Pro Suite

A Modern, Open, AI-Integrated ERP Platform

Generational Shift: Enterprise ERP

White Paper

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1. Executive Summary

Enterprise resource planning software is the operational backbone of serious businesses. The organizations that run it depend on it daily — for financial reporting, for inventory accuracy, for customer commitments, for regulatory compliance, for every transaction that moves money, product, or information through the company. Choosing an ERP platform is a decade-scale decision. The one chosen today will shape operations well into the 2030s.

This white paper introduces BIS Pro Suite — the Gen III enterprise ERP platform from BIS Computer Solutions. Pro Suite is a modern, web-native application engineered for organizations that need serious operational capability without the constraints of legacy enterprise software: no client software to install on workstations, native mobile for field and warehouse operations, artificial intelligence designed and governed for business use, documented APIs for clean integration with every modern tool, and an open architecture that keeps hosting, deployment, and technology choices in the hands of the customer rather than a single vendor.

Pro Suite is delivered and supported by BIS Computer Solutions, a company that has been building and maintaining enterprise business systems for more than fifty years. It is not the work of a startup learning the domain. It is the work of a company that has watched enterprise technology evolve through multiple generations and has built Pro Suite deliberately, with the lessons of those generations informing every engineering and design decision.

This document is intended for business and technology leaders evaluating modern ERP options. It covers the architecture, the functional coverage, the AI and integration capabilities, the security and compliance posture, the deployment and hosting model, the implementation approach, and the reasons an organization might choose BIS and Pro Suite. The material progresses from business context to architectural detail and should be read at whatever depth is appropriate to your role.

2. What Modern ERP Must Do

Before evaluating any specific ERP, it is worth restating what a modern enterprise platform must deliver to be credible. The list below represents what we believe business leaders should expect — not as aspirations, but as table-stakes requirements for any ERP decision made in 2026 or later.

Operational completeness

The platform must cover the full operational footprint of the business — financial management, purchasing and payables, sales and receivables, inventory and warehouse operations, customer service, reporting, and whatever industry-specific capability the organization depends on — as a single integrated system rather than a collection of loosely joined modules.

Web-native delivery

Users should open a browser and work. There should be no client software to install, no compatibility matrix to maintain, no workstation imaging requirements, no VPN friction. New employees should be productive on day one from any modern device.

Real mobile capability

Warehouse staff, field technicians, customer service representatives, and executives increasingly work on mobile devices. Mobile cannot be an afterthought — it must be a first-class experience designed around actual workflows, delivered as native iOS and Android applications that share business logic with the web tier.

API-first integration

Every modern business integrates with an ecosystem: banks, shipping carriers, EDI networks, e-commerce platforms, tax engines, CRM systems, payroll providers, customer portals, and an expanding list of SaaS tools. Integration must be a normal engineering activity with clean, documented, secured APIs — not a multi-month custom project for every connection.

AI done responsibly

Artificial intelligence is now useful inside ERP for plain-English queries, forecasting, anomaly detection, and intelligent document processing. It must be governed for business use: strict role-based access, read-only operations where appropriate, audit trail, defense against prompt injection, and deployment options that respect data-sensitivity requirements.

Open architecture

The platform should run on open, widely-adopted technologies with no single-vendor lock-in. The customer should be able to choose their hosting, their identity provider, their integration partners, and their analytics tools without fighting the application.

Compliance-readiness

Audit trail, segregation of duties, encryption, access controls, and alignment to the major frameworks (ISO 27001, SOC 2, SOX, HIPAA, PCI DSS, GDPR, FedRAMP) must be built into the platform rather than retrofitted.

Durability and support

The company delivering the ERP should demonstrate a track record of building and supporting enterprise systems over decades, not quarters. ERP decisions require a partner, not a vendor.

Pro Suite is designed to satisfy each of these requirements. The sections that follow describe how.

3. Pro Suite Architecture

Pro Suite is built on a deliberately chosen stack of modern, open-architecture technologies. Every layer was evaluated against the requirements above, with particular attention to longevity, developer availability, integration friendliness, and the practical ability to incorporate AI and machine learning.

3.1 Core Technologies

- **TypeScript.** The application language. TypeScript is a strongly-typed compiled language maintained by Microsoft as an open-source project. Strong typing catches entire classes of defects at build time, and the language is the dominant choice for large-scale JavaScript applications across the industry. The developer talent pool is among the largest of any modern language.
- **Next.js.** The web application framework. Maintained by Vercel and a large open-source community, Next.js handles server-side rendering, client-side interactivity, routing, data fetching, image optimization, and API route hosting — concerns that would otherwise require substantial glue code. Used in production by organizations including Netflix, TikTok, GitHub, Nike, and The Washington Post.
- **PostgreSQL.** The database. PostgreSQL is a mature, enterprise-grade relational database with ACID compliance, advanced SQL support, native JSON handling for semi-structured data, and extensions for full-text search, geospatial queries, time-series workloads, and vector similarity search (pgvector) for AI use cases. Commercial support is available from multiple providers — EnterpriseDB, Crunchy Data, AWS, Azure, and Google Cloud among others — meaning no single-vendor lock-in at the database layer.
- **React Native.** The mobile application framework. Developed by Meta and used in production by Microsoft, Shopify, Discord, Walmart, and thousands of other organizations, React Native produces native iOS and Android applications from a TypeScript/React codebase, allowing the mobile tier to share business logic with the web tier.
- **Node.js.** The runtime for business logic and API services. A mature, long-term supported JavaScript runtime with a vast ecosystem of libraries and a strong operational track record at scale.

3.2 Supporting Infrastructure

- Identity and access: OpenID Connect and SAML 2.0, compatible with Okta, Microsoft Entra ID, Google Workspace, Ping, Auth0, and on-premises Active Directory Federation Services.

- API surface: REST and GraphQL endpoints, webhook-driven event notifications, OpenAPI specifications.
- Object storage: AWS S3, Azure Blob Storage, Google Cloud Storage, or on-premises MinIO for document attachments, media, and generated reports.
- Observability: OpenTelemetry-based structured logging, metrics, and distributed tracing, shipped to the customer's preferred SIEM or APM platform.
- Containerization: Docker, optionally orchestrated with Kubernetes, or deployable to managed platforms for simpler hosting.
- CI/CD: Git-based source control, automated build and test pipelines, automated deployment with rollback capability.

3.3 Architectural Properties

- Open at every layer. No single-vendor lock-in on language, framework, database, mobile, identity, or hosting.
- Cloud-ready, not cloud-required. Deployable on AWS, Microsoft Azure, Google Cloud, or on-premises. Customers choose where their data lives and can change that choice later without re-implementing the application.
- Observable. Every transaction, API call, and user action is logged in structured form for operational visibility and audit.
- Upgrade-friendly. Versioned, backwards-compatible releases with feature flags for major changes and blue-green deployments for zero-downtime upgrades. No more multi-week version upgrade projects.

4. Functional Coverage

Pro Suite covers the complete operational footprint of a modern enterprise. The sections below describe each functional domain in turn. Every module interoperates natively with every other module through the shared data model and API layer — there are no seams between “Finance” and “Operations” that would require middleware or batch integration.

4.1 Financial Management

- General Ledger with multi-entity, multi-currency, and inter-company support.
- Accounts Payable: vendor master, invoice intake and matching, approval workflows, payment runs, 1099 reporting.
- Accounts Receivable: customer master, invoicing, payment application, credit management, collections, aging.
- Fixed Assets: acquisition, depreciation schedules, disposition, asset-tag tracking.
- Banking and Reconciliation: bank feeds, statement reconciliation, ACH, wire, and check processing.
- Tax Management: sales tax, use tax, VAT where applicable, integration with third-party tax engines.
- Period and Year-End Close: configurable close checklists, close-period restrictions, audit readiness.
- Financial Reporting: native dashboards, scheduled reports, and seamless integration with external BI tools.

4.2 Purchasing & Payables

- Purchase requisitions with configurable approval hierarchies.
- Purchase orders, with vendor-specific and category-specific routing rules.
- Receiving against purchase orders, with partial and over-receipt handling.
- Invoice matching: two-way, three-way, and exception-based matching.
- Payment processing: ACH, wire, credit card, check, and customer-preferred payment methods.
- Vendor self-service portal for invoice submission, PO status, and payment visibility.
- Spend analytics across the full procurement lifecycle.

4.3 Sales & Receivables

- Customer master with configurable account hierarchies, terms, credit limits, and price lists.

- Quotes and proposals with configurable approval workflows.
- Sales orders across channels: direct entry, e-commerce, EDI, phone, and mobile.
- Pricing engine with customer-specific and product-specific discount rules.
- Credit management with automated holds, manager overrides, and audit trail.
- Multi-ship-to orders and drop-ship handling.
- Invoicing, with configurable print/email delivery and customer-specific invoice formats.
- Collections workflow and aging reporting.
- Customer self-service portal for order status, invoice history, and payment.

4.4 Inventory and Warehouse

- Real-time inventory visibility across multiple locations and warehouses.
- Bin and location-level tracking with configurable granularity.
- Cycle counting with task assignment and variance reporting.
- Barcode scanning and RFID support on native mobile devices.
- Receiving, put-away, picking, packing, and shipping workflows.
- Carrier integration for UPS, FedEx, USPS, DHL, LTL, and parcel.
- Shipping label generation, rate shopping, and tracking.
- Returns management with RMA workflows and disposition tracking.

4.5 Customer Service

- Unified customer view across orders, shipments, invoices, payments, and communications.
- Case management for service inquiries, complaints, and returns.
- Activity tracking, configurable escalations, and SLA management.
- Integration with phone systems, email, and modern messaging channels.

4.6 Reporting and Analytics

- Native interactive dashboards for every module, role-filtered and drill-through enabled.
- Scheduled and on-demand reports delivered via email or to the customer portal.
- Excel and PDF export from every tabular view, with no custom report build required.
- Clean, performant integration with external BI tools: Power BI, Tableau, Looker, Qlik, and similar.
- Custom report builder for customer-specific analytical needs.

- Data warehouse feeds for organizations with a centralized analytics strategy.

4.7 Mobile

- Warehouse: receiving, picking, cycle counting, put-away, label printing.
- Field service: work orders, parts lookup, time capture, signature capture, photo documentation.
- Executive: approvals, dashboards, key metrics at a glance.
- Customer service: customer lookup, order status, on-the-floor inquiries.
- Offline-capable for environments with intermittent connectivity; automatic synchronization when back online.

4.8 Industry-Specific Extensions

Beyond the core modules above, Pro Suite supports industry-specific extensions for distribution, manufacturing, service, and other verticals that BIS has historically served. Vertical capability is layered onto the common core rather than replacing it, keeping the benefits of the shared platform while accommodating the specific requirements of each industry.

5. Artificial Intelligence in Pro Suite

Artificial intelligence is built into Pro Suite from the ground up rather than bolted on as a later feature. The capability is designed to be useful in day-to-day business operations while respecting the data-isolation, access-control, privacy, and audit obligations that any serious ERP must honor.

5.1 Conversational Access to Business Data

The headline AI capability is conversational: a user types a business question in plain English — "how many widgets did we sell yesterday," "which customers are more than sixty days past due," "show me shipments that missed their commit date last week," "which products have inventory below reorder point at the Dallas warehouse" — and the system translates the question into a safe, read-only database query, executes it, and returns the answer in plain English. Behind the scenes, the AI has no ability to modify or delete data; it is strictly limited to a whitelist of non-destructive operations.

5.2 Deployment Modes

Three deployment modes are offered so customers can match AI to their data-sensitivity posture:

- **On-premises.** A self-hosted model runs entirely inside the customer network. No prompts, documents, or query results leave the customer's infrastructure. Typical infrastructure cost is in the range of $180–$300 per month for a mid-size deployment. Recommended for customers with strict data-residency or compliance requirements.
- **Private cloud with frontier models.** A dedicated, encrypted tenant on AWS Bedrock (Claude) or Google Vertex AI (Gemini). Prompts and responses traverse the cloud provider but inside an isolated tenant that the provider contractually will not use for training. Better model quality at modest per-token cost.
- **Hosted frontier API.** Direct use of hosted Claude or OpenAI APIs. Lowest cost and best model quality, suitable for customers whose data sensitivity permits this tradeoff.

5.3 Security Controls

- Per-tenant data isolation. Every AI-generated query is automatically rewritten to include tenant, role, and permission filters before execution. No prompt can cross those boundaries.
- Role-based AI access. Administrators define permission groups (finance, operations, warehouse, executive, etc.). A user's AI scope matches their application scope — a warehouse associate asking the AI about executive compensation receives a polite refusal, not the data.

- Prompt-injection defense. The AI is hardened against attempts to trick or manipulate it into violating its access rules, including emotional manipulation and instruction-override attempts.
- No environmental leakage. API keys, system prompts, internal configuration, and raw database errors are never exposed to end users.
- Complete audit trail. Every prompt, every generated query, and every response is logged for audit, compliance, and refinement.

5.4 Beyond Conversational Search

Conversational access is the foundation. On that foundation, higher-value capabilities follow at the customer's pace: demand forecasting informing purchasing and inventory policy; anomaly detection in the general ledger and accounts payable for fraud and error reduction; intelligent document processing for vendor invoices, shipping documents, and customs paperwork; narrative-style exception alerts; automated reconciliation; and scheduled AI tasks that run on a cadence and deliver reports or alerts to configured recipients.

Each capability is added when the organization is ready for it. None are mandatory at go-live.

6. Integration and Extensibility

Modern business does not happen inside a single application. Pro Suite treats integration as a first-class capability, engineered into the product from the beginning rather than retrofitted when customers demand it.

6.1 API Surface

- REST APIs for every entity and operation in the application.
- GraphQL for flexible querying and client-driven data retrieval.
- OpenAPI specifications published and maintained for every endpoint.
- Webhook event notifications for outbound integration — when an order is created, an invoice is posted, a shipment is confirmed, a payment is received.
- Versioned, backwards-compatible API releases with clear deprecation timelines.
- Rate limiting, authentication, and comprehensive logging on every API call.

6.2 Common Integrations

- Banking: direct ACH, wire, positive pay, bank feeds via standard protocols.
- Shipping carriers: UPS, FedEx, USPS, DHL, regional LTL and parcel.
- Tax engines: Avalara, Vertex, Sovos, and comparable providers.
- E-commerce platforms: Shopify, WooCommerce, BigCommerce, Adobe Commerce.
- Marketplaces: Amazon, Walmart, eBay, and specialized B2B marketplaces.
- EDI networks: inbound and outbound EDI across X12 and EDIFACT.
- Payroll: ADP, Paychex, Paylocity, Gusto, and other major providers.
- CRM: Salesforce, HubSpot, Microsoft Dynamics CRM.
- Email, SMS, and notifications: SendGrid, Postmark, Twilio.

6.3 Extensibility

Customer-specific requirements are accommodated through clean extension patterns rather than forking the core product. Configurable workflows, customer-specific plugins, scoped data extensions, and custom reports can be added without compromising upgrade compatibility. Extensions are inventoried, classified, and managed as first-class artifacts of the customer deployment.

7. Security and Compliance

Compliance is treated as an architectural requirement of Pro Suite, not an after-the-fact overlay. For customers with government, regulatory, or third-party compliance obligations, Pro Suite is designed to meet or exceed the certifications and control frameworks the business relies on.

7.1 Information Security and Service-Organization Standards

The Pro Suite architecture aligns with the current generation of globally recognized information-security and service-organization standards, including:

- ISO/IEC 27001:2022 — Information Security Management Systems.
- ISO/IEC 27017:2015 — cloud-specific security controls.
- ISO/IEC 27018:2019 — protection of personally identifiable information in public cloud environments.
- ISO/IEC 27701:2019 — Privacy Information Management System extension.
- ISO 22301:2019 — Business Continuity Management.
- SOC 1 Type II and SOC 2 Type II — AICPA Trust Services Criteria for Security, Availability, Processing Integrity, Confidentiality, and Privacy.
- NIST Cybersecurity Framework 2.0 (published February 2024) and NIST SP 800-53 Revision 5.

7.2 Financial Reporting and Sarbanes-Oxley

For customers subject to the Sarbanes-Oxley Act of 2002 — particularly Section 404 requirements for management assessment of internal controls over financial reporting — Pro Suite provides granular audit trails, enforceable segregation of duties, configurable approval hierarchies, change-management logging, and period-close controls that external auditors expect. Application controls are mapped to a SOX control catalog that can be shared directly with audit partners, materially reducing preparation burden. For privately held customers whose lenders, insurers, or major customers request SOX-equivalent assurance, the same control structure applies.

7.3 Industry-Specific and Privacy Regimes

- HIPAA and HITECH — healthcare and healthcare-adjacent processing.
- PCI DSS v4.0.1 — payment-card data environments.
- GLBA — financial services.
- GDPR, UK GDPR, CPRA, PIPEDA, Law 25 (Québec), LGPD (Brazil), APPI (Japan) — major privacy regimes.

- Data residency is a customer choice. Deployments can be region-locked or fully on-premises where sovereignty concerns demand it.

7.4 Government and Public-Sector Compliance

- FedRAMP (Moderate and High baselines) for cloud deployments to U.S. federal agencies.
- FISMA controls for federal information systems.
- StateRAMP for state-government engagements.
- CMMC 2.0 (32 CFR rule effective December 2024) for Department of Defense contractors and subcontractors handling Controlled Unclassified Information.
- ITAR and EAR environments supported through restricted-access deployment configurations and U.S.-person access controls.

7.5 Accessibility

Pro Suite is built to Web Content Accessibility Guidelines (WCAG) 2.2 Level AA as a baseline — the current W3C standard ratified in October 2023. This satisfies the substantive accessibility requirements of Section 508 of the U.S. Rehabilitation Act, the European Accessibility Act (enforceable as of June 2025), EN 301 549, and comparable standards worldwide. A VPAT 2.5 is maintained and provided on request to customers whose contracts require formal conformance documentation.

8. Deployment and Hosting

Where the ERP runs, who controls it, and how the hosting evolves over time are customer decisions. Pro Suite is designed to accommodate all common deployment postures and to allow the posture to change without re-implementing the application.

8.1 Hosting Options

- **Public cloud.** Deployable on Amazon Web Services, Microsoft Azure, or Google Cloud. All three support the full Pro Suite stack, and the choice among them can be driven by existing customer cloud relationships, pricing agreements, or regional presence.
- **Private cloud.** Dedicated-tenant deployments in a cloud provider's environment, or in a managed data center of the customer's choice.
- **On-premises.** Full on-premises deployment on customer-controlled infrastructure. Appropriate for organizations with strict data-residency, sovereignty, or regulatory constraints.
- **Hybrid.** Some components hosted in a cloud, others on-premises, with secure connectivity between them. Common for organizations that want AI or analytics workloads in the cloud while transactional data remains on-premises.

8.2 Disaster Recovery and Business Continuity

Every Pro Suite deployment includes configurable backup, point-in-time recovery, and disaster recovery with customer-defined Recovery Point Objective (RPO) and Recovery Time Objective (RTO) targets. Multi-region deployment is supported for organizations that require geographic redundancy. Business continuity practices align with ISO 22301:2019.

8.3 Upgrade and Release Model

Pro Suite uses a continuous-delivery model with versioned, backwards-compatible releases. Feature flags allow major changes to be rolled out gradually; blue-green deployments enable zero-downtime upgrades; rollback capability is preserved on every release. There are no multi-week version upgrade projects.

9. Implementation Approach

Implementing an ERP is a meaningful undertaking. BIS has designed a phased, low-risk, rehearsed approach so that no customer carries surprise risk at cutover.

9.1 Application Design and Process Review

Every implementation begins with an Application Design and Process Review — a structured, multi-day onsite engagement with customer leadership and operational teams. The Review is organized around five topic areas:

- **Core and Supporting Business Needs.** A deliberate separation of capabilities that differentiate the customer's business (Core) from capabilities that run the business but do not distinguish it (Supporting). Core Business Needs receive proportional design attention.
- **Common Core Modules.** The modules every Pro Suite customer runs on the same foundation. These are covered efficiently with standard configuration.
- **Data Migration.** Migration of existing data into the Pro Suite PostgreSQL schema, with multi-level reconciliation before cutover.
- **Training.** Role-tailored training in multiple formats, delivered by BIS, matched to the customer's specific configuration.
- **Application-Specific Changes.** Customer-unique capabilities, built as clean Pro Suite extensions that survive version upgrades.

The Review produces a written report covering current-state findings, recommended workflow improvements, and the future-state design for the customer deployment. The report is the basis for the subsequent Co-Design, Build, and Cutover phases.

9.2 Co-Design, Build, and User Acceptance Testing

Working sessions with customer subject-matter experts refine the module-by-module design. The Pro Suite environment is stood up for the customer: configuration applied, custom extensions built if any are needed, integrations developed and tested, data migration scripts written and rehearsed. Multiple full-volume test migrations are performed against a copy of production data. User Acceptance Testing exercises end-to-end business processes with the customer team; defects are captured and resolved; formal end-user training is delivered.

9.3 Cutover, Hypercare, and Optimization

Cutover is performed on a planned weekend, typically immediately after month-end close. Production data is migrated, Pro Suite goes live, integrations are pointed to production, users

return Monday in the new system. For the first several weeks, a dedicated BIS hypercare team is engaged with expedited response times and active monitoring of known risk points (first month-end close, first payroll run, first statutory filing). After hypercare, the account transitions to normal BIS support. Post-cutover, additional enhancements and optimization opportunities are prioritized with the customer team.

9.4 Typical Overall Duration

For a typical mid-size customer with a moderate customization profile, end-to-end implementation runs roughly eight to fourteen months from kickoff to successful cutover, depending on complexity, customer availability, and scheduling. A precise estimate is produced at the conclusion of the Application Design and Process Review.

10. Why BIS Computer Solutions

An ERP selection is ultimately a choice of partner. The software matters, but the company delivering and supporting it — over the next ten or fifteen years, through business cycles, technology shifts, regulatory changes, and the evolving needs of the customer — matters equally.

10.1 Fifty Years of Enterprise Software

BIS Computer Solutions has been designing, implementing, and supporting enterprise business systems for more than fifty years. That is multiple generations of enterprise technology — from mainframe, to client-server, to web, and now to modern cloud-and-mobile. Each generation taught us something that informs how we build software today. Pro Suite reflects those lessons.

10.2 Long-Tenured Customer Relationships

Many BIS customers have been with us for ten, fifteen, or more than twenty years. Those relationships persist because BIS has made good on the commitments a serious ERP partner must make: reliable software, responsive support, consultative enhancement, and a business model that remains viable across decades rather than a single funding cycle. Pro Suite is designed to continue that pattern for the next generation of customers.

10.3 Proven Implementation Methodology

The Application Design and Process Review methodology described in Section 9 is not theoretical. It has been refined across many engagements and reflects what actually works when customer organizations adopt a new ERP. The framework for separating Core Business Needs from Supporting Business Needs, the common-language-model discipline, the structured five-area design approach — these are proven techniques that reduce risk and accelerate time to value.

10.4 Open Architecture, No Lock-In

Pro Suite's open architecture is a commitment we make to customers: you will not be trapped in a single-vendor ecosystem by choosing Pro Suite. Your database can be supported by multiple providers. Your hosting can move between clouds. Your identity, your BI tools, your integration partners are your choices. If any component of the stack becomes unacceptable for reasons outside anyone's control, BIS can replace it without replacing the application. That optionality is genuine value, even when it is not visible as a line item.

11. Conclusion and Next Steps

BIS Pro Suite represents the consolidation of a great deal of deliberate engineering work, informed by decades of experience building and supporting enterprise software. It is a modern platform — web-native, mobile-ready, AI-integrated, API-first, open-architecture — delivered and supported by a company that has demonstrated the longevity to still be around in 2046 when today's decisions come up for renewal.

Organizations evaluating a modern ERP should, at a minimum, expect the platform to cover the full operational footprint, to respect their choice of hosting and integration partners, to provide modern security and compliance posture as architectural defaults, to offer AI in a governed and auditable form, and to be delivered by a company that will be there for the long term. Pro Suite satisfies each of those requirements.

Next steps for interested organizations

BIS welcomes evaluation conversations with organizations considering a modern ERP. The typical next step is a working session with our team to understand the operational context, the decision criteria, and the evaluation timeline of the prospective customer. From that session, a scoped Application Design and Process Review can be proposed; the Review produces a concrete, customer-specific artifact on which a full evaluation decision can be made responsibly.