to Survival
- Black Friday and Cyber Monday Top 10 Fraud Alert Tips
- Why Veterans Make Great Hires and How to Recruit Them
- December Events
- Show Off Your Made in CA Pride or Join Today
- Manufacturing Month Success
- Gen Z is the Answer to Skills Gap
- Getting Food on the Table Safely and Less Wastefully
- SB 1343 Harassment Avoidance Training
- Blog Posts
- California Manufacturing Quiz

In the News



Gregg Profozich speaking to Manufacturers' Council of the Inland Empire

TECHNOLOGY IS KEY TO SURVIVAL OF MANUFACTURERS

Presenter, Gregg Profozich, Director of Advanced Manufacturing Technologies at California Manufacturing Technology Consulting (CMTC), gave the audience plenty to think about as he covered Manufacturing 4.0: Where We Are... Where We Are Going. Manufacturers attending the Manufacturers' Council of the Inland Empire meeting on October 30 were intrigued to learn about the latest innovations in their industry.

Manufacturing 4.0 includes cyber-physical systems (CPS), the internet of things (IoT), industrial internet of things (IIoT), cloud computing, cognitive computing and artificial intelligence.

Profozich said, "New technologies can lead to rapid, widespread change as the rate of technology adoption is accelerating across society. As an example, the hearing aid industry essentially converted to additive manufacturing in only 500 days." He then went into detail on three emerging manufacturing technologies: additive manufacturing, advanced robotics and smart manufacturing. Each of these technologies will fundamentally change how products are manufactured.

Read more...

[Read More](#)

SMART MANUFACTURING SERVICES WITH CMTC

<https://www.cmtc.com/smart>

ADVANCED ROBOTICS AND AUTOMATION SERVICES WITH CMTC

<https://www.cmtc.com/advanced-robotics-cmtc>



BLACK FRIDAY AND CYBER MONDAY TOP 10 FRAUD ALERT TIPS

Reprinted from KnowB4 blog article by Stu Sjouwerman

We have been warning against these types of scams for years and the bad guys are at it again. Black Friday attracts crowds, crowds attract scammers, and that means you need to take extra care when shopping online over the Black Friday and Cyber Monday weekend.

About 75% of Americans plan to do at least half of their holiday shopping online this year, shows a new [TransUnion 2019 Holiday Retail Fraud Survey](#). Yes, online shopping skips the crowds at the mall, but you need to navigate an increasingly dangerous cybersecurity minefield.

It's Holiday Season for the bad guys too! But not the way you might think. They go into scam-overdrive mode. Black Friday and Cyber Monday are the busiest on-line shopping days and the bad guys are planning to get rich with your money. So, here are the **Top 10 Fraud Alert Tips**:

- **Never click on links in emails.** If you want to shop at a site, enter that site address in your browser. There are thousands of fake sites that look almost identical to the real thing. Don't fall for evil-twin shopping sites.
- **Don't open attachments with special offers.** It's a classic scam. The offer should be in the email and you should be able to see it right away.
- **Watch for malicious ads and popups.** Do not click on ads that sound too good to be true, and ignore popups that might propose the "best deal ever".

-
- **Beware of e-skimmers.** This is a new one. Do you know that bad guys sometimes skim your credit card at gas stations or ATMs? Well, there is a new flavor of that, the shopping website you order from might be infected with a "e-skimmer" and they steal your card data when you check out. You can prevent that by using PayPal or Amazon.
 - **Use a credit card to buy stuff online if possible.** NEVER use a debit card to make online purchases but use that debit card to take out cash only.
 - **Do not shop over a public Wi-Fi.** You simply do not know if it's secure and who is listening. Only shop using a secure, trusted network. If you have no other way to shop, use a VPN which encrypts your traffic.
 - **Be very careful when you see a free offer during the holidays.** There is an explosion of all kinds of survey fraud and gift card scams.
 - **Do not re-use any of your passwords.** Instead, use a password manager to create hard-to-break passwords. Re-using any password is literally an invitation to get hacked.
 - **Keep a close eye on your credit card and bank accounts.** During this season, unexpected and strange charges might appear which could very well be the first sign your card or even your whole identity has been stolen. If you think you might have been scammed, stay calm and call your credit card company, nix that card and get a new one.
 - **Be especially suspicious of gift card scams.** They can be a perfect holiday gift, but gift card scams are skyrocketing. Only buy gift cards from trusted sources.

So, especially this time of year, do not let the bad guys exploit your holiday spirit and use it against you. Remember to stay alert when you shop online! *Think Before You Click!*

Read more...

[Read More](#)



WHY VETERANS MAKE GREAT INDUSTRIAL EMPLOYEES AND HOW TO RECRUIT THEM TO JOIN YOUR TEAM

Reprinted from Thomas Net, author Lindsay Gilder

Serving in the military is an incredible challenge. But for many veterans, the biggest hurdle often comes during their return to civilian life. 44% of veterans who served in the decade since September 11 have a difficult time readjusting after completing their service, according to a recent [Pew Research Center study](#).

A great way to give back to the veterans who protect our freedom and our country is to make this difficult transition a little bit easier.

Veterans possess a wealth of skills and knowledge that makes them great candidates for jobs in

manufacturing and industrial businesses. Thomas Insights spoke to leading industry professionals about the traits that make veterans uniquely qualified for these rewarding positions, and how your industrial business can find and recruit talented veteran candidates for your open job opportunities.

Read the article online to learn more about:

- What Traits Make Veterans Great Candidates for Industrial Jobs?
- What You Need to Know About Hiring Veterans
- How to Recruit Veterans into Open Opportunities at Your Company

"Smart employers realize that there are some skills that can be taught and learned while there are other intangible skills that must be developed via experience over time. The military does a very good job of putting people in positions of great responsibility early in their careers. This is why many military veterans have leadership skills and a work ethic that is usually found in more experienced candidates."

Read more online...

[Read more](#)

Upcoming Events

[Check out Our Events Page at **www.cmtc.com**](#)

December

Tuesday, December 3

10:00 am PST

WEBINAR

Machine Vision 101: an Introduction to Industrial Machine Vision

Join Catalyst Connection, CMTC, FuzeHub, and Impact Washington for a webinar webinar, presented by Raminder Sandhu, Advanced Automation Practice Lead, for CMTC in California.

Topics to be covered:

- What is machine vision?
- Key players in the industry
- Line Scan, 2D and 3D Vision Systems
- What are good places to apply machine vision on the factory floor?
- Artificial Intelligence vs Traditional Machine Vision Software

[Click here to RSVP](#)

Thursday, December 5

5:30 pm

RBC MT Panel Event: Planning Before the Sale of Your Company

Hosted by M&T Investment Group, RBC Wealth Management, and CMTC. Reid Matthews and Chase Tushaus will lead the panel discussion.

Location: AleSmith Brewing Company
9990 AleSmith Ct., San Diego, CA 92126

RSVP: www.theMTInvestmentgroup.com

[Click here](#) to download a printable pdf

NAVFAC EXWC Industry Day

Tuesday, December 10

8:00 am

Marriott Hotel Ventura

Naval Facilities Engineering and Expeditionary Warfare Center, Economic Development Collaborative and MatterLabs present a Technology Exposition, hosted by RDP-21. For details about opportunities to participate as a sponsor or exhibitor, please contact: Bill Simmons (805) 351-9429 . Ticketed event: [Eventbrite.com](#)

2020

January

Wednesday, January 22

11:30 am -1:30 pm

Technology Showcase and Accessing Capital Seminar

SBDC hosted by El Camino College

13430 Hawthorne Blvd
Hawthorne, CA 90250

Registration link TBA on Events Page at [cmtc.com](#)

February

Thursday, February 20

11:30 am -1:30 pm

Kern County Technology Showcase and Accessing Capital Seminar

CMTC, CSUB Small Business Development Center, with the participation of the Kern Economic Development Corp.

Owens Valley Career Development Center
2574 Diaz Ln, Bishop, CA 93514

Registration link TBA on Events Page at [cmtc.com](#)

March

Wednesday, March 25 - Friday, March 27

CALED 2020 Annual Conference: Getting It Done

Sheraton Grand Sacramento Hotel
13th and J St
Sacramento, CA 95814

California Association for Local Economic Development Conference. CMTC is a co-sponsor of the event.

Register: <https://caled.org/40-caled-annual-training-conference/> Secure the Early Bird rates through 2019.

Made in California Proud



SHOW OFF YOUR MADE IN CA PRIDE

Studies demonstrate that consumers are seeking out—and willing to pay more—for American-made products because they're known for their quality. That means sharing your Made in CA logo can really pay off.

Simply take a photo of your Made in CA logo and post it to Twitter, Facebook or LinkedIn using the hashtag **#MadeinCAProud**. The logo can be on the wall (frame and display your certificate), on your packaging, on your website, or even in a selfie! When you share the photo, we'll then feature it on our main Made in CA webpage and repost it in our social media posts. Increasing your company's online visibility at no cost to you can only be a plus!

<https://www.cmtc.com/made-in-california-profile>

Ready to Join Made in CA

Complete the online form and include a copy of your logo artwork and NAICS code.

<https://offers.cmtc.com/join-the-made-in-california-program>

Manufacturing Month



On behalf of over 5,000 students and community members in California, thank you for your participation, making Manufacturing Day 2019 a success! We really appreciate all the organizers and event hosts for helping manufacturers to shine a spotlight on manufacturing and inspiring new talent to consider it for the future.

Hey! We have lots of photos to share ... but may be missing yours.

Please take a moment to send us any photos taken during your

Manufacturing Month event. Look for the MFGDAY19 Flip Book posted soon on our website — highlighting the manufacturers and organizations involved.

Are you ready?

Planning for Manufacturing Day October 2, 2020 has started! Throughout the month of October next year, manufacturers will be celebrating National Manufacturing Day by opening their facilities for student tours or participating in expos. Taking on the vital work of inspiring our young people to pursue careers in manufacturing and engineering, manufacturers help answer the critical challenge of workforce



development. Today's science, technology, engineering, and math graduates will help manufacturing face the challenges of changing technology, global competition, and sustaining production growth.

Are you interested in holding a Manufacturing Day event in October 2020? Please contact Steve Brand, Communications Manager, at comm@cmtc.com



GEN Z IS THE ANSWER TO THE SKILLS GAP— THEY JUST DON'T KNOW IT YET

Reprinted from IndustryWeek.com (Oct. 30, 2019), author Alan Mindlin

Gen Z refers to the generation that was born between 1996-2010, following millennials. This generation has been raised on the internet and social media, with some the oldest finishing college by 2020 and entering the workforce.

Having witnessed the student-loan crisis, this generation [Gen Z] may be more open to educational paths other than four-year college.

With their unique characteristics and career outlook, the Gen Z workforce can help solve the manufacturing skills gap. But lack of awareness and mis-perceptions about the industry are holding them back. That all adds up to a big opportunity for manufacturers to change their outreach, hiring and benefit strategies to connect with this generation of potential workers.

Having witnessed the massive debt and competitive job market many millennials faced upon graduation, Gen Z is determined to make [practical educational decisions with an emphasis on financial stability](#). For many of them, a four-year college degree is only necessary if it's a requirement for their ultimate career goals. Instead, they're considering alternative education options that require less time and money to set them on their future paths.

New-collar jobs, a term [coined by IBM CEO Ginni Rometty](#), provide that balance of job security and little up-front investment. These jobs require the technical and soft skills that are valuable in today's economy, but don't require a four-year degree. Instead, *new-collar workers* are trained through technical colleges, vocational schools, certification programs or even on-the-job instruction.

New-collar jobs are especially prevalent in the manufacturing industry, which has evolved dramatically with advances in technology. Today's manufacturers need employees with digital skills in automation, software, robotics, analytics, cloud computing and 3D printing. As digital natives, Gen Z's experience with tech means they can easily adapt and adopt the skills needed to work with these new technologies.

The lack of awareness around manufacturing

Despite this seemingly perfect fit, most members of Gen Z haven't considered careers in manufacturing. This is due in large part to a lack of awareness around the number of available

manufacturing jobs and the variety of roles, as well as the misperceptions associated with the industry.

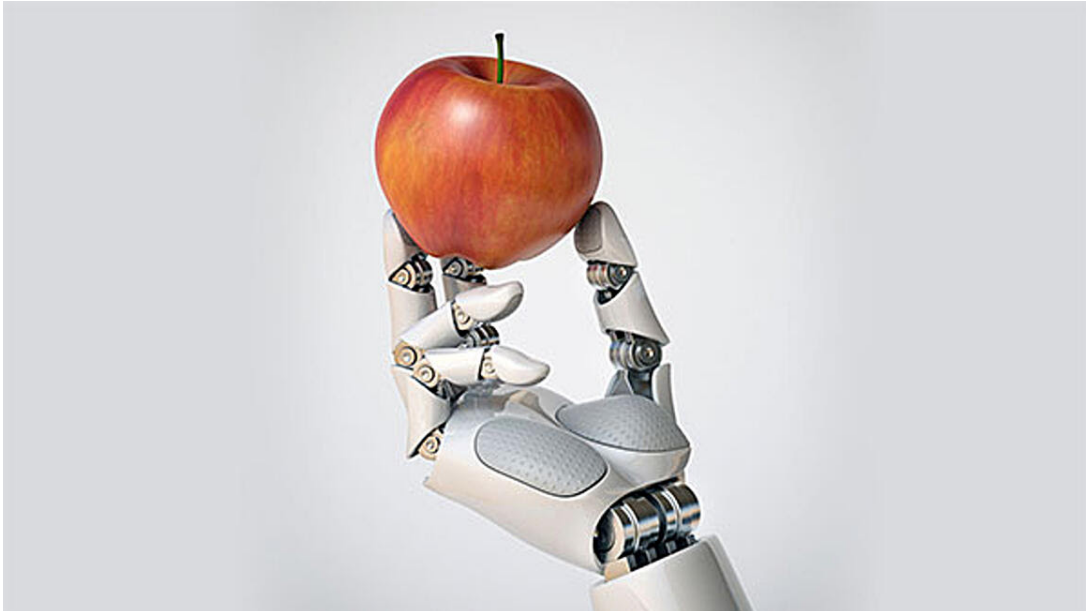
Many Gen Z'ers simply don't know much about the manufacturing industry. Manufacturing careers are rarely included in high school curriculums. And parents likely aren't talking to their kids about the industry either, as many [believe manufacturing is outdated, low-paying or unchallenging](#). Similarly, Silicon Valley giants like Google, Apple and Tesla are perceived as more tech-savvy — even though new innovations like IoT and advanced robotics are also transforming the manufacturing industry. By the time many members of Gen Z learn about the career possibilities in manufacturing (if they ever do), they've already chosen another path.

What manufacturers can do

Employers can take several steps to help create awareness, change misperceptions and encourage Gen Z to get excited about their industry.

- **Public outreach and partnerships:** Reach out to Gen Z where they already are — get in touch with local high schools, community colleges, vocational programs and other nearby services. Establish collaborative programs aimed at creating a talent pipeline that will benefit the entire community. Internships and apprenticeships provide Gen Z'ers the opportunity to gain the [active, hands-on and immersive learning experiences they crave](#), while allowing businesses the chance to test-run future candidates.
- **Financial and career growth incentives:** Give Gen Z'ers what they want: a clear path to financial and career growth. Aside from partnerships with local educational institutions, create your own in-house learning and development programs. Cover the costs of training and certification in exchange for job contracts with minimum durations. Consider a scholarship program to pay for the offsite training of promising candidates. Additionally, offer cross-training and create paths for employees to transfer and grow within your organization.
- **On-the-job perks:** Make your company a great place to work. This may sound obvious, but keep in mind that Gen Z has different preferences than older generations. While Gen Z'ers appreciate traditional benefits like healthcare and 401(k) matches, they're also inclined to seek out flexible perks, like remote work opportunities for office employees or factories that have transitioned to a four-day work week.
- **Government programs:** Contact your local representatives about changing school curriculum, providing community resources or creating a public awareness campaign. Your state workforce development board can help you coordinate training programs, which may be eligible for funding through the [Workforce Innovation and Opportunity Act](#) (WIOA).

Skilled workers are out there — manufacturers just need to adapt their searches. A change in perspective around job requirements combined with awareness and training initiatives will widen the talent pool and welcome the next generation of new-collar workers.



GETTING FOOD ON OUR TABLES FROM THE U.S. AND AROUND THE WORLD, SAFELY AND LESS WASTEFULLY

Reprinted from NIST article, author Nenad Ivezic

Nenad Ivezic is the leader of the Process Engineering Group in the Systems Integration Division of the NIST Engineering Laboratory.

I'm still amazed to see strawberries, avocados and watermelons in my grocery store out of their "normal" season. As amazing as this is, I know it means that my food is arriving from far-flung destinations and may be subjected to poor conditions or handling along the way. So, now, even more so than before, I regularly check where the fresh fruit or produce is hauled in from. Instinctively, I try to remember any recent news of recalls due to foodborne illness. Did I hear about any recalls or hospitalizations lately?

Yes, grocery shopping does give me pause these days.

A recent [study](#) found that "addressing drivers of food waste can slash the value of food lost and wasted every year globally by nearly \$700 billion." Clearly, moving food from farm to table nowadays is not without challenges, to say the least. Yet, there are some outstanding developments that are starting to help address these safety and waste issues.

For example, food manufacturers and distributors are beginning to attach new internet of things (IoT) sensors to food shipping containers. These IoT devices use the regular internet communication infrastructure (the same as your email app does) to "talk" to senders and receivers of the containers about their temperature, humidity and other conditions, including unauthorized tampering with the contents. These sensors provide critical and useful information to the monitoring systems of both the sender and the receiver of the shipments.

Also, to achieve efficient delivery, up-to-date information on things like shipment plans needs to be exchanged among all partners.

And, at the end of the supply chain, before appearing in grocery stores, the crops and food shipments may need to pass quality tests. Hence, laboratories and their partners must electronically exchange testing information such as inspection orders, test specifications and test results.

As you can see, more than ever, moving food safely and efficiently around the U.S. and the world requires that partners in the food supply chain exchange important information in a usable and timely manner. Before that can happen, however, a community of stakeholders, including food manufacturers, IoT device-makers and operators in the food supply chain, needs to find a meaningful and feasible way of representing that data to assure it is communicated and interpreted as intended.

Read more online...

[Read More](#)