Mary B. DeFilippe

Senior Marketing Professional

✉ mbdefilippe@gmail.com

in linkedin

📍 Connecticut, USA

📱 203.788.4344

The Evolution of Push-to-Talk

The Journey from Radios to Digital Push-to-Talk

Connecting frontline teams with real-time voice is critical, but many organizations struggle to connect deskless workers with team members, management, and the operations center. It is difficult to serve clients and partners when communication breaks down.

Push-to-talk (PTT) technology was introduced roughly 80 years ago with the invention of radio transceivers. With radio transceivers, people could talk to each other across long distances using a mobile device. Push-to-talk technology is simple: users press and hold a button on a handheld device to talk, then let go to listen, instantly transmitting messages to one or many people.

PTT revolutionized communications during World War II, enabling military leaders to communicate to their troops. Today, industries from hospitality and manufacturing to transportation, retail, and security all rely on push-to-talk technology to communicate with deskless workers. Deskless workers are constantly moving throughout their work days and are more difficult to reach than workers who can consistently be found at their desks.

Historically, push-to-talk communication was voice-only, but today the technology includes more intelligence. Modern push-to-talk platforms connect frontline teams with corporate systems and third-party internet services to provide real-time intelligence, enabling deskless workers to better serve customers and perform important tasks.

Radios: The Origin of Push-to-Talk

Traditional push-to-talk solutions include two-way radios that require users to purchase and set up their own network equipment and apply for operating licenses. Radios have significant challenges:

1. They are limited to small usage/reception areas, making it difficult for decentralized and distributed workforces in industries like transportation, where vehicles and drivers are constantly on the move. In these decentralized and distributed industries, workers need to maintain real-time voice communication with dispatch and operation centers.
2. Radios can't tell dispatchers where drivers or assets are, which vehicles are in motion, or who's online and listening.
3. With radios, incidents and emergency situations like incapacitations, location breaches, panic alarms — even fires — require manual processing of events and responses. Radios cannot provide automatic safety check-ins, monitoring for incapacitation, and automatic emergency workflows including all-call notifications, notifying headquarters, and enabling bots to begin running safety procedures.
4. Radios can only provide voice communications. Deskless workers often need to send texts, photos, videos, and PDFs while they're on the job. Being able to send these file types improves communication, reporting, compliance, and productivity.

Walkie-Talkies: More Suitable for Homes than Businesses

Consumers are often familiar with push-to-talk walkie-talkies, which look and operate much like two-way radios but are built with less powerful technology. Walkie-talkies typically fail quickly in business settings because of extremely short communications range, unstable audio quality, and other limitations similar to two-way radios.

Push-to-Talk Apps: The Simple Digital Solution

One recent push-to-talk solution is a simple push-to-talk app for workers' phones. The app enables users to communicate via push-to-talk using their own cellular or Wi-Fi connection. While they can be convenient, these apps don't offer encryption or specialized functions that professional organizations need.

Push-to-Talk Platforms

Push-to-Talk platforms solutions deliver more functionality than radios or simple PTT apps. With these platforms, workers can:
1. Communicate over any network and any distance without installing special network equipment or applying for licenses.
2. Share texts, photos, videos, and files in addition to voice messages.
3. Enable mapping and real-time location services so everyone knows where all team members are.

PTT platforms are a huge step forward from radios, but they still lack automation, intelligence, and analytics to help optimize frontline operations.

Push-to-Talk 2.0

Push-to-talk 2.0 (PTT 2.0) is powered by Voice AI Bots and platform integrations to digitize, optimize, and power frontline operations. In addition to voice communication and all the benefits of a PTT platform (multimedia sharing, real-time mapping, etc.), PTT 2.0:

1. Provides value-added services like real-time bi-directional language translation and transcription.
2. Voice-automates routine work to make frontline teams more productive.
3. Calls for help in emergencies, automates safety check-ins, monitors for incapacitation, and tracks geofence location breach alerts. Always-ready Emergency Response Bots listen for voice commands and create multi-step workflows to intelligently manage and coordinate complex actions across teams during an emergency.
4. Automates previously manual procedures like pre-ride vehicle inspections and radio checks required for safety and compliance, eliminating manual radio checks.
5. Utilizes Process Automation Bots for voice-activated checklists, standard operating procedures, and compliance forms. These voice-automated processes ensure completion on time, in the right order, by the right staff.
6. Augments employee intelligence with Voice Bots that have instant access to knowledge bases. Workers can access information dynamically (e.g., employee request), or it can be automatically triggered (e.g., event, geofence breach, etc.) or intelligently routed (e.g., data- or application-driven, IoT sensor alerts, etc.) to deliver the utmost value to the frontline worker.

PTT 2.0 technology has standard end-to-end encryption and can be deployed over public networks, private cloud networks, or onsite at a specific set of locations.

PTT 2.0 Use Cases

PTT 2.0 can benefit organizations of any size, but it's critical for companies with large frontline teams that require reliable communication. It is a voice-first communication method, so deskless workers can communicate without stopping what they are doing or moving to a different location. It is easy to activate and enables quick, efficient communication with one person or an entire team. If supporting documents are required, workers can attach documents, images, or any additional information the team needs.

PTT 2.0 also provides real-time employee mapping to improve employee safety. You can improve workflows and processes using PTT 2.0 analytics and save time during emergencies with automated safety protocols.

Some examples include:

1. Security operations officers and dispatchers use push-to-talk to communicate quickly as they protect the physical security of a worksite. This webinar examines how security teams use push-to-talk.
2. On-call transportation and delivery vehicle fleets coordinate via push-to-talk to dynamically dispatch pickups of people or packages. With PTT, drivers can stay hands-free and don't have to stop to make phone calls or send text messages.
3. Retail workers use push-to-talk to help customers find the perfect product by querying inventory with voice commands instead of disappearing to search for what's in stock.
4. Hospitality teams keep hotels and resorts running smoothly, using push-to-talk to coordinate all their teams and delight their guests with great service. Learn how The Boca Raton uses PTT 2.0 to provide frontline communications across various departments, including housekeeping, engineering, food and beverage, security, events, recreation, and concierge.

5. Defense organizations use advanced push-to-talk capabilities to coordinate their field teams and improve situational awareness. This [video presentation](#) demonstrates how they do it.

What to Look for in a Push-to-Talk Service Provider

The best PTT service providers will help your organization modernize its communication platform and build a path to innovation and digital transformation.

You can evaluate critical PTT features in this [Buyers Guide](#), including all the basic and advanced functionality you should consider, such as:

1. Coverage (communications range) and audio quality
2. Security and encryption
3. Multimedia message support
4. Device support and interoperability
5. Deployment options
6. Automation

Real-time communication, collaboration, and engagement are essential to ensure worker safety, improve productivity and customer satisfaction. Push-to-Talk 2.0 delivers the connectivity and collaboration you need to optimize operations, improve safety, and enhance customer satisfaction.

[6 Ways Radios Fail Logistics and Warehousing Industries](#)

How Push-to-Talk Communication Enables True Collaboration

Communicating with frontline logistics teams is challenging because frontline teams often work in remote locations, and they are constantly on the move in warehouses, at depots, or on the road.

Companies rely on radios to communicate with frontline workers, but radios fail when teams communicate across long distances and through physical barriers like concrete walls.

Communication is often disjointed, with workers isolated for extended periods of time. These communication blackouts decrease efficiency and clog the supply chain.

Most companies are beginning to realize the importance of real-time communication for frontline workers. According to a Harvard Business Review [survey](#), nearly 86% of companies say frontline workers need better technology to support accurate, real-time judgment calls. Many companies are investing in collaboration software to connect their entire workforce.

Why Is Real-time Communication So Important in Logistics?

Effective [logistics](#) is a complex coordination of warehousing and transporting goods. [Successful logistics](#) increases efficiency, lowers costs, and improves production rates, inventory control, and use of warehouse space. Both customers and suppliers are more satisfied, ensuring better long-term relationships.

Since the beginning of the COVID-19 pandemic, logistics has remained in a constant state of flux. Logistics teams continue to face challenges, including high fuel prices, labor shortages, disrupted supply chains, geo-political upheaval, and difficulty sourcing raw materials and securing available transport.

Many of these logistics challenges are exacerbated by communication delays and disruptions, making [effective logistics communications](#) across supervisors and frontline teams more important than ever. The world is moving fast, and logistics teams need to keep up.

How Radios Fail Logistics Teams

Frontline employees and management teams need real-time collaboration to operate at the most efficient levels. Radios are the most common communication choice for logistics and warehouse teams, but they are not the best choice. Radios don't provide the collaboration capabilities required to successfully navigate today's complex challenges.

1. Radio networks are geographically limited with connectivity issues. They don't effectively link workers distributed in warehouses, shipping depots, and on the road. Radio transmissions are impacted by the number of floors, stairwells, and walls in a given location and communicating in concrete structures with radios is almost impossible. Dispatch centers and supervisors need continuous contact with all team members, but radios have gaps in connectivity.
2. Radios are single-function devices, restricted to voice communications. Voice alone is not always enough to explain a situation clearly or provide detailed instructions to a team member. The longer it takes to accurately describe a situation, the more likely you are to have delayed shipments and deliveries.
3. Radios do not keep track of team members. One of the most common uses for radios is determining the status and location of deskless workers, but radios can't tell dispatchers where workers are, which vehicles are in motion, and who's online and listening. The first question dispatchers usually ask is, "what is your location?" Dispatchers must wait for the workers to stop what they are doing to respond to know where they are. It is difficult to optimize operations when you don't know where everyone is.
4. Radios do not enable automated processes. If a frontline worker has a question, they must contact someone on the radio, ask the question, and then wait for that person to find the answer. There is no quick way to access information from back-end systems, and routine status checks and verifications of procedures require a two-way conversation.
5. With radios, incidents and emergency situations like incapacitations, location breaches, and panic alarms are handled with a call across a radio channel. Someone must hear the call, respond, and manually start emergency procedures. If no one is listening at that moment, the incident response is delayed. If there is a fire in a warehouse or a driver has broken down, you want to begin emergency procedures as quickly as possible.

6. Radios do not record and archive conversations, so you aren't capturing any information from communications shared between team members. This information is useful for optimizing operations and during incident review and compliance meetings.

The Solution: Push-to-Talk 2.0 (PTT)

Maintaining connection with your entire logistics team doesn't have to be difficult. With a unified communication platform like Orion's [PTT 2.0](#), you can reach your team any time, anywhere. Logistics challenges can be solved faster with increased range, complete connectivity, and automated processes.

With Push-to-Talk 2.0, you can:

1. Stay connected with frontline workers no matter where they are. PTT 2.0 does not have the connectivity issues that radios have. Logistics teams located in warehouses, depots, and on the road stay connected over any network, including LTE, private LTE, Wi-Fi, satellite, and mesh. Workers can communicate over any distance, including on-site, on the road, across town, or across the continent and maintain connectivity through floors, stairwells, and concrete walls.
2. Tell the complete story with multimodal communication. If a team member needs to document an event from the road, a warehouse, or any remote location, they can capture the situation using texts, photos, PDFs, videos, and any other supporting documents. Management gets a clear picture of the situation, enabling better incident review and analysis as well as improved compliance reporting if required.
3. Use [advanced location services](#) with real-time geolocation of each employee to always know the exact location of every asset and team member. With real-time visibility across the entire logistics team, operational command can monitor and adjust plans, optimize routes, and update delivery estimates without interrupting workers for status checks.
4. Enable automated processes, so routine and structured tasks don't require a person-to-person connection.
    1. With [process automation voice bots,](#) frontline workers use voice-activated checklists and automated check-ins. For example, workers responsible for transporting goods can use voice bots to complete checklists and compliance forms prior to moving goods. This ensures smoother movement of products through the supply chain and provides complete visibility for compliance checks.
    2. Intelligence amplification bots provide frontline workers real-time access to systems, data, and subject matter experts from the road, in the factory, or in the warehouse. Workers can consult manuals and receive instructions from bots, so they don't have to wait for a person to manually search for information.
    3. AI bots automate safety check-ins to monitor the location, status, and movement of each team member. No one in operational command has to stop work to wait for a response, and frontline workers can quickly click a button to respond without interrupting their work.
5. Use [Emergency Response Bots](#) to enable automated emergency response with a single word, ensuring the fastest response. If there is a problem, the worker simply uses a predefined codeword and voice-activated, real-time automated workflows are triggered to manage the emergency response. Push-to-Talk 2.0 AI bots provide multi-step [workflows](#) that deliver on-demand intelligence, enabling faster, smarter responses to location breaches, lone worker situations, and other incidents or emergencies. Operational command receives notification of the incident in real time and can monitor the situation and response.
6. Record and archive all staff messages and interactions, including voice, text, and visual media. Operational command can monitor communication groups and process information in real time or on demand. Management can search and retrieve information for incident reporting, reaction analysis, and compliance reporting. This information also helps teams optimize operations.

[Learn How PTT 2.0 Can Help Your Logistics Team](#)

As logistics challenges continue to grow, frontline workers need better technology to support accurate, real-time judgment calls. With PTT 2.0, logistics challenges can be managed more effectively, ensuring faster delivery of goods, optimized transportation, and safer work environments.

[Does Your Hospitality Team Need a Push-to-Talk Translation Solution?](#)

How Real-time Translation Helps You Navigate the Current Labor Crisis

A [Push-to-Talk](#) translation solution can help you combat the severe labor shortage currently challenging hospitality organizations. According to a [survey conducted by the American Hotel & Lodging Association](#), almost 97% of respondents are experiencing a staffing shortage, with 49% experiencing a severe shortage. This extreme staffing shortage is compounded by the post-pandemic rebound in demand for travel and entertainment.

Push-to-talk language translation can help by enabling you to hire non-native language speakers and make them effective day one. This is critical, since many hotels are hiring staff with [little or no experience](#). Keeping hospitality employees can be as challenging as finding them. According to the U.S. Bureau of Labor Statistics, the average turnover rate in the leisure and hospitality industry is [84.9%](#).

Hospitality Communication Challenges

Even with increased wages, more flexible scheduling, and better benefits, 97% of hospitality managers surveyed have been unable to fill open positions. To fill these open slots, hospitality managers must be open to every possible candidate. Eliminating people just because they don't speak the manager's required language disregards too many strong applicants in a time when hospitality organizations desperately need to increase staff.

At the same time, hiring people who speak a different language presents some challenges.

- Teaching new skills can be difficult if you don't speak the same language.
    - If new hires don't understand what you are saying, you have to repeat instructions or find other ways to clarify, making the training process slower and lowering team productivity.
    - You need to onboard staff as quickly as possible to minimize disruptions to guests, but you also need to onboard correctly to ensure the highest quality of service to guests. Your new hires need to understand and follow correct procedures and work well with the rest of your team.
- Managing routine tasks is more difficult when your staff speak several languages. Some staff members may misunderstand instructions, creating delays and more work for the team. Some tasks require collaboration, which is difficult if team members can't communicate with each other. According to a study by Urban bound, [an estimated $37 billion dollars](#) is spent annually managing employees who do not understand their jobs.
- Emergencies and unexpected events can be impossible to manage. If an unusual event occurs, describing the event and coordinating the response and steps required to resolve it may cause confusion, resulting in delays and disrupting guests' experiences.
- Customer service will suffer. If staff members are confused, their frustration may become evident to your guests, impacting customer service.
- Turnover will remain high. Keeping good staff members is difficult if you can't communicate with them. Their confusion about job requirements or daily communication can make them feel isolated and frustrated, leading them to find new jobs that are less stressful.

The Communication Solution: Push-to-Talk 2.0

What Is Push-to-Talk (PTT) 2.0?

Push-to-talk is a voice-first communication solution. When you need to communicate, you push a button on a handheld device to instantly stream your message to one or many people at once. You let go to listen.
Unlike radios which have spotty coverage and limited range, PTT 2.0 has unlimited range. It works in basements, through concrete stairwells, and across large properties. It also enables more than just voice communication. Workers can share photos, videos, and documents – whatever they need to clearly communicate with their team.

Push-to-talk 2.0 is powered by Voice AI Bots and platform integrations, moving beyond simple communication to voice-activated automated workflows, real-time asset location services, bi-directional language translation and transcription, and more.

Push-to-Talk Language Translation

Orion's Language Translation instantly translates over 60 languages with the push of a button. Your team members simply push a button, speak in their language, and let Orion's Voice AI bots translate their voice into the right language for other team members or managers.

Teams hear messages in their languages individually, and respond in their languages, and Orion translates it back to the original language for the original speaker. Orion's Push-to-Talk Language Translation provides real-time, two-way, translate out and translate back communication to any location with any network connection using any communication device.

This is extremely powerful for onboarding new staff and ensuring guests receive the best possible experience.

- Teaching new skills is easier if staff can understand the instructions they are provided. New staff can ask questions with confidence and receive clear answers they understand. Without effective training, it takes about 8 months for a new employee to become productive.
- Onboarding is faster, ensuring teams are more productive. Onboarding is more effective, because new staff understand directions and can follow correct procedures. Research on successful onboarding shows that when onboarding is done correctly, new employees have higher job satisfaction, stronger commitment to the organization, and increased performance levels.
- Teams are more collaborative and effective. Everyone on the team can communicate clearly and effectively with the rest of the team. They work together better because they can communicate with each other without struggling to find a common language.
- Managing tasks is easier because everyone receives instructions, and can ask questions, in their language. All procedures are understood and followed.
- Emergencies and surprise events are handled efficiently and effectively. If an unusual event occurs, staff can describe the event clearly in their chosen language. Management can provide guidance and the team can collaborate to determine how best to resolve the issue. Everyone can ask questions in their language, ensuring complete understanding of the problem and the steps to resolve it.
- Guest experience is improved.
  - Because the staff is onboarded faster and more completely, guests receive the best experience. New staff understand processes better, having received clear directions in their primary language.
  - Staff members are not confused or frustrated trying to figure out their jobs. They work with more confidence and ease, providing a more positive presence to guests.
  - Research by Cornell University shows a direct link between better guest experiences and employees who are motivated and engaged.
- Staff are less likely to quit. In a recent survey, employees at organizations with little collaboration reported being 4.5 times more likely to quit their jobs. With Push-to-Talk Language Translation, staff members no longer feel isolated or confused. They can communicate easily with coworkers, ask questions in their primary language, and collaborate on projects without difficulty.
- Onboarding is less expensive. Because it takes less time to onboard staff, you save money training them and they are productive more quickly.

Do Even More with Voice AI Bots and Automated Workflows

Orion's PTT 2.0 provides hospitality organizations more than just translation services. Since workers always have their PTT-enabled device on hand for translation, they can use the device for additional services like emergency response. With PTT Emergency Alerts, workers can use a predefined emergency word – "help-help-help" for example – to trigger automated workflows that implement the correct procedures with that one voice command. External resources like emergency response teams can be automatically contacted as part of the automatic workflow. Hotel managers, maintenance, and other members of the team may be contacted as well.

Push-to-Talk Translation Can Help

Hospitality organizations endured years of upheaval during the Covid-19 pandemic. As consumers venture out more, these organizations face new challenges finding enough workers to meet demand. Translation solutions enable hospitality organizations to widen their applicant pool without compromising customer service, efficiency, or company standards. Onboarding is faster and better, ensuring the best guest experience.

Can Enhanced Commodity Trading and Risk Management Decrease the Cost of Christmas Cookies?

Whether your preferred indulgence is pecan pie, gingerbread cookies, or cupcakes, chances are it includes an international mix of ingredients. Sugar, flour, fruit, chocolate and dairy products are procured from all over the world. These ingredients need to be grown, marketed, transported and eventually sold to you so you can bake your favorite cookies.

How do commodity trading and risk management improvements help you pay less for your cookies?

Sourcing

Growers can use IoT sensors, big data analytics and Digital Commodity Trading and Risk Management (CTRM) to increase yield and cut costs. Analyzing real-time data on plant health, soil health and moisture levels lets growers know exactly which plants need fertilizer, water, and pesticides. This improves the output from each acre of land and keeps the use of expensive fertilizers and clean water – often a scarce resource – to a minimum.

Advanced weather analytics provide weather forecasts specific to a location and time, enabling farmers to plan for unusual weather events. When growers are more prepared, less crop damage occurs.

CTRM technology lets farmers trace crops across the entire value chain, from farm to fork, ensuring that consumers, retailers, and manufacturers know exactly where their ingredients came from and how they were sourced. If a crop is recalled, action can be taken quickly to replace contaminated food from the value chain, reducing supply disruptions and ensuring consumer safety.

Trading

Traders need to purchase commodities from growers and sell the products to manufacturers who package it for sale in your local markets. CTRM enables real-time digital collaboration, so traders know exactly which contracts are open and what prices are available. Using CTRM, traders make the best purchase and sell decisions, reducing raw material costs.

Because CTRM connects the entire value chain in real time, traders have insight into both supply and demand for crops and can ensure all contracts are filled on time and at the best price.

Manufacturing

At the same time, manufacturing procurement teams use CTRM to make sure they buy their ingredients from the right supplier at the right time and at the right price. Its advanced analytics help buyers spot and respond to demand trends, so they can make better planning and purchasing decisions.

Procurement managers use CTRM to determine which contracts make sense. Is it more cost-effective to buy sugar from Brazil (which might be cheaper to buy but more expensive to deliver) or to buy more expensive sugar from the EU and spend less on transport costs? They also use CTRM to optimize logistics, storage and transportation costs as well. Is it better to store materials in Ohio or move them to Tennessee? What are the optimal routes for moving raw materials?

When transport, warehousing, and other logistics are optimized, buyers can shorten the time to market for seasonal goods, cut expensive waste, and avoid rent for unnecessary storage.

Manufacturers, growers and traders that embrace a digital edge and upgrade to Digital Commodity Trading and Risk Management cut costs, operate more efficiently, and improve partner relationships. And, we, as consumers, spend less on our Christmas cookies.

[Navigate Uncertainty with Speed and Agility](#)

Speed and agility are essential in today's chaotic and ever-changing world

Reflect for a moment on an amazing feat recently accomplished in China, where thousands of people built a [hospital in just 10 days](#). Creating a safe, functional and secure medical facility in 10 days would not have been possible years ago, but today – with automation, advanced analytics, and real-time communication – they were able to create a plan, gather resources and build a working hospital.

In many ways, this amazing engineering feat is a good analogy for commodity management. When market disruptions occur – driven by politics, extreme weather, rogue viruses, or other unexpected events – companies need to react as quickly as possible to form a response that protects their profits while mitigating risk. They need to react fast – just as officials in Wuhan, China did to create a hospital just weeks after recognizing the severity of the coronavirus outbreak.

The need for speed and agility

Speed is essential because commodity markets are constantly changing. Take, for example, oil. The International Energy Agency (IEA) [cut 2020 oil demand estimates this week](#), predicting that first-quarter oil demand would fall by 435,000 barrels per day (bpd) from a year ago because of the coronavirus. China is the world's largest oil importer, so a disruption to the Chinese economy has repercussions around the world. At the same time, January 2020 was [the hottest January in the 141 years](#) that global records have been kept, providing another kick to global energy markets. *"Commodity-intensive companies buying or selling oil must analyze the impact of these events real time, not days or weeks later."*

Commodity-intensive companies buying or selling oil must analyze the impact of these events real time, not days or weeks later, because the situation is constantly evolving. You need real-time visibility and you need to be able to turn it into real-time action.

Eka's platform delivers the speed and agility you need through automation, real-time access, and rapid analytics. Because all your data is connected, you can create reports in seconds instead of spending hours – or days – manually collecting data from different applications. Because the platform is cloud native, Eka's analytics engines are fast and efficient.

Take, for example, Eka's Position app

If commodity markets shift dramatically, you need to immediately assess your position and evaluate how vulnerable you are. Do you have open contracts you won't be able to fulfill? Are you holding too much inventory that you won't be able to sell?

With Eka's [Position](#) app, you have that information in hand in minutes, because the data from across your entire value chain is automatically aggregated. With Eka's analytics, you can run simulations and evaluate options for mitigating risk and taking advantage of new opportunities quickly and efficiently. You move faster and you move smarter. *"When commodity markets shift, you need information quicky to take advantage of new opportunities and efficiently."*

Eka's Blockchain Marketplace drives fast, efficient collaboration

Eka's [Blockchain Marketplace](#) enables real-time collaboration across the entire value chain – delivering both speed and agility. Buyers and sellers can bid, negotiate, and create contracts digitally, communicating instantly to all registrants across geographies. If a market shock occurs, traders on the blockchain can react immediately to secure the most profitable deals without waiting for phone calls or emails.

Eka's Blockchain Marketplace also provides visibility across the entire value chain, enabling traceability for those worried about sustainable sourcing. It's efficient, provides increased value to all participants in the value chain, and is cost effective.

Commodity markets are becoming more volatile, so you need to harness the power of data and analytics to trade smarter. Eka's platform delivers the speed and agility you need to thrive.

[Explore the speed and agility of Eka's platform](#).

Coffee is grown in more than 70 countries and consumed in over 230 countries and territories each year. It is one of the most popular drinks worldwide, generating billions of dollars of revenue. Coffee is the way many people start each morning, but it is much more than just a jolt to start your day.

Coffee is actually good for you

At one time, coffee was considered unhealthy. However, according to a [blog published in Harvard Health Medicine](#), moderate coffee consumption (three to four cups per day) has been linked with a longer lifespan, and coffee consumption is associated with an 8% to 15% reduction in the risk of death (with larger reductions among those with higher coffee consumption).

Many countries have banned coffee throughout history

Coffee has been banned repeatedly over time. [Coffee was banned in Mecca in 1511](#) because it was believed to stimulate radical thinking. Murad IV claimed the Ottoman throne in 1623 and quickly forbade coffee drinking in Constantinople. Sweden banned coffee in 1746 and used it as a means of execution for convicted murderers. Coffee is not a great tool for executing prisoners.

Adding cream keeps coffee warm

While it may seem surprising, [coffee with cream cools about 20% more slowly than black coffee](#). Adding cream thickens the coffee (adds viscosity), slowing the rate of evaporation. Evaporation causes heat loss. Dark colors also emit heat faster than light colors. By lightening the color of your coffee, you slow its rate of heat loss slightly. Finally, hotter surfaces radiate heat faster, so by cooling your coffee by adding cream, you slow the rate at which it loses heat.

Coffee was supposedly discovered by a goat herder

No one knows exactly how or when coffee was discovered, but there is a legend that says it was discovered by a [goat herder in Ethiopia in the 1500s](#). He saw his goats eating coffee cherries and observed a change in their behavior. After eating the cherries, they gained a high amount of energy and they didn't sleep at night. He reported his findings to the abbot of the local monastery, who made a drink with the berries and found that it kept him alert through the long hours of evening prayer. The abbot shared his discovery with the other monks at the monastery and knowledge of the energizing berries began to spread.

What we do know is that by the 15th century, coffee was being grown in the Yemeni district of Arabia and by the 16th century it was known in Persia, Egypt, Syria, and Turkey.

Finland has the highest coffee consumption per capita

The US may be one of the largest consumers of coffee per country, but Americans are not even close to Finns when it comes to coffee consumption per person. [Finns consume an average of 26.45 lbs](#) (12 kg) of coffee per capita. If you take children out of the equation, that number is even higher. Finland is followed closely by Norway, Iceland and Denmark. Americans drink under 10 lbs per capita.

Coffee is the second most traded commodity in the world

Coffee is the world's second most traded commodity, right behind crude oil. The global coffee market was [valued at approximately USD 102.15 billion in 2019](#), with worldwide production estimated at over 19 billion pounds.

Most coffee farms are actually small

Countries like [Burundi, Uganda and Ethiopia](#) derive more than half their export earnings from coffee alone, so coffee is big business. At the same time, small-scale family farmers produce 75 percent of the world's coffee supply, so coffee is rooted in small family-owned businesses.

Hawaii and California are the only US states that grow coffee

While the US is one of the largest consumers of coffee in the world, it does not grow a lot of coffee. Good coffee growing conditions require high altitudes, tropical climates, and rich soil. Hawaii has been producing coffee from before it was a state, but [California only recently began growing coffee](#).

When you drink your first cup of coffee today, take a moment to savor it and enjoy the health benefits of the drink that was once a very ineffective tool to execute murderers.

At iRely, we have a long history of helping coffee traders and roasters navigate the nuances of coffee trading and procurement. In fact, more coffee roasters use iRely than use any other CTRM software. [Contact iRely today to learn more.](#)

Rising commodity prices are impacting the global economic recovery, fueling inflation, and damaging vulnerable businesses and households. At the same time, supply chain disruptions stemming from events like the global pandemic, Suez Canal blockage, and extreme weather are becoming more common.

Price volatility and supplier uncertainty are major sources of risk in commodity trading. Supplier diversification is one of the most effective methods to secure your supply chain and hedge against these risks. Supplier diversification is the process of selecting backup suppliers of different sizes, in different locations, and with different capabilities, so you do not completely rely on one source for business-critical materials.

With supplier diversification, you will not lose access to all your raw materials if a supply chain disruption occurs. You can increase orders from other partners and swiftly engage with secondary suppliers if your primary supplier increases prices too much or experiences a supply chain disruption. You have options.

While the concept of supplier diversification is easy to understand, implementing it can be challenging. Following these five steps can help.

1. Evaluate your current sourcing

Before you create a supplier diversification plan, you need to understand what commodities and manufacturing inputs are essential to produce your product. Evaluate how flexible your requirements are and assess which commodities you cannot afford to do without, which are most price sensitive, and which ones are most vulnerable.

For example, if you need a specific [coffee](#) that only grows in a handful of locations in the world, you have very few options for locations and must choose your suppliers carefully. You need to understand the risks involved in choosing your primary supplier or suppliers. You need to know how long they have been in business, how financially stable they are, if they can handle your quality requirements, and if they have the capacity to meet your demand. You also need to look at the region to assess if the area is stable enough to minimize supply chain risks and understand local regulations, tariffs, and potential supply chain bottlenecks.

2. Develop your diversification strategy

After you evaluate your current supply chain, ask yourself a few questions.
- What are the most unique inputs to the product (and therefore the hardest to source)?
- Which commodities are most critical for your business?
- What items have the longest lead times?
- What supply chain disruptions are most likely to occur?

Use these answers to develop a supplier diversification strategy. Analyze the probability of a given disruption occurring along with the impact it will have on your business. If you source sugar from a plantation three miles away, supply chain disruptions are unlikely. If your [cocoa](#) travels thousands of miles across an ocean, and is grown in a politically volatile location, supply chain disruptions are more likely.

Your strategy may be as simple as "use two different primary suppliers for this commodity with three backups" or as complex as "have three primary, four secondary and three tertiary suppliers for all commodities and make sure they are on different continents." You must balance the costs with the risks.

3. Identify suppliers

Once you outline your strategy, you need to find suppliers that fit your requirements. For example, if the goal is to mitigate location risk by finding suppliers in different regions, you need to locate suppliers of each critical commodity located in different areas of the world. For example, cocoa can be sourced from Africa, Asia, and South America, and [sugar](#) can be sourced from North America, South America, Europe, and Asia.

4. Select suppliers

After finding potential suppliers that satisfy the goals of your strategy, you need to narrow the list down to the ideal candidates and select your new suppliers. These suppliers should meet all the requirements of your diversification

strategy as well as your overall business strategy. Use qualification criteria to select which supply partners you want to engage, including detailed assessments of supplier operations and even onsite audits to review processes and facilities. You may want to engage consultants to get third-party validation of potential partners.

5. Adjust operations

Once suppliers have been selected, the final step is to adjust your operations to integrate the new suppliers. You may be sourcing from multiple suppliers in different regions, so you need to ensure you have systems in place to manage shipments, payments, and contracts for different suppliers in countries with different regulations, currencies, and tax structures. In most cases, your original supplier will remain your primary supplier even after diversification since you chose them as your supplier for a reason.

When doing business with multiple suppliers, you need to standardize your paperwork (RFQs, purchase orders, etc.). Keeping accurate and consistent audit trails for all transactions is essential for companies working with multiple suppliers.

Once you have updated operations to incorporate your new diversification strategy, your supply chain will be more stable and secure, reducing risk for your operations. When disruptions occur, you will have a plan in place to quickly shift to alternate suppliers, ensuring your business remains operational despite the disruption.
If you are worried about commodity risk, contact iRely today or download our commodity risk management overview to learn how we can help.

Choosing the Right Multifactor Authentication Method

Security compliance is critical for wealth management companies to fulfill legal requirements and protect the company's systems, data, and operations. Multifactor authentication (MFA) is one way to protect against unauthorized access to systems and ensure data security.

What Is MFA?

MFA is user authentication that requires two or more factors to achieve access. Factors include something you know, such as a password or personal identification number (PIN); something you have, such as a token or physical device; or something you are, such as a fingerprint.

Many industries require companies to provide MFA to users, but that requirement is vague. While people often think of MFA as one thing, such as the text message their bank sends when they try to access their account, there are several authentication methods available today.

Why MFA Is So Critical Today

According to Microsoft, there are more than [300 million fraudulent sign-in attempts](#) to Microsoft cloud services every day, and that figure is growing. Microsoft deflects more than 1,000 password attacks per second in Microsoft systems, and 99.9 percent of accounts that are compromised [don't have multifactor authentication enabled](#).

The threats are increasing, with more sophisticated attacks fueled by advances in technology. Thankfully, authentication options are also advancing.

Evolution of MFA

MFA options have evolved, with more secure options developed over time. While older methods like email and phone calls are still available in some cases, newer options like mobile apps are being widely adopted and phasing out the older methods in a lot of organizations.

With email-based MFA, the account provider sends the user a 5-10 digit code via email and the user inputs that code into the login page. While this method is more secure than having no MFA, email is not the safest option. Email-based MFA does not stop phishing if the user's account is already compromised. An estimated [3.4 billion emails are sent by cyber criminals every day](#), and these emails are designed to look like they come from trusted senders. Many recipients are compromised and don't know it, and 36% of all data breaches involve phishing.

Phone-based MFA options – either calls or texts – are very popular because of the convenience. These days, people are rarely far from their cellphones, so receiving a call or text with a security code is easy. Unfortunately, both texts and phone calls can be intercepted. The simplest way that hackers can interfere with this authentication process is to direct the user to a spoofed login page that forwards the phone-based MFA code to the hacker. Text messages can be monitored and intercepted, and hackers can trick carriers into switching phone numbers to new devices.

Hardware tokens are more secure than email or phone-based options. A hardware token – such as a key fob, security token, or USB token – must be physically plugged into a computer or device for authentication. This token allows you to access software and verify your identity with a physical device rather than relying on authentication codes or passwords. This physical device has a unique code for your login. A physical security key is considered one of the most secure MFA options, since it's a dedicated authentication device and completely resistant to phishing.

Biometrics, including fingerprints and face recognition, offers MFA that helps prevent account fraud. In fact, face recognition could be one of the most secure MFA options possible. Scammers can steal knowledge-based authenticators like passwords or gain access to verification links, but fake photos generally fail biometrics scans. Like hardware-based keys, the physical aspect of this authentication method makes it difficult for hackers to interfere with this login process. Because of privacy concerns, including location information when users' faces are scanned, many users are opposed to this option for MFA.

Secure mobile apps, such as Google Authenticator, Microsoft Authenticator, and Duo, are apps you install on your cellphone. These systems generate a unique code every 30 seconds or minute, making it difficult for hackers to gain unauthorized access. The codes generated in the app are tied to the device, not the user's online identity. While it would be very rare for a hacker to take their target's phone, it is possible for someone to steal a cell phone with a weak password (like 1234) and use their authenticator app to gain access to online accounts.

"While any multifactor authenticator is better than having nothing, we would never recommend email or text messages because they just aren't secure enough." Ryan Flaherty, ITS Technician

Which MFA Method Is Right for You?

If your business deals with sensitive information, and you want to guard against data breaches, MFA is essential, but choosing the right system for your company can be difficult. You need to consider how sensitive your data is. The goal is to ensure security while avoiding over-credentialing or under-provisioning.

For wealth management companies, all client and investment data is highly sensitive and would benefit from MFA; however other programs and files, such as lists of office supplies or marketing materials, may not require the same level of security. Understanding which programs, servers, and files you need to protect is key to creating security protocols that safeguard your important data without overburdening your staff.

You also need to evaluate how difficult each option would be to implement and use, because MFA only works if your team uses it. Hardware tokens are a strong choice for data security, but you have to purchase a token for each employee, train your team how to use them, and keep track of them. This could be a challenge for smaller companies. You need to balance security with usability and budget.

Engaging a Wealth Management Technology Expert

MDS can make adopting a multifactor authentication program easy. We evaluate your data access needs to determine which MFA method will work best based on your security requirements, budget, risks, and more. Our comprehensive implementation plans include testing and validating MFA solutions before deployment and training your staff to ensure compliance.

We follow major security breaches to stay updated on MFA best practices and regularly review cybersecurity standards like NIST and industry recommendations to guide MFA deployment. We also evaluate other organizations that meet and exceed security standards to assess best-in-class MFA programs.

Contact MDS Solutions today to learn how we can help you choose the best multifactor authenticator for your business.

Are You Ready for Trade Date Plus One (T+1) Day?

Beginning on May 28, 2024, the standard settlement cycle for most broker-dealer transactions in securities will change from two business days after the trade date (T+2) to one (T+1). The shift from T+2 to T+1 was driven by both the industry (via SIFMA, ICI, DTCC) and the Securities and Exchange Commission (SEC), and it covers trades in equities, corporate bonds, unit investment trusts, mutual funds, ETFs, ADRs, and options. While this shorter settlement cycle is designed to benefit investors and "reduce latency, lower risk, and promote efficiency as well as greater liquidity in the markets" according to SEC Chair Gary Gensler, for firms managing these transactions, getting from T+2 to T+1 presents major challenges.

The Impact of Losing a Day

A T+1 settlement cycle requires trades to be settled one day after the trade transaction date. To meet this tight settlement window, the industry is recommending that trade allocations be completed by 7 p.m. ET and trade confirmation and affirmation be completed by 9 p.m. ET on the trade date. This means that trades must be allocated, confirmed, and affirmed just five hours after markets close – including resolving exceptions. That is not a lot of time for organizations that have built their settlement procedures around managing exceptions and settling trades during the next business day.

Managing settlement after the market closes instead of the following day is also a challenge for the trading team, who typically start work as early as 4 a.m. for pre-market trading. Under T+2, many firms use the early mornings to manage post-trade processing before the market opens. This is no longer an option if they plan to meet the T+1 deadline.

Settlement Processes Will Have to Change

Each firm has to review its processes, collaborate with counterparties, and determine how they can streamline settlement workflows as the transition deadline approaches. Instead of waiting until markets close to do their allocations, they may have to send transaction data throughout the day to avoid overwhelming brokers and systems at the end of the day.

Firms will no longer have the luxury of waiting a day to determine if they need to fund a trade with a money market balance. T+1 will require firms to keep a closer eye on their liquidity to make sure they have the cash available to fund a stock purchase on the trade date. There may also be issues with foreign trading, since many of those trades will remain on T+2 cycles. This will create timing differences in funds owed and funds received.

Technology Updates Are Required

At a minimum, all market participants must update their portfolio accounting systems and trade order management systems to make sure the system settings are properly set up for the new trading cycle. These changes have to occur over the holiday weekend, because trading the week of May 20 will follow the existing T+2 cycle and trading beginning on Tuesday, May 28 must adhere to the new T+1 cycle. This may involve creating new dataflows, installing software patches, and even code changes on some older systems.

If you run reports or share screenshots of trading activity with counterparties as email attachments or faxes, this process will be too slow for T+1. Custodians and brokers may need to receive data in machine-readable formats to accelerate data loading directly into their systems, so you probably want to invest in an electronic trading system to ensure trades are settled quickly and efficiently. An electronic method for allocations with a direct connection between ETF issuers and order management systems will efficiently move trade information downstream from the trading desk.

Workflow Adjustments

Perhaps the most difficult change is the necessary change to human workflows. Under T+2, the trading desk can shut down after market hours and leave post-trade processes for the next day. Under T+1, post-trade processes cannot wait until the next morning, so trading operations teams will need to have people available during East Coast evening hours to monitor post-trade activity, resolve issues, and process exceptions.

Rules will have to be in place to automatically manage common or minor exceptions without requiring individuals to call or email counterparties, because there just won't be time for long discussions and approvals. If each exception requires even 10 minutes of discussion, you will soon run out of time and miss deadlines.

You also need people who are willing to work after-market hours. If your team starts work at 4, 6, or even 8 a.m. ET, they have worked a full day by 4 p.m. ET and are not going to have the focus, energy, or desire to spend hours on post-trade work.

MD Solutions Can Help – Assistance from the Frontline

If you do your own assessment and you are not sure that you are ready for T+1, MD Solutions can help. We can analyze your systems and procedures and create a plan to get you ready for May 28. In fact, we have our own trade settlement team, and we already created our plan to update their systems and processes to ensure they are ready for T+1.

First, we can provide a quick analysis of your tools and workflows and make recommendations to help ensure you are prepared. Our team can update your software programs, or we can outline the steps you need to take to update your systems to ensure you are ready to go on May 28. We can provide workflow suggestions to help you adopt to the shorter timeline.

Second, you may determine that there is no way for your team to manage T+1 settlement. If so, you are not alone and our team can fill the gap.

We have a trade settlement team to provide after-hours trade settlement support to firms that do not have the capacity to handle all the after-hours work. Our experienced trade settlement team is located across the globe, ensuring we always have trade settlement experts working day and night to make sure no one misses a trade settlement deadline. Are you ready for T+1? If you are not sure, contact MD Solutions today and we can make sure your team is ready to switch from T+2 to T+1.