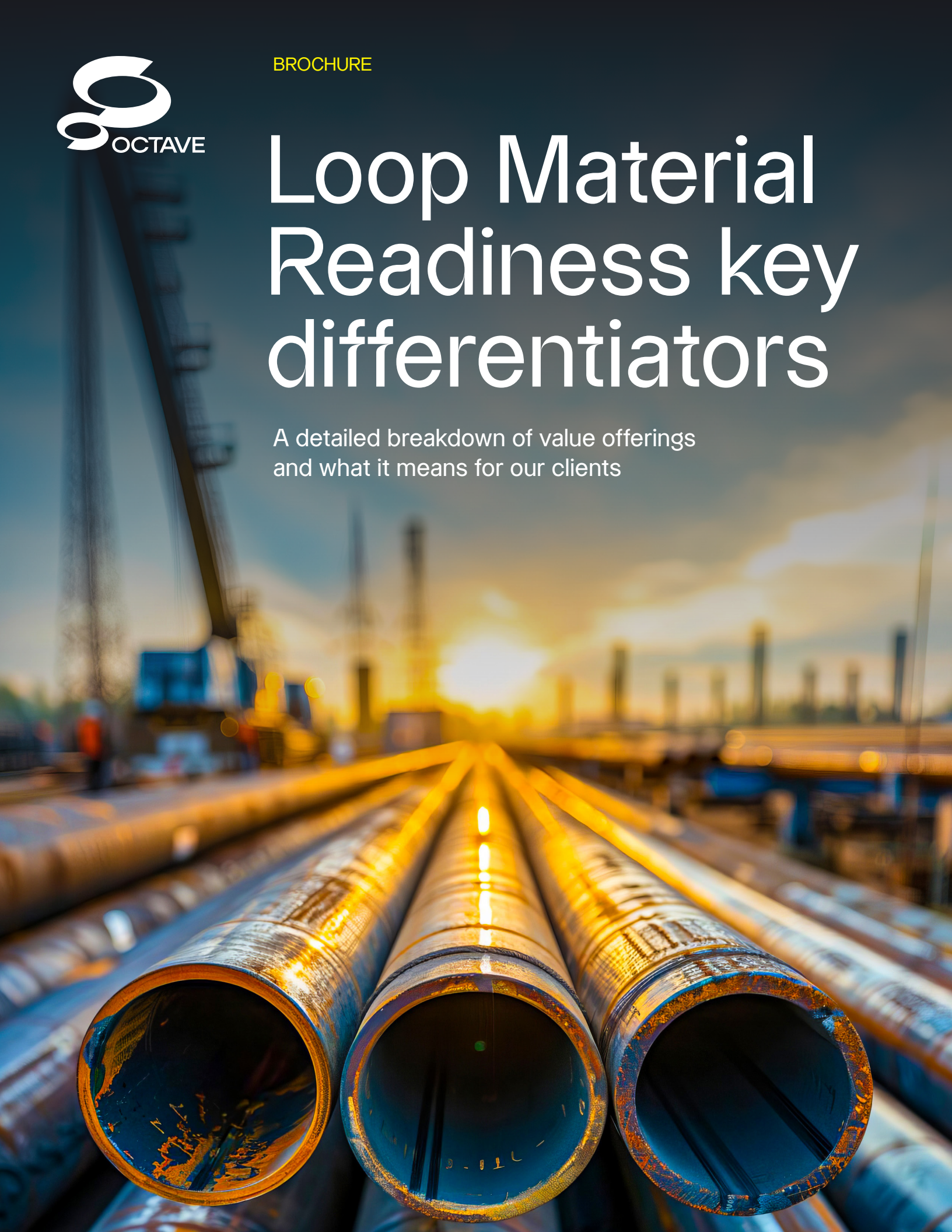
OCTAVE

BROCHURE

Loop Material Readiness key differentiators

A detailed breakdown of value offerings and what it means for our clients



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Executive summary

Loop Material Readiness *(formerly Jovix),* part of Octave, is the original provider of RFID-enabled, site-level material control systems in the construction industry. As the market leader in terms of industry experience, quality and quantity of clientele and innovative output, Loop Material Readiness was the first in the market to effectively apply active and passive RFID, as well as the first to implement vehicle- and drone-mounted RFID readers for efficient material tracking. We were first to establish a team of experienced personnel to assist in facilitating technology adoption and change management on the jobsite. And to date, Loop Material Readiness is the only provider among our competitors to provide a true digital supply chain solution with visibility enabled by auto-ID technology (barcode labels, passive and active RFID tags).

What is material readiness?

Quite simply, material readiness is defined as construction crews having the required materials without delay to complete their work according to plan. Material readiness can only be achieved by fully digitizing the supply chain to provide real-time, geo-contextual and relational visibility from fabrication to installation. Through this Loop Material Readiness solution, Octave is doing its part to transform the construction industry by reducing material wait times to zero.

Since 2008, Loop Material Readiness has been deployed on hundreds of jobsites around the world. No matter the location, our knowledgeable and experienced customer success team will be there to lead and/or support the implementation and provide training and sustainment services thereafter.

Loop Material Readiness value

Loop Material Readiness provides clients with an accessible, seamless and comprehensive material readiness platform, setting itself apart with exclusive functionality.

Top 10 ways to benefit from using Loop Material Readiness:

1. **Supplier engagement and onboarding:** Upstream tagging with auto-ID and the Loop Material Readiness mobile app at the supplier location helps to create a seamless digital supply chain.

2. **Material visibility and planning:** Because Loop Material Readiness contains bill of material (BOM) data and is accessible anywhere on the jobsite, construction planners can request work packages for pick and issue, eliminating the need to involve additional systems throughout the request, pick and issue process. This can replace a multi-step, manual work process that might be in use on your project currently.

3. **Loop Material Readiness mobile application:** The Loop Material Readiness mobile application is designed to support field operations in both connected and disconnected environments. It allows users to download data for offline use in remote locations, while also providing real-time, online workflows when network connectivity is available.

4. **Configurable workflows:** Loop Material Readiness offers configurable workflows designed to align with real-world field operations. These workflows adapt to project-specific processes across key material activities—such as receiving, inspections, inventory movements, picking, and issuing, while maintaining a consistent user experience across mobile and web applications. This configurability makes the application simpler to use in the field while driving consistency, efficiency and user adoption without custom development.

5. **User experience:** The Loop Material Readiness web app is user friendly with customizable, filterable and intuitive layouts. The Loop Material Readiness mobile app provides large buttons designed for workers who are required to wear gloves on site.

6. **Advanced track and trace:** The core of a digital asset management program is a comprehensive track and trace platform. Loop Material Readiness has a long history of innovation in this space, including early use of passive RFID and drone-mounted RFID readers. In addition to fixed gate readers, material location and status updates are provided automatically by regular sweeps of storage areas and laydown yards via handheld devices, vehicle-mounted readers and/or drone-mounted readers for both passive and active RFID.

7. **Integrated field materials management and advanced work packaging (AWP):** Our functionality includes receiving, overage, shortage and damage (OS&D) management through resolution, receipt inspection, inventory management with transfer and location changes, preservation and maintenance inspection, allocation-based requests, picking, issuing, re-issuing and returns to stock.

8. **User adoption via online training:** We offer hundreds of online, interactive courses via training. Adoption dramatically increases once users have 24/7 access to training tailored to their specific role.

9. **Loop Material Readiness integrations:** In addition to the productized integration with Loop Core, the Loop Material Readiness API provides seamless integration for purchase order (PO) data, supply data and work package (engineering, construction and installation) demand data. The ability to consume both purchase orders as supply and work packages as demand provides data for material allocation and requests. In a typical workflow, Loop Material Readiness consumes PO data from the purchasing system of record, receipts are performed in the mobile app, and that data is translated back to the purchasing system for the three-way match.

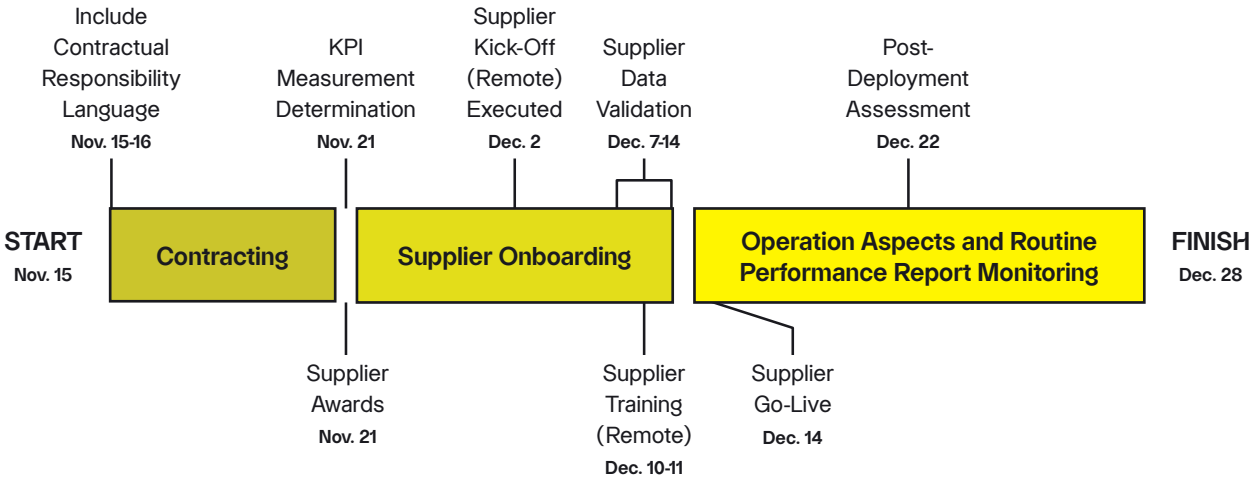
10. **Global implementation experience:** Implemented on six continents, 25 countries, more than 100 projects and over 650 jobsites, clients can feel confident that Loop Material Readiness is a long-term partner, truly invested in your success.

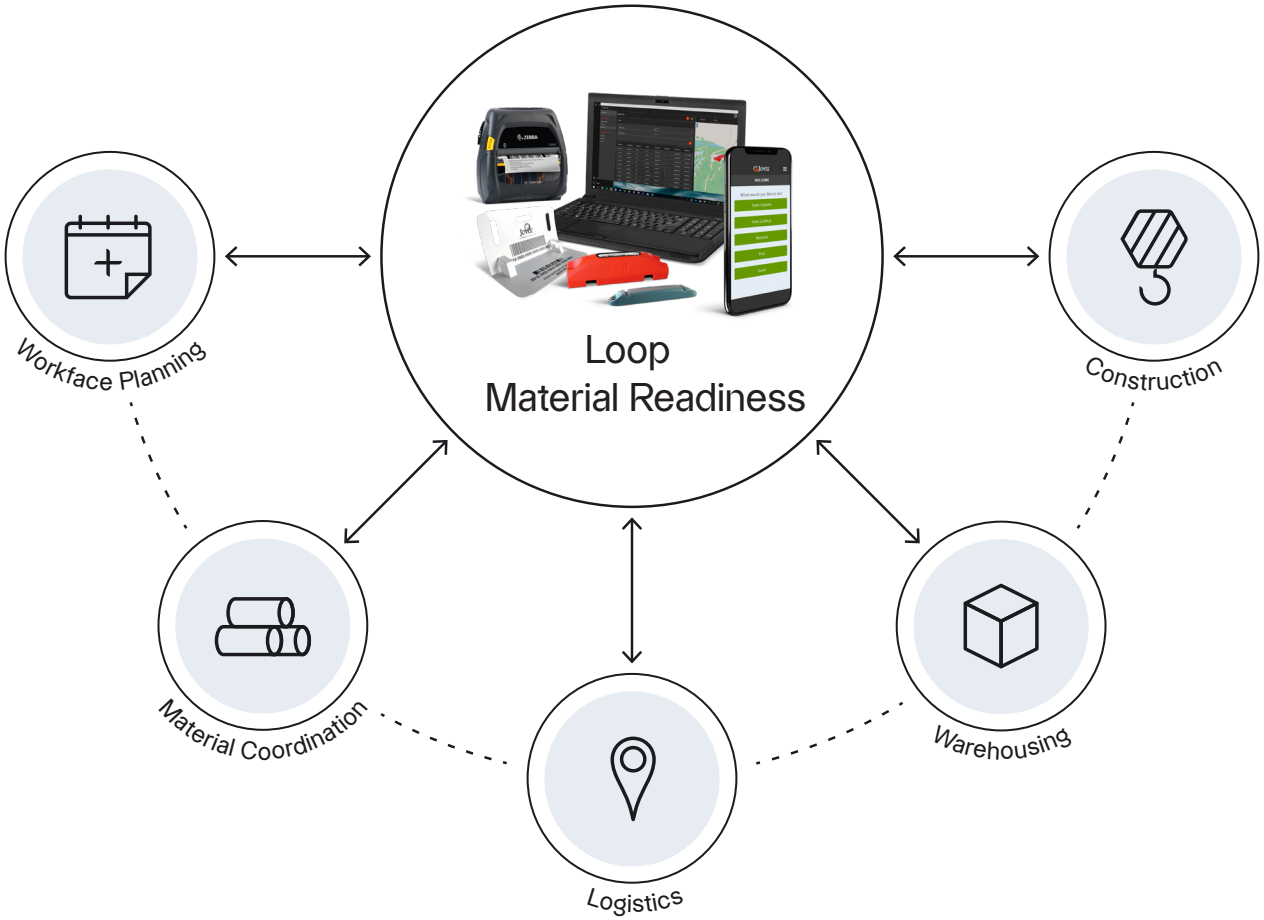
A supplier uses the Loop Material Readiness mobile app to scan barcodes on materials.

Breakdown of value offerings

Supplier engagement and onboarding

The Loop Material Readiness digital supply chain program increases visibility and data control for the project. The image below provides a high-level overview of the supplier onboarding program. We are constantly adjusting to abbreviate the timeline.





Digital supply chain value streams

- The contractual requirement for suppliers to participate in a digital supply chain program places additional focus on the supplier's quality control program. Requiring suppliers to tag assets with RFID or barcodes enhances visibility all the way through to digital packing list creation. The data generated by supplier-tagged materials automatically populates digital reports, allowing a quick review of program health.

- In the same way that aspects of EPC construction have moved upstream (i.e., modular construction), a digital supply chain program moves the creation of in-bound asset information upstream and enables suppliers to publish asset data at the point of origin. Relieving the project of data entry and pushing it to the supplier not only improves visibility into material arrival at the jobsite, but also provides a better understanding of the supply chain. In turn, this translates into a more detailed view of constructability.

- Tagged assets are assigned to a construction work package (CWP) and/or installation work package (IWP), bringing an end to the environment of unmanaged "ship-loose" materials and preventing asset management inefficiencies. Visibility into CWP and/or IWP components empowers the project to end improper asset issuance to construction.

- By increasing a project's auto-ID footprint and moving work upstream, transactional efficiency gains and improved material control are optimized downstream.

- The digital supply chain opens a direct line of engagement with suppliers, resulting in tighter data integration and an easy flow of information between all parties.

Supplier engagement program key components

- **Supplier Contract Language:** Contractual language inserted into the PO/contract terms and conditions, outlining the supplier's obligations as related to program adherence
- **Supplier Guide:** Step-by-step supplier instructions detailing program enrollment, engagement requirements and contractual tagging obligations
- **Reports:** Automated, real-time snapshots into supplier compliance
  - **Supplier Readiness:** Focuses on timeliness to complete tasks such as RFID tag ordering, online training and Loop Material Readiness utilization
  - **Shipment Readiness:** Focuses on data quality as well as physical placement of auto-ID on materials

Suppliers and the Loop Material Readiness mobile app

- Loop Material Readiness mobile app users can update GPS and named location of any tagged material
- Using an RFID reader in conjunction with a mobile device allows users to find material easily
- Once materials have been picked and packed for shipment to a jobsite, a user can update the status of ship-loose material to "shipped"
- The Loop Material Readiness mobile app allows the supplier to take photos of materials in crates, sea containers, pallets, etc., to be used as reference by users on the jobsite

Activity	Clients	Loop Material Readiness	Supplier	Contractor
Award supplier PO	●			
Send supplier link to supplier support request form (SSRF)		●		
Request training through SSRF			●	
Register user in training and send link to class		●		
Complete online training			●	
Email project procurement preliminary packing list			●	
Approve preliminary packing list	●			
Submit PO for RFID tags through SSRF			●	
Request RFID tags			●	
Package and prepare RFID tags for shipment to supplier		●		
Ship RFID tags to supplier	●			
Invoice supplier for RFID tags	●			
Associate RFID tags via spreadsheet or mobile app			●	
Complete final packing list and send to project procurement for approval			●	
Submit final packing list through the SSRF	●			
Upload packing list to Loop Material Readiness		●		
Recieve materials				●
Track supplier onboarding metrics		●		

Supplier engagement and compliance

- The Digital supply chain coordinator (DSCC) will use the supplier portal within Loop Material Readiness to receive RFID tag orders with quantities based on the supplier's scope
- All POs will have a "promise date" (or similar) to help suppliers track the necessary data metrics
- All POs and contracts issued to clients, vendors and/or suppliers will contain the contract language required by Octave
- Clients' buyers are responsible for including the necessary contract language in any award documentation to vendors and/or suppliers

Supplier onboarding standardization

Suppliers will use the online Loop Material Readiness modules to complete the following standardization training:

- **Base software and hardware (1 hour):** General Loop Material Readiness training including logging into the app, navigation, settings and performing tag association updates
- **Tag attachment overview (1 hour):** Review auto-ID tag types and optimal positioning attachment methods
- **Support protocol (1/2 hour):** Review available support options and supplier protocol when interfacing with the Loop Material Readiness support team
- **Documentation overview (1/2 hour):** Review collateral materials and work instructions that assist suppliers in performing Loop Material Readiness functions

Loop Material Readiness and configurable workflows

Process requirements in construction are unique to each project. Loop Material Readiness has the flexibility to match those unique data collection needs. Configurable workflows in the mobile app are perfect for capturing field-level data and activities, and custom processes can also be configured within the Loop Material Readiness server to meet client requirements. Loop Material Readiness configuration can be applied to the following areas:

- **Entities:** Materials, POs, receipts, drawings, tools, inspections, etc.
- **Naming conventions:** Adjust display names throughout system
- **Entity relationships:** One-to-one or one-to-many
- **Application Views:** Web (create, detail, list/grid, nested list/grid) and mobile (create, detail, list)
- **Entity data fields:** Text boxes, text areas, decimal, boolean, date and time, etc.
- **Field-level data capture and activities:** Force photo, GPS capture, supplier barcode capture, etc.
- **Configured Workflows:** Web (define steps to manage transactions and other web-based activities from a browser) and mobile (create transactions and activities associated with supplier staging, digital packing lists, receiving, picking, issuing, inspections, etc.)

The Loop Material Readiness configurator on the web app is used to develop the specific attributes and entities within your custom workflow. The grid view (a visual building block tool represented below) enables your team to design a precise, custom workflow for your mobile devices, ensuring processes are followed by field users.

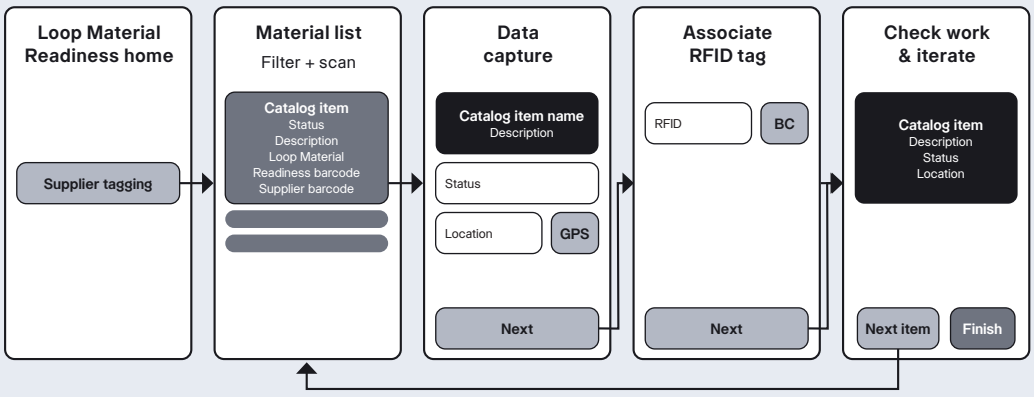
After establishing the workflow, it will be published and available on the mobile device. All client-specific configurations and workflows can be standardized, made available on the server and easily deployed to new or additional projects.

Implementation and schedule

Configurable workflows within Loop Material Readiness do not require custom software development and can be completed by your DSCC or by a client champion. For enterprise accounts, the preferred method is to train Loop Material Readiness super users and, if necessary, project-specific resources. The Loop Material Readiness configurator super user course is a 20-hour walkthrough of all instructions required for a project or client to create their own specific workflows.

Supplier tagging

Filter/scan by data fields: Catalog item name, description, Loop Material Readiness barcode (scannable), supplier barcode (scannable)



Configurable options

Clients have helped us identify areas where value could be added to Loop Material Readiness, such as tool tracking, equipment tracking, personnel tracking, scaffolding tracking and progress capture. Let's break down each of these initiatives.

Equipment tracking

Maintaining and keeping track of equipment is critical to a project. How does Loop Material Readiness help?

- Rental equipment tracking
  - Consume PO and receive equipment on the jobsite and capture essential data such as serial numbers, engine hours rented, rental dates and pre-use inspection
  - Track invoiced rental equipment to ensure it's still on-site
- Track equipment location using auto-ID and view locations on a map
- Preservation and maintenance routines can be triggered by status or data inputs such as engine-run hours and dates

Scaffolding tracking and management

Scaffolding is critical to constraint-free work packages, and there are scaffold management activities including inventory, safety inspections and erection that can be automated within Loop Material Readiness.

Scaffold management activities can be automated within Loop Material Readiness.

- **Scaffold inventory:** Using auto-ID, individual scaffolding components can be identified and inventoried, ensuring that contractors have adequate supply to meet demand. Scaffolding can be placed on individual work packages that related to scopes of work in the field. Required-at-site (RAS) dates for scaffolding can be set ahead of the work package RAS date so that it's erected in time for work to begin. Superintendents, foremen and workface planners can leverage Loop Material Readiness to create scaffolding withdrawal requests to ensure the scaffolding is delivered at the proper time. Loop Material Readiness manages scaffolding constraints related to available components (i.e., "What components make up a 10-foot elevated platform and are they available?").
- **Scaffold Erection and inspection:** As platforms are built, the status is updated within the app. Status updates can trigger events (i.e., safety inspection) and alert foremen and superintendents that the area is ready, and work may begin.

Progress capture

Milestones may be attached to the manufacture and fabrication of materials, and these milestones can be progressed by scanning an asset's auto-ID tag and updating its status in Loop Material Readiness. This is called "progress capture." Once materials are issued to construction, different progress activities (i.e., staged, weld, final weld, commissioning, etc.) are captured and passed back to the project controls tool to drive earned value for contractors. This not only enables quicker payment to contractors and EPC firms, but also allows for precise validation of events based on reads of auto-ID tags.

User experience

Loop Material Readiness mobile: Site materials management

Loop Material Readiness pairs auto-ID (barcode labels, passive and active RFID tags) with mobile devices (commercial, rugged tablets, consumer smartphones and tablets) to conduct material management transactions and replace manual, paper-based activities with digital, automated processes in a modern and intuitive workflow. Users are equipped with actionable data that enables them to work quickly and efficiently with fewer errors. Material transactions captured digitally provide real-time status and location updates, populate project reports and provide dashboard visibility and insights to the entire project team.

Digital packing lists: Suppliers and fabricators associate auto-ID to materials using mobile devices and generate advanced shipping notices (ASNs) and packing lists to support an efficient receiving process.

Site receiving: Employing mobile devices to receive materials at the jobsite, laydown yard, warehouse, port, mod yard, etc., users can take photos, capture heat numbers, annotate OS&Ds and record digital signatures.

Inventory management: The Loop Material Readiness mobile app updates material status and location via material transfers, inventory cycle counts, photos, GPS location and field notes.

Material picking: Using a mobile device and a Bluetooth RFID reader or barcode scanner alongside digital drawings and photos found in the Loop Material Readiness mobile app helps your crew find materials faster.

Material issuing: Loop Material Readiness users can capture employee IDs, timestamps, GPS locations, photos and digital signatures at the point of issue to construction.

Loop Material Readiness web: Construction materials planning

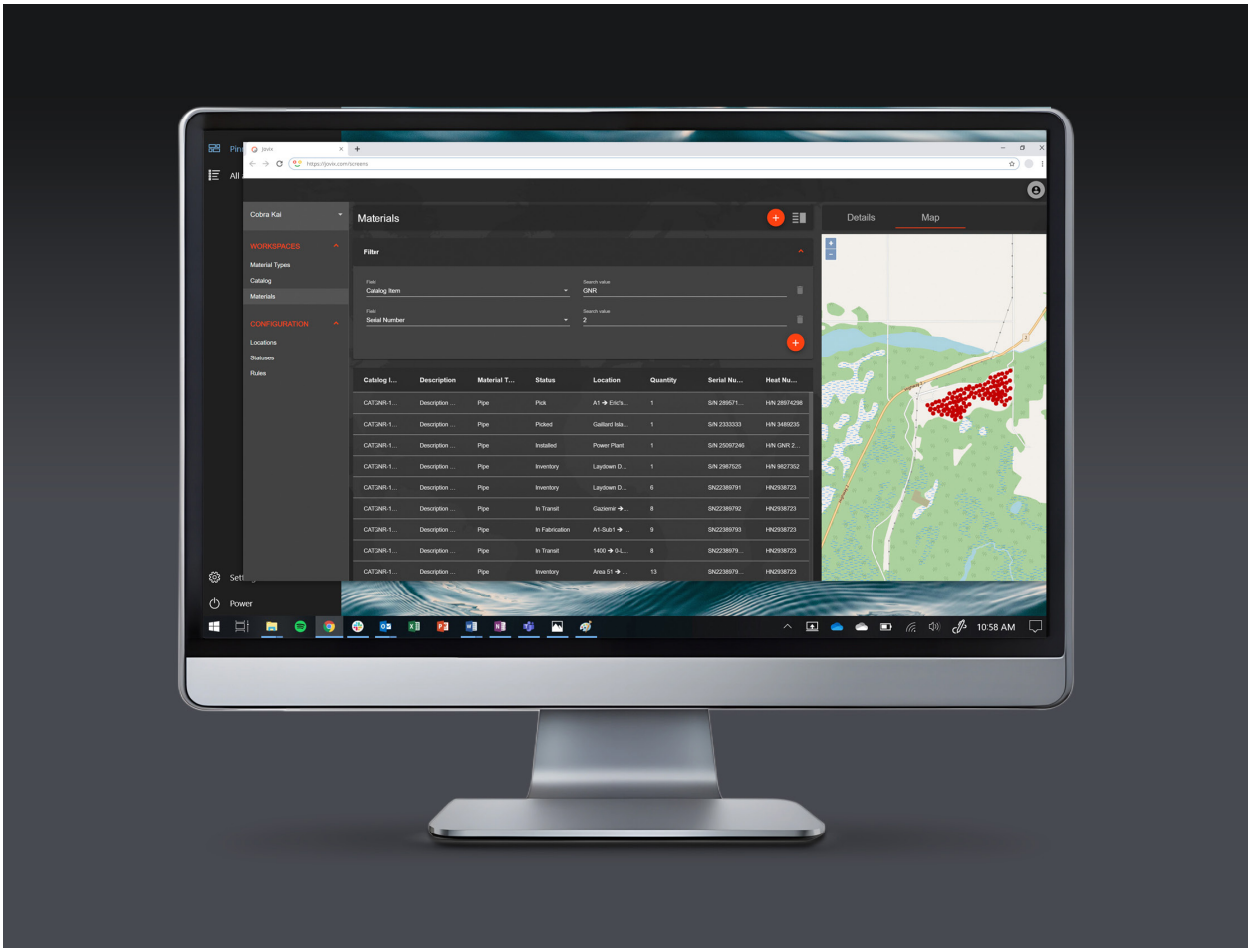
Loop Material Readiness provides an easy-to-use interface for material coordinators, workface planners and construction management teams to effectively plan material control activities and support the schedule.

Material withdrawal requests (MWRs): Users can submit MWRs and generate pick lists, allowing material management teams to plan, pick and issue more effectively. MWRs may be initiated from IWPs, drawings or ad-hoc. Pick crews check their mobile devices for pick lists and use them to locate auto-ID tagged materials.

Material availability: Loop Material Readiness web is a single source of truth for material availability. Data collected through mobile devices is used to provide real-time material status and location reports and can be generated against the project's BOM and workface planning data.

AWP readiness: Planners, field engineers, superintendents and materials management staff use Loop Material Readiness web for real-time visibility into engineering work packages (EWPs), IWPs and construction work areas. Material availability metrics on both current and forecasted status are based on algorithms associated with supplier data and construction RAS data.

Reporting and analytics: With the Loop Material Readiness dashboard, users can create project-specific reports and use the Loop Material Readiness export utility to establish periodic reporting, distributed to a fully customizable list.



A construction-specific solution

Loop Material Readiness is made specifically for the complex, global supply chains of construction and to provide users with easy access to project information.

Configurable workflows: Terms change from site to site. One site's "IWP" may be another site's "work order." That's one of the reasons Loop Material Readiness offers easy customization. Additionally, you can create custom entities (i.e., equipment, BOM) and configure the dashboard with custom views and filters.

Responsive relational design: Loop Material Readiness web can be accessed from any device, offers global search and is designed to provide users with access to relational data at the click of a button. Materials are hyperlinked for an efficient, easy-to-use experience. Navigate quickly between POs, receipts, material issues, engineering data, workface planning data and more.

No-limits mapping: For Loop Material Readiness users, the earth is our "yard." Instead of uploading laydown yard images, we leverage satellite and drone imagery, CAD and EarthCam to ensure up-to-date mapping that's focused on cluster and heat maps with drill-down ability.

Advanced track and trace

Some examples of auto-ID technologies used for track and trace include GPS, cellular trilateration (mobile phone tracking), barcodes, real-time location services (RTLS), as well as active and passive RFID. The auto-ID is attached to the item, and it will be tracked as it passes through "choke points" throughout the supply chain. Gate readers, vehicle-mounted readers, drone-mounted readers and manual sweeps scan an area, ping cellular towers and record GPS coordinates, providing direct and up-to-date asset visibility by status and location. Often, the best solution for our customers comes when using two or more technologies tailored for various needs in different stages of the supply chain.

Fully integrated field materials management and AWP

By leveraging mobile devices, digital material transactions take place in the field and eliminate redundant, error-prone data entry. Material transactions include fabrication tracking, shipment tracking and expediting, MRRs, OS&Ds, MWRs, issuing, location changes and warehouse functionality. A user with a mobile device can walk up to any tagged asset, scan it and immediately view all available data including the PO, shipment and receipt details, outstanding OS&Ds, inspection or preventive maintenance activities, status and availability.

Warehousing and inventory control

Loop Material Readiness uses mobile devices to provide field crew with real-time access to project material documentation in the field, including shop drawings, isometric drawings, engineering specifications, manufacturing preservation manuals, material safety data sheets (MSDS), mill test reports and other project-related documentation.

When warehouse inventory procedures are digitized, the physical inventory levels are more accurate and collecting that data is more efficient and less disruptive. With mobile and RFID-enabled warehousing functionality, Loop Material Readiness delivers the following:

- Cycle count management
- Transfers
- Location management (GPS or named warehouse locations)
- Barcodes and passive RFID
- Min/max management
- Reports
- Field notations
- Photo captures

Progress trackers are available and provide visibility throughout field mobility for the following:

- PO shipped items
- Receipt status and progress
- Material pick status and progress
- PO order received items
- Cycle count status and progress
- Material issue status and progress
- PO order/receipt OS&Ds
- Material request status and progress
- Shipment items received

Request

Loop Material Readiness may consume the project's BOM in the form of drawings or CWPs/IWPs. Users can submit MWRs based on work packages, construction drawings or even on an ad-hoc basis. MWRs contain a required RAS date to ensure the proper planning of material picking, and the Loop Material Readiness MWR forecast helps users visualize days to impact, status, percent completable (and more), based on inventory. MWRs are converted to pick lists, distributed digitally to the warehouse crew's mobile devices and used for efficient material location via auto-ID technology.

A mobile device paired with a reader gives field workers all the information needed about an auto-ID-tagged material.

Field mobility components

Loop Material Readiness pairs auto-ID (barcode labels, passive and active RFID tags) with mobile devices (commercial, rugged tablets, consumer smartphones and tablets) to conduct material management transactions and replace manual, paper-based activities with digital, automated processes in a modern and intuitive workflow. Users can feel confident replacing the clipboard with a digital platform. Auto-ID provides efficiencies that many other industries have used to their advantage for decades. Utilizing the shoulder strap, a Bluetooth mobile printer can be easily taken into the field for on-demand barcoding. As discussed previously, auto-ID is commonly applied upstream by vendors using the Loop Material Readiness supplier engagement program. Handheld Bluetooth RFID and barcode readers allow users to scan material on the fly as materials transactions are completed.

Receive

Efficient receiving begins with quality data and supplier communication. The Loop Material Readiness supplier engagement program allows for seamless data consumption and direct involvement from the supplier, and that attention to detail upstream leads to effective receiving. As materials arrive at jobsites, warehouses, laydown yards, ports, mod yards and elsewhere, users can complete a receipt vs. PO, shipment or ASN with their mobile devices. They can take photos, capture heat numbers, annotate OS&Ds and record digital signatures. The data can then be published to the client's ERP system to record inventory and update PO line items via Loop Material Readiness connect.

Pick and issue

Pick lists are made available on a user's mobile device. Through this digital platform, users activate RFID readers and barcode scanners to find material in conjunction with GPS and warehouse locations. While searching for material in a laydown yard, a user sees their location on a map as well as the location of the material, allowing them to plan an efficient route through the yard and find material faster. A Loop Material Readiness user can also reference digital drawings and photos to aid in material recognition.

Loop Material Readiness uses mobile devices to issue materials to construction. Issue transactions can be line items transferred directly from one or more pick lists, or they can even be created ad-hoc. At the point of issue, Loop Material Readiness captures material IDs, employee IDs, timestamps, GPS locations, pictures and digital signatures which signal a formal change of material care, custody and control. If required, these issue transactions can be formatted into a PDF report for document management.

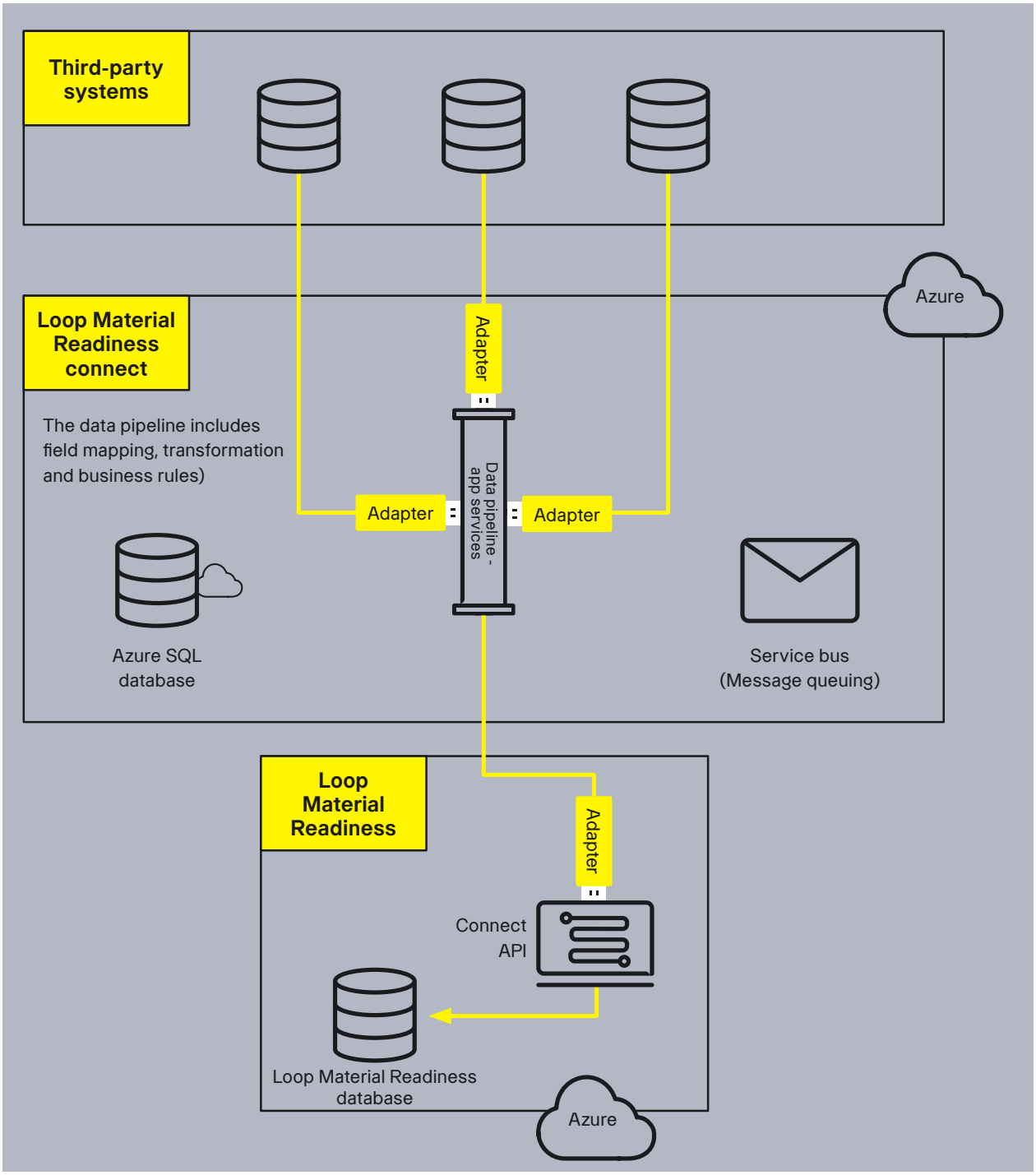
User adoption enabled with online training

The Loop Material Readiness client training methodology combines online learning with live training to ensure that all users have the necessary skills and abilities to confidently perform their roles on site. Outstanding training needs are assessed to ensure the process is successful with each individual Loop Material Readiness user. In addition to end user training, we also offer certifications including: Loop Material Readiness software certification, Loop Material Readiness super user certification and role-based software certifications to enhance the user's skillset and credibility on the jobsite.

We provide users with process-specific training and support that includes hardware usage, tag application, software functionality, troubleshooting and best practices to maximize the value Loop Material Readiness brings to the project. Upon completion of training, users will be proficient in their areas of responsibility and will be equipped to effectively use the Loop Material Readiness system during their time on the jobsite.

Loop Material Readiness Connect and API systems integration approach

The following diagram depicts the flow of data through an integration of Loop Material Readiness into any third-party system:



In addition to integrating with Octave's Smart Materials, Loop Material Readiness has also been successfully integrated into many other systems such as SAP, Autodesk, InEight, Oracle, Triax and Bentley, as well as EPC in-house systems like BPS, IPMS, JMMS, IMMS and MatMan.

Global implementation experience

We've implemented Loop Material Readiness on many projects for big names in the construction space.

Fluor
Enterprise customer, 6 projects

Kiewit
Enterprise customer, 20 projects

McDermott
Enterprise customer, 2 projects and counting

Worley
Enterprise customer, 9 projects and counting

Dow
Enterprise customer, 4 projects and counting

Additionally, we've worked on multiple projects with leading EPC firms, including Bechtel, TechnipFMC, KBR, MEG Energy and Zachry.

Our global experience shows results:

6 Continents

25 Countries

100+ Projects

650+ Jobsites

$5B Project TIV*

2.3M+ RFID tags deployed

275M+ Transactions

500+ Suppliers onboarded

1.2B+ Materials tracked

7.5k+ Loop Material Readiness users

*Average total investment value

Implementation methodology

We have created a proven project management approach that maximizes the likelihood of implementation success. The stages below show generalized activities that are part of the Loop Material Readiness implementation methodology. Specific timing and activity sequences are finalized in the project implementation plan after the contract is awarded.

STAGE 1 - DEFINE

This stage details all activities performed prior to the Loop Material Readiness implementation and ensures that all requirements and the contract-supporting solution proposal are fully defined and that all parties are aligned prior to deployment.

RFID execution planning kickoff: A meeting between the Loop Material Readiness team (project manager, Loop Material Readiness system manager and DSCC) and the client's warehousing program to confirm the implementation plan and schedule, obtain data samples and define expectations for administrative tasks and behaviors.

Define project security and safety requirements: This stage generates a project safety review related to geographic site training and OSHA/CSTS requirements for Octave employees. It also includes drug screening, on-site PPE, site training and OSHA/CSTS requirements for Octave employees.

Hardware procurement: Purchase hardware from suppliers according to the scope of work and schedule.

Finalize staffing plan: Octave personnel resource allocation for the project based on the client's warehousing program needs, availability, line knowledge, skills, abilities and resource preferences.

Project onboarding: Once project security and safety requirements are defined, Loop Material Readiness and the client will take actions to acquire any necessary visas, drug screening appointments and potential living arrangements at the project.

Define training plan: Define the approach to training project personnel considering the volume of trainees, project logistics and schedule.

Define testing plan: The testing plan documents the tests that will occur, based on the client warehousing program's functional and non-functional business requirements. Standard test case scenarios can be customized, if necessary.

Environment build: Loop Material Readiness support works with the client's IT team to set up Loop Material Readiness server software in specified user testing and production environments. Closeout requirements define the client warehousing program's expectations on data turnover, archiving and contractual obligations.

Loop Material Readiness reporting requirements: The reports that are periodically sent to the client's warehousing program from Loop Material Readiness (or Octave personnel assigned to the project) are specifically scoped as part of the proposal. Examples of reports include KPIs, transactions statistics, user statistics, training status and Loop Material Readiness standard reports.

STAGE 2 - PREPARE

This phase is driven by the mobilization of project personnel to the jobsite and completion of stage 1 deliverables as defined in the project schedule.

Hardware configuration: This step involves devising project-specific workflows, creating default device settings, establishing Loop Material Readiness status rules, installing hardware and verifying functionality.

Hardware shipment: The Loop Material Readiness team is responsible for the procurement and configuration of all hardware included in the scope of the contract and ensuring shipment to the client's warehousing program as well as any third-party sites. The client is responsible for the import and customs clearance of all hardware, tags and consumables (as defined in the contract) to all project locations.

Loop Material Readiness project instance and work instructions: The Loop Material Readiness team will be primarily responsible for configuring the client warehousing program's instance to conform to the process flow diagram (PFD) and work instructions, including user roles and permissions, yards, zones, facilities, locations, mobile templates, custom fields and status rules. During project configuration, administrator settings and project-specific settings should be based on the solution design. Loop Material Readiness will draft preliminary work instructions based on the PFD, input from the client's warehousing program team and our own implementation experience. With the client warehousing program's support and review, the Loop Material Readiness team will ensure that proposed work instructions comply with existing company procedures. Work instruction approval is required from the client's warehousing program stakeholders (potentially expanded to site-level personnel that may not be currently involved in the planning process), and approved documents will be distributed and used at the end-user level for training-specific tasks during implementation.

Mobilize operations personnel: In this step, the required Loop Material Readiness team members travel to the jobsite and complete any outstanding requirements necessary for work to begin on-site. The completion of a phase readiness review by the client's warehousing program is required for the associated phase and/or scope. The phase readiness review must be approved three weeks prior to mobilization.

Build integrations and data loaders: This step involves creating back-end integrations to move data between the client's warehousing program, third-party systems and Loop Material Readiness. Data loaders are Excel- or Access-based utilities that exchange data between the client's warehousing program, third-party systems and Loop Material Readiness, using the front-end UI. This activity should not require input from the engineering or integrations teams. Before the client warehousing program's Loop Material Readiness instance can be populated, and prior to on-site implementation activity, the integration and the quality of the data exchange must be examined.

Update and finalize SITS: The System Integration Technical Specifications (SITS) contain all field-level mapping, transformations, integration triggers (manual or automatic), system business rules and logic, error handling and reporting, and escalation of resolution activities. Both the Loop Material Readiness team and the client's warehousing program will participate in data mapping exercises to audit and test the movement of material code, UOM, supplier, PO and shipment data into Loop Material Readiness and define data workflows with a PFD. Each entity should have business logic around it to determine which system takes priority in the event of a conflicting piece of data for the same item. This scenario will be tested for any entity with business logic implemented.

Load required data in Loop Material Readiness: Data from the implementation test environment will be used to test the PFD that was defined during pre-deployment. The Loop Material Readiness Project Manager (or designee) will lead testing in the QA environment. The client warehousing program's implementation leader will verify the tests to ensure they're in accordance with the defined workflow.

System testing: This step involves a full walkthrough of all test cases. The client's warehousing program will conduct site-specific bandwidth testing on the wireless network to be used for Loop Material Readiness access using the following methodologies: stress, spike and soak. The client's warehousing program will share the results with Loop Material Readiness technical resources.

User acceptance evaluation: This meeting between the Loop Material Readiness project manager and the client's warehousing program is a comprehensive review and approval of the end-to-end Loop Material Readiness solution. The Loop Material Readiness team will lead a testing effort involving stepping through each PFD from start to finish, using and observing all required dataflows during the testing.

KPI baseline standards: The client will gather all current, or "pre-Loop Material Readiness," metrics to be compared with "post-Loop Material Readiness" deployment metrics. In cases where there's not a viable source of information, obtain estimated values from the client's warehousing program and ensure all stakeholders agree on the values.

STAGE 3 - DEPLOY

This phase involves all steps between testing and going live.

Hardware functional testing: The Loop Material Readiness team ensures that hardware has arrived properly configured and in good working order and trains the client's warehousing program personnel on proper care and safeguards for devices.

Initiate training: The Loop Material Readiness team will conduct training on how to use the Loop Material Readiness hardware and software and provide overviews of RFID technology and associated best practices. Personnel to be trained must allocate a reasonable amount of time to spend with the instructor and must complete any required Loop Material Readiness training courses assigned beforehand.

Conduct go-live readiness review: The client's warehousing program, other key stakeholders and the Loop Material Readiness team will review the agreed-upon processes, completed hardware set-up, training to date and project readiness for go-live.

Initiate cutover: In preparation for go-live, any required data will be loaded into the Loop Material Readiness production instance, and the integrations team will be informed that the client's warehousing program is ready for go-live of the production instance. The integrations team will coordinate with the client's warehousing personnel to activate the cutover. Once UAT approval has been obtained, the next step is to begin the cutover process. Depending on the speed with which the integrations team synchronizes the existing information in the third-party system to the production instance, this process could take hours or days. Once the integrations team confirms that Loop Material Readiness and the third-party system are aligned, the new Loop Material Readiness users can begin the receipt and tag association transactions on mobile devices. The Loop Material Readiness team will conduct periodic reviews of the results to ensure that the entire system — from the integration to the handheld Bluetooth scanner — is functioning as expected and is synchronizing data properly. Barring any unforeseen issues, remaining personnel can be trained and begin employing the Loop Material Readiness processes as defined in previous training sessions and workshops.

Initiate go-live: All necessary go-live preparation and training should be completed at this point, and the instance goes live on a date agreed upon by the client's warehousing program and other key stakeholders. End users begin performing Loop Material Readiness processes according to previously accepted work instructions.

Perform post go-live After Action Report (AAR): The objective of this meeting between Loop Material Readiness and the client is to garner feedback on the go-live deployment, system functionality, user adoption and whether expectations are fulfilled.

STAGE 4 - SUPPORT AND IMPROVE

During this stage, the system is actively supported by the client's warehousing program and the Loop Material Readiness customer support team. It's during this stage that client personnel become champions of the system and will likely need less on-site support from the Loop Material Readiness team.

DSCC transition plan and post-Loop Material Readiness de-mobilization checklist: The client and the Loop Material Readiness team collaborate to develop requirements for de-mobilization of Loop Material Readiness personnel from the jobsite.

Project management hand-off: The Octave project manager turns over all project information and responsibilities to the client and the Octave customer support team.

Hand-off documentation audit: Review all project documents and update, if necessary, to support hand-off between the Octave project manager and the Octave customer support team.

Operation assessments: A member of the Octave customer success team can conduct periodic health and operational assessments of the deployment during this phase, as required and approved by the client. The Loop Material Readiness team will deliver an operational assessment (OA) report that covers current project conditions, challenges and personnel assessment.

Loop Material Readiness system upgrades: We will work with the client in upgrading Loop Material Readiness to the latest release on an ongoing six-week release cycle.

STAGE 5 - CLOSEOUT

The closeout phase consists of all activities necessary to de-commission Loop Material Readiness at the completion of the client warehousing program's project.

Closeout analysis: Loop Material Readiness will provide a detailed representation of the program in its current state, identifying whether transactions mirror current material status. We will also identify whether the closeout requires a transformation to the client warehousing program's system.

Build closeout package: The Loop Material Readiness team will deliver project-specific deliverables that outline the client's closeout requirements physically, financially and emotionally (assurance). We will resource budget, time, costs and requirements and identify any turnover documents that might be required.

Closeout package review meeting: Working from the client's list of closeout requirements, the Loop Material Readiness team will check and cross-check all actionable items as either "complete" or "outstanding," as not all items are required to be closed in some cases.

De-commission Loop Material Readiness: We'll review Loop Material Readiness commitments and determine if a de-commissioning plan is required and finalize an execution plan. This will be followed by a full closure or hand-off to the client's warehousing program.

About Octave

Octave is a leader in enterprise software, turning data into decisive action and intelligence into your edge. Our software solves for and simplifies complexity, from the design and build to operations and protection of people, property, and assets– for any scope, at any scale. For decades, we've partnered with customers to sharpen performance, elevate efficiency, and amplify results. From factory floors to entire cities, our solutions are tuned to scale up what's possible from day one onward.