Host: *Hi, I'm Tina Lincoln and in today's episode we'll be discussing how artificial intelligence is bringing a radical shift in the industrial workplace and how this new wave of democratization of emerging technologies is translating data into concrete business outcomes and creating new opportunities.*

To talk about this, I would like to welcome Gabe Batstone, co-founder & CEO of Contextere. Gabe has over two decades of experience in implementing emerging technologies across industries in six continents. Contextere is well recognized in the World Economic Forum (WEF) Innovator as one of the world's most promising start-ups that work at the forefront of technological and business model innovation.

Hi Gabe...

Gabe: Hi, Tina. Thank you for having me here. I'm looking forward to our discussion.

Host: Great! Everyone's talking about how the influx of new technologies and processes has driven an unprecedented expansion across organizations. However, we are also witnessing how the blue-collar workforces have only experienced a limited impact from such transformative initiatives in our industries. **Why, according to you, have the blue-collar workers been relatively left behind during these technological revolutions?**

Gabe: This environment we see around blue collar workers today is a consequence of multiple factors. Traditionally, the industrial worker was viewed as either the recipient of top-down decisions and pre-defined work optimizations (in the case of the enterprise software) or is considered irrelevant to the process (in the case of analytics and automation). Neither case considers the vital involvement and expertise of the industrial worker in the minute-to-minute decisions that are made in the operations and maintenance of complex remote machine assets. This stereotypical notion of the blue-collar workforce not liking new technologies has created an impediment in their speed of adoption since there is a clear gap in the process of implementation.

Another factor has been this 'boogeyman' association of new technologies and their place in the industrial workplace. There's a lingering sentiment that blue-collar jobs are on the front line of an automation takeover, but the fact is that it's not easy to fully automate any occupation. Look at the numbers and research, applications of AI in our industrial workplaces are narrow, task-based, and not according to job profiles. We're not looking at machines replacing humans, but there can be a human-machine interface where we blend the power of computing with human ingenuity to create 'skilled trade workers' of the future. With the work environments becoming more diverse and complex, markets becoming more sensitive to external forces, and with higher expectations, organizations need to figure out a best-case solution for everyone.

Host: Agreed. We're definitely at an inflection point for technology and human resources in our workplaces. Speaking of such modern-day shifts in our industries, what do you think has sparked the change for the blue-collar workforce now?

Gabe: The pandemic, amongst many other factors, changed a lot of things for everyone. It forced us to change the status quo of how we did things to adapt to the changing conditions. When you look at the blue-collar workforce, there were certainly a few things that didn't reflect the reality of their situation. The blue-collar profile has changed dramatically as a new generation is poised to move into

the workforce. Many next-generation blue-collar workers are tech-savvy, and we see that they are looking for technology to improve business efficiencies. They want to be able to use technology in their jobs, and positions that are still manual likely won't be appealing. The new workers are aware that technology enhancements make the job not only easier, but more enticing, and encouraged them to keep working at a modern workplace. This generational recognition of the importance of technology in not only broadening the capabilities of younger workers through improved techniques but also attracting them to the field itself, all the while making our industrial workplace more accessible.

As these industries move forward, the adoption of artificial intelligence (AI) and predictive analytics technologies will likely increase, and I believe the younger generations are particularly well-placed to manage this progression. They are using technology every day to simplify their lives, make them more productive and allow them to multitask. The idea of not extending these same benefits to the workplace can make many blue-collar businesses appear outdated and unappealing.

Gone are the days of "earning your stripes." We find that younger generations not only come in with an expectation for being able to prove their worth quickly but also offer resources and insights based on their exposure to technology from an early age. Companies need to be open to the ideas of younger people and empower them to take the lead. By providing them with the opportunity to create solutions for a blue-collar work environment based on their own experience and access to technology, these positions will be a more attractive option to this younger generation.

Host: Enterprises will need to facilitate future workforces in more ways than one to truly achieve their business potential. This changing landscape of our industrial workplaces has huge implications for companies. What are your thoughts on that?

Gabe: While we are beginning to focus on the needed skills to embrace this digital revolution, we must not forget to address the loss of crucial institutional intelligence and 'tribal knowledge' due to the ongoing demographics gap. Almost all industrial enterprises are threatened by the large-scale impact of this generation of skilled workers retiring. Baby boomers, who represent a sizable portion of the industrial workforce, are poised to retire over the next five to seven years taking with them extensive organizational, process, and procedural knowledge. There are simply not enough resources to rely on traditional 'on-the-job' training (OJT) techniques to transfer this crucial knowledge to the next generation of workers. New methodologies are needed to deliver real-time intelligence to blue-collar workers in their context based on their digital identity. However, instead of perceiving these facts as a threat to society, requiring a major cultural shift, we should view it as an opportunity to do things differently. We need to approach these challenges with a greater emphasis on the impact to the worker on the last tactical mile, as well as innovative solutions focused on outcomes, not technology. With the proper application of innovative software solutions, workers can be rapidly upskilled or reskilled to fill the growing gaps in our industrial workforce.

In reality, blue-collar jobs will be some of the most difficult to automate, but that doesn't mean artificial intelligence (AI) and big data won't have a huge role in transforming the industry. By working alongside humans as complementary assets, tools powered by AI and machine learning will seriously improve safety, productivity, and efficiency.

Host: To take an essence of what you're saying, the future of work is seemingly pointing towards a symbiotic relationship between man and machine. So, what kind of a business impact should we expect from these developments?

Gabe: There's a lot of truth to the saying, "Happy employees' equal happy customers". As companies that employ traditional blue-collar workers consider how best to attract and retain the next generation,

they must find ways to fill the technology gap and adopt a human-centric approach towards the changing workplace. Those that do will likely benefit from better hiring and retention and ensure future growth and scale for their businesses. Companies that do not bring in new technology and software will likely see higher turnover with these new workers who experience frustration with an outdated approach to business operations. Companies need to leverage technology that mimics the usage of everyday life: tablets with apps that enable workers to seamlessly integrate warehouse logistics and fulfillment, assist in determining the most efficient delivery route, provide product recommendations based on sales, utilize virtual reality to restock or repair machines, etc. By combining 'human-centric' machine learning (ML) and intelligent context curation, we can develop an intelligent personal agent capable of delivering actionable insights at the point of service that is customized to the user. Weaving together the power of AI and IoT data, it's possible to give blue-collar workers the right information, at the right time on the right device. This is where we saw an opportunity and how 'Contextere' came to be, our name comes from Latin and it means 'to weave together'. We understand that if we weave all the processes, data, and technology together, we could have a real solution to these problems.
There is a need among industrial enterprises to adopt technology-based solutions that improve the effectiveness and efficiency of field-based personnel. Advances in AR, mobile technology, and machine learning combined with human ingenuity will lead to higher productivity and safety and reduce the time to proficiency of new employees.

Host: I'm sure our listeners now have a lot to think about when it comes to the future of industrial workplaces and the changing role of the blue-collar workforce – the human resource, in them. How emerging technologies like AI and ML are poised to alter the man-machine dynamic for the better in the coming future.

With this, we have come to the end of this episode and I want to thank you, Gabe for taking time out to share insightful views with our listeners.

Gabe: Thank you for having me here.