

# Oak Ridge National Laboratory: The Journey to Ariba

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TN ASUG Chapter Meeting  
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ORNL is managed by UT-Battelle LLC  
for the US Department of Energy

# What is ORNL?

- ORNL is a multi-program science and technology laboratory managed for the US Department of Energy (DOE) by UT-Battelle, LLC.
- We deliver scientific discoveries and technical breakthroughs needed to realize solutions in energy and national security and provide economic benefit to the nation.
- ORNL is the largest DOE science and energy laboratory. Science areas include:
  - Biology and Environment
  - Clean Energy
  - Fusion and Fission
  - Isotopes
  - Materials
  - National Security
  - Neutron Science
  - Supercomputing (home to Frontier, the world's fastest supercomputer and first exascale computer)

# ORNL Key Statistics

- Annual Budget: \$2.4 billion
- Number of employees: 6000+
- Number of users/visiting scientists annually: 3200+
- Contract Workspace awards/counts in FY2022:
  - \$3+ billion in awards
  - 2,695 CWs
  - Includes data-migrated contract workspaces
- Contract spend/counts in FY2022:
  - \$318.5 million in spend
  - 1,220 PO releases

# ORNL Key Statistics

- PO spend/counts in FY2022:
  - \$840,526,653 in spend
  - 66,438 POs
- Breakdown of PO spend/counts in FY2022:
  - Buyer-Assisted POs – \$741,612,738, PO count is 9019
  - P-Card POs – \$5,474,715, PO count is 4285
  - Punchout Catalog POs - \$93,439,200, PO count is 53,134
- Number of punchout and/or supplier catalogs – 30
- Number of Active Suppliers: 2,930 and growing

# Ariba: ORNL's Overall Goals

- Modernize antiquated procurement tools with commercial cloud application
  - SAP no longer investing in standard SAP Purchasing module
  - All investment transitioned to SAP Ariba (new releases issued monthly)
  - Transition ORNL to a more commercial model
  - Empower the user and improve the user experience
- Reduce custom applications and customizations in SAP environment
  - Retire Marketplace, Supplier Registration, Workplace Substance Abuse Program (WSAP), and Guided Procurement System (GPS)
- Improve compliance and reduce risk
- Transition fully to Ariba (internal name ORNL Buy)
  - Minimize need to cross-train staff on two applications

# Ariba: Applications for ORNL

- Supplier Lifecycle Performance (SLP)
- Modular Questionnaires
- Sourcing
- Contracts Management
- Guided Buying
- Advanced Buying
- Ariba Network including invoicing (pass-thru to SAP ECC LIV), order confirmations, and advance ship notifications

# Ariba: ORNL's Implementation Timeline

- Contracts Negotiations and Award: August and September 2020
- Project Kickoff: October 2020
- Original Target Go-Live: March 2021
- Target Go-Live, Rev 1: May 2021
- Target Go-Live, Rev 2: October 2021
  - Customer Master/Vendor Master Transition to Business Partner Complete, early March 2021
  - SLP Go-Live including Data Migration, early April 2021
  - Sourcing and Contracts Management Go-Live, April 2021
  - Guided Buying, Advanced Buying, Catalogs (including punchouts), Level 2 Catalogs, MRP CIFs, Supplier Enablement Go-Live, October 2021
  - Data Migration for Contracts and POs, October 2021

# Ariba: ORNL Benefits by Application

- Supplier Lifecycle Performance:
  - Supplier registration
    - Reviews by Accounts Payable, Treasury Services, and Contracts
    - Supplier registration questionnaire includes majority of representations and certifications
      - Reduces steps for individual awards
    - Annual re-registration of suppliers plus suppliers can access their questionnaires at any time to submit updates proactively, ensuring accurate information
    - Reduction in overall risk for ORNL
  - Supplier qualification
    - Replaced custom Workplace Substance Abuse Program (WSAP) application
    - Automated process to evaluate Construction suppliers
    - Will automate Quality's evaluated supplier process



# Ariba: ORNL Benefits by Application

- Sourcing and Contracts Management:
  - Tool to manage clause library and create templates
  - Drives compliance, reducing risk
  - RFPs accessible via the web for supplier
  - Utilizes DocuSign to capture signatures
  - Transition buyers to a more strategic role
- Guided Buying
  - Presentation layer for end users
  - Incorporates forms for collection of critical information
    - ES&H, Quality, Cyber, Operations Security, Personnel Security, and Finance
  - Houses supplier catalogs and provides connections to supplier punchouts
  - Tiles to help guide user

# Ariba: ORNL Benefits by Application

- Advanced Buying

- Empowers end user to draw down on negotiated contracts (minimal buyer involvement; reduction in cycle time)
- Extendable workflow engine for a flexible approval process
- Improved visibility into PR approval process
- POs automatically created upon PR final approval and transferred to suppliers
- Tool for using lab-wide staff augmentation contracts

- Ariba Network

- Suppliers can retrieve PO's
- Suppliers can enter order confirmations and advanced shipping notifications (ASN)
- Suppliers can submit invoices
- Registration questionnaires

# Ariba: ORNL Technical Details

- Current ECC environment is ECC 6.0, EHP 17
  - Modules include Materials Management, Business Partners, Sales and Distribution, Classification, Financial Accounting, Asset Accounting, Controlling, Human Resources, Payroll
  - SAP Cloud applications include SuccessFactors and Ariba
  - Recently licensed SAP Enable Now (upcoming project)
- Mandatory requirements for ORNL:
  - PR integration with SAP ECC (necessary for commitment reporting)
  - PO integration with SAP ECC (necessary for commitment reporting, receiving and invoicing)
  - Contract integration (necessary for downstream and other applications)

# ORNL: Technical Details

- Invoicing and receiving remain in ECC
- ASN's processed as inbound deliveries on ECC PO items
- For integrations:
  - Managed Gateway for Spend Management and SAP Business Network (previously known as CIG)
    - Ariba data exports utilize custom mappings for payload transformation and BADI implementations for custom ECC logic
    - ECC master data export is delivered program with config and BADI implementation for custom ECC logic
    - ECC Flex Master Data (FMD) export is a custom program (with supporting custom tables)
    - ECC MRP export is delivered program with configuration and BADI implementation for custom ECC logic

# Ariba: ORNL Technical Details

- APIs including:
  - Analytical Reporting API
  - Contract Compliance API
  - Contract Workspace Retrieval API
  - Custom Forms API
  - Document Approval API
  - Operational Reporting for Procurement API
  - Validate and Enrich (V&E) API

# Ariba: ORNL Technical Details

- For data migrations:
  - RPA BOT for contract workspace and contract terms creation
  - File upload for PRs
  - Custom SAP program to deobligate existing funding on PO items, identify funding to migrate to Ariba
- For invoices from Ariba Network:
  - IDOCs
- For PR approval flow:
  - Master data
  - FMD files

# Ariba: ORNL Mistakes

- Not building a dedicated project team
  - Project team members were supporting production systems and processes along with the ORNL Buy project
  - End users were not adequately represented
  - ORNL team was not adequately staffed for volume of work
- Project plan timeline was inadequate
  - Plan was not realistic (too much scope, too little time)
  - Inadequate buffer to accommodate delays from software provider
  - No time for data cleanup

# Ariba: ORNL Mistakes

- Business Partner Transition
  - Complex and time-consuming effort to transition from vendor and customer master records to business partners
  - Stretched a too-thin team to the breaking point, consuming critical Ariba resources
  - Needed to be a separate project prior to Ariba project
- Underestimating the complexities of data migration
  - Ariba does not support data migration
  - Complex process to deobligate existing subcontracts/POs, create new contracts, and create PRs for remaining funding



# Ariba: ORNL Mistakes

- Underestimating the complexity of integrations
  - Integrations still being worked while testing “final” solution
  - Testers didn’t get “full picture”
  - Data migration SERIOUSLY stressed the integration capabilities
- Underestimating the change management needs
  - ORNL Buy is a paradigm shift (replaced 23 year-old contracting process)
  - Impacted parties included Suppliers, End Users, Contracts, Accounts Payable, Treasury Services, Finance, Quality, ES&H, Hazardous Materials Management, Specialty Approvers, Receiving
  - Training was INSUFFICIENT (not enough knowledgeable staff available to build/provide training/resource constraint)

# Ariba: ORNL Mistakes

- Underestimating the complexity of onboarding suppliers
  - The Ariba model is complex
    - It's a two-way integration with SAP business partners
    - It's not obvious that ALL of the business partner/supplier data is migrated (versus the data you map and can see)
  - Suppliers don't like working in Ariba
  - Some suppliers won't agree to the Ariba terms and conditions
  - Ariba PUSHES the enterprise (paid) supplier account type (which is NOT necessary for most suppliers)
  - Existing suppliers NEED to be integrated before going live with Advanced Buying to reduce errors and rework

# Ariba: ORNL Lessons Learned

- Dedicated project team is CRITICAL
- Project plan must be realistic
  - Software provider and consultants are selling a product/service; not familiar with ORNL requirements
- Project team must represent all affected parties
- Data migration is DIFFICULT
  - Do not underestimate and plan accordingly
- Integrations are DIFFICULT
  - Do not underestimate and plan accordingly
- Data cleanup is CRITICAL
  - Pay now or pay later, but you will pay for bad data

# Ariba: ORNL Lessons Learned

- Change management is CRITICAL
  - Change is hard
  - ORNL staff are, at times, resistant to change
  - New application that introduces a new business model poses training difficulties
- Training is CRITICAL for all affected parties
  - Allocate time and resources to develop training
- APIs have serious limitations
  - V&E API limited to small subset of standard fields
  - API rate limits can impact business usage; rendering the
  - All data is not available via APIs

# Ariba: ORNL Lessons Learned

- Security model is limited
  - Ariba-delivered security groups include broad access
  - You can build security groups, but only based on existing Ariba-built security groups
- Ariba doesn't support refreshes in test environments!
- Establish dedicated resources to help build knowledge and resolve errors during hypercare
- The cloud model will likely require additional functional resources for support
- 360 view of PO including invoices and receipts only works if you are using Ariba for invoicing and receiving

# Ariba: ORNL Lessons Learned

- Ariba's method for requesting product enhancements is inadequate
  - Customers enter an enhancement request
  - Customers “vote” on the enhancement requests (little to no communication; only one vote per customer)
  - Don't count on Ariba actually addressing your enhancement requests
- In SLP, limit questionnaire updates or hold/group updates to limit template upgrades for suppliers
- In SLP, use security groups for identification of approvers instead of individuals (changing individuals requires a new template version and template upgrade for suppliers)

# Ariba: ORNL Lessons Learned

- Suppliers will likely need assistance with using their AN accounts and modifying settings
  - Don't assume Ariba will help with this effort
- 100% adoption of catalog/catalog date rules by suppliers in early stages of project is critical
  - Getting suppliers to retroactively comply is nearly impossible
- Do not underestimate the time and resources required to keep catalogs up-to-date
  - Specifically referring to level 2 catalogs and MRP CIFs

# Ariba: ORNL Lessons Learned

- Contract Negotiations with Ariba
  - Include additional custom fields in contract negotiations
    - Limited number of custom fields included for Buying & Invoicing, Contracts, and Sourcing
  - Specify your data center for application and your data center for CIG
    - Both the application database and cloud integration gateway (CIG) house data
    - Do not assume that your data centers will both be US-based
  - Standard cloud environment is two-tiered
    - Adding a third tier is possible but costs extra
    - Adding a third tier adds complexity (configuring/testing three environments)
  - Standard Support Model is insufficient
    - Consider upgrading support model
    - Basic support model is woefully inadequate



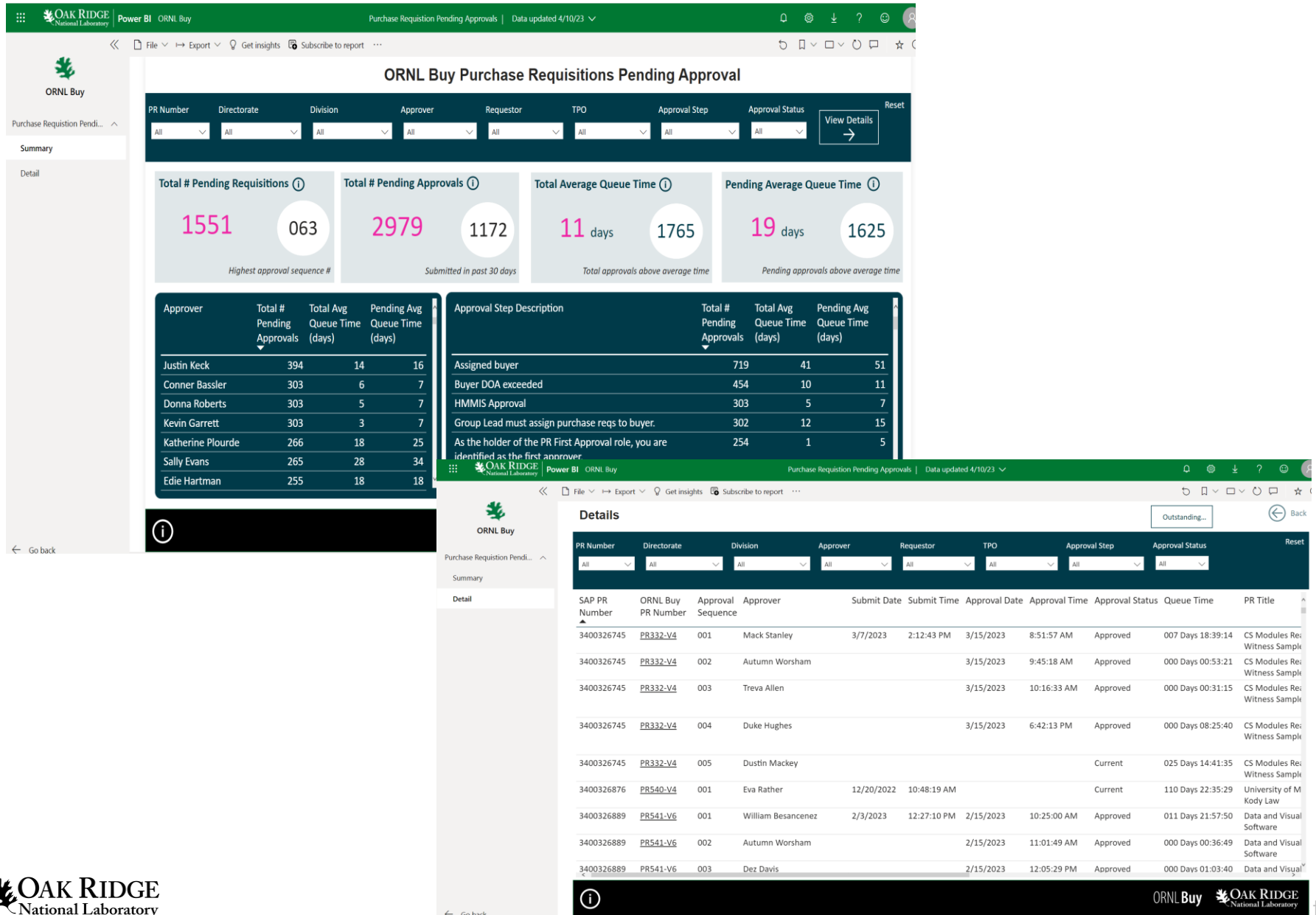
# Ariba: ORNL Looking Ahead

- Continue to work backlog of requested enhancements and changes
- Evaluate/redesign PR approval process
- Evaluate/update re-triggers for PR approval process
- Continue to implement additional validations and bug fixes
  - Reduce/minimize errors and promote good behavior
- Continue to refine and improve training materials
- Update internal ORNL applications including SAP with Ariba-related ID's
  - Reduce staff effort to identify cross-references

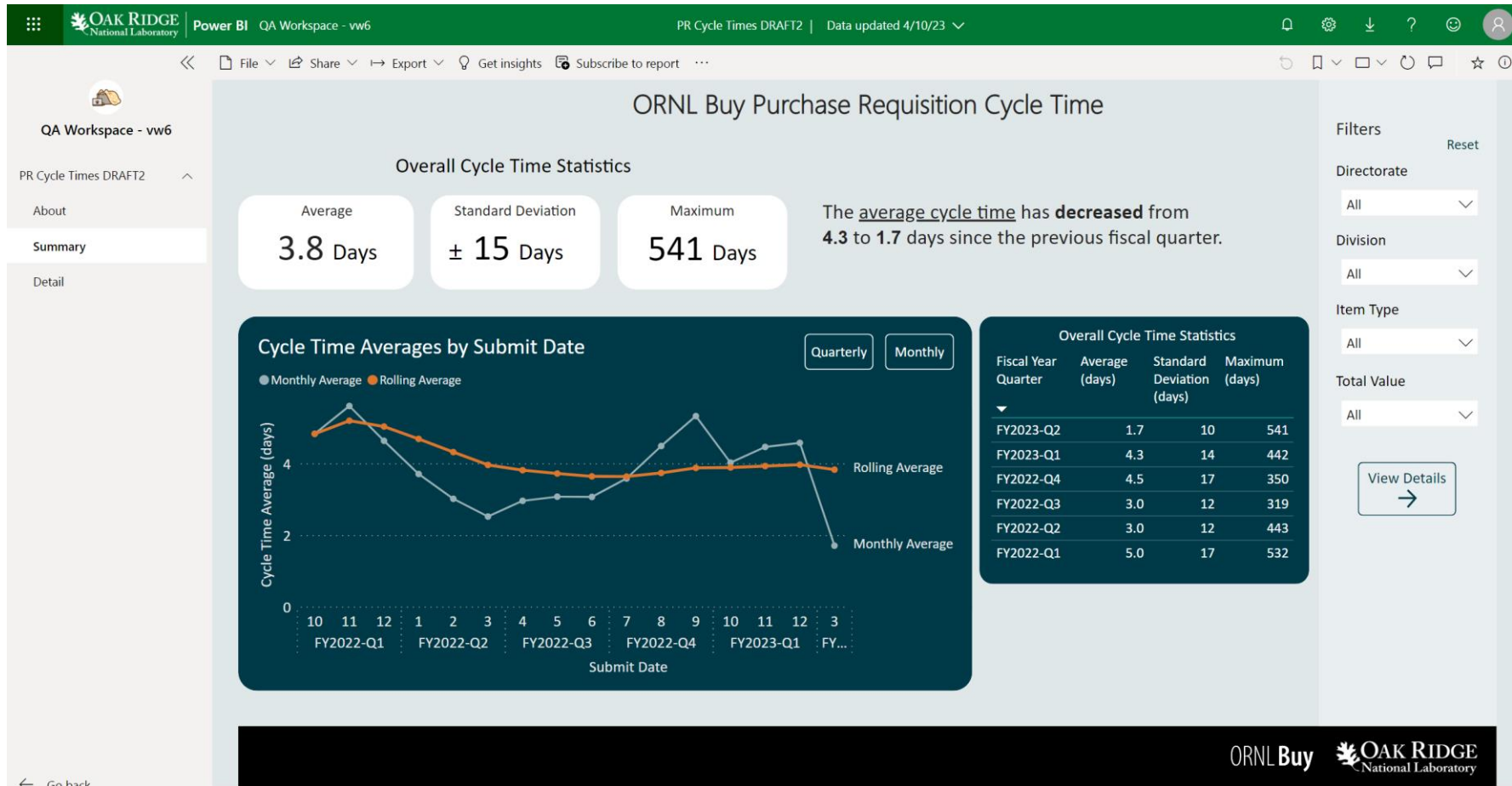
# Ariba: ORNL Looking Ahead

- Retire custom SAP ES&H/QS Reviewer application
- Build PR to PO cycle time dashboards
  - Ariba does not provide cycle time for each PR version; necessitating the need for ORNL to build
- Upgrade support model
- Implement SAP EnableNow to provide in-application help and e-learning content directly to the users

# PR Pending Approvals BI Report



# Draft PR to PO Cycle Time BI Report (Phase 1)



# Workaround to Get Visibility into 360 View of PO

Scientific Sales  
PR145346 / 4801411819 [View in SAP Ariba Procurement](#)

**Confirmed**

Confirmed 5,000/5,000	Shipped 0/5,000	Received By Quantity 0/5,000	Estimated delivery Monday September 4
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<b>Supplier</b> SCIENTIFIC SALES INC 130 VALLEY COURT OAK RIDGE, TN 37830-8046 United States Email: jsimmons@scisale.com Phone: 865-483-9332 Fax: 865-483-0241	<b>Bill to</b> ornlap@ornl.gov Oak Ridge, TN 37831-6436 United States	<b>Ship to / Deliver to</b> 1 Bethel Valley Road, Bldg 7120 Oak Ridge, TN 37830-8050 United States
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**Payment terms**  
Payable immediately - No discount  
Net amount ordered **4,000.00 USD** [Details](#)

**Items**

Image	Item Description	Quantity	Price	Amount
	Socket Contact, Size 20, Female, 20-24 AWG, ...	5,000	0.80 USD	4,000.00 USD

Address: 1 Bethel Valley Road, Bldg 7120 Oak Ridge, TN 37830-8050 United States [Comments](#) [Attachments](#)

> Terms and conditions

**Related documents**

Document ID	Document type	Date created	Status
OC60717	Order Confirmation	March 7, 2023 8:01 AM	Added

1 record

< ORNL Buy

4801411819 - Scientific Sales

These are the details of the request you selected. Depending on its status, you can edit, change, copy, cancel, or submit the request for approval. You m

[Change](#) [Cancel](#) [Print](#)

**Summary** [Approval Flow](#) [Invoices](#) [Payments](#) [History](#)

Order ID: [4801411819](#)  
Version: 1  
Order Confirmation Status: Confirmed  
Title: Scientific Sales  
Supplier: [SCIENTIFIC SALES INC](#)  
Contact: [SCIENTIFIC SALES INC](#)  
Close Order: Open  
Source System: Ariba Guided Buying  
Service Start Date:  
Service End Date:  
NAICS Code: (no value)  
Size Classification: No Choice  
TPO/Point of Contact: [Ian T Stiefel](#) ⓘ  
Procurement Officer: (no value)  
Is PR SPP Funded? No  
Security clearance required? ⓘ  
Emergency: No  
Accountable Property:  
Inspection Required:  
Hazardous Material:  
**PO Receipt/Invoice Status:** [4801411819](#)  
My Labels: [Apply Label...](#) ⓘ

# Workaround to Get Visibility into 360 View of PO

**Procurement**

**Purchase Orders** PO Amount ↑↓

Mar 6, 2023 VENDOR DOWNLOAD → Mar 20, 2023 LAST RECEIVED

**Purchase Order Approved** ↗ 4801411819

**\$4,000.00**  
SCIENTIFIC SALES INC MARKETPLACE PUNCHOUT  
*Marketplace PO*

24% Invoiced

Items Delivery Approvals Contacts

**Partially Received**

I-1  
Socket Contact, Size 20, Female, 20-24 A

Qty 5000.0
x \$0.80
\$4,000.00

Sep 4, 2023 **3781 units**  
Expected Delivery Waiting on

**MAIN SAIL LLC**  
SAP Ariba Preferred Success Solutions Tr  
Validity: Mar 20, 2023 - Sep 29, 2023  
PO #4000208155

**\$28,774.40**

**INSIGHT CONSULTING PARTNERS LLC**  
SAP Consulting Support  
Validity: Jul 26, 2012 - Sep 30, 2022  
PO #4000192585

**\$25,000.00**

**TICLARITY BUSINESS SOLUTIONS LLC**  
SAP Consulting Support  
Validity: Jul 24, 2019 - Sep 30, 2022  
PO #4000193922

**\$10.00**

**HOLMAN'S USA LLC (MARKETPLACE P...**  
Repair Service Smoke Test  
Validity: Sep 28, 2021 - Sep 29, 2021  
PO #4000192507

ORNL Portal

# Questions?

- ORNL Contacts

- Functional contact: Tracey Lawson, [lawsonto@ornl.gov](mailto:lawsonto@ornl.gov)
- Technical contact: Justin Rogers, [rogersjn@ornl.gov](mailto:rogersjn@ornl.gov)