# TOSS ERP III – Product Requirements Document

## Introduction

TOSS ERP III is a comprehensive enterprise resource planning platform that integrates traditional business management modules with innovative **cooperative economy** features and an AI-driven **Business Co-Pilot**. It is designed to support both **product-based businesses** (e.g. retail, distribution, light manufacturing) and **service-based businesses** (e.g. agencies, contractors, consultancies) with a modular, scalable solution. The system’s vision is to streamline all core operations of an organization – from finance and sales to inventory and projects – while also enabling multiple businesses to **collaborate** for mutual benefit through co-op style features. By incorporating cooperative mechanics (like group purchasing and resource sharing) and an AI assistant, TOSS ERP III aims to reduce costs, improve decision-making, and increase productivity across the board.

**Product Goals and Vision:** TOSS ERP III seeks to empower small and medium enterprises to operate more efficiently and **cooperatively**. Core goals include:

* **Unified Operations:** Provide a single platform where businesses can manage finances, supply chain, sales, human resources, and projects in an integrated way. The ERP ensures data flows seamlessly between modules (e.g. sales orders flowing into invoicing and inventory updates), minimizing duplicate work and errors.
* **Cooperative Economy Enablement:** Introduce features that allow businesses to leverage **collective strength** – for example, pooling purchasing power, sharing tools and assets, and pooling credit resources – thereby achieving cost savings and capabilities that would be out of reach individually. (For instance, **group purchasing** helps members obtain bulk pricing and lower costs, similar to how cooperative buying groups enable small businesses to get competitive prices that rival larger enterprises[[1]](https://ncbaclusa.coop/resources/co-op-sectors/purchasing-co-ops/#:~:text=Individual%20stores%20who%20are%20members,quality%20and%20the%20group%E2%80%99s%20leadership).)
* **Intelligent Assistance and Automation:** Leverage artificial intelligence (the Business Co-Pilot) to automate routine tasks, provide data-driven insights, and offer a natural language interface (chat or voice) for interacting with the system. This AI assistant helps users work smarter by answering questions, generating reports or content, and even executing multi-step workflows on command. It acts as a productivity **copilot**, enabling faster decision-making and reducing manual busywork[[2]](https://www.sap.com/products/artificial-intelligence/ai-assistant.html#:~:text=What%20is%20Joule%3F).
* **Flexibility for Different Business Types:** Ensure the feature set is flexible enough to support various industries. Product-focused companies can utilize modules like Inventory, Procurement, and Logistics, while service-oriented companies can make use of Project Management and Time Tracking – all within the same platform. Common features (e.g. Finance, CRM, HR) are applicable to both, and any module can be enabled or disabled based on the business’s needs.
* **Scalability and Integration:** TOSS ERP III is a cloud-first solution with a modern technical architecture. It supports **API integrations** for connecting with e-commerce sites, payment gateways, or other specialized systems. The architecture is modular and extensible, allowing additional Phase II and III modules (like the AI assistant and co-op features) to plug in seamlessly. Strong security (role-based access control, data encryption) and multi-tenant capabilities are included, especially as cooperative features may involve **cross-organization data sharing** with proper permissions.

## Core Functional Modules (Phase I)

TOSS ERP III’s core modules cover the end-to-end workflows needed to run a business. These modules are available in the current system (Phase I) and provide a foundation for all users. Each module is designed with an intuitive UI, configurable workflows, and reporting capabilities.

### Financial Management (Core Module)

This module handles all accounting and financial tasks to keep the business’s books in order. It supports both accrual and cash accounting and is compliant with standard accounting principles. Key features include:

* **General Ledger (GL):** Chart of accounts, journal entries, and automatic posting of entries from sub-ledgers. Users can generate financial statements (balance sheet, income statement, cash flow) and close periods. Multi-currency support is built-in for companies dealing with foreign currencies.
* **Accounts Payable (AP) and Accounts Receivable (AR):** Manage bills, vendor invoices, and payments (AP) as well as customer invoicing, receipts, and aging of receivables (AR). The system tracks due dates, helps schedule payments, and can automate payment reminders or late fee calculations.
* **Billing and Invoicing:** Create professional invoices or bills from orders or projects. Recurring invoice support is available for subscription or retainer services (useful for service businesses). The system can handle sales taxes (VAT/GST), discounts, and multiple payment terms (e.g. net 30, installment plans).
* **Expense Management & Banking:** Record expenses and purchases, attach receipts, and manage petty cash or employee reimbursements. Bank reconciliation features allow linking with bank feeds to automatically match transactions.
* **Budgeting and Reporting:** Set budgets for departments or projects and track performance versus budget. Financial reports and dashboards give real-time visibility into cash flow, profitability, and key ratios. Users can drill down from summary financials to transaction details.

The Financial Management module ensures that both **product and service businesses** can maintain healthy finances. For example, a product company can track Cost of Goods Sold and inventory value, while a service firm can track project-related expenses and billable revenues. Robust reporting helps in compliance (tax filings, audits) and strategic planning.

### Sales & Customer Management (Core Module)

This module combines sales order processing with basic Customer Relationship Management (CRM) functionality to handle the revenue side of the business. It helps track leads through deals, and once sales are made, it manages order fulfillment and customer invoicing. Key capabilities:

* **Leads and Opportunities:** Track potential customers (leads) and sales opportunities. Sales teams can log communications, schedule follow-ups, and update the status of deals in a simple CRM interface. This helps service businesses manage client pipelines and product businesses manage wholesale/B2B prospects.
* **Quotations and Sales Orders:** Generate quotes or estimates for customers with predefined products or services and pricing. Once approved, quotes can be converted to sales orders. Sales orders trigger downstream processes (e.g., reserve stock, schedule service delivery).
* **Order Fulfillment:** For **product sales**, the system supports picking, packing, and shipping processes. It integrates with Inventory and Logistics modules to ensure orders are fulfilled accurately and on time. For **service sales**, orders can be tied to project tasks or service tickets to ensure the service is delivered to the client.
* **Invoicing and Revenue Recognition:** Convert orders into invoices automatically. Support various billing scenarios – one-time shipments, milestone billing for projects, or recurring subscriptions. The module can also handle credit notes/refunds and adjustments if needed. Invoices flow into the Financial module for revenue tracking.
* **Customer Data & CRM:** Maintain a database of customers with contact details, purchase history, and communication logs. The system can log customer interactions (emails, calls) and store documents (contracts, proposals). This 360° view is useful for account management and marketing. Basic CRM analytics (like sales pipeline reports, conversion rates, top customers) are available.

By consolidating sales and customer management, TOSS ERP III ensures a smooth journey from initial customer inquiry to final sale and after-sales support. Both sales-driven service firms and product sellers benefit from timely follow-ups, organized sales processes, and responsive customer service (with all information in one place).

### Inventory & Procurement Management (Core Module)

This module is critical for product-oriented businesses (and useful for any company that manages physical assets or supplies). It tracks inventory levels in real time, supports purchasing of goods, and manages supplier relationships. Key features include:

* **Inventory Control:** Maintain records of all products, materials, or assets with SKU codes, descriptions, categories, and units of measure. The system tracks stock levels by location (multiple warehouses or stores), and supports inventory adjustments, transfers between locations, and cycle counts/audits. It can alert users when stock is low or about to expire (for perishable goods).
* **Procurement & Purchase Orders:** Create **purchase requisitions** and **purchase orders (POs)** for suppliers. The module streamlines the purchasing workflow: request, approve, order, receive, and invoice matching. Users can manage supplier info, price lists, and terms. When goods are received, inventory is updated and the PO is marked as fulfilled (integrating with Financials for accounts payable).
* **Warehouse Management:** Organize warehouse operations with support for bins/slots, picking lists, and goods receipt notes. The system can optimize picking routes and batch orders together for efficiency. For more advanced needs, support for barcode scanning and serialization is available (Phase II could extend this).
* **Product Attributes & Costing:** Track product attributes like lot numbers or serial numbers if needed, and maintain cost records (standard cost, moving average, or FIFO/LIFO costing methods). The module calculates inventory valuation for the balance sheet automatically based on transactions.
* **Vendor Management:** Keep a directory of vendors/suppliers with contact details and track performance (on-time delivery, quality). The system can record supplier ratings and history of purchases. This ties into cooperative features like group buying (detailed later), where multiple companies might collectively engage with vendors.

Inventory & Procurement ensure that a product business never loses a sale due to stock-outs and never ties up excess capital in overstock. Even service businesses can use a simplified version of this module to manage supplies or company assets (for example, an IT service company tracking its loaner equipment or spare parts). The module’s **integration** with Sales (for demand signals) and Finance (for costing and payables) provides end-to-end visibility of the supply chain.

### Project & Service Management (Core Module)

For service-centric organizations or any business running internal projects, this module provides tools to plan, execute, and monitor projects and jobs. It helps ensure services are delivered efficiently and projects stay on budget. Major features:

* **Project Planning:** Create projects with start/end dates, milestones, and deliverables. Tasks can be defined with dependencies, and assigned to team members. The system can allocate resources (staff, equipment) to tasks and identify potential scheduling conflicts or overbooking.
* **Time Tracking & Timesheets:** Team members can log hours worked on tasks or projects. This is critical for professional services (consulting, agencies) that bill clients based on time, and also useful for internal cost tracking. Timesheet approvals workflow is available for managers.
* **Project Budgeting & Costing:** Set project budgets for labor, expenses, and materials. As time and expenses are logged, the system shows budget vs actual in real time. It can capture all project-related costs (travel, purchases) and tie them back to the project record.
* **Service Delivery Management:** If the business offers field services or tickets, the module can handle scheduling service appointments, tracking service requests, and ensuring fulfillment of service contracts. This can integrate with CRM (customer support cases) and even the Inventory module if spare parts are used in service jobs.
* **Billing & Revenue Recognition for Projects:** The module links with Financials to support project billing – whether it’s time-and-material invoices, fixed-price project milestones, or recurring service fees. It ensures no billable work falls through the cracks by pulling approved timesheet hours and expenses into invoices.

Project & Service Management brings discipline to service delivery and project execution. A marketing agency, for example, can manage multiple client campaigns as separate projects with assigned teams and due dates. A construction firm can plan out phases of a build and track costs. By having this in the ERP, the project data is connected to financial outcomes (so management can see profitability per project) and resource utilization (to spot who is over or under-worked).

### Human Resources & Payroll (Core Module)

This module covers basic HR needs and payroll processing for employees. It ensures that employee information is organized and that staff are paid accurately and on time. Key capabilities include:

* **Employee Records:** Maintain a database of employees with personal info, job titles, departments, and documents (IDs, contracts). Track employment history, promotions, and performance notes. Role-based permissions ensure HR data is secure and only accessible to authorized users.
* **Time Off and Attendance:** Allow employees to request leave (vacation, sick days) through the system. Managers can approve requests, and the system tracks balances of available leave. An attendance tracker can log working days or shifts, which can integrate with project timesheets if needed.
* **Payroll Processing:** Define payroll elements like salary, hourly wages, overtime, bonuses, and deductions. The module can compute payroll for each period, handling taxes and withholdings as configured for the locale. It generates payslips for employees and summary reports for finance. Payroll transactions post to the Financial module (for expenses and liabilities).
* **Compliance and Benefits:** Store information on benefits (health insurance, retirement plans) and manage enrollments. The system can also assist in compliance reporting such as workforce statistics or tax filings related to payroll.
* **Self-Service Portal:** (If applicable) Employees might have a self-service view where they can see their payslips, submit time sheets or leave requests, and update personal details. This reduces administrative overhead on HR staff.

By integrating HR into TOSS ERP III, companies ensure that their **people operations** align with other business processes. For example, project costing can include actual payroll costs, and sales commissions (if any) can be paid out through payroll. Though this module covers general HR needs, it is designed to be **generic** and flexible so it can handle both salaried staff (more common in service firms) and hourly or shift workers (often in retail/manufacturing settings).

### Reporting & Analytics (Core Module)

Across all modules, TOSS ERP III provides robust reporting and analytics tools. Users can generate standard reports or create custom reports to analyze the data captured by the ERP. Key aspects of this cross-cutting module:

* **Dashboards:** Interactive dashboards show KPIs and summary metrics for different roles – for example, a CEO dashboard might show sales, expenses, and cash balance; a sales manager sees pipeline and top deals; an operations manager sees inventory turns and fulfillment status. Dashboards can combine data from multiple modules (thanks to a unified data model).
* **Report Builder:** A flexible report writer allows users to slice and dice data. They can create reports (tabular or charts) using any fields from the database (subject to permissions). Common reports are available out-of-the-box: sales by product, expenses by category, employee hours by project, etc. Users can schedule reports to run and be emailed periodically.
* **Analytics & Forecasting:** Basic analytical tools are integrated, such as trend analysis or forecasting based on historical data. For example, forecasting cash flow based on open invoices and bills, or predicting inventory stock-out dates based on current sales velocity. These help businesses anticipate issues.
* **Exports and Integration:** All report data can be exported to formats like Excel or PDF for further analysis or presentations. Additionally, the system’s API allows external BI tools to connect if more advanced analytics are needed.
* **Audit Trails:** Every module logs key changes (who edited a record, when, and what changed). This provides accountability and traceability, which is especially important for financial data and multi-user collaboration.

The reporting module ensures decision-makers have **real-time insights** into their operations. By consolidating data across functions, it breaks down silos – you can correlate sales with inventory levels, or project hours with payroll costs, all in one place. This lays the groundwork for even more advanced AI-driven insights provided by the Business Co-Pilot in Phase III.

## Cooperative Economy Features

One of the standout innovations of TOSS ERP III is its built-in support for **cooperative economy** features. These allow independent businesses using the ERP (for example, members of a business network or co-op) to work together and leverage their collective power. The following features (available in Phase II and beyond) are designed in both product and technical terms to facilitate multi-organization collaboration securely within the ERP environment.

**Overview:** The cooperative features are optional and can be enabled for groups of businesses that trust each other (such as a formal cooperative, franchise network, or any consortium). When enabled, the ERP creates a **shared space** or marketplace where members can participate in group activities (buying, sharing, lending) while keeping their individual company data partitioned. Role-based permissions and smart contracts/agreements underpin these features to ensure fairness and transparency among participants. Below are the key co-op economy features:

### Group Buying & Collective Procurement

Group Buying allows multiple businesses to **pool their purchases** to achieve bulk discounts and better terms from suppliers. In practice, the ERP provides a cooperative purchasing portal where users can propose purchase needs that others can join. Key elements of this feature:

* **Joint Purchase Requests:** A member can initiate a purchase request for a certain product or raw material, indicating quantity and target price. Other members of the co-op network are notified and can commit to a portion of the order (e.g. Business A needs 100 units, Business B adds 200 units). The system aggregates these commitments into a single **group purchase order**.
* **Vendor Negotiation and Contracts:** Suppliers see a combined order from the co-op, which increases order size and **purchasing power**. By buying as a group, members can negotiate **more favorable pricing** and volume discounts that they wouldn’t get individually[[3]](https://www.clarity-ventures.com/buying-group-ecommerce-overview#:~:text=,intelligently%20adapt%20to%20each%20user). The ERP can integrate with vendor systems or send out RFQs (requests for quotation) to get the best offer for the group. Once a deal is secured, the system finalizes the group PO.
* **Allocation and Drop-Shipping:** The group PO is then split into individual orders for each participating business according to their committed quantities. The system handles split shipping instructions – for example, instructing the supplier to deliver specified portions to each member’s address (the **split shipping** capability is integrated). Each business receives their share, but all benefit from the bulk pricing.
* **Settlement and Accounting:** Financially, the ERP can either have each member pay the vendor directly for their part, or use a central fund (if the co-op has one) to pay and then invoice each member. The system records the transaction in each member’s Financial module appropriately. It also logs the savings achieved through group buying (e.g. percentage discount vs regular price) for transparency.
* **Governance and Permissions:** Only authorized proposals are visible to the network. Businesses can set criteria on which group buys they join (for instance, only from vetted suppliers or for certain categories of items). The system enforces these rules.

*Benefit:* Group buying empowers small businesses to act together as a large buyer. **Cooperative purchasing helps members reduce costs and offer competitive prices** compared to larger rivals[[1]](https://ncbaclusa.coop/resources/co-op-sectors/purchasing-co-ops/#:~:text=Individual%20stores%20who%20are%20members,quality%20and%20the%20group%E2%80%99s%20leadership). In the system, this translates to improved profit margins on goods and the ability to compete with big players on pricing. Technically, implementing this required multi-company data sharing and order-splitting logic, which TOSS ERP III handles with a robust cross-org workflow engine.

### Shared Asset & Tool Sharing Network

This feature enables businesses to share expensive tools, equipment, or other resources with each other – effectively creating a **tool library** or rental network within the co-op. The ERP provides a catalog of shareable assets and a reservation system to coordinate usage. Key aspects:

* **Shared Asset Registry:** Companies can list assets they own that they are willing to lend or share, such as machinery, vehicles, meeting facilities, or specialized tools. Each asset entry can include availability schedule, usage terms (e.g. any fees or deposit required), and conditions (like needing certified operators). The registry is visible to members of the network, creating a pooled asset base.
* **Reservation & Booking System:** If a member company needs an asset (say a piece of equipment they don’t own) they can put in a reservation request for it through the system. The ERP handles scheduling – checking availability and avoiding double-booking. It allows the owner to approve the request if needed and coordinates pickup/delivery logistics. The **integrated booking system** lets participants make reservations, check real-time availability, and get notifications for their bookings[[4]](https://www.weeshare.com/en/blog/cooperatives-and-sharing-portals-two-powerful-partners#:~:text=It%20is%20clear%20that%20now,used%20to%20its%20full%20capacity).
* **Cost Sharing & Tracking:** The system keeps track of any costs associated with using the shared asset – for example, maintenance, fuel, or wear-and-tear fees. It can record which party covered what expense and automatically split or reimburse costs according to agreed formulas. All participants can see **who paid what and when**, ensuring transparency in cost distribution[[5]](https://www.weeshare.com/en/blog/cooperatives-and-sharing-portals-two-powerful-partners#:~:text=Furthermore%2C%20costs%20can%20be%20assigned,to%20a%20variable%20mileage%20package). If there’s a rental fee, the ERP can handle invoicing between the parties (or to a central co-op account).
* **Asset Care and Accountability:** To build trust, the module can record condition reports or require checklists when handing over an asset. If damage occurs, there’s a process for reporting and assigning responsibility. A rating or feedback system can be in place so members maintain mutual accountability.
* **Technical Implementation:** Under the hood, this uses a multi-tenant calendar and asset management system. Each asset is owned by one entity but visible in the shared marketplace. Permissions ensure only authorized members can book. Notifications (emails or in-app) keep everyone updated on reservations or cancellations.

*Benefit:* Shared asset usage means each business doesn’t have to individually invest in rarely-used expensive tools – they **save money by sharing resources**. For example, instead of five companies each buying a machine that sits idle most of the time, one can buy it and rent/share with the others. This embodies the “sharing economy” in a B2B context. As one case study notes, a sharing platform allows users to **manage their shared items, coordinate reservation requests, and keep track of costs and expenses** all in one place[[6]](https://www.weeshare.com/en/blog/cooperatives-and-sharing-portals-two-powerful-partners#:~:text=WeeShare%20is%20the%20tool%20that,expenses%20at%20the%20same%20time). TOSS ERP III’s implementation focuses on the act of sharing rather than profit, so any cost savings or rental earnings go directly to the participants, not to a middleman platform. This fosters trust and true cooperation among the user base.

### Pooled Credit & Mutual Financing

Pooled Credit is a cooperative financial mechanism where businesses band together to improve access to credit and financing. In TOSS ERP III, this feature is facilitated by the **Credit Engine** (detailed in the next section) and allows members to either borrow from a common fund or collectively guarantee loans for each other. Key components:

* **Co-op Credit Pool Management:** Member businesses can contribute funds into a shared credit pool (almost like a credit union or mutual fund within the network). The ERP keeps track of each member’s contributions (equity stakes) and available pool size. The pool can then be used to issue loans or lines of credit to members in need of financing. This structure mirrors how **credit unions** operate: members purchase shares and **the money is pooled together and used to provide financial services to the members**[[7]](https://utahscreditunions.org/news/the-cooperative-structure-of-a-credit-union/#:~:text=Credit%20unions%20are%20financial%20organizations,financial%20services%20to%20the%20members).
* **Loan Requests and Approval Workflow:** A member can apply for a loan or credit line from the pool via the system. The application captures purpose, amount, and proposed repayment terms. The ERP’s Credit Engine evaluates the request by analyzing the applicant’s financial data (e.g. revenue trends, payment history, credit score if available) and possibly the overall health of the pool. The system can either auto-approve based on rules or route the request to a committee of member representatives for approval (capturing the cooperative governance aspect).
* **Collective Guarantee and Credit Scoring:** In cases where external financing is involved (like the co-op collectively approaching a bank), the system can produce a consolidated credit profile combining the strength of multiple businesses. Essentially, members can **co-guarantee** each other’s loans – the ERP tracks these guarantees as contingent liabilities. The Credit Engine might generate a **mutual credit score** for the group that is higher than an individual score, unlocking better interest rates or credit limits due to diversified risk.
* **Repayment and Profit Sharing:** If a loan is issued from the co-op pool, the borrowing member will repay it to the pool with interest. The ERP handles scheduling repayments, deducting from the borrower’s account, and returning funds to the pool. Any interest earned can be distributed to the contributing members as a dividend or used to grow the pool, according to rules configured. All transactions are recorded in each member’s books appropriately (e.g. interest expense for borrower, interest income for lenders).
* **Risk Monitoring:** The Credit Engine continuously monitors members’ financial health and can flag risks (for example, if a member’s sales are plummeting and they have an outstanding co-op loan). It can alert the co-op if intervention is needed (perhaps adjusting payment plans). The system ensures that the cooperative spirit of “mutual assistance” is maintained – members are literally **cooperating with one another to help each other be financially successful**, sharing both risks and rewards in the credit program[[8]](https://utahscreditunions.org/news/the-cooperative-structure-of-a-credit-union/#:~:text=Image%3A%20Diagram%20of%20credit%20union,and%20bank%20structures).

*Benefit:* Pooled credit gives businesses access to financing that might otherwise be unattainable or expensive. By sharing risk and acting as a mutual support system, members improve their financial stability. For example, a small business that could only get a high-interest loan alone might secure a lower rate when the co-op collectively guarantees it. In TOSS ERP III, this feature also fosters financial transparency and discipline, as members know their data might be considered in co-op credit decisions (encouraging good financial practices). The technical challenge of this feature is ensuring **secure data sharing and isolation** – each company’s financial data is private, but summary metrics used for credit scoring can be shared in aggregate. We employ data anonymization and aggregation techniques in the Credit Engine to protect sensitive information while enabling trust among members.

## Advanced Modules & Features (Phase II & III)

In addition to the core and cooperative features, TOSS ERP III introduces advanced modules in Phase II and Phase III of its roadmap. These modules further extend the system’s capabilities into specialized areas such as logistics and AI-driven assistance. Below is an overview of these advanced components, all of which integrate seamlessly with the core modules described earlier.

### Logistics & Supply Chain Management (Planned Phase II)

The Logistics module builds on Inventory Management and focuses on the **distribution and delivery** side of the business. It is particularly valuable for product-centric businesses or any organization that needs to move goods efficiently. Key features planned include:

* **Shipping & Carrier Integration:** Generate shipments from sales orders or transfer orders, and manage the packing and shipping process. The system can integrate with major shipping carriers (UPS, FedEx, DHL, local couriers) to print labels, schedule pickups, and track shipments via tracking numbers. Real-time shipping rates can be fetched to choose the most cost-effective delivery method for each order.
* **Route Planning & Delivery Management:** For companies with their own delivery fleets or multiple delivery stops, the module can optimize delivery routes and schedules. It uses parameters like truck capacities, locations, and delivery time windows to minimize fuel cost and delivery times. Drivers can have a mobile app integration for delivery confirmations (signatures, photos).
* **Advanced Warehousing:** Extend basic warehouse management with features like wave picking (grouping orders for batched picking runs), cross-docking (direct transfer from receiving to shipping to fulfill backorders faster), and perhaps automation integration (support for conveyer or robotics systems with API hooks).
* **Logistics Analytics:** Track key metrics such as on-time delivery rate, shipping cost per order, and inventory turnover. The system can identify bottlenecks (e.g. frequent delays with a certain carrier or at a certain warehouse) and suggest improvements. It also provides visibility into the supply chain – from supplier shipments coming in (inbound logistics) to customer orders going out (outbound).
* **Collaboration & EDI:** For companies that work closely with supply chain partners, the module supports Electronic Data Interchange (EDI) standards to send/receive order and shipping information. This is useful in cooperative logistics too – for example, if co-op members decide to **share warehousing or transport**. One member’s warehouse could serve as a regional hub for others, and the system would handle multi-company inventory ownership within a shared location. (This concept can complement the co-op features, though it requires strict controls in the software to attribute stock to the right owner).

By introducing Logistics management, TOSS ERP III will enable businesses to **deliver products faster and more cost-effectively**. It reduces manual work in arranging shipments and provides end-to-end traceability from warehouse to customer. This module is slated for Phase II and will be designed to meet the needs of growing businesses that require more sophisticated supply chain tools than the basic inventory module offers. It also naturally ties into the group buying cooperative feature – for instance, if multiple businesses do a group buy, the logistics module can coordinate distributing that bulk order to each participant efficiently.

### Credit Engine & Financing Hub (Planned Phase II)

The Credit Engine is an advanced module that underpins the **financial analytics and financing** capabilities of TOSS ERP III. While core Financial Management handles bookkeeping, the Credit Engine goes a step further into **credit analysis, risk management, and financing options** for the business and its customers. This module is central to enabling things like the pooled credit co-op feature, but it also serves standalone purposes for individual companies. Key functions include:

* **Customer Credit Management:** If a business sells to customers on credit (e.g. offering net payment terms or installment plans), the Credit Engine helps manage that. It can compute credit scores or ratings for each customer by analyzing their payment history, order volumes, and external credit data if available. Based on configurable policies, it will recommend credit limits for each customer and flag risky accounts. This reduces bad debt by guiding sales to make informed decisions on extending credit.
* **Dynamic Credit Decisions:** The module can integrate with sales orders to provide real-time checks – for example, warning if a new order will put a customer over their credit limit or if a customer has overdue invoices. It can automate holds on orders for non-payment or release them when payment comes in. These rules ensure healthy cash flow while maintaining customer relationships.
* **Financing & Loans:** Beyond managing receivables, the Credit Engine allows the business itself to seek financing. It can package the company’s financial data (with permission) to present to potential lenders or investors. The idea is to have a **Financing Hub** where a business owner can see various funding options (bank loans, invoice factoring, credit lines, etc.) possibly offered through integrated financial partners. The ERP could integrate with fintech APIs to, say, get a loan quote based on current receivables or to automatically sell an invoice to a factor for immediate cash.
* **Credit Analysis & Risk Forecasting:** Using machine learning, the module can forecast cash flow and detect financial risks. For instance, it might analyze patterns to predict that “based on current burn rate and receivables, the company will face a cash shortfall in 3 months” and then suggest actions (like cutting certain costs or drawing from a credit line). It can also score the overall financial health of the business and track metrics like debt-to-equity, interest coverage, etc., over time.
* **Integration with Co-op** Pooled Credit\*\*\*\*: As described earlier, the Credit Engine powers the pooled credit feature by analyzing multiple members’ data in aggregate. It ensures that decisions in the co-op credit program are data-driven and fair. Technically, it isolates individual data and only uses anonymized metrics for group scoring unless explicit consent is given for deeper sharing. It can also interface with external credit bureaus or community development financial institutions if the co-op seeks outside capital to augment the pool.

Overall, the Credit Engine & Financing Hub is about giving businesses **financial intelligence and options** at their fingertips. Many small businesses struggle with credit management and financing – this module is like having a smart financial advisor built into the ERP. It will help a business decide whom to trust with credit sales, when to borrow money, and how to optimize their financial strategy. This is slated for Phase II and will heavily utilize data analytics and possibly AI models (for credit scoring), making it a natural precursor to the full AI Co-Pilot in Phase III.

### AI Business Co-Pilot & Voice Assistant (Planned Phase III)

The Business Co-Pilot is a transformative feature of TOSS ERP III, bringing the power of AI and natural language interaction to the platform. It acts as an intelligent assistant that is omnipresent across the ERP, ready to help users with questions, analyses, and even perform tasks through simple prompts. The Co-Pilot can be interacted with via a chat interface or through voice commands, making the ERP far more accessible and proactive. Key characteristics and capabilities:

* **Conversational Interface (Chat & Voice):** Users can interact with the ERP by simply talking or typing in natural language. For example, a user could ask, “*What were our top 5 selling products last month?*” or say, “*Show me the cash flow trend for this quarter*.” The Co-Pilot will understand the request, retrieve the relevant data from the system, and present an answer (in text, and visually with charts if appropriate). It uses a combination of natural language processing and the system’s data context to interpret what the user needs. *Voice-driven interaction* is a key focus – **users can speak directly to the Co-Pilot, asking questions or issuing commands without typing**, enabling hands-free operation for busy managers[[9]](https://windowsforum.com/threads/microsoft-copilot-vision-the-future-of-ai-powered-windows-assistance.370433/?amp=1#:~:text=A%20standout%20aspect%20of%20Copilot,Microsoft%20pushes%20the%20envelope%20by). The assistant can execute multi-step voice commands as well (for example, “*find all overdue invoices and send reminders*” and it will carry out those actions).
* **AI-Powered Insights:** The Co-Pilot doesn’t just fetch data – it provides insights. It can proactively analyze data to highlight trends or anomalies. For instance, it might alert a user, “*Noticing that Q2 sales are 15% lower than Q1 – here are some factors (like product X decline or region Y slowdown).*” It leverages generative AI and machine learning models on top of the company’s data to draw conclusions. This is similar in spirit to SAP’s **Joule AI copilot**, which is *grounded in business data and uses AI agents to proactively assist employees across applications while automating complex processes*[[2]](https://www.sap.com/products/artificial-intelligence/ai-assistant.html#:~:text=What%20is%20Joule%3F). In TOSS ERP III, the Co-Pilot can surface opportunities (e.g. a product that’s selling fast and needs restock), assess risks (e.g. a project likely to miss its deadline based on current pace), and even suggest actions (like recommending a group buy for an item several co-op members need).
* **Task Automation with AI Agents:** The Co-Pilot is not only for Q&A; it can take action on behalf of the user. Backed by AI “agents” under the hood, it can perform multi-step workflows when instructed. For example, a user could say, “*Create a purchase order for 50 units of item ABC from our cheapest supplier and set delivery by next Friday*.” The Co-Pilot will confirm the details and, upon approval, execute those steps: lookup item ABC’s preferred supplier and price, create the PO in the system, and forward it for approval or send to the supplier as configured. It essentially serves as a semi-autonomous assistant that can navigate across modules (sales, inventory, finance) to complete an objective. These **AI agents** are able to reason and use the ERP’s functions like a power user, which means many routine tasks can be offloaded to them.
* **Learning and Context Awareness:** The Business Co-Pilot learns from user interactions. It adapts to each user’s role and preferences – for instance, if a sales manager always asks about a certain report on Mondays, it might start showing that proactively. It is context-aware, meaning if you’re looking at a particular customer’s screen, you can ask “*what is the total revenue from this customer?*” and it knows you mean the one currently displayed. It can also chain context, so you could drill down further by saying “*show me their last 5 orders*” after the first question, in a conversational flow.
* **Safety, Security & Control:** From a technical perspective, the AI Co-Pilot is integrated with the ERP’s permission system. It will only access data the current user is allowed to see. All AI-generated actions (like creating a transaction) go through the usual validation and approval flows. The system keeps logs of what the AI did or recommended for audit purposes. Administrators can configure the level of autonomy (for example, allowing the Co-Pilot to draft an email to a client but not send it without human review, or to create a purchase order but mark it for approval). The AI models are “grounded” in the company’s actual data to prevent hallucinations – essentially, the Co-Pilot cross-checks its answers with the database, ensuring **accurate, context-rich responses based on business data**[[10]](https://www.sap.com/products/artificial-intelligence/ai-assistant.html#:~:text=Joule%20is%20SAP%E2%80%99s%20AI%20copilot%2C,make%20business%20users%20more%20productive).

*Use Cases:* The Business Co-Pilot brings many practical benefits. New or infrequent users of the ERP can simply ask for what they need instead of navigating menus, which lowers the learning curve. Seasoned users can save time – imagine a CEO getting a quick spoken briefing: “*Give me a summary of this week’s performance*,” and the Co-Pilot reads out a short report (sales, key payments, any alerts). It can also help enforce best practices: e.g. if inventory is running low and the user asks for status, the Co-Pilot might not only report “20 units left” but also follow up with “*Would you like me to create a restock order?*”. In essence, it shifts the ERP from a passive tool to a proactive advisor and collaborator. This aligns with the industry trend of AI assistants in business software, where **copilots provide a human-like conversational experience and a broad range of capabilities to help users complete tasks more efficiently**[**[11]**](https://www.sap.com/products/artificial-intelligence/ai-assistant.html#:~:text=What%20is%20an%20AI%20copilot%3F).

Phase III will see the full rollout of this Co-Pilot and Voice Assistant. It will leverage state-of-the-art AI (likely a combination of large language models, custom-trained on ERP terminology, and predictive analytics models for business data). We also anticipate continuous improvement – the Co-Pilot will gain skills over time, possibly via an **AI Skill Store or Studio** where new capabilities (for specific domains or custom company needs) can be added. This ensures the AI evolves with the business, always staying relevant and valuable.

## Conclusion and Next Steps

TOSS ERP III represents a next-generation ERP system that not only covers the **breadth** of business operations (from finance to HR, inventory to sales) but also delves into **innovative depth** with its cooperative economy features and AI integrations. By including both current modules and planned Phase II/III modules, this PRD outlines a full vision of the product: a platform where businesses manage their own operations and also **collaborate** with a community, aided by intelligent automation.

In summary, the **key benefits** of TOSS ERP III are:

* **Operational Efficiency:** A unified system reduces friction between departments and processes. Automation (both traditional workflow and AI-driven) cuts down manual effort and errors, allowing staff to focus on high-value tasks.
* **Cooperative Empowerment:** Features like group buying, shared resources, and pooled credit give smaller businesses the advantages of scale and solidarity, fostering a spirit of “win-win” collaboration. Members of a network can achieve together what they can’t alone – whether it’s buying at bulk prices or accessing credit on better terms – thereby strengthening the entire community[[12]](https://ncbaclusa.coop/resources/co-op-sectors/purchasing-co-ops/#:~:text=As%20part%20of%20a%20purchasing,efficiencies%20and%20increased%20market%20power)[[7]](https://utahscreditunions.org/news/the-cooperative-structure-of-a-credit-union/#:~:text=Credit%20unions%20are%20financial%20organizations,financial%20services%20to%20the%20members).
* **Informed Decision-Making:** Through rich analytics and the Business Co-Pilot, users gain **real-time insights and advice**. Decisions are backed by data and AI recommendations, reducing guesswork. The system can highlight trends or issues early (thanks to predictive analytics) so that businesses can be proactive rather than reactive.
* **Adaptability:** The modular design means TOSS ERP III can be tailored to each business. A company can start with core modules and then **unlock** additional modules (Logistics, Credit Engine, etc.) as their needs evolve. Similarly, cooperative features are opt-in – they can be introduced as trust and demand grows among a user group. This flexibility makes the product suitable for a wide range of industries and scales.
* **User-Friendly Experience:** With the Co-Pilot’s conversational UI and overall emphasis on usability (short, guided processes, alerts and notifications for important events, a modern web interface, and mobile access), the ERP is approachable even to non-experts. Training time is reduced, and user satisfaction is increased when the system feels like a partner in daily work, not a hindrance.

Going forward, the development of TOSS ERP III will prioritize security and reliability, especially as more advanced features (AI and multi-organization functions) come into play. Each phase will undergo thorough testing with pilot users – for instance, the Co-Pilot will be beta-tested with a small group to refine its responses and ensure it meets real business scenarios accurately. User feedback loops will guide refinements (e.g. adding new co-op features that early adopters suggest, or adjusting AI behavior to better fit user expectations).

By combining robust enterprise functionality with cutting-edge collaboration and AI, TOSS ERP III is poised to become a **business co-pilot** in the truest sense – handling the heavy lifting of operations, enabling cooperative strategies, and guiding users to success. This PRD will continue to be refined as we move through Phase II and Phase III, incorporating detailed specifications for each module and incorporating feedback from stakeholders. The end vision, however, remains clear: **an ERP platform that not only manages businesses, but also helps them grow *together*, smarter and faster**.

[[1]](https://ncbaclusa.coop/resources/co-op-sectors/purchasing-co-ops/#:~:text=Individual%20stores%20who%20are%20members,quality%20and%20the%20group%E2%80%99s%20leadership) [[12]](https://ncbaclusa.coop/resources/co-op-sectors/purchasing-co-ops/#:~:text=As%20part%20of%20a%20purchasing,efficiencies%20and%20increased%20market%20power) Purchasing Co-ops - NCBA CLUSA

<https://ncbaclusa.coop/resources/co-op-sectors/purchasing-co-ops/>

[[2]](https://www.sap.com/products/artificial-intelligence/ai-assistant.html#:~:text=What%20is%20Joule%3F) [[10]](https://www.sap.com/products/artificial-intelligence/ai-assistant.html#:~:text=Joule%20is%20SAP%E2%80%99s%20AI%20copilot%2C,make%20business%20users%20more%20productive) [[11]](https://www.sap.com/products/artificial-intelligence/ai-assistant.html#:~:text=What%20is%20an%20AI%20copilot%3F) Joule Copilot from SAP | Artificial Intelligence

<https://www.sap.com/products/artificial-intelligence/ai-assistant.html>

[[3]](https://www.clarity-ventures.com/buying-group-ecommerce-overview#:~:text=,intelligently%20adapt%20to%20each%20user) Key Features for Group Buying Platforms in 2025 | Clarity

<https://www.clarity-ventures.com/buying-group-ecommerce-overview>

[[4]](https://www.weeshare.com/en/blog/cooperatives-and-sharing-portals-two-powerful-partners#:~:text=It%20is%20clear%20that%20now,used%20to%20its%20full%20capacity) [[5]](https://www.weeshare.com/en/blog/cooperatives-and-sharing-portals-two-powerful-partners#:~:text=Furthermore%2C%20costs%20can%20be%20assigned,to%20a%20variable%20mileage%20package) [[6]](https://www.weeshare.com/en/blog/cooperatives-and-sharing-portals-two-powerful-partners#:~:text=WeeShare%20is%20the%20tool%20that,expenses%20at%20the%20same%20time) Cooperatives and sharing portals - two powerful partners

<https://www.weeshare.com/en/blog/cooperatives-and-sharing-portals-two-powerful-partners>

[[7]](https://utahscreditunions.org/news/the-cooperative-structure-of-a-credit-union/#:~:text=Credit%20unions%20are%20financial%20organizations,financial%20services%20to%20the%20members) [[8]](https://utahscreditunions.org/news/the-cooperative-structure-of-a-credit-union/#:~:text=Image%3A%20Diagram%20of%20credit%20union,and%20bank%20structures) The Cooperative Structure of a Credit Union – Utah's Credit Unions

<https://utahscreditunions.org/news/the-cooperative-structure-of-a-credit-union/>

[[9]](https://windowsforum.com/threads/microsoft-copilot-vision-the-future-of-ai-powered-windows-assistance.370433/?amp=1#:~:text=A%20standout%20aspect%20of%20Copilot,Microsoft%20pushes%20the%20envelope%20by) Microsoft Copilot Vision: The Future of AI-Powered Windows Assistance | Windows Forum

<https://windowsforum.com/threads/microsoft-copilot-vision-the-future-of-ai-powered-windows-assistance.370433/?amp=1>