

TECHNICAL PROPOSAL ERP SYSTEM DEVELOPMENT, AND IMPLEMENTATION



BEAEKA General Business



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Implementation Approach

Phase 1: Manufacturing Sector

Our top priority in the initial phase is the manufacturing sector. By focusing on this area first, we aim to streamline and optimize our production processes, ensuring a strong foundation for subsequent phases.

Importance of the Phased Approach

Implementing the ERP system in phases is crucial for several reasons:

- *Risk Management*: By focusing on one sector at a time, we can identify and address issues early, minimizing risks and disruptions.
- *Resource Allocation*: A phased approach allows us to allocate resources more effectively, ensuring each sector receives the attention and support it needs.
- *Continuous Improvement*: Lessons learned from the initial phase can be applied to subsequent phases, leading to a more refined and efficient implementation process.
- *Stakeholder Buy-In*: Gradual implementation helps in securing and maintaining stakeholder support, as they can see tangible benefits before moving on to the next phase.

Future Phases

Following the successful implementation in manufacturing, we will extend the ERP system to other critical areas, including:

- *Construction and Equipment Administration*
- *Agri-Business*
- *Import/Export*

These sectors will be addressed immediately after the manufacturing phase is fully operational.

By adhering to this phased approach, **BEAEKA General Business** will ensure a smooth and effective transition to the new ERP system, ultimately enhancing our overall efficiency and productivity.

Acronyms and Abbreviations

Acronym	Full Expansion
ATS	Ashewa Technology Solutions S.C
BA	Bachelor of Arts
CEO	Chief Executive Officer
CRM	Customer Relationship Management
CTO	Chief Technology Officer
ERP	Enterprise Resource Planning
ETV	Ethiopian Television
HR	Human Resource
ICB	International Competitive Bidding
ICT	Information Communication Technology
IT	Information Technology
MBA	Master of Business Administration
NCB	National Competitive Bid
NGO	Non-Governmental Organization
RPO	Recovery Point Objective
SLA	Service Level Agreement
WBS	Work Breakdown Schedule
OOB	Out of the Box
CUS	Customization
BOL	Bolt-on at additional cost
3RD	3rd-party software
FUT	Available in the near future
NA	Unavailable

Executive Summary

Ashewa Technology Solution S.C. (ATS) presents a comprehensive technical proposal to address BEAEKA Manufacturing's specific needs. Our proposed solution leverages advanced technology to:

- **Optimize Production:** Enhance production visibility, control, and efficiency with a Manufacturing Execution System (MES).
- **Empower Decisions:** Gain real-time data insights for accurate production estimates, improved scheduling, and proactive problem-solving.
- **Reduce Costs:** Minimize waste, optimize resource allocation, and gain better control over material handling for increased profitability.
- **Enhance Customer Satisfaction:** Deliver accurate order fulfillment and improve responsiveness to customer inquiries.
- **Future-Proof Agility:** Implement a cloud-based solution with Agile development for continuous improvement and scalability.

ATS boasts a proven track record of delivering successful solutions in various industries. Our Agile methodology ensures project flexibility and close collaboration with BEAEKA throughout the implementation process.

This proposal outlines our comprehensive approach, including detailed deliverables, risk management strategies, and robust data security measures. We are confident that our solution will significantly enhance BEAEKA's manufacturing operations and empower data-driven decision making for long-term success.

I. Introduction

1.1. About BEAEKA GENERAL BUSINESS PLC

- **A Company Rooted in Progress**

BEAEKA General Business PLC is a dynamic force within Ethiopia's business landscape. Since its inception in 2010, the company has undergone remarkable growth, establishing itself as a leading conglomerate with a presence in diverse sectors. Today, BEAEKA stands as a testament to Ethiopian entrepreneurial spirit, leaving its mark on the nation's development.

- **A Journey of Expansion:**

BEAEKA's story began in the construction industry, where it quickly carved a niche for itself. However, the company's ambitions extended far beyond. Fueled by a vision of becoming a leading conglomerate by 2030, BEAEKA embarked on a strategic expansion, venturing into various sectors critical to Ethiopia's economic growth.

- **A Footprint Across Industries:**

Today, BEAEKA's portfolio reflects a commitment to national progress. From manufacturing high-quality paints, marble, and edible oils to thriving in agriculture through the production of specialty coffee and other crops, BEAEKA's impact is undeniable. The company's reach extends further, encompassing the import and export of goods, petroleum distribution, and construction ventures of significant scale, including partnerships with internationally renowned companies like Schakman.

- **Innovation and Service:** BEAEKA's success isn't solely driven by diversification. The company prioritizes innovation, establishing state-of-the-art manufacturing facilities and utilizing modern technologies in its agricultural practices. This commitment to progress extends to its service offerings, with BEAEKA providing solutions like heavy machinery maintenance, construction equipment rental, and export processing services.

- **Beyond Business:** BEAEKA recognizes its responsibility towards the nation. The company has created over 5,000 jobs across various skill levels, empowering Ethiopian

citizens and contributing to the country's economic vitality. Furthermore, BEAEKA actively participates in national development initiatives, from supporting infrastructure projects like the Dire Dawa Water Project to advocating for inclusivity and gender equality.

- **A Future of Continued Growth**

BEAEKA's journey is far from over. The company's commitment to innovation and diversification ensures its continued relevance in Ethiopia's evolving economy. As BEAEKA sets its sights on the future, it remains dedicated to playing a pivotal role in building a stronger, more prosperous Ethiopia for generations to come.

1.2. About the Ashewa Technology Solutions (ATS)

Ashewa Technology Solutions S.C (ATS) is a prominent technology company that offers a wide range of services and solutions to empower businesses and individuals in various technological sectors. ATS is a leading technology company based in Ethiopia that is dedicated to empowering African businesses through innovative and inclusive digital solutions. With a focus on providing revolutionary tools and expertise, ATS aims to help businesses thrive in the digital age. ATS born in 2020, Ashewa, led by Daniel Bekele and his team, rose from vision to a multibillion-birr force in Ethiopian tech. Legally registered, operate across 11 technology sectors, from e-commerce, smart ERP, website solution, and to smart custom software and custom development. In the last five years' journey, grown up to a national share company passed its honor ship to more than 1600 registered shareholders.

Our mission: is to transform African businesses through innovative digital solutions, facilitating business transitions from traditional to digital in the modern era.

Our Vision: is to be the leading provider of revolutionary digital solutions, empowering businesses across Africa.

Our Values: are Result-Oriented, Teamwork, Agility, Integrity, Excellency, Impact-Focused, Customer-Centric and Innovation.

ATS understands the unique challenges faced by businesses in Africa, including limited access to technology, markets, finance, and infrastructure. To address these challenges, ATS offers a comprehensive range of digital solutions tailored to meet the specific needs of businesses. Some of the core services provided by ATS include:

E-commerce Services: ATS operates an e-commerce platform called Ashewa.com, which facilitates direct-to-customer transactions. This platform connects customers directly with manufacturers, eliminating unnecessary middlemen and making shopping easy, affordable, and

reliable.

Smart ERP (Enterprise Resource Planning): – ATS provides smart ERP solutions to businesses. These solutions help streamline and automate various business processes, such as inventory management, order processing, and customer relationship management.

Nahabi Web Building: – ATS offers web building services through its Nahabi platform. This platform enables businesses to create and customize their websites, allowing them to establish a strong online presence and reach a wider customer base.

ON DEMAND SOFTWARE DEVELOPMENT: –Our on-demand software development service specializes in providing custom software solutions tailored solutions to meet your specific business needs. We offer a wide range of software development services, including web and mobile app development, with Ongoing Support and Maintenance. We have proven history of delivering high-quality on demand software solutions and successful project implementations. We have delivered number software solution for diverse sectors including Fintech, E-commerce, transport, logistics, health and entertainment sector. Our team of skilled software engineers, designers and business analyst collaborates closely with you to understand your specific needs and create a customized software solution that caters to your brand and business objectives. With our comprehensive expertise and deep industry knowledge, we can develop robust and scalable software to meet your business goals.

1.3. ATS Organizational Structure

ATS with its structural arrangement fosters innovation, and delivers high-quality software solutions to clients, ensuring alignment with company goals and objectives. The following picture depicts the existing organizational structure.

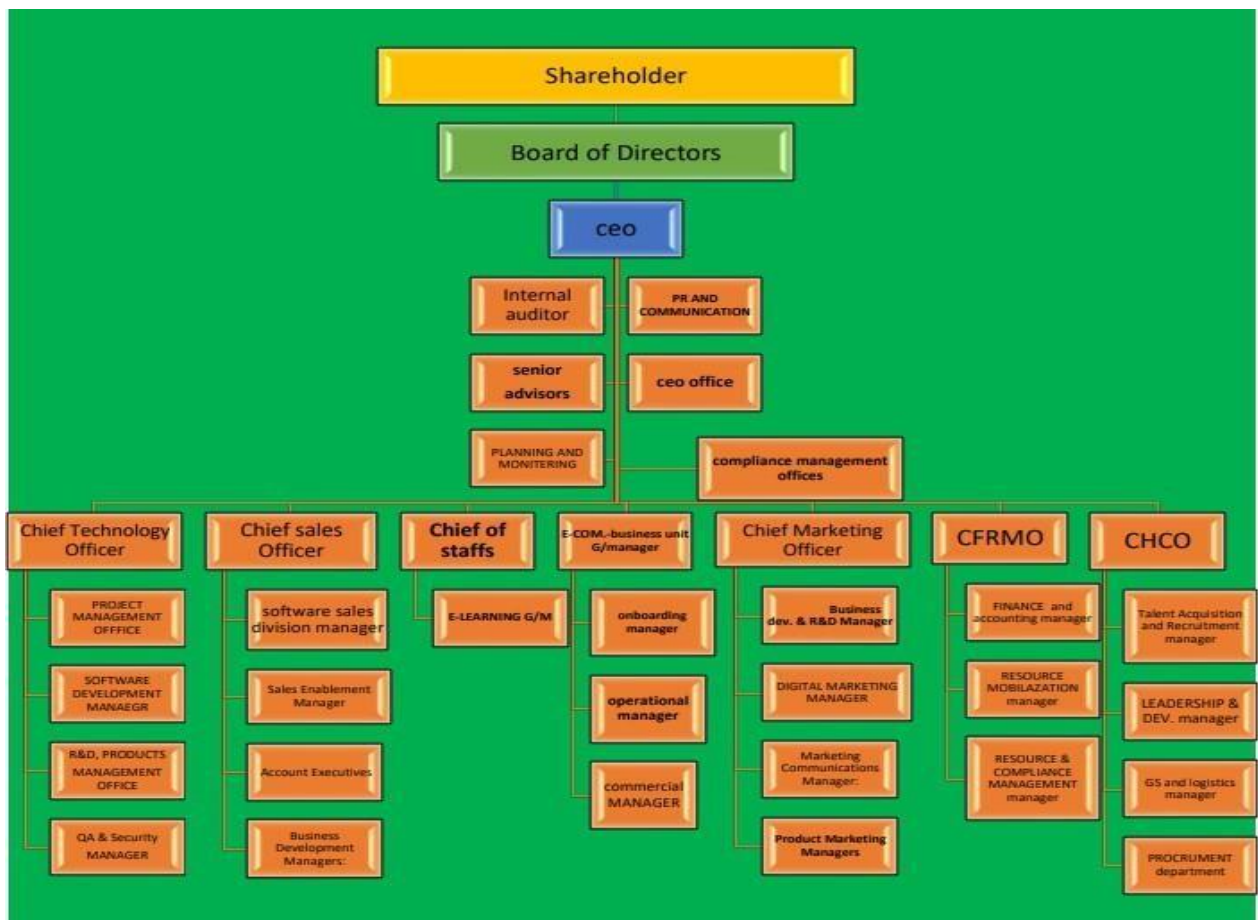


Figure 1: ATS Organizational Structure

1.4. Why BEAEKA GENERAL BUSINESS PLC Choose ATS?

Innovative and Revolutionary Solutions: We provide cutting-edge digital solutions that are not readily available in the African market. Our solutions are designed to address the specific needs and challenges faced by African businesses including agencies like BEAEKA GENERAL BUSINESS PLC .

Inclusive Approach: We believe that every African business, regardless of size or location, should have access to technology. Our solutions are affordable and easy to use, and making them accessible to a wide range of businesses and end users.

Proven Track Record: We have a successful track record of helping businesses achieve their goals. We have completed more than five (5) projects similar to BEAEKA GENERAL BUSINESS PLC's Mobile Application software design, development and delivery project in the last five years (2020 – 2024). Our partnerships with leading companies like ETV, FM Addis 97.1, Telemedicine, PAD ETHIOPIA (Int. NGO), Techno-Serve Ethiopia, GIZ, a number of real estate companies, Fana Cafe and Restaurants, Royal Fleet, and Price Listing those demonstrated our ability to deliver results.

Reliable and User-Friendly Solutions: Our digital solutions are reliable and user-friendly, making implementation and maintenance hassle-free. This reduces the need for expensive training and support, saving businesses time and money.

Exceptional Customer Service: We are committed to providing the best possible service and support to our clients. Our dedicated teams of experts are available to answer questions and ensure businesses get the most out of our solution.

Empowering African Communities: Our mission is to transform African businesses,

which, in turn, empowers African communities and contributes to a stronger economy.

Scalable Business Model: Our business model is designed for rapid expansion and increased profitability, allowing us to reach more businesses and have a greater positive impact on the African economy.

Long-Term Vision: We are committed building a company that lasts for 300 years. This long- term vision ensures that we will continue to invest in innovation and develop solutions that support African businesses for generations to come.

Sustainability with Commitment: We prioritize operating in a sustainable way and utilize eco- friendly technologies and practices whenever possible.

Partnership Opportunities: We offer a variety of partnership opportunities for businesses and individuals to work together in making a positive impact on the African economy. ATS being a share company attracted more than 1600 paid shareholders.

1.5. Key Benefits and Value Proposition of our product for BEAKA Manufacturing

Unmatched Operational Efficiency:

- Implement a comprehensive digital solution that streamlines various manufacturing operations.
- Gain real-time visibility and control over production processes with a Manufacturing Execution System (MES).
- Optimize production schedules, improve resource allocation, and reduce downtime.
- Enhance quality control through integrated inspection plans and real-time data monitoring.

Empowered Decision-Making:

- Leverage real-time data and advanced analytics for informed decision-making.
- Generate accurate production estimates and quotes based on real-time factors.

-
- Track inventory levels and material requirements for efficient production planning.
 - Gain insights for continuous improvement and proactive problem-solving.

Enhanced Customer Satisfaction:

- Improve order accuracy and on-time delivery with accurate promise dates.
- Provide customers with real-time order status updates and projected milestones.
- Streamline communication and collaboration with customers throughout the order lifecycle.
- Improve responsiveness to customer inquiries and requests.

Reduced Costs and Increased Profitability:

- Minimize waste and optimize resource utilization through efficient production planning.
- Reduce production downtime through proactive maintenance and problem identification.
- Gain better control over material handling and inventory management.
- Improve overall operational efficiency for cost reduction and increased profitability.

Future-Proof Scalability and Agility:

- Implement a cloud-based solution for scalability and accessibility.
- Leverage Agile development methodology for continuous improvement and adaptation.
- Ensure the solution evolves alongside your business needs and industry advancements.
- Foster a culture of innovation and continuous improvement within your manufacturing processes.

1.6. ATS Background Prior Similar Experience

Ashewa Technology Solutions has undertaken and successfully completed several projects for multiple clients, earning recognition and certification for its adherence to timelines and budgets. Notably, its Smart Website builder, Smart ERP system, E-commerce platform, and electronic document management systems have been effectively implemented across various

companies, underscoring its adaptability and efficacy in meeting diverse business requirements. Key achievements include:

- The PAD Ethiopia project involved the successful implementation of a comprehensive HR system, leading to the optimization of human resource processes within the organization.
- The implementation and delivery of the fleet and rental management system for Royal Family resulted in significant improvements in the fleet and rental management efficiency.
- The implementation and delivery of the procurement, sales, inventory and electronic document management systems for Zelalem Import Company, enhancing procurement and sales operations.

Established a multi-company architecture for Amibara, spanning various subsidiaries such as Amibara Trading, Addis Mojo Edible Oil, and Agriculture, across sales, purchase, inventory, manufacturing, finance and electronic document management system. Employing a phased approach for ERP implementation, Ashewa initially focused on Property management, rolling out CRM, sales, inventory and electronica management systems to support ongoing apartment sales, with release plan for subsequent systems such as project management, finance, and inventory underway.

- In addition to the above achievements Ashewa is also is also committed to developing and delivery its Smart ERP system to its esteemed clients Edomias and Bultex

II. Understanding the ToR and/or the Project

2.1. General Requirements

As the provider of the Smart ERP solution for BEAEKA General Business, we acknowledge the essential requirements outlined for the successful implementation and operation of the system. Our approach aligns with the objectives set forth, emphasizing meticulous planning, comprehensive training, and hands-on collaboration to ensure the effective deployment and integration of the ERP solution. The Smart ERP system is designed to meet the diverse needs of BEAEKA General Business, offering high availability, stability, and scalability across multiple sectors and locations. With full scope functionality, our solution provides robust support for various business processes, accommodating the organization's evolving requirements.

We understand the importance of adhering to ERP architecture standards and delivering superior functionality. The Smart ERP solution surpasses the specified requirements, leveraging advanced architecture to enhance performance and efficiency.

Our implementation includes the procurement of necessary middleware, software, and support tools to support central servers and facilitate integration with third-party systems. The Smart ERP system integrates seamlessly with existing infrastructure and supports customization and enhancements as needed.

Key features such as workflow management, email notifications, and user-friendly interfaces enhance productivity and streamline operations. The system operates on a topology-independent platform, supporting various network technologies and remote client access across any network type.

The Smart ERP system offers extensive capabilities to create, modify, and customize data collection and reporting forms, enabling users to tailor the system to their specific needs. It incorporates alerts and validation mechanisms to enforce adherence to system protocols and

ensure data validity and consistency.

With comprehensive monitoring and evaluation features, the system generates financial statements, performance indicators, and other critical reports across various dimensions such as branches, business segments, and processes. Users can access detailed information on budgets, expenses, income, and staffing, facilitating efficient analysis and comparison.

Our solution provides flexible access rights and customization options, allowing users to create, modify, and share reports based on hierarchical duties and user-defined criteria. It supports the creation of dashboards with graphical presentations for real-time monitoring and decision-making.

In addition, the Smart ERP system integrates seamlessly with other modules such as human resource management, project management, and business intelligence, providing a holistic view of organizational performance. Users can drill down into detailed data, highlight problem areas, and track the progress of strategic projects and programs.

With advanced BI capabilities, the system enables users to evaluate, forecast, and implement strategic decisions, leveraging analytical information and flexible reporting options. It facilitates comparisons between financial models, actual performance, and budget forecasts, aiding managers in planning and communication.

Furthermore, our solution prioritizes data integrity and accessibility, offering data repositories, data warehouses, and interfaces with legacy systems to ensure seamless data integration and management. Users can access historical data, group data into data marts, and retrieve information through user-friendly interfaces.

In terms of information management, the Smart ERP system generates customer-level information for all product types and produces summary reports by sector, product type, business segment, and location/branch. It enables users to create pivot reports, inquire about different types of information, and analyze data using summary tables, ratios, and graphical presentations. Additionally, the system verifies and validates data based on predefined

parameters before usage and allows/denies access to data/information through proper authorization and access rights, managed through our user matrix setup.

For delivery mechanisms, the system allows authorized users to print predesigned reports and export data into different file formats, ensuring flexibility and accessibility.

In terms of management reporting, our solution provides a user-friendly online query/reporting capability with support for multiple user-defined selection criteria, consolidations, and sort orders. It offers ad hoc reporting capabilities for both online and archived data, enabling users to output information in various media formats, including standard forms, predefined hard copy formats, and user-designed formats. Our report writer tool empowers users to create custom reports without the need for programming intervention and supports hierarchical summarization, data compilation hierarchies, mathematical functions, and more.

In the realm of security and auditing, the Smart ERP system ensures data protection and integrity through features such as automatic log-off after a period of inactivity, prohibition of concurrent logins with the same ID, role-based security, and encrypted communication. It maintains audit trails of updates to selected tables or fields and logs failed access attempts and security violations, enabling administrators to configure security settings and password policies.

Documentation provided with the Smart ERP solution is clear, concise, and professionally presented, available in both hard copy and electronic formats. It covers various aspects such as application installation and setup procedures, conceptual design, data dictionary, user manuals, error messages, maintenance procedures, and more, ensuring comprehensive support for system implementation and operation.

Our proposed Smart ERP ensures total internal data consistency, including domain, entity, and referential integrity. We utilize database constraints, triggers, and stored procedures to enforce data consistency, along with validation checks.

2.2. Human Resource Management

2.2.1. Payroll Management

Ashewa Smart ERP offers a robust payroll management module designed to streamline and automate the intricate processes involved in payroll calculation and administration. This comprehensive system ensures accuracy, compliance, and efficiency in managing employee compensation.

The module facilitates the creation and management of diverse salary structures tailored to the specific needs of organizations. With Ashewa Smart ERP, businesses can define various components such as basic pay, allowances, deductions, and benefits, ensuring flexibility and customization in payroll management.

Moreover, Ashewa Smart ERP's payroll management system includes sophisticated tax calculation capabilities, covering income tax and statutory deductions in accordance with local regulations. This ensures that organizations remain compliant with tax laws while accurately processing payroll.

Integration with the time and attendance module enhances accuracy in payroll calculations by leveraging attendance records and leave data. By seamlessly integrating with attendance systems, Ashewa Smart ERP ensures that payroll is based on actual attendance and absence data, minimizing errors and discrepancies.

Furthermore, the module facilitates the generation of detailed payslips, providing employees with transparent information about their earnings, deductions, and benefits. Additionally, it supports various payment methods, including direct deposit and payment processing, offering convenience and flexibility in disbursing salaries.

2.2.2. Benefit Administration:

In addition to payroll management, Ashewa Smart ERP simplifies benefit administration through a dedicated module focused on managing employee benefits effectively.

The benefit administration module enables organizations to define and manage a range of employee benefits, including health insurance, retirement plans, and other perks. Organizations can configure benefit plans according to their specific policies and requirements, ensuring flexibility and customization.

Moreover, the module facilitates seamless enrollment of employees into benefit programs, tracking eligibility criteria and ensuring timely enrollment and coverage management. Integration with the payroll system allows for accurate deductions and adjustments based on employees' benefit selections, ensuring consistency and compliance in payroll processing.

Ashewa Smart ERP's benefit administration module empowers employees with self-service options, allowing them to view and manage their benefit elections conveniently. By providing employees with access to their benefit information, the system promotes transparency and enables informed decision-making regarding benefit selections.

2.2.3. Employee Database:

Ashewa Smart ERP boasts a robust employee database module, serving as a centralized repository for storing and managing comprehensive employee information. This module allows for extensive customization, enabling organizations to tailor fields to capture specific details relevant to their operations.

The system maintains a detailed record of employees' personal information, including but not limited to their full name, date of birth, contact details, marital status, educational qualifications, prior work experience, and identification numbers. Additionally, it accommodates information on dependents, spouses, and other pertinent familial data.

Furthermore, the database captures essential job-related information such as job title, job grade, current salary, employment date, service years in the company, and termination details. It also tracks career progression, disciplinary records, training history, and benefits entitlements, ensuring a comprehensive overview of each employee's journey within the organization.

Ashewa Smart ERP's employee database module supports the management of HR

administration tasks, including tracking employee history from hiring to termination. It records job assignments, promotions, salary changes, disciplinary actions, and other relevant events, ensuring a complete and accurate audit trail.

Moreover, the system facilitates the management of employee exits, including exit interviews, asset surrender, and pass retrieval, streamlining the offboarding process. It also supports the maintenance of job descriptions, job specifications, and organizational structures, ensuring alignment with company objectives and requirements.

Additionally, the database module enables the generation of various reports, including payroll expenses, turnover analysis, bonus payments, and employee demographics. It supports the customization of reports based on user-defined criteria, providing actionable insights for strategic decision-making.

2.2.4. Signature Authorization:

In addition to employee data management, Ashewa Smart ERP offers robust signature authorization functionality, ensuring secure and efficient handling of signatures across the organization.

The system allows for the authorization of signatures for BEAEKA staff across different offices, including head office, business segments, and branches. It supports the online visibility of updated signatures, ensuring transparency and accessibility for relevant stakeholders.

Moreover, the system safeguards against issuing duplicate signature numbers and facilitates signature upgrades based on predefined criteria. It handles signature cancellations and maintains a comprehensive archive of active and inactive signatures for reference and compliance purposes.

Additionally, the solution supports the handling of signature change requests, including upgrades and slight modifications. It ensures timely alerts for the expiration of temporary signatures and enables printing directly from the database when hard copies are required.

Furthermore, the system tracks the assignment of signatures to ensure consistency and integrity. It allows for the authorization of signatures for contractual staff and facilitates the reversal of assigned signatures when necessary, providing flexibility and control in signature management.

2.2.5. Employee's Self-Services:

Ashewa Smart ERP empowers employees with self-service capabilities, allowing authorized staff of BEAEKA to access essential information and perform various tasks conveniently.

Authorized staff members can log in securely through BEAEKA's intranet or the internet to access a range of features, including:

- Detailed employee profiles, featuring personal information and job-related details.
- Viewing and updating their photograph, subject to authorization from HR.
- Checking annual leave status to plan time off effectively.
- Accessing personal training history to track professional development.
- Reviewing gross pay, deductions, and net pay details for transparency.
- Viewing performance appraisals and any internal vacancy announcements.
- Accessing company messages, such as newsletters and daily news updates.
- Applying for vacant positions within the organization.
- Requesting lateral transfers to explore new opportunities within BEAEKA.

2.2.6. Leave Management

Ashewa Smart ERP offers a comprehensive leave management system tailored to the needs of BEAEKA employees. It streamlines the process of requesting, approving, and tracking various types of leave, ensuring efficiency and accuracy throughout the organization. Key features include configurable leave calendars, support for different leave types such as annual leave, sick leave, and maternity leave, and the ability to adjust leave details even after approval. This flexibility allows employees to manage their leave effectively while ensuring compliance with organizational policies and collective agreements.

The system maintains a detailed record of leave transactions, including return dates from leave and comprehensive reporting capabilities. Supervisors can access employee leave records easily, enabling them to make informed decisions regarding leave approvals and scheduling. Automated workflows facilitate the approval process, ensuring timely responses to leave requests and reducing administrative burden. Additionally, the system generates confirmation letters for approved leaves, streamlining communication between employees and management.

Integration with the payroll system enables accurate calculation of payment entitlements for approved leaves. The system automatically raises payment requisitions based on approved leave, simplifying payroll processing and ensuring employees receive accurate compensation. Furthermore, Ashewa Smart ERP retains comprehensive leave history, allowing for detailed analysis and reporting of leave trends and patterns. This historical data provides valuable insights for workforce planning and resource management.

Ashewa Smart ERP also supports the management of disciplinary statuses and tracks employees' total service years by accounting for leave without pay periods. It includes features for tracking employees on sick leave, calculating salaries for sick leave based on predefined rules, and generating real-time reports on accrued leave and leave clearance. The system seamlessly integrates with attendance records, ensuring accurate allowance and salary calculations based on employees' attendance and leave records. Overall, Ashewa Smart ERP's leave management module offers a robust solution for managing leave processes efficiently and transparently within the organization.

2.2.7. Time Attendance Management

Ashewa Smart ERP's Time and Attendance Management module offers a robust solution for accurately capturing and managing employee attendance data. It enables the seamless integration of time management with other components such as biometric or fingerprint machines, ensuring that time data is recorded and processed efficiently without human intervention. Compatible biometric devices are recommended for optimal functionality. The

system identifies late attendance and maintains a record of reasons for absences or late arrivals, allowing for comprehensive reporting on lateness frequencies and criteria defined by users.

Supervisors have the provision to approve employee time sheets, facilitating streamlined approval processes and ensuring accuracy in attendance records. Additionally, the system tracks unauthorized absences and instances of repeated late arrivals or employees working fewer hours than their designated schedules. This functionality serves both timekeeping and disciplinary purposes, allowing organizations to address issues of absenteeism and lateness proactively.

In cases of regular lateness or absenteeism, the system can generate disciplinary notes for employees, copying supervisors for awareness and follow-up. This feature helps enforce organizational policies and encourages adherence to attendance expectations. Furthermore, the system's reporting capabilities provide insights into attendance patterns, enabling managers to identify trends and implement targeted interventions as needed.

Overall, Ashewa Smart ERP's Time and Attendance Management module offers a comprehensive solution for monitoring and managing employee attendance effectively. By automating time capture processes and providing detailed reporting functionalities, the system empowers organizations to optimize workforce productivity and compliance with attendance policies.

2.2.8. Planning and Budgeting

The Planning and Budgeting in Ashewa Smart ERP offers comprehensive support for various methods of planning and budgeting. It allows for the entry of plans and budgets by GL account code and period, both in summary and detail, catering to diverse organizational needs. The system facilitates spreadsheet integration, enabling seamless import from Excel for enhanced flexibility and ease of use. Once finalized, plans and

budgets are locked to prevent unauthorized changes, ensuring data integrity and accuracy.

Organizations can set up budgets for different levels, from sectors and branches to departments, aligning them with corporate-level budgets for cohesive financial management. The system maintains unified chart of accounts accessible by user organs, fostering consistency and clarity across the organization. Furthermore, budgets can be allocated through defined formulas and techniques, enabling efficient resource distribution and optimization.

Users have the flexibility to adjust budgets at both corporate and detailed account levels, facilitating responsive financial planning and decision-making. The system supports scenario planning, providing insights based on trends, data, and user input to suggest the best path forward. It also incorporates features for communication and collaboration between strategic management offices, planning teams, finance departments, and budget centers, promoting transparency and alignment of goals.

With advanced reporting capabilities, the system generates periodic reports and statements, including management reports with graphical dashboards for enhanced visualization of key financial metrics. It offers interpretation of financial ratios and indicators, helping users assess performance and make informed decisions. Additionally, the system enables budget transfer requests, mass budget revisions, and freeze/unfreeze functionalities, empowering authorized users with greater control over financial processes and outcomes.

2.3. ACCOUNTING AND FINANCE MODULE

The Ashewa Smart ERP Accounting & Financial module is a powerful tool specifically created to streamline and enhance financial management for businesses. This module is designed to handle various financial transactions, such as recording income and expenses, managing accounts payable and receivable, and tracking cash flow.

With the Ashewa Smart ERP Accounting & Financial module, businesses can effectively monitor their financial data in real-time, ensuring accurate and up-to-date information. This allows for better decision-making, as managers and stakeholders have access to reliable financial insights.

One of the key features of this module is its ability to generate detailed financial reports. These reports provide a comprehensive overview of the organization's financial health, including key metrics such as profit and loss statements, balance sheets, and cash flow statements. These reports can be customized and tailored to meet the specific needs of the business, providing valuable insights into the financial performance and enabling effective planning and forecasting.

Furthermore, the Ashewa Smart ERP Accounting & Financial module integrates seamlessly with other modules within the ERP system, such as inventory management and sales, enabling a holistic view of the organization's operations. This integration eliminates the need for manual data entry and ensures that financial information is accurately reflected across all relevant modules.

Overall, the Ashewa Smart ERP Accounting & Financial module offers businesses a comprehensive solution for managing their financial processes. By automating tasks, providing real-time insights, and generating accurate financial reports, this module

empowers organizations to make informed decisions, improve financial control, and drive overall business success.

Key features

2.3.1. Chart of Account Administration

The feature enables businesses to set up and manage their chart of accounts, which is a structured list of all the accounts used for recording financial transactions. It allows businesses to define account types, categories, and hierarchies to organize financial data systematically.

Flexibility in Chart of Accounts: The Ashewa Smart ERP Accounting & Financial module provides businesses with the flexibility to customize their chart of accounts according to their specific needs. It allows users to define account types, such as assets, liabilities, equity, revenue, and expenses, and set up categories within each type. This flexibility enables businesses to tailor their chart of accounts to match their industry-specific requirements or unique organizational structure.

Structured Organization: With the module's chart of accounts management functionality, businesses can establish a structured organization of financial data. They can create hierarchies within the chart of accounts, grouping accounts together based on their relationships or levels of granularity. This hierarchical structure provides a clear and organized view of financial transactions, making it easier to analyze and track financial data.

Efficient Financial Reporting: By utilizing the chart of accounts within the module, businesses can generate comprehensive and accurate financial reports. The structured organization of accounts allows for efficient grouping and aggregation of financial data, enabling the module to generate reports that provide a detailed breakdown of various

financial aspects. This includes reports such as income statements, balance sheets, trial balances, and cash flow statements, which are crucial for monitoring financial performance and making informed decisions.

Streamlined Data Entry: The chart of accounts functionality within the module simplifies the process of entering financial transactions. By establishing a standardized list of accounts, businesses can ensure consistency and accuracy in recording financial data. This eliminates the need for manual entry of account names or numbers each time a transaction is recorded, saving time and reducing the risk of errors.

Scalability and Growth: As businesses evolve and expand, the module's chart of accounts management capability accommodates their changing needs. New accounts can be easily added, and existing ones can be modified or restructured to accommodate the growth of the organization. This scalability ensures that the chart of accounts remains aligned with the evolving financial requirements of the business.

2.3.2. Journalizing and recording

The Ashewa Smart ERP Accounting & Financial module provides efficient and accurate journalizing capabilities to streamline this process.

Recording Financial Transactions: When a financial transaction occurs within a business, such as a sale, purchase, or payment, it needs to be properly documented for future reference and financial analysis. Journalizing involves capturing the relevant details of each transaction, including the date, accounts involved, amounts, and a brief description.

Journal Entry Format: The Ashewa Smart ERP Accounting & Financial module follows a standardized journal entry format, ensuring consistency and accuracy in recording transactions. Each journal entry typically consists of multiple lines, with each line representing a separate account involved in the transaction. The accounts are debited or credited, depending on the nature of the transaction and the accounting principles being followed.

General Journal: The module provides a general journal where all types of financial transactions are initially recorded. The general journal serves as a chronological record of transactions, allowing businesses to track and review the sequence of events.

Accuracy and Auditability: Journalizing within the module ensures the accuracy and auditability of financial transactions. By recording transactions in a systematic and organized manner, it becomes easier to trace and verify the origin of each entry. This is crucial for internal control purposes and during audits or financial reviews.

Integration with Other Modules: The Ashewa Smart ERP Accounting & Financial module seamlessly integrates with other modules, such as sales, purchases, and inventory management. This integration allows for automatic journalizing of transactions, reducing manual data entry errors and ensuring that transaction details are accurately reflected in the journal.

Financial Reporting: Journalizing forms the foundation for generating financial reports. The module utilizes the recorded journal entries to compile information for creating comprehensive financial statements, including income statements, balance sheets, and cash flow statements. Accurate journalizing enhances the reliability and integrity of these reports, providing stakeholders with valuable insights into the financial health of the business.

2.3.3. General Ledger

The Accounting & Financial module provides a general ledger that serves as the central repository for recording and tracking all financial transactions within the organization. It captures journal entries, tracks debits and credits, and generates a complete audit trail of financial activities.

Centralized Financial Repository: The General Ledger functionality within the Ashewa Smart ERP Accounting & Financial module acts as a centralized repository for all financial transactions within the organization. It consolidates data from various sources, such as journal entries, sub-ledgers, and other modules, providing a comprehensive and organized view of the company's financial activities.

Tracking Debits and Credits: The General Ledger keeps track of the debits and credits associated with each transaction. It ensures that the accounting equation ($\text{Assets} = \text{Liabilities} + \text{Equity}$) remains balanced by accurately recording the increases and decreases in each account. This tracking of debits and credits is essential for maintaining the integrity of financial records and complying with accounting principles.

Comprehensive Audit Trail: The General Ledger maintains a complete audit trail of financial activities. Each transaction recorded in the ledger is accompanied by relevant details such as transaction dates, descriptions, and references to supporting documents. This detailed information allows for easy tracing and verification of financial transactions, aiding in audits, internal control processes, and financial analysis.

Account Balances and Trial Balance: The General Ledger calculates and maintains the balances of each account based on the recorded transactions. It provides an up-to-date view of the financial standing of individual accounts, allowing businesses to monitor account balances and identify any discrepancies or irregularities. Additionally, the General Ledger

generates a Trial Balance report, which summarizes the debit and credit balances of all accounts at a specific point in time. The Trial Balance serves as a crucial tool for verifying the accuracy of the recorded transactions and detecting any errors before generating financial statements.

Customizable Reporting: The Ashewa Smart ERP Accounting & Financial module offers customizable reporting capabilities within the General Ledger. Users can generate financial reports tailored to their specific requirements, such as income statements, balance sheets, and cash flow statements. These reports provide a comprehensive overview of the organization's financial performance and position, enabling stakeholders to make informed decisions and assess the company's financial health.

Integration with Sub-Ledgers: The General Ledger integrates seamlessly with sub-ledgers, such as accounts payable and accounts receivable, ensuring that all transactions from different modules are accurately reflected in the ledger. This integration enhances data consistency and eliminates the need for manual data entry, reducing the risk of errors and ensuring that financial information is up-to-date and reliable.

2.3.4. Financial Reporting

The module offers a variety of financial reports, including balance sheets, income statements, cash flow statements, and trial balances. These reports provide insights into the financial health of the organization, profitability, liquidity, and other key financial indicators. Users can generate customizable reports and export them in various file formats.

Balance Sheets: The Financial Reporting functionality within the Ashewa Smart ERP Accounting & Financial module enables the generation of balance sheets. Balance sheets

provide a snapshot of the organization's financial position, presenting information about its assets, liabilities, and equity at a specific point in time. This report helps assess the company's solvency, liquidity, and overall financial stability.

Income Statements: The module allows for the creation of income statements, also known as profit and loss statements. Income statements provide a summary of the organization's revenues, expenses, gains, and losses over a specific period. They help evaluate the company's profitability, identify trends, and make informed decisions regarding revenue generation and cost management.

Cash Flow Statements: The Financial Reporting capability includes the generation of cash flow statements. These statements provide insights into the organization's cash inflows and outflows, categorizing them into operating activities, investing activities, and financing activities. Cash flow statements assist in evaluating the company's ability to generate cash, meet financial obligations, and fund future investments.

Trial Balances: The module facilitates the generation of trial balance reports. Trial balances summarize the debit and credit balances of all accounts within the organization at a specific date. They serve as a tool for verifying the accuracy of recorded transactions and ensuring that the accounting equation remains balanced. Discrepancies in the trial balance can be identified and resolved before finalizing financial statements.

Key Financial Indicators: The Financial Reporting functionality allows users to analyze and interpret key financial indicators. These indicators may include ratios and metrics such as profitability ratios (e.g., gross profit margin, net profit margin), liquidity ratios (e.g., current ratio, quick ratio), and efficiency ratios (e.g., inventory turnover, accounts receivable turnover). These indicators provide valuable insights into the organization's financial performance, efficiency, and overall health.

Customizable Reports: The module offers customization options for financial reports. Users can tailor reports by selecting specific accounts, time periods, and formatting preferences to meet their unique requirements. Customization allows businesses to focus on the relevant financial data and present it in a meaningful and digestible format for stakeholders.

Exporting in Various Formats: The Financial Reporting capability enables users to export reports in various file formats, such as PDF, Excel, or CSV. This flexibility allows for easy sharing and distribution of financial reports with stakeholders, both within and outside the organization. Exported reports can be further analyzed, archived, or incorporated into presentations or financial documents.

2.3.5. Automated Reconciliation

Ashewa Smart ERP automates the reconciliation process by matching bank transactions with corresponding entries in the system. It uses intelligent algorithms to suggest matches, saving time and reducing errors in the reconciliation process.

Bank Transaction Matching: The Automated Reconciliation feature within the Ashewa Smart ERP system automates the process of matching bank transactions with corresponding entries in the system. It compares the transactions recorded in the ERP system with the transactions reflected in the bank statements, aiming to identify and reconcile any discrepancies or differences.

Intelligent Matching Algorithms: The system utilizes intelligent matching algorithms to suggest potential matches between bank transactions and system entries. These algorithms analyze transaction data, such as dates, amounts, and descriptions, to identify

potential matches based on predefined criteria. The use of intelligent algorithms increases the accuracy and efficiency of the reconciliation process.

Time Savings: By automating the reconciliation process, Ashewa Smart ERP saves considerable time compared to manual reconciliation methods. The system automatically identifies potential matches, reducing the need for manual search and comparison. This time-saving benefit allows finance professionals to focus on more critical tasks, such as financial analysis and decision-making.

Error Reduction: The Automated Reconciliation feature helps to minimize errors in the reconciliation process. Manual reconciliation is prone to human errors, such as overlooking transactions or recording incorrect amounts. By automating the matching process, the system reduces the risk of errors and ensures greater accuracy in reconciling bank transactions with system entries.

Exception Handling: The Ashewa Smart ERP system provides functionality for handling exceptions during the reconciliation process. In cases where a clear match is not found automatically, the system flags these transactions as exceptions, allowing finance professionals to review and resolve them manually. This exception handling capability ensures that all discrepancies are appropriately addressed and resolved.

Audit Trail and Documentation: The system maintains an audit trail and documentation of the reconciliation process. It records the details of each reconciliation, including the matched transactions, exceptions, and any manual adjustments made during the process. This audit trail provides a transparent and traceable record of the reconciliation activities, which is valuable for internal control purposes and audits.

Reconciliation Reporting: The Ashewa Smart ERP system generates reconciliation reports, providing an overview of the reconciliation activities performed. These reports offer insights into the status of each reconciliation, including matched transactions, outstanding

exceptions, and any adjustments made. Reconciliation reports facilitate transparency, monitoring, and tracking of the overall reconciliation process.

2.3.6. Fixed Asset Management

The module allows businesses to track and manage their fixed assets. Users can record asset details, track depreciation, and generate reports on asset values and depreciation expenses. This helps in accurately reflecting the value of assets and complying with accounting standards.

Asset Registration: The Fixed Assets Management functionality within the Ashewa Smart ERP module enables businesses to register and record details of their fixed assets. Users can input essential information such as asset descriptions, purchase dates, acquisition costs, useful lives, and other relevant data. This comprehensive asset registration process ensures accurate documentation and identification of each fixed asset.

Depreciation Tracking: The module allows businesses to track depreciation for their fixed assets. Depreciation refers to the gradual reduction in the value of an asset over its useful life. Ashewa Smart ERP provides various depreciation methods, such as straight-line, declining balance, and units of production, allowing users to select the most appropriate method for different types of assets. The system automatically calculates and records depreciation expenses based on the chosen method, ensuring accurate financial reporting.

Asset Valuation: The Fixed Assets Management feature provides insights into the value of fixed assets. It enables users to generate reports on asset values, allowing businesses to have an up-to-date view of the worth of their fixed assets. These reports can be used for

financial analysis, insurance purposes, or when making decisions regarding asset maintenance, upgrades, or disposals.

Compliance with Accounting Standards: The module ensures compliance with accounting standards related to fixed assets. It facilitates adherence to guidelines such as International Financial Reporting Standards (IFRS) or Generally Accepted Accounting Principles (GAAP). By accurately tracking and reporting fixed asset values and depreciation expenses, businesses can meet regulatory requirements and maintain transparency in their financial statements.

Asset Maintenance and Tracking: The Fixed Assets Management functionality helps businesses maintain and track their fixed assets throughout their lifecycle. Users can record maintenance activities, such as repairs or upgrades, and attach relevant documentation, such as invoices or service reports, to the asset records. This feature enables proactive asset management, ensuring that assets are well-maintained, maximizing their lifespan, and optimizing their value.

Disposal and Retirement: The module assists in managing the disposal or retirement of fixed assets. When an asset is sold, scrapped, or otherwise disposed of, users can record the details of the transaction within the system. This information is crucial for accurately reflecting the impact on financial statements, such as recognizing gains or losses on the disposal of assets.

Audit and Asset Verification: The Fixed Assets Management feature within Ashewa Smart ERP supports auditing and asset verification processes. The system provides a comprehensive record of fixed asset details, including purchase information, depreciation history, maintenance records, and disposal transactions. This data facilitates asset audits, helps in physical asset verification, and ensures the accuracy and completeness of fixed asset records.

Asset Categorization: The Fixed Assets Management module allows businesses to categorize their fixed assets based on different criteria such as asset type, location, department, or project. This categorization provides a structured and organized view of assets, making it easier to manage and analyze asset portfolios.

Asset History and Tracking: The system maintains a complete history of each fixed asset, including its acquisition, maintenance, and disposal activities. This historical tracking helps in understanding the asset's lifecycle, identifying patterns of maintenance or repair, and assessing its overall performance and cost-effectiveness.

Lease Management: In addition to owned assets, the module may include features for managing leased assets. Users can record lease agreements, track lease payments, and generate reports on leased asset utilization. This functionality assists businesses in effectively managing their leased assets and ensuring compliance with lease terms.

Asset Maintenance Scheduling: The Fixed Assets Management module can include maintenance scheduling capabilities. Users can set up maintenance schedules for each asset, specifying routine inspections, preventive maintenance tasks, or service intervals. This feature helps in proactively managing asset maintenance, reducing downtime, and extending the lifespan of the assets.

Asset Disposition Planning: The system can provide features for planning asset disposition or replacement. By analyzing asset depreciation, maintenance costs, and expected useful life, businesses can make informed decisions about when to retire or replace assets. This planning helps ensure that assets are replaced in a timely manner, avoiding disruptions to operations and minimizing potential risks.

Asset Barcode or RFID Tagging: The module may support asset tagging using barcodes or RFID (Radio Frequency Identification) technology. Each asset can be assigned a

unique identifier that can be scanned or read electronically, facilitating efficient asset tracking, inventory management, and accurate data capture.

Integration with Procurement and Accounting: The Fixed Assets Management module can integrate with other modules within the ERP system, such as procurement and accounting. This integration allows for seamless recording of asset acquisitions, linking purchase orders and invoices to asset records, and automating asset-related financial transactions, such as capitalization and depreciation entries.

Asset Performance Analysis: The module can provide analytics and reporting capabilities to analyze asset performance. Users can generate reports or dashboards that provide insights into key performance indicators (KPIs) related to assets, such as asset utilization, maintenance costs, downtime, or return on investment (ROI). This analysis helps businesses identify underperforming assets, optimize asset allocation, and make data-driven decisions regarding asset investments.

Regulatory Compliance: The Fixed Assets Management module helps businesses comply with regulatory requirements related to fixed assets. It ensures accurate financial reporting and adherence to regulations governing asset valuation, depreciation methods, impairment assessments, and disclosures.

Integration with Asset Tracking Systems: In certain cases, the Fixed Assets Management module may integrate with external asset tracking systems or Internet of Things (IoT) devices. This integration enables real-time tracking of assets' location, condition, or usage, enhancing visibility, and facilitating proactive maintenance and risk management.

2.3.7. Bank and cash Management

The Accounting & Financial module helps businesses manage their bank accounts, cash transactions, and bank reconciliations. It allows users to record bank deposits, withdrawals, and transfers. It also provides bank statement reconciliation features to ensure accurate and up-to-date financial records.

Multiple Bank Account Management: The Bank and Cash Management functionality within the Accounting & Financial module enables businesses to manage multiple bank accounts. Users can record and track transactions for each bank account separately, allowing for better organization and monitoring of funds across different accounts.

Cash Transaction Recording: In addition to bank transactions, the module allows businesses to record cash transactions. This feature is particularly useful for tracking petty cash expenses, cash sales, or other cash-related activities. By capturing and categorizing cash transactions, businesses can maintain a comprehensive record of their cash flow.

Bank Deposits and Withdrawals: Users can record and track bank deposits and withdrawals within the system. This functionality helps in accurately documenting and reconciling funds coming into and going out of the bank accounts. It ensures that all financial transactions are properly recorded and accounted for.

Bank Transfers: The module facilitates the recording and tracking of bank transfers between different accounts, such as intercompany transfers or transfers between business units. Users can easily initiate and document these transactions, ensuring transparency and proper allocation of funds within the organization.

Bank Reconciliation: The Bank and Cash Management feature includes bank statement reconciliation capabilities. Users can compare their recorded transactions with the bank statements and perform reconciliations to ensure that the records in the system match

the actual bank transactions. This process helps identify any discrepancies, such as missing transactions or errors, ensuring the accuracy and integrity of financial records.

Bank Statement Import: The system may provide the functionality to import bank statements directly into the ERP system. Users can upload electronic bank statements in commonly-used formats, such as CSV or OFX, which the system then reconciles with the recorded transactions. This feature streamlines the reconciliation process, saving time and reducing manual data entry errors.

Cash Flow Monitoring: The module enables businesses to monitor their cash flow effectively. By recording and categorizing bank and cash transactions, users can generate cash flow reports or dashboards that provide insights into the organization's inflows and outflows of cash. This information helps in forecasting, budgeting, and making informed financial decisions.

Bank Charges and Fees: The system allows users to record and track bank charges or fees associated with their bank accounts. This functionality helps businesses accurately account for these expenses and incorporate them into their financial records and reports.

Integration with Bank APIs: In some cases, the Bank and Cash Management module can integrate with bank application programming interfaces (APIs). This integration enables real-time retrieval of bank transaction data, automatic updates of bank balances, and seamless communication between the ERP system and the bank. This feature enhances efficiency, accuracy, and timeliness of bank-related processes.

Audit Trails and Controls: The module maintains audit trails and provides controls for bank and cash transactions. It records user activities, such as transaction creation or modification, ensuring transparency and accountability. Additionally, the system may offer authorization controls, such as approval workflows, to enforce segregation of duties and prevent unauthorized access to sensitive financial information.

Cash Forecasting: The Bank and Cash Management module can include cash forecasting capabilities. By analyzing historical cash flows and projected cash inflows and outflows, businesses can forecast their future cash positions. This feature helps in optimizing cash utilization, identifying potential cash shortfalls or surpluses, and making informed decisions regarding investments, borrowing, or other financial activities.

Cash Pooling and Concentration: For businesses with multiple bank accounts, the module may provide functionality for cash pooling and concentration. Cash pooling involves consolidating funds from different accounts into a central account to optimize cash utilization and interest earnings. Cash concentration allows businesses to transfer excess funds from subsidiary accounts to a central account for better cash management. These features assist in maximizing cash efficiency and reducing banking costs.

Cash Disbursements: In addition to bank deposits and transfers, the module enables businesses to record and track cash disbursements. This functionality is useful for managing payments made in cash, such as petty cash expenses, vendor payments, or employee reimbursements. By accurately recording cash disbursements, businesses can maintain a complete and transparent record of their cash outflows.

Cash Management Reporting: The Bank and Cash Management module provides various reports and financial statements related to cash management. These reports include cash flow statements, bank reconciliation reports, cash position summaries, cash forecasts, and other relevant financial analytics. These insights help businesses monitor cash performance, identify trends, and make informed decisions to optimize their cash management strategies.

Integration with Payment Gateways: In some cases, the Bank and Cash Management module integrates with payment gateway platforms, enabling businesses to process online payments directly from the ERP system. This integration streamlines the payment process, improves efficiency, and provides centralized tracking of online transactions.

Cash Security and Controls: The module incorporates security measures and controls to ensure the integrity and security of cash transactions. This includes user access controls, segregation of duties, transaction authorization workflows, and encryption of sensitive financial data. These measures help prevent fraud, unauthorized access, and ensure compliance with financial regulations.

Petty Cash Setting: The module allows businesses to set up and manage petty cash funds, including defining the initial cash amount, tracking cash disbursements, and reconciling the remaining cash balance. It provides controls and visibility over petty cash transactions, ensuring proper documentation and accountability for these expenses. This functionality streamlines the management of petty cash, reduces the risk of misappropriation, and improves overall cash management.

2.3.8. Payment and collections

The module supports the creation and management of customer invoices and supplier bills. It allows businesses to generate professional invoices, record payments, and manage the accounts receivable and accounts payable processes. It also integrates with other modules for seamless invoicing and payment management.

Invoice Customization: The Invoicing and Payments module provides customization options for invoices. Users can tailor invoice templates with their company logo, branding, and specific formatting requirements. This feature helps businesses create professional-looking invoices that align with their brand identity.

Invoice Generation: The module enables businesses to generate invoices based on various criteria such as sales orders, service contracts, or project milestones. Users can

automatically populate invoice details, including item descriptions, quantities, prices, and applicable taxes. This functionality streamlines the invoicing process and reduces manual data entry.

Recurring Invoices: smartERP systems offer the ability to create recurring invoices. This feature is useful for businesses that have regular billing cycles or subscription-based services. Users can set up recurring profiles, specifying the frequency and duration of invoice generation. This functionality automates the invoicing process, saving time and effort for businesses.

Invoice Tracking and Management: The module allows businesses to track and manage their invoices effectively. Users can view the status of each invoice, such as pending, paid, or overdue. They can also generate reports or dashboards that provide insights into outstanding invoices, aging of receivables, and payment trends. This functionality helps optimize cash flow, monitor customer payment behavior, and take appropriate actions for collection management.

Accounts Receivable Management: The Invoicing and Payments module facilitates accounts receivable management. It provides features for tracking customer payments, applying cash receipts to invoices, and managing customer credit limits. Users can generate aging reports, track outstanding balances, and initiate collection activities if necessary. This functionality helps businesses maintain healthy cash flow and minimize bad debt risks.

Supplier Bill Management: In addition to customer invoicing, the module supports the management of supplier bills. Users can record bills received from vendors, track due dates, and monitor outstanding payables. This functionality ensures accurate recording of financial obligations and helps businesses manage their cash outflows effectively.

Accounts Payable Management: The module includes features for managing accounts payable processes. Users can track and review supplier bills, initiate payment

approvals, and schedule payments. It may support various payment methods such as checks, electronic transfers, or online payment gateways. This functionality streamlines the accounts payable process, improves accuracy, and ensures timely payments to vendors.

Integration with Inventory Management: The Invoicing and Payments module integrates with inventory management modules within the ERP system. This integration enables real-time updates of inventory levels upon invoice generation or fulfillment. It ensures accurate inventory tracking, reduces the risk of overselling, and improves order-to-cash processes.

Integration with Sales and CRM: The module may integrate with sales and customer relationship management (CRM) modules. This integration allows for seamless flow of information between these modules, ensuring that invoices are generated based on accurate sales data and customer details. It improves efficiency, reduces manual data entry, and enhances customer satisfaction.

Payment Gateway Integration: Ashewa smartERP systems offer integration with popular payment gateways or electronic payment processors. This integration enables businesses to accept online payments directly from customer invoices. Users can set up payment links or portals, facilitating secure and convenient payment options for customers. This functionality improves cash flow, reduces payment processing time, and enhances the customer experience.

Multicurrency Support: The Invoicing and Payments module may support multicurrency transactions. Businesses operating in multiple countries can generate invoices and process payments in different currencies. The module handles currency conversions, updates exchange rates, and ensures accurate recording of financial transactions across different currencies.

Tax Compliance: The module incorporates tax compliance features to ensure accurate calculation and recording of taxes on invoices. It can handle various tax regulations, including tax rates, exemptions, and reporting requirements. This functionality helps businesses comply with tax laws and streamline tax-related processes.

Handling of Suspense Account: The Invoicing and Payments module includes functionality to handle suspense accounts. A suspense account is a temporary account used to hold funds or transactions when there is uncertainty or discrepancy in their proper allocation. The module allows businesses to identify and track transactions that require further investigation or clarification before they can be properly allocated. It helps businesses maintain accurate financial records by providing a mechanism to resolve and reconcile these transactions, ensuring proper handling and allocation of funds.

Invoice Templates and Layouts: The module may offer a range of pre-designed invoice templates and layouts for businesses to choose from. Users can select a template that best suits their industry or customize the layout to meet their specific requirements. This feature allows businesses to create professional, visually appealing invoices that enhance their brand image.

Invoice Itemization: The module allows for detailed itemization of products or services on invoices. Users can add line items with descriptions, quantities, unit prices, and applicable taxes. This level of itemization provides transparency to customers and simplifies record-keeping for both the business and the client.

Invoice Attachments: Businesses can attach relevant documents or files to invoices, such as contracts, receipts, or supporting documents. This feature ensures that all relevant information is easily accessible and associated with the invoice. It facilitates streamlined communication and minimizes potential disputes or confusion.

Payment Terms and Discounts: The module enables businesses to define payment terms and conditions for invoices. Users can set due dates, specify early payment discounts, or establish late payment penalties. This functionality helps businesses maintain cash flow by encouraging prompt payments or appropriately addressing late payments.

Partial Payments and Payment Plans: In some cases, the module allows for partial payments or the creation of payment plans for invoices. This feature is particularly useful for businesses that offer installment-based payment options or have long-term projects with milestone-based billing. Users can track partial payments and monitor the overall payment status for each invoice.

Automatic Payment Reminders: The module may include automatic payment reminder functionality. Users can schedule and customize reminders to be sent to customers when invoices are approaching or past due dates. This feature helps businesses minimize payment delays, improve collections, and maintain positive customer relationships.

Credit Notes and Refunds: The module supports the creation and management of credit notes or refunds. If a customer returns goods or services or if an invoice requires adjustment, users can generate credit notes that offset the original invoice. This functionality ensures accurate recording of credit transactions and provides a clear audit trail.

Settlements of Advance Payment: The Invoicing and Payments module supports the settlement of advance payments. Businesses often require customers to make advance payments before providing goods or services. This module allows users to record and track these advance payments, ensuring proper allocation and reconciliation when the final invoice is generated. It provides transparency and clarity in the financial transaction process, helping businesses manage and account for advance payments effectively.

Payment Allocation and Reconciliation: Businesses can allocate payments received to corresponding invoices within the module. The system reconciles payments against

outstanding invoices, updating the accounts receivable balance automatically. This feature streamlines the payment reconciliation process, minimizes errors, and ensures accurate financial records.

Compliance and Audit Trail: The module incorporates compliance features to ensure adherence to financial regulations and standards. It allows for the inclusion of legally required information on invoices, such as tax identification numbers or regulatory disclaimers. Additionally, the system maintains an audit trail of all invoice and payment activities, providing a record of changes, approvals, and user actions for compliance and auditing purposes.

2.3.9. Budgeting and Forecasting

Ashewa Smart ERP enables businesses to create budgets and forecasts within the Accounting & Financial module. It allows users to define budget plans, allocate funds to different accounts, and track actual performance against the budget. This helps in financial planning and monitoring.

Budget Planning: The Budgeting and Forecasting feature in Ashewa Smart ERP provides businesses with the ability to create comprehensive budget plans. Users can define budget periods, such as monthly, quarterly, or annually, and allocate funds to different accounts or cost centers. This functionality allows businesses to set financial goals and allocate resources effectively.

Multiple Budget Versions: The module may support the creation of multiple budget versions. This feature enables businesses to create different scenarios or versions of the budget, such as optimistic, conservative, or best-case scenarios. Users can compare and analyze the impact of different budget versions, helping them make informed financial decisions.

Budget Allocation and Distribution: Within the Budgeting and Forecasting module, users can allocate funds to specific accounts or cost centers based on their priorities. This functionality allows businesses to distribute resources strategically and align budget allocations with their organizational goals and priorities.

Automatic Data Population: The module may offer integration with other modules or data sources within the ERP system. This integration enables automatic population of actual financial data, such as revenues, expenses, and historical performance, into the budgeting module. It eliminates the need for manual data entry and improves the accuracy of budget vs. actual comparisons.

Budget Approval Workflow: Ashewa Smart ERP may include a budget approval workflow feature. This functionality allows businesses to define an approval hierarchy or workflow for budget plans. Users can submit budget proposals for review and approval by designated approvers. This feature helps ensure accountability, control, and compliance in the budgeting process.

Variance Analysis: The Budgeting and Forecasting module enables businesses to perform variance analysis by comparing actual financial performance against the budget. Users can generate reports or dashboards that highlight the variances, providing insights into areas of over or under-spending. This functionality helps businesses identify budget deviations, take corrective actions, and improve financial performance.

Collaboration and Communication: The module may include collaboration and communication features, allowing users to collaborate on budget plans, share comments or annotations, and facilitate discussions among team members. This functionality promotes cross-departmental collaboration, improves transparency, and ensures that all stakeholders are involved in the budgeting process.

Historical Data Comparison: The module allows businesses to compare current budget plans with historical data from previous periods. Users can assess the effectiveness of past budgeting strategies, identify trends, and incorporate lessons learned into future budgeting exercises. This functionality supports continuous improvement in financial planning and forecasting.

2.3.10. Tax Management

The Accounting & Financial module supports tax management by allowing businesses to define tax rules, rates, and jurisdictions. It automates tax calculations and ensures compliance with applicable tax laws and regulations.

Tax Rule Customization: The Tax Management feature in the Accounting & Financial module allows businesses to customize tax rules based on their specific requirements. Users can define tax codes, exemptions, thresholds, and other parameters to ensure accurate tax calculations and compliance with tax regulations specific to their industry or jurisdiction.

Multi-Jurisdiction Support: The module supports tax management for businesses operating in multiple jurisdictions. It enables users to define tax rates and rules for different regions, countries, or states where the business conducts operations. This functionality ensures accurate tax calculations based on the applicable tax laws in each jurisdiction.

Automated Tax Calculations: The Accounting & Financial module automates tax calculations based on the defined tax rules and rates. When financial transactions occur, such as sales or purchases, the system automatically applies the appropriate tax calculations, reducing manual effort and minimizing the risk of errors. This automation streamlines the tax management process and improves efficiency.

Tax Reporting and Filing: The module may include features for tax reporting and filing. It enables businesses to generate tax reports, such as income tax or VAT reports, that

provide a summary of taxable transactions within a specified period. These reports assist businesses in meeting their tax obligations by providing accurate data for tax filing purposes.

Tax Compliance Monitoring: The Tax Management feature helps businesses ensure compliance with tax laws and regulations. It provides visibility into tax-related information, such as tax liability, tax credits, or exemptions, allowing businesses to monitor their compliance status. This functionality helps minimize the risk of penalties or fines associated with non-compliance.

Tax Audit Trail: The Tax Management feature maintains an audit trail of tax-related activities and transactions. It records changes, approvals, or adjustments made to tax rules, rates, or calculations, providing a comprehensive history for auditing purposes. This functionality enhances transparency and accountability in tax management processes.

2.4. SUPPLY CHAIN MANAGEMENT

2.4.1. PURCHASEING

The Ashewa Smart ERP Procurement and Purchase module streamlines procurement processes, manages supplier relationships, and optimizes inventory replenishment. It offers centralized procurement management from requisition to purchase order creation, ensuring efficiency and reducing errors. Businesses can evaluate and collaborate with suppliers effectively, track inventory levels, and generate purchase orders based on predefined thresholds. The module also provides comprehensive purchase order management, supplier performance evaluation, spend analysis, and integrates seamlessly with financials. Implementing this module enhances procurement capabilities, drives cost savings, and improves overall efficiency.

2.4.1.1. Supplier Management

The Procurement and Purchase module enables businesses to manage their supplier relationships. It allows the creation and maintenance of a supplier database, including supplier contact information, terms and conditions, and historical data. This information helps in supplier evaluation and selection.

- **Supplier Management:** The Procurement and Purchase module offers robust capabilities for businesses to effectively manage their supplier relationships. It allows for the creation and maintenance of a comprehensive supplier database, which serves as a centralized repository for all supplier-related information.

- **Supplier Database:** Within the module, businesses can store and manage essential supplier details such as contact information, company profiles, payment terms, delivery preferences, and contractual agreements. This centralized supplier database ensures that all relevant information is easily accessible and up-to-date, facilitating efficient supplier management.

- **Supplier Evaluation and Selection:** The module provides tools and features to evaluate and select suppliers based on various criteria. By leveraging the supplier database, businesses can track and assess supplier performance, including factors such as quality, reliability, responsiveness, and adherence to delivery schedules. Historical data stored in the database enables businesses to make informed decisions when evaluating and comparing suppliers.

- **Supplier Performance Ratings:** The module may include the ability to assign performance ratings to suppliers based on predefined metrics and key performance indicators (KPIs). These ratings can be derived from real-time data and feedback collected from various departments within the organization. Supplier performance ratings provide valuable insights for businesses when assessing and managing their relationships with suppliers.

- **Supplier Collaboration:** The module may also offer features that facilitate effective collaboration and communication with suppliers. This can include tools for exchanging messages, sharing documents, and managing requests for information (RFIs) and requests for proposals (RFPs). Streamlining communication channels within the module enhances collaboration and strengthens the relationship between businesses and their suppliers.

- **Supplier Performance Monitoring:** The Procurement and Purchase module enables businesses to monitor supplier performance on an ongoing basis. It provides real-time visibility into key metrics, such as delivery timeliness, quality control, and customer satisfaction. By monitoring supplier performance, businesses can identify areas for improvement and proactively address any issues that may arise.

- **Supplier Relationship Analytics:** The module may offer analytical tools and reporting capabilities to gain insights into supplier relationships. Businesses can generate reports and analyze supplier performance, costs, and contributions to the organization. These insights help in identifying strategic suppliers, negotiating favorable terms, and optimizing supplier portfolios.

2.4.1.2. Purchase Requisitions

The module allows employees or departments within an organization to create purchase requisitions for the items or services they require. Purchase requisitions serve as requests for procurement and initiate the procurement process.

- **Purchase Requisitions:** The Procurement and Purchase module offers a user-friendly interface that allows employees or departments within an organization to create purchase requisitions seamlessly. Purchase requisitions serve as formal requests for the procurement of specific items or services and play a crucial role in initiating the procurement process.

- **User-Friendly Interface:** The module provides a simple and intuitive interface for creating purchase requisitions. Users can easily access the system, navigate through relevant categories, and select the desired items or services they need to procure. This user-friendly interface ensures a smooth requisition creation process, even for non-procurement professionals.

- **Requisition Details:** When creating a purchase requisition, users can specify essential details such as the quantity, description, required delivery date, and any specific specifications or requirements for the items or services. Including comprehensive information in the requisition allows the procurement team to understand the exact needs of the requester, ensuring accurate and efficient procurement.

- **Budget Validation:** The module may include functionality to validate purchase requisitions against budget allocations. This feature helps ensure that the requested items or services align with the available budget, preventing overspending and promoting financial control within the organization.

- **Approval Workflows:** Purchase requisitions often require approval from designated personnel or managers before progressing to the next stage of the procurement process. The module enables the creation and customization of approval workflows based on organizational hierarchy or predefined rules. This ensures that purchase requisitions follow the appropriate channels for review and approval, enhancing control and compliance.

- **Workflow Notifications:** The module can send automated notifications to relevant stakeholders, such as the procurement team, approvers, or requesters, to keep them informed about the progress of purchase requisitions. These notifications may include updates on pending approvals, rejections, or successful approvals, ensuring transparency and timely action.

- **Requisition Tracking:** The module allows users to track the status of their purchase requisitions in real-time. They can easily view the progress, including the current stage of approval, any comments or notes added by approvers, and the estimated timeline for

fulfillment. This visibility provides requesters with valuable insights into the procurement process and helps manage expectations.

- **Requisition Modification:** In situations where modifications are required for a submitted purchase requisition, the module enables users to make necessary changes. This flexibility ensures that purchase requisitions can be modified to reflect any updates or amendments, such as quantity adjustments, specification changes, or revised delivery dates.

- **Requisition History:** The module maintains a comprehensive history of purchase requisitions, including details of all modifications, approvals, and comments throughout the procurement process. This historical data serves as an audit trail, facilitating transparency, compliance, and analysis of requisition patterns for future procurement planning.

- **Attachments and Supporting Documents:** The module may allow users to attach relevant documents, such as product specifications, quotes, or contracts, to purchase requisitions. This feature enables requesters to provide additional information or supporting documentation to aid the procurement team in making informed decisions. Attachments also serve as a reference for future auditing or tracking purposes.

- **Integration with Procurement Workflow:** Purchase requisitions seamlessly integrate with the broader procurement workflow within the module. Once approved, requisitions can be transformed into purchase orders, triggering the subsequent procurement activities such as vendor selection, order placement, and delivery coordination.

- **Requisition Analytics and Reporting:** The module may offer analytics and reporting capabilities to provide insights into requisition patterns, approval cycle times, and spending trends. Organizations can generate reports to analyze requisition volumes, identify bottlenecks in the approval process, and assess the overall efficiency of the procurement workflow. These analytics help drive process improvements and optimize procurement operations.

2.4.1.3. Purchase order

The Procurement and Purchase module provides functionality to generate purchase orders automatically once a purchase requisition is approved. This automation reduces manual efforts, eliminates errors, and expedites the procurement process, ensuring timely order placement.

- **Purchase Order Details:** When creating a purchase order, the module allows users to include various details such as item or service descriptions, quantities, pricing, unit of measurement, and delivery terms. Comprehensive purchase order information ensures clarity and accuracy in supplier communication and minimizes potential misunderstandings or discrepancies.

- **Supplier Selection:** The module may include features to assist in selecting the appropriate supplier for a specific purchase order. It can provide supplier suggestions based on factors such as pricing, availability, lead times, quality ratings, or predefined supplier performance metrics. These suggestions help streamline the supplier selection process and enable organizations to make informed decisions.

- **Price and Terms Negotiation:** The module supports negotiation capabilities, allowing businesses to negotiate pricing, discounts, and other terms with suppliers before finalizing the purchase order. It provides a platform for effective communication and collaboration between procurement professionals and suppliers, ensuring favorable pricing and terms for the organization.

- **Approval and Authorization:** Purchase orders generated from approved requisitions may require additional approvals or authorizations before being sent to suppliers. The module can facilitate the routing of purchase orders for review by designated personnel, such as finance managers or higher-level approvers. This ensures compliance with internal control procedures and enhances financial governance.

- **Order Status Tracking:** The module enables users to track the status of purchase orders throughout the procurement process. It provides real-time visibility into the progress of orders, including order placement, order acknowledgment from suppliers, order fulfillment, and delivery tracking. Tracking purchase order status allows organizations to proactively monitor the procurement workflow and manage supplier performance effectively.

- **Amendment and Change Management:** In situations where modifications or changes are required for an already issued purchase order, the module allows users to manage amendments seamlessly. It facilitates the revision of quantities, delivery dates, or other order details and provides a structured change management process. This ensures that any required changes to purchase orders are properly documented and communicated to suppliers.

- **Electronic Order Transmission:** The module may support electronic transmission of purchase orders to suppliers, such as through email or electronic data interchange (EDI). Electronic order transmission eliminates manual handling, reduces paperwork, and expedites order processing. It also enables organizations to maintain digital records of all purchase orders for future reference or auditing purposes.

- **Order Confirmation and Acknowledgment:** The module allows suppliers to provide order confirmation or acknowledgment upon receiving the purchase order. This confirmation serves as a formal acceptance of the order and helps establish a clear understanding between the organization and the supplier regarding the terms, pricing, and delivery expectations. Order acknowledgments provide visibility into supplier commitment and facilitate effective order management.

- **Integration with Inventory Management:** The module can integrate with inventory management systems to ensure accurate inventory tracking and management. When purchase orders are fulfilled, the module updates inventory levels accordingly, enabling organizations to maintain optimal stock levels and avoid stockouts or overstocking.

2.4.1.4. Tender Management

Ashewa smartERP tender management is a crucial aspect of procurement that involves the process of soliciting bids or proposals from suppliers and selecting the most suitable vendor to fulfill specific requirements.

- **Tender Document Preparation:** With Ashewa SmartERP, organizations can easily create comprehensive tender documents within the system. The platform provides templates and customizable forms to input the scope of work, technical specifications, evaluation criteria, and contractual terms and conditions specific to the tender.

- **Tender Publication:** Ashewa SmartERP offers a centralized platform where organizations can publish their tender documents. The system provides options to make the tender information available to potential suppliers through the organization's website, a dedicated supplier portal, or other selected distribution channels.

- **Supplier Engagement and Clarifications:** Ashewa SmartERP streamlines supplier engagement during the tender process. Suppliers can access the tender documents, submit queries or requests for clarifications directly through the platform. The system facilitates efficient communication between the organization and suppliers, ensuring that all queries are addressed promptly and transparently.

- **Bid Submission:** Suppliers using Ashewa SmartERP can submit their bids electronically through the system. The platform allows suppliers to input their pricing, product or service specifications, delivery timelines, and any supporting documentation required for the tender.

- **Bid Evaluation:** Ashewa SmartERP provides robust features for bid evaluation. The system allows the organization's procurement team or evaluation committee to review and score the submitted bids based on predefined evaluation criteria. The platform supports

quantitative assessments, such as scoring mechanisms, and facilitates collaborative evaluation processes.

- **Supplier Selection:** Based on the evaluation results, Ashewa SmartERP assists in the supplier selection process. The system provides tools for comparing bids, analyzing supplier performance, and considering other factors for decision-making. It enables organizations to select the most suitable supplier(s) by combining quantitative evaluations with qualitative considerations.

- **Contract Negotiation:** Ashewa SmartERP supports contract negotiation activities. The system helps organizations manage the negotiation process by tracking and documenting the discussions, revisions, and agreements. It allows users to define and capture the finalized pricing, contractual terms, delivery schedules, SLAs, and any other relevant terms and conditions.

- **Contract Award:** Once the contract negotiation is complete, Ashewa SmartERP facilitates the contract award process. The system generates official notifications or formal contract agreements to communicate the contract award to the selected supplier(s). It ensures that all parties involved have a clear understanding of the contract terms and initiates the next steps for contract implementation.

- **Contract Management:** Ashewa SmartERP provides comprehensive contract management capabilities. The system enables organizations to monitor and track contract implementation, ensuring compliance with the agreed-upon terms and conditions. It supports tasks such as tracking delivery, managing SLAs, addressing disputes, and facilitating ongoing communication with the supplier(s).

- **Automated Reminders and Notifications:** The system provides automated reminders and notifications to both organizations and suppliers at various stages of the tender process. This helps ensure that deadlines are met, clarifications are addressed promptly, and all parties involved are kept informed of important updates or changes.

- **Analytics and Reporting:** Ashewa SmartERP provides robust analytics and reporting capabilities for tender management. The system generates comprehensive reports on bid evaluation results, supplier performance, tender process timelines, and other key metrics. These insights enable data-driven decision-making, process improvement, and performance monitoring.

2.4.2. WAREHOUSE MANAGEMENT AND INVENTORY CONTROL

2.4.2.1. Warehouse management

Ashewa SmartERP allows users to set up and manage multiple warehouses within the system. Each warehouse represents a physical location where goods are stored and managed.

- **Multiple Warehouses:** Ashewa SmartERP enables businesses to configure and manage multiple warehouses within the system. This is particularly beneficial for organizations that have multiple physical locations, such as distribution centers, regional offices, or branch locations. Each warehouse can be defined separately, with its unique characteristics and inventory management settings.

- **Internal Locations:** Within each warehouse, users can define internal locations or sections to further organize the storage of goods. For example, a warehouse may have designated areas for specific product types, such as raw materials, finished goods, or components. Internal locations help optimize the storage space and facilitate efficient retrieval of goods when needed.

- **Efficient Storage and Retrieval:** With the warehouse organization feature, businesses can effectively manage the storage and retrieval of goods. The system provides functionalities to record and track the movement of inventory within and between warehouses.

This ensures that goods are stored in their designated locations, minimizing search time and improving overall operational efficiency.

- **Inventory Management:** Ashewa SmartERP's warehouse organization feature integrates with the inventory management module of the system. It allows users to monitor stock levels, track inventory movements, and perform stock transfers between warehouses or internal locations. This provides real-time visibility into stock availability across different physical locations, helping optimize inventory levels and prevent stockouts or overstocking.

- **Order Fulfillment:** The warehouse organization feature plays a crucial role in order fulfillment processes. When an order is received, the system can identify the most appropriate warehouse or internal location from which to pick the required items. This streamlines the order fulfillment process, reduces order processing time, and improves customer satisfaction.

- **Reporting and Analytics:** Ashewa SmartERP provides reporting and analytics capabilities related to warehouse organization. The system generates reports on inventory levels, stock movements, warehouse utilization, and other key metrics. These insights help businesses make data-driven decisions, optimize warehouse operations, and identify areas for improvement.

2.4.2.2. Inventory Control

This module includes various tools to perform inventory control tasks, such as stock adjustments, transfers between locations, and inventory counts. It also provides comprehensive reporting and analytics capabilities to gain insights into inventory performance.

- **Stock Adjustments:** The inventory control tools in Ashewa SmartERP allow users to perform stock adjustments when discrepancies or errors are identified in inventory records. Users can record stock adjustments to account for damaged, expired, or lost items, as well as

any other inventory discrepancies. This ensures accurate inventory records and helps maintain inventory integrity.

- **Transfers Between Locations:** Ashewa SmartERP enables users to initiate transfers of inventory between different locations within the organization. This feature is particularly useful when there is a need to redistribute stock, balance inventory levels, or fulfill requests from different locations. Users can create transfer orders, specify the source and destination locations, and track the progress of the transfer within the system.

- **Inventory Counts:** The module provides functionality for conducting physical inventory counts or cycle counts. Users can define counting parameters, such as frequency, location, or item categories, and perform counts to reconcile physical inventory with the system records. This helps identify and resolve discrepancies, minimize stockouts or overstocking, and maintain accurate inventory levels.

- **Serial and Batch Number Tracking:** Ashewa SmartERP supports the tracking of serialized or batch-tracked items within the inventory control module. Users can assign unique serial numbers or batch numbers to items during receiving or production processes. This enables traceability throughout the supply chain and facilitates product recalls, warranty management, or quality control processes.

- **Expiry Date Management:** For businesses dealing with perishable or time-sensitive goods, Ashewa SmartERP includes features for expiry date management. Users can record and track the expiry dates of items within the system. The module provides alerts or notifications when items are approaching their expiration dates, helping to prevent the sale or use of expired products and ensuring compliance with regulatory requirements.

- **Inventory Classification:** Ashewa SmartERP provides the ability to classify inventory items based on various attributes such as product category, supplier, brand, or customer. This classification allows users to analyze inventory data from different perspectives, generate customized reports, and make informed decisions regarding procurement, sales, or inventory optimization.

- **Comprehensive Reporting:** Ashewa SmartERP offers robust reporting capabilities related to inventory control. Users can generate various reports to gain insights into inventory performance, such as stock levels, stock movements, stock valuation, and inventory turnover. These reports help identify slow-moving or obsolete items, optimize inventory levels, and support data-driven decision-making.

- **Stock Valuation:** The system incorporates stock valuation methods to determine the financial value of inventory. Ashewa SmartERP supports different valuation methods such as standard cost, average cost, or specific identification. By accurately valuing inventory, businesses can generate precise financial statements, calculate cost of goods sold, and monitor the profitability of their inventory operations.

- **Analytics and Insights:** In addition to reporting, Ashewa SmartERP provides analytics and insights related to inventory control. The system employs data analysis techniques to identify trends, patterns, and anomalies in inventory data. This helps businesses identify opportunities for process improvement, optimize inventory management strategies, and make informed decisions to enhance overall inventory performance.

- **Integration with Procurement and Sales:** The inventory control module seamlessly integrates with the procurement and sales modules of Ashewa SmartERP. This integration ensures that inventory records are automatically updated when purchases are made or sales orders are fulfilled. It enables real-time visibility into inventory levels, enhances order fulfillment accuracy, and supports efficient procurement and sales processes.

- **Reorder Point and Safety Stock:** Ashewa SmartERP allows users to define reorder points and safety stock levels for items in the inventory control module. Reorder points represent the minimum quantity at which a new order should be placed to replenish stock. Safety stock is an additional buffer maintained to mitigate the risk of stockouts due to unexpected demand or supply disruptions. These features help optimize inventory levels and ensure timely replenishment.

- **Backorder Management:** Ashewa SmartERP includes features for managing backorders, which occur when there is insufficient stock to fulfill an order. The system tracks backordered items and provides alerts or notifications to users, enabling proactive management of customer expectations, prioritizing stock allocation, and minimizing the impact of stockouts.

- **Costing Methods:** Ashewa SmartERP supports various costing methods within the inventory control module. Users can choose between methods such as First-In, First-Out (FIFO), Last-In, or weighted average cost. The system automatically calculates the cost of goods sold and the value of remaining inventory based on the selected costing method. This helps in accurate financial reporting and inventory valuation.

- **Lot Tracking:** Ashewa SmartERP includes lot tracking capabilities for businesses that deal with products manufactured or received in batches or lots. Users can assign lot numbers to items and track their movement throughout the supply chain. This is particularly useful for industries such as pharmaceuticals, food and beverage, or electronics, where traceability and quality control are crucial.

- **Serialized Item Tracking:** In addition to lot tracking, Ashewa SmartERP enables the tracking of individual serialized items within the inventory control module. Each item is assigned a unique serial number, allowing for precise tracking of its movement, warranty status, maintenance history, or customer ownership. Serialized item tracking enhances traceability, improves product recall management, and supports after-sales service processes.

- **Kit Assembly and Disassembly:** The inventory control module supports kit assembly and disassembly functionalities. Users can define kits or bundles of items that are sold or used together. When a kit is assembled, the system automatically adjusts the inventory levels of the individual components. This feature streamlines the management of bundled products and ensures accurate stock tracking.

- **Dead Stock Management:** Ashewa SmartERP helps businesses identify and manage dead stock or obsolete inventory items. The system provides reports and analytics to identify

slow-moving or stagnant items that are tying up capital and storage space. With this information, businesses can develop strategies to liquidate or repurpose dead stock, freeing up resources for more profitable items.

- **Integration with Barcode Scanning:** Ashewa SmartERP integrates with barcode scanning technology to streamline inventory control processes. Users can scan barcodes to record stock movements, perform stock counts, or verify item information. This enhances accuracy, minimizes manual errors, and speeds up inventory-related tasks.

- **Demand Forecasting:** Ashewa SmartERP offers demand forecasting capabilities within the inventory control module. By analyzing historical data and considering factors such as seasonal trends or market conditions, the system can project future demand for items. This helps businesses optimize inventory levels, plan production or procurement activities, and reduce the risk of stockouts or overstocking.

- **Compliance and Audit Trails:** Ashewa SmartERP provides features to ensure compliance with regulatory requirements and maintain audit trails for inventory control activities. The system captures and logs all inventory-related transactions and changes, allowing for traceability and accountability. This supports internal audits, regulatory compliance audits, and provides a reliable record of inventory-related activities.

2.4.3. FLEET MANAGEMENT

The Ashewa Smart ERP Fleet Management module is designed to streamline and manage the operations of a fleet of vehicles within an organization. It provides tools to track vehicles, schedule maintenance, manage fuel consumption, and monitor fleet performance.

- **Vehicle Management:** The module allows businesses to manage their fleet of vehicles. It provides features to record vehicle information such as make, model, registration

number, and other details. This helps in maintaining a comprehensive database of the organization's vehicles.

- **Maintenance Scheduling:** Ashewa Smart ERP supports maintenance scheduling for vehicles in the fleet. It allows businesses to set up maintenance plans, schedule routine inspections, and track maintenance activities. This helps in ensuring regular maintenance, reducing breakdowns, and extending the lifespan of the vehicles.

- **Fuel Management:** The Fleet Management module includes fuel management features. It allows businesses to track fuel consumption, record fuel purchases, and monitor fuel efficiency. This helps in analyzing fuel costs, identifying fuel consumption patterns, and optimizing fuel usage.

- **Driver Management:** Ashewa Smart ERP provides features for managing drivers associated with the fleet. It allows businesses to record driver details, track driver assignments to vehicles, and manage driver-related documents such as licenses and certifications. This helps in maintaining driver records and ensuring driver compliance.

- **Vehicle Reservations:** The Fleet Management module supports vehicle reservation functionalities. It allows businesses to manage and schedule vehicle reservations for different purposes, such as employee travel or client visits. This helps in optimizing vehicle usage and avoiding conflicts in vehicle availability.

- **Vehicle Tracking:** Ashewa Smart ERP can be integrated with GPS and tracking systems to enable real-time vehicle tracking. This feature helps in monitoring the location of fleet vehicles, improving route planning, and enhancing overall fleet efficiency and security.

- **Reporting and Analytics:** The module provides reporting and analytics features for fleet management. It allows businesses to generate reports on vehicle maintenance, fuel consumption, driver performance, and other fleet-related metrics. This helps in monitoring fleet performance, identifying areas for improvement, and making data-driven decisions.

- **Integration with Other Modules:** The Fleet Management module integrates with other modules in Ashewa Smart ERP, such as Inventory, Accounting, and Purchasing. This

integration ensures seamless flow of data across different business processes, enabling accurate cost allocation, efficient inventory management, and streamlined fleet financials.

2.4.4. SALES AND DISTRIBUTION

The Sales module of Ashewa SmartERP is a robust solution that empowers businesses to streamline their sales processes effectively. As an integral part of the Ashewa SmartERP suite of business applications, it seamlessly integrates with modules such as Inventory, Accounting, and Manufacturing, providing a comprehensive solution for managing the entire sales cycle.

With the Sales module, businesses gain access to a wide range of tools to enhance their sales operations. From effortless quotation creation to efficient order processing and seamless customer fulfillment, the module equips businesses with the capabilities needed to optimize their sales activities. It enables businesses to track sales progress, manage customer interactions, and close deals with greater effectiveness and efficiency.

The Sales module offers businesses a centralized platform to manage their sales activities, providing a holistic view of customer interactions and sales pipelines. With features such as lead management, opportunity tracking, and contact management, businesses can effectively nurture their leads, convert them into opportunities, and track the progress of each sales deal. The module also enables sales teams to collaborate seamlessly by sharing information, assigning tasks, and monitoring the sales performance of individual team members. This promotes efficient teamwork, improves communication, and enhances overall sales productivity.

Furthermore, the Sales module facilitates accurate and timely order processing. It allows businesses to generate detailed quotations, create sales orders, and manage pricing and

discounts. The module integrates with the Inventory module, ensuring real-time visibility into stock availability and enabling businesses to make informed commitments to customers. Sales representatives can efficiently process orders, check product availability, and provide accurate delivery timelines, thereby enhancing customer satisfaction and reducing order errors or delays.[res](#)

2.4.4.1. Quotation and Order Management

Businesses can create professional-looking quotations and send them to customers directly from the system. The module supports customizable templates, product catalog management, automated pricing calculations, and easy conversion of quotations into sales orders. It also facilitates order modifications, order confirmations, and order fulfillment processes.

- **Customizable Quotation Templates:** The Sales module offers customizable quotation templates, allowing businesses to create professional and visually appealing quotations. Users can personalize templates with their company logo, branding elements, and specific formatting preferences to present a consistent and professional image to customers. This customization capability enhances the overall customer experience and reinforces the brand identity of the business.

- **Product Catalog Management:** Within the Sales module, businesses can maintain a comprehensive product catalog. This catalog acts as a centralized repository of product information, including descriptions, specifications, pricing, and availability. Sales representatives can easily access the catalog while creating quotations or sales orders, ensuring accurate and up-to-date product information is included. This streamlines the quotation process and eliminates errors or discrepancies in product details provided to customers.

- **Automated Pricing Calculations:** The Ashewa SmartERP Sales module automates pricing calculations, simplifying the quotation and order management process. Businesses can

define pricing rules, discounts, and promotions based on various criteria such as customer type, quantity ordered, or contractual agreements. The module automatically applies the relevant pricing rules, ensuring accurate and consistent pricing calculations without manual intervention. This saves time, reduces errors, and enables sales representatives to generate quotations quickly and accurately.

- **Easy Conversion of Quotations into Sales Orders:** The Sales module allows seamless conversion of quotations into sales orders with just a few clicks. Once a quotation is accepted by the customer, it can be easily converted into a sales order without the need for manual data reentry. This eliminates duplication of effort, improves order accuracy, and accelerates the order fulfillment process. Sales representatives can focus on progressing the sales cycle rather than spending time on administrative tasks.

- **Order Modifications and Confirmations:** Businesses can efficiently manage order modifications within the Sales module. If changes are requested by customers after the quotation has been accepted, sales representatives can easily update the sales order details, including quantities, delivery dates, or shipping instructions. The module tracks and records all modification history, providing a clear audit trail of changes made to orders. Additionally, the Sales module supports order confirmation functionality, allowing businesses to send order confirmation notifications to customers, providing them with peace of mind and confirming the details of their purchase.

- **Streamlined Order Fulfillment Processes:** The Sales module facilitates smooth order fulfillment processes. It integrates with the Inventory module, enabling real-time stock availability checks during order processing. Sales representatives can ensure that the ordered items are in stock and ready for delivery before confirming the order. This integration eliminates the risk of overselling or promising products that are not available, leading to improved customer satisfaction and efficient order fulfillment.

- **Multiple Currency Support:** The Sales module in Ashewa SmartERP offers support for multiple currencies, allowing businesses to handle transactions in different currencies based

on their customer requirements. Sales representatives can generate quotations and process orders in the currency preferred by the customer, ensuring accurate pricing and facilitating international sales. The system automatically handles currency conversions and calculates the total amounts in both the base currency and the customer's currency.

- **Approval Workflows:** The Sales module includes approval workflows for quotations and orders, enabling businesses to define specific approval processes based on their organizational hierarchy or business rules. For instance, for high-value quotations or orders, businesses can set up an approval process where designated managers or supervisors need to review and authorize the quotation or order before it is sent to the customer or fulfilled. This helps maintain control, ensures compliance, and prevents unauthorized sales activities.

- **Sales Analytics and Reporting:** Ashewa SmartERP provides robust sales analytics and reporting capabilities within the Sales module. Businesses can gain insights into their sales performance, track key metrics, and analyze sales trends. The module offers various pre-built reports and dashboards that provide comprehensive visibility into sales activities, including quotations, orders, sales revenue, and customer performance. These analytical tools enable businesses to make data-driven decisions, identify areas for improvement, and optimize their sales strategies.

2.4.4.2. Pricing and Discount Management

Ashewa Smart ERP provides flexible pricing and discount management capabilities within sales orders. Users can apply discounts, set pricing rules, manage volume discounts, and handle multiple price lists to cater to different customer segments or contracts.

- **Dynamic Pricing Rules:** The Sales module offers powerful pricing rule management features, allowing businesses to define and apply dynamic pricing strategies. Businesses can set up pricing rules based on various criteria such as customer type, order quantity, contract agreements, or promotional campaigns. These rules automatically adjust the pricing of

products or services within sales orders, ensuring accurate and consistent pricing calculations. Dynamic pricing rules enable businesses to implement targeted pricing strategies, optimize revenue, and maximize profitability.

- **Flexible Discount Management:** Ashewa SmartERP provides flexible discount management capabilities to accommodate various discount scenarios and business requirements. Sales representatives can easily apply discounts to individual products, entire sales orders, or specific customer segments. The module supports both percentage-based and fixed amount discounts, giving businesses the flexibility to offer different types of discounts based on their sales strategies. The ability to apply discounts at different levels within the sales order provides granular control over pricing and helps businesses meet customer expectations while maintaining profitability.

- **Volume Discounts:** The Sales module enables businesses to implement volume-based discount structures. By defining volume thresholds, businesses can offer tiered discounts based on the quantity of products ordered. This encourages customers to buy in larger quantities, incentivizes repeat purchases, and promotes customer loyalty. The module automatically calculates the appropriate volume discount based on the order quantity, ensuring accurate pricing adjustments and simplifying the order management process.

- **Multiple Price Lists:** Ashewa SmartERP supports the management of multiple price lists within the Sales module. This functionality is particularly useful for businesses that cater to different customer segments or have specific pricing arrangements for different contracts or regions. Sales representatives can easily switch between price lists while creating sales orders, ensuring that the correct pricing is applied based on the customer's specific price list. Multiple price lists streamline the pricing process, improve accuracy, and facilitate personalized pricing for different customer segments.

- **Contract Pricing:** The Sales module allows businesses to manage contract-specific pricing within sales orders. Businesses can define pricing agreements or contracts with specific customers, offering them preferential pricing or discounts based on the terms of the contract.

The module ensures that the contract-specific pricing is automatically applied when creating sales orders for those customers, eliminating the need for manual adjustments. Contract pricing provides transparency, consistency, and adherence to contractual obligations, enhancing customer satisfaction and strengthening business relationships.

- **Pricing Visibility and Control:** Ashewa SmartERP provides visibility and control over pricing within the Sales module. Sales representatives can view the pricing details, including the applied discounts, for each product or service within the sales order. This transparency helps sales representatives provide accurate pricing information to customers, address any pricing inquiries or discrepancies promptly, and build trust during the sales process. Additionally, sales managers and administrators have control over pricing rules, discounts, and price lists, ensuring consistency and compliance across the organization.

2.4.4.3. Order Confirmation and Processing

Once a sales order is created, it can be confirmed and processed for fulfillment. The Sales module supports order confirmation, order modifications, and order tracking. It also allows businesses to manage backorders and partial deliveries.

- **Order Confirmation Workflow:** The Sales module provides an order confirmation workflow that streamlines the process of confirming sales orders. Sales representatives can initiate the order confirmation, which triggers notifications to relevant stakeholders, such as customers, warehouse personnel, or logistics teams. The workflow ensures that all parties involved are aware of the confirmed order, minimizing miscommunication and ensuring a smooth order processing and fulfillment process.

- **Order Modification Management:** Businesses often encounter situations where order modifications are required after the initial creation. The Sales module allows users to handle order modifications efficiently. Sales representatives can update order details, such as

quantities, delivery dates, shipping addresses, or product substitutions, as needed. The system tracks and maintains a revision history of order modifications, providing a clear audit trail for reference and ensuring accurate order processing.

- **Order Tracking and Status Updates:** The Sales module enables businesses to track the status of sales orders throughout the order fulfillment process. Sales representatives and other authorized users can easily access the real-time status of orders, including their progression through various stages, such as order confirmation, picking, packing, and shipping. This visibility into order status helps sales representatives provide timely updates to customers, manage expectations, and proactively address any potential delays or issues.

- **Backorder Management:** In situations where products are temporarily out of stock, the Sales module allows businesses to manage backorders effectively. When a product is unavailable for immediate delivery, sales representatives can create a backorder for the item within the sales order. The system automatically tracks and manages backorders separately, ensuring that customers are promptly notified about the delay and that the backordered items are fulfilled as soon as they become available. This capability helps businesses maintain customer satisfaction and minimize revenue loss due to stockouts.

- **Partial Delivery Handling:** The Sales module supports partial delivery management, allowing businesses to fulfill orders partially when not all items are available for immediate shipment. Sales representatives can split the order into multiple deliveries based on stock availability, customer preferences, or logistical constraints. The module tracks and manages partial deliveries, ensuring accurate invoicing and providing visibility into the remaining items to be fulfilled. This flexibility in partial delivery handling optimizes order processing and customer satisfaction.

- **Integration with Warehouse and Logistics:** The Sales module seamlessly integrates with the Warehouse and Logistics modules within Ashewa SmartERP. This integration facilitates smooth order processing and fulfillment. Once an order is confirmed, it automatically triggers the creation of picking lists, packing slips, and shipping labels. Warehouse personnel can access

these documents, pick the items from inventory, pack them, and generate shipping labels for timely dispatch. The integration streamlines the entire order processing workflow, reduces manual effort, minimizes errors, and accelerates order fulfillment.

- **Order Document Generation:** The Sales module in Ashewa SmartERP automates the generation of essential order-related documents. Once a sales order is confirmed, the system automatically generates documents such as order confirmations, packing slips, invoices, and delivery notes. These documents contain all the relevant information related to the order, including customer details, product information, quantities, prices, and shipping instructions. The automated document generation saves time, reduces manual errors, and ensures consistency in order-related communication.

- **Shipping and Logistics Integration:** Ashewa SmartERP integrates with shipping and logistics providers, allowing businesses to streamline the shipping process. The Sales module enables the creation of shipping labels, generation of tracking numbers, and seamless communication with shipping carriers. This integration simplifies the shipment of orders, provides real-time tracking information to customers, and enhances the overall order fulfillment experience. Businesses can choose from a range of supported shipping carriers, selecting the one that best suits their requirements.

- **Integration with Accounting:** The Sales module seamlessly integrates with the Accounting or Financials module within Ashewa SmartERP. This integration ensures that sales orders, including order confirmations, invoices, and payment information, are automatically synchronized with the financial system. This eliminates the need for manual data entry, reduces errors, and streamlines the financial reconciliation process. The integration provides accurate and up-to-date financial information, enabling businesses to have a comprehensive view of their sales and financial performance.

- **Audit Trail and Compliance:** The Sales module maintains a detailed audit trail of all activities related to order confirmation and processing. This includes information about who initiated or modified an order, the date and time of the action, and any updates made to the

order details. The audit trail ensures transparency, accountability, and compliance with internal and external regulations. It allows businesses to track changes, investigate discrepancies, and maintain a complete record of order-related activities for auditing purposes.

2.4.4.4. Sales Reporting and Analytics

The module offers comprehensive reporting and analytics capabilities to help businesses gain insights into their sales performance. Users can access real-time sales dashboards, track key performance indicators (KPIs), analyze sales trends, and generate customized reports. This data-driven approach enables businesses to make informed decisions and optimize their sales strategies.

- **Real-time Sales Dashboards:** The Sales module provides interactive and customizable dashboards that offer real-time visibility into sales performance. Users can configure the dashboard to display key metrics, charts, and graphs that are relevant to their business needs. The dashboards provide a consolidated view of sales data, including revenue, units sold, average order value, top-selling products, and sales by region or customer segment. Real-time dashboards enable users to monitor sales performance at a glance and quickly identify trends or areas that require attention.

- **Key Performance Indicator (KPI) Tracking:** The Sales module allows businesses to define and track key performance indicators specific to their sales objectives. Users can set KPIs such as sales growth rate, customer acquisition rate, conversion rate, or average sales cycle length. The module automatically calculates and tracks these KPIs based on the sales data captured within the system. By monitoring KPIs, businesses can evaluate their sales performance against set targets, identify areas for improvement, and take proactive measures to drive sales growth.

- **Sales Trend Analysis:** Ashewa SmartERP Sales module offers robust analytical capabilities to analyze sales trends over time. Users can leverage historical sales data to identify patterns, seasonality, or cyclical trends in their sales performance. The module supports various analytical techniques, such as trend analysis, regression analysis, or forecasting models, to provide insights into future sales projections. Sales trend analysis enables businesses to anticipate demand, plan inventory levels, identify market opportunities, and optimize their sales strategies accordingly.

- **Customized Reporting:** The Sales module allows users to generate customized reports tailored to their specific reporting requirements. Users can define the parameters, filters, and data elements to include in the reports. The module offers a wide range of report templates and formats, such as sales performance reports, sales by product category, sales by territory, or sales by customer type. Customized reporting empowers businesses to extract meaningful insights from their sales data, track progress against goals, and share comprehensive sales reports with stakeholders across the organization.

- **Sales Pipeline Analysis:** The Sales module enables businesses to analyze their sales pipeline to identify potential bottlenecks or opportunities for improvement. Users can track the progress of sales opportunities through various stages of the sales cycle, from lead generation to deal closure. The module provides visibility into the number of open opportunities, conversion rates at each stage, and the average time taken to move deals through the pipeline. Sales pipeline analysis helps businesses identify areas where sales efforts can be focused, streamline the sales process, and maximize revenue generation.

- **Comparative Analysis:** With the Sales module, businesses can perform comparative analysis to assess sales performance across different time periods, regions, product lines, or customer segments. Users can compare sales data side by side, view year-over-year or quarter-over-quarter growth rates, or analyze sales performance by comparing various metrics. Comparative analysis helps businesses identify sales trends, evaluate the success of marketing

campaigns, identify high-performing regions or products, and make data-driven decisions to drive sales growth.

- **Sales Forecasting:** The Sales module offers sales forecasting capabilities that enable businesses to predict future sales based on historical data, market trends, and other relevant factors. Users can generate forecasts for individual products, product categories, or sales territories. The module utilizes advanced algorithms and statistical models to generate accurate forecasts. Sales forecasting helps businesses in demand planning, inventory management, resource allocation, and setting realistic sales targets.

- **Data Visualization:** The Sales module provides powerful data visualization tools to present sales data in a visually compelling manner. Users can create charts, graphs, heat maps, or geographical representations of sales data, making it easier to understand and interpret trends and patterns. Data visualization enhances the decision-making process by presenting complex sales data in a visually appealing and intuitive format.

2.4.4.5. Invoicing and Payment Management

When a sales order is fulfilled, Ashewa Smart ERP allows businesses to generate invoices based on the order details. It supports various invoicing methods, such as full payment upfront, partial payments, or invoice creation upon delivery. The Sales module also manages payment tracking and integration with accounting functionalities

- **Multiple Invoicing Methods:** The Sales module in Ashewa SmartERP supports flexible invoicing methods to accommodate different business requirements. Businesses can choose to generate invoices for full payment upfront, where customers pay the entire amount before or at the time of order placement. Alternatively, businesses can opt for partial payments, allowing customers to make multiple payments over a specified period. Additionally, the module enables invoice creation upon delivery, where invoices are generated when the

products are shipped or delivered to the customer. This flexibility in invoicing methods caters to various payment scenarios and enhances customer convenience.

- **Invoice Customization:** Ashewa SmartERP allows businesses to customize their invoices to reflect their brand identity and meet specific requirements. Users can design and personalize the invoice templates by adding company logos, custom fields, terms and conditions, payment instructions, and other relevant information. The module provides a user-friendly interface or drag-and-drop functionality to easily create and modify invoice templates. Customized invoices not only provide a professional look but also ensure clarity and transparency in the payment process.

- **Automated Payment Tracking:** The Sales module facilitates efficient payment tracking by automatically updating invoice statuses and recording payment information. When customers make payments, the system captures the details and associates them with the corresponding invoices. Businesses can easily track the payment status of each invoice, including payments received, pending payments, or overdue payments. Automated payment tracking eliminates manual effort, improves accuracy, and provides real-time visibility into the financial status of sales transactions.

- **Integration with Payment Gateways:** Ashewa SmartERP integrates with popular payment gateways and processors to streamline the payment collection process. The module enables businesses to connect with payment gateways such as PayPal, Stripe, or Authorize.net, allowing customers to make online payments securely and conveniently. Integration with payment gateways ensures smooth and seamless payment processing, reduces manual errors, and enhances the overall customer experience.

- **Payment Reminders and Notifications:** The Sales module includes features for sending payment reminders and notifications to customers. Businesses can set up automated reminders for pending or overdue payments, helping to ensure timely receipt of payments. The system can send notifications via email, SMS, or other communication channels, providing customers with payment details, due dates, and convenient payment options. Payment

reminders and notifications improve cash flow, reduce payment delays, and enhance the efficiency of the accounts receivable process.

- **Integration with Accounting:** The Sales module integrates seamlessly with the Accounting or Financials module in Ashewa SmartERP. This integration ensures that invoice details and payment information are automatically synchronized with the financial system. When payments are received and recorded in the Sales module, the accounting system is updated accordingly, maintaining accurate financial records. The integration eliminates the need for manual data entry, reduces errors, and streamlines the financial reconciliation process.

- **Credit Control and Credit Limit Management:** The Sales module provides features for credit control and credit limit management. Businesses can set credit limits for customers, defining the maximum amount they can purchase on credit. The module tracks the credit utilization of each customer and generates alerts or notifications when the credit limit is approaching or exceeded. This helps businesses enforce credit policies, mitigate the risk of bad debts, and maintain healthy customer relationships.

- **Recurring Invoices:** Ashewa SmartERP's Sales module supports the creation and management of recurring invoices for products or services with subscription-based billing models. Businesses can set up recurring invoice templates with predefined billing frequencies, durations, and payment terms. The module automatically generates and sends invoices at the specified intervals, eliminating the need for manual invoice creation. Recurring invoices streamline the billing process for subscriptions, memberships, or ongoing services, saving time and effort for both businesses and customers.

- **Payment Analytics and Reporting:** Ashewa SmartERP's Sales module offers payment analytics and reporting capabilities to gain insights into payment trends and performance. Users can generate reports that provide information on payment cycles, average payment times, outstanding balances, or customer payment histories. These analytics help businesses analyze payment patterns, identify potential payment issues, and optimize cash flow management strategies.

2.4.4.6. Claims, Returns, and Refunds Management

Ashewa SmartERP includes robust functionality for managing claims, returns, and refunds, ensuring efficient handling of customer requests and providing a seamless experience. The system allows businesses to streamline the process of managing customer claims, handling product returns, and issuing refunds

- **Claim Initiation:** The module provides a centralized platform for customers to initiate claims for defective products, damaged goods, or other issues. Customers can submit claims through various channels such as a customer portal, email, or phone. The system captures claim details, including the product information, nature of the claim, supporting documents, and customer contact information.

- **Claim Tracking and Resolution:** Ashewa SmartERP enables businesses to track the status of each claim from initiation to resolution. The module provides a dashboard or interface where users can view and manage all open claims, assign them to responsible employees, and track the progress of claim resolution. This ensures timely and effective handling of customer claims, leading to improved customer satisfaction.

- **Return Merchandise Authorization (RMA):** For product returns, the system supports the creation and management of Return Merchandise Authorization (RMA) numbers. When customers request a return, the system generates a unique RMA number that serves as a reference for tracking the return process. The RMA number helps streamline the return process, ensuring that returned products are properly identified and processed.

- **Return Material Authorization (RMA):** In cases where customers need to return defective or damaged products, the module enables the creation of Return Material Authorization (RMA) documents. The RMA document captures details such as the reason for

return, product condition, quantity, and return shipping instructions. This helps ensure that returned products are properly documented and facilitates efficient handling of returned items.

- **Refund Processing:** Ashewa SmartERP facilitates streamlined refund processing for approved returns or eligible claims. The system automates the calculation of refund amounts based on predefined refund policies or business rules. It generates refund requests, tracks the refund status, and records refund transactions. This helps businesses manage the refund process accurately, reducing manual effort and ensuring timely reimbursement to customers.

- **Integration with Inventory Management:** The claims, returns, and refunds management module seamlessly integrates with the inventory management functionality in Ashewa SmartERP. When products are returned, the system updates inventory levels accordingly, ensuring accurate stock reconciliation. Integration with inventory management provides real-time visibility into product availability, enables efficient handling of returned items, and helps maintain inventory accuracy.

- **Analytics and Reporting:** The module offers analytics and reporting features to gain insights into claims, returns, and refunds data. Businesses can generate reports on claim resolution time, refund processing time, return reasons, or product quality issues. These insights help identify trends, identify areas for improvement, and make data-driven decisions to enhance customer service and operational efficiency.

- **Customer Communication:** Ashewa SmartERP supports seamless communication with customers throughout the claims, returns, and refunds process. The system can send automated notifications and updates to customers regarding the status of their claims or returns. This improves transparency, keeps customers informed, and reduces support inquiries related to the claim resolution or return process.

- **Automated Workflow:** Ashewa SmartERP provides an automated workflow for claims, returns, and refunds management. The system allows businesses to define and configure their specific workflows, including approval processes, escalations, and notifications. As claims and returns progress through the workflow, the system automatically triggers the

next steps, such as assigning tasks to the appropriate employees, notifying stakeholders, or escalating unresolved issues. This automation streamlines the entire process, improves efficiency, and ensures consistent handling of customer requests.

- **Document Management:** The module includes document management features to store and manage relevant documents related to claims, returns, and refunds. Businesses can attach supporting documents, such as proof of purchase, product images, or shipping receipts, to the respective claims or returns. This centralizes document storage, facilitates easy access to information, and ensures that all necessary documentation is readily available for reference or audit purposes.

- **Warranty Management:** Ashewa SmartERP offers warranty management capabilities to handle claims and returns within warranty periods. The system allows businesses to define warranty policies, including warranty durations, terms, and conditions. When customers initiate claims or returns for products under warranty, the system validates the warranty status and applies the appropriate policies. Warranty management features help businesses enforce warranty terms, streamline warranty-related processes, and ensure compliance with warranty obligations.

2.4.4.7. Customer Relationship Management (CRM)

The Ashewa Smart ERP CRM module is designed to help businesses manage their interactions, relationships, and communications with customers. It is a central hub for customer-related activities and integrates with other modules in the Ashewa Smart ERP suite to provide a comprehensive CRM solution.

- **Lead Management:** The CRM module enables businesses to capture, organize, and track leads from various sources, such as website forms, email campaigns, or social media. It provides a centralized dashboard to manage leads, assign them to sales representatives, and track the progress of lead nurturing and conversion.

- **Opportunity Management:** Once a lead is qualified, it can be converted into an opportunity within the CRM module. Opportunities represent potential sales, and businesses can track the progress of each opportunity, assign sales teams, estimate revenue, and monitor the probability of closing deals.

- **Sales Pipeline Management:** The CRM module offers a visual representation of the sales pipeline, allowing businesses to track the movement of leads and opportunities through different stages of the sales process. This provides a clear overview of the sales funnel, identifies bottlenecks, and helps prioritize activities for better conversion rates.

- **Customer Communication and Interaction:** The CRM module provides tools for managing customer communication, including email info, logging calls and meetings, and tracking customer interactions. This ensures that all customer-related activities and conversations are recorded, facilitating personalized and consistent communication.

- **Sales Team Collaboration:** Ashewa Smart ERP CRM enables collaboration among sales teams by providing shared access to customer information, activities, and opportunities. It allows teams to assign tasks, share notes, and collaborate on deals, improving coordination and ensuring a unified approach to customer engagement.

- **Customer Segmentation:** The CRM module supports customer segmentation based on various criteria, such as demographics, purchase history, or behavior. This segmentation allows businesses to target specific customer groups with tailored marketing campaigns, personalized offers, and focused sales efforts.

- **CRM Reporting and Analytics:** Ashewa Smart ERP CRM provides reporting and analytics features to gain insights into sales performance, lead conversion rates, team productivity, and customer behavior. It offers customizable dashboards, reports, and visualizations to track key performance indicators and make data-driven decisions.

2.5. Manufacturing Module

2.5.1. Production Planning and Scheduling

- Capacity planning: Plan and allocate resources such as machinery, labor, and materials to ensure optimal production levels while avoiding bottlenecks.
- Production order management: Create, track, and manage production orders for different textile products, from raw material input to finished goods output.
- Routing and work center management: Define the sequence of operations and assign tasks to specific work centers for each textile production process, such as spinning, weaving, dyeing, and finishing.
- Lead time optimization: Minimize lead times by scheduling production orders efficiently, reducing setup times, and optimizing workflow sequences.
- Resource allocation and scheduling: Allocate resources based on production demand, availability, and capacity constraints, ensuring smooth operations and on-time delivery of textile products.

2.5.2. Master Data - Material Master:

- Material code assignment: Users can assign either internal or external codes to materials, with ERP generating internal codes or users manually entering external codes.
- Industry sector and material type assignment.

2.5.3. Bill of Materials (BOM) Management:

- Flexible BOM creation and management: Create detailed BOMs for each textile product, specifying the components, quantities, and routing operations required for production.

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- Version control for BOMs: Maintain multiple versions of BOMs to accommodate changes in product design, materials, or manufacturing processes over time, ensuring accurate production planning and cost estimation.
 - Phantom BOMs for subassembly management: Define phantom BOMs for subassemblies or intermediate products used in textile manufacturing, streamlining the production process and simplifying BOM management.
 - BOM costing and analysis: Calculate the total cost of producing textile products based on BOMs, including material costs, labor costs, overhead costs, and any additional expenses, to determine product profitability and pricing strategies.
 - BOM explosion and implosion: Expand or explode BOMs to identify all the components and subassemblies required to produce a finished textile product, as well as implode BOMs to calculate the total demand for raw materials based on production orders.
 - Users create BOMs with single or multiple levels, specifying components, quantities, and routing operations for production.
 - Creation of BOM Screen: Users specify material type, plant, BOM usage, alternative BOM, and validity date.
 - Alternative BOM: Users define multiple versions of BOMs with different quantities and materials.
 - By-products & Co-products at BOM level: Users include co-products and by-products in BOMs with negative quantities.
 - Definition of Bill of Material: Users create BOMs with single or multiple levels, specifying components, quantities, and routing operations for production.
 - Creation of BOM Screen: Users specify material type, plant, BOM usage, alternative BOM, and validity date.
 - Alternative BOM: Users define multiple versions of BOMs with different quantities and materials.

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- By-products & Co-products at BOM level: Users include co-products and by-products in BOMs with negative quantities.

2.5.4. Quality Control and Assurance:

- Quality inspection setups: Define quality control checkpoints and inspection criteria at various stages of the textile production process to ensure compliance with quality standards and specifications.
 - Defect tracking and non-conformance management: Capture and track defects or non-conformances identified during quality inspections, initiate corrective and preventive actions (CAPAs), and monitor their resolution to prevent recurrence.
 - Quality alerts and notifications: Set up alerts and notifications for quality issues or deviations from established standards, triggering immediate corrective actions and minimizing the impact on product quality.
 - Statistical process control (SPC): Monitor and analyze process data from textile production operations to detect trends, variations, or anomalies that may affect product quality, enabling proactive quality management and continuous improvement initiatives.
 - Compliance management for industry standards: Ensure compliance with regulatory requirements, industry standards, and customer specifications for textile products through systematic quality control measures, documentation, and audits.

2.5.5. Work Order Management:

- Work order creation and assignment: Generate work orders based on production plans, assign tasks to specific work centers or production teams, and schedule production activities according to priorities, resource availability, and due dates.
 - Real-time work order tracking: Monitor the progress of work orders in real-time, track labor and machine hours expended, record production quantities, and update work order

statuses as tasks are completed, providing visibility into production performance and adherence to schedules.

- Work center scheduling and dispatching: Schedule and dispatch work orders to appropriate work centers or production lines based on their capabilities, capacities, and skill requirements, optimizing resource utilization and minimizing idle time.
- Labor and machine time tracking: Capture labor and machine time data for each production task or operation, including setup time, processing time, downtime, and changeover time, for accurate costing, performance analysis, and payroll processing.
- Work order costing and analysis: Calculate the total cost of executing work orders, including direct labor costs, machine costs, material costs, overhead costs, and indirect expenses, to evaluate profitability, identify cost drivers, and improve cost efficiency.

2.5.6. Costing and Financial Analysis:

- Standard costing methods: Apply standard costing methods to estimate the cost of producing textile products based on predetermined standard costs for materials, labor, and overhead, facilitating cost control, variance analysis, and performance evaluation.
- Actual costing and variance analysis: Compare actual costs incurred during production with standard costs to analyze variances, identify cost overruns or savings, and investigate the root causes of discrepancies for corrective action.
- Cost roll-up and cost comparison: Aggregate and roll up costs from individual components or operations to calculate the total cost of producing finished textile products, allowing for cost comparisons across different products, production batches, or cost centers.
- Cost allocation and overhead absorption: Allocate indirect costs or overhead expenses to textile products using appropriate cost allocation methods, such as activity-based costing (ABC) or direct labor hours, to determine the true cost of production and accurately price products for profitability.

- Financial reporting and analysis tools: Generate comprehensive financial reports, dashboards, and key performance indicators (KPIs) to analyze manufacturing costs, profitability, inventory valuation, cash flow, and other financial metrics, enabling informed decision-making and strategic planning.

2.5.7. Maintenance Management:

Maintenance Plan:

- Single Cycle Plan, Strategy Plan, Multiple Counter Plan, Service Procurement, Contract Item:

- Users can create, change, and display maintenance plans for various purposes such as single cycle, strategy, multiple counter, service procurement, and contract item.

- Mass Maintenance of Maintenance Plan: Users can perform mass maintenance operations on maintenance plans.

- Capacity Requirement Planning for Plant Maintenance: Create, Change, Display Capacity Requirement Planning:

- Users can create, change, and display capacity requirement planning for plant maintenance, including reconciliation of capacity and scheduling.

- The system supports creating, changing, and displaying the hierarchy, evaluation for work center lists, cost center assignment, and work center capacity.

- Maintenance Task List: Create, Change, Display Equipment Task List, Functional Location Task List,

- General Maintenance Task List: Users can manage task lists for equipment, functional locations, and general maintenance by creating, changing, and displaying them.

- Production Resource/Tools: Users can manage production resources and tools by creating, changing, and replacing them.

- Contract Management for Third-Party Service Provider: The system handles contract processing by allowing users to create, change, display, and list all contracts.

- **Contract Notifications and Alerts:** Users are notified when contract scheduling becomes due.

- **Maintenance and Service Processing:** Users can create, change, and display maintenance notifications and order types for various purposes such as maintenance, service, investment, calibration, and spare part orders.

Integration with Other Modules:

- **Seamless integration with procurement:** Integrate manufacturing operations with procurement processes to streamline material requisition, purchase order generation, vendor management, and supplier collaboration, ensuring timely availability of raw materials and supplies for production.

- **Integration with sales:** Align manufacturing activities with sales orders, demand forecasts, and customer requirements to optimize production scheduling, order fulfillment, and delivery logistics, enhancing customer satisfaction and on-time delivery performance.

- **Integration with accounting:** Connect manufacturing data with accounting systems to automate cost accounting, inventory valuation, general ledger entries, and financial reporting, ensuring accurate and timely financial information for management decision-making and regulatory compliance.

- **Integration with CRM:** Link manufacturing processes with customer relationship management (CRM) systems to capture customer preferences, order histories, and feedback, enabling personalized marketing, sales forecasting, and customer service excellence.

- **Customizable dashboards and reporting:** Configure personalized dashboards, reports, and analytics tools to provide real-time visibility into manufacturing performance, KPIs, and trends, empowering stakeholders with actionable insights for continuous improvement and strategic decision-making.

I. TECHNICAL APPROACH

3.1. Introduction

This bid proposal has been prepared in response to the requirements of BEAKA Manufacturing, outlining our technical approach to address their specific needs in Manufacturing Operations Management, Quality Management, Planning & Scheduling, Estimating & Quoting, Order Management, and Materials Management. Our proposal encompasses essential elements such as project understanding, methodology, work breakdown structure (WBS), project team composition, timeline, deliverables, cost estimates, anticipated risks, mitigation strategies, benefits, and value propositions.

Our technical solution aims to enhance operational effectiveness and efficiency within BEAKA Manufacturing. We propose the implementation of a comprehensive digital solution that leverages advanced technology to streamline various aspects of manufacturing operations.

For Manufacturing Operations Management, our solution entails the deployment of a Manufacturing Execution System (MES), which provides real-time visibility and control over production processes. This system facilitates operations monitoring, production tracking, and resource management, enabling improved efficiency, reduced downtime, and enhanced productivity.

Quality Management is a crucial aspect of our proposal. We incorporate quality control measures through the integration of quality inspection plans, ensuring adherence to regulatory compliance and industry standards. The MES will enable real-time quality monitoring, data capture, and analysis, facilitating proactive decision-making and continuous improvement.

The Planning & Scheduling module of our solution optimizes production schedules based on real-time data, including inventory availability, resource capacity, and customer demand. It provides accurate shop floor dispatch information, tracks production schedule compliance, and

recommends the most suitable next job to start at the shop floor level. Real-time updates to the production schedule ensure efficient coordination and resource allocation.

Estimating & Quoting is another key component of our proposal. Our system generates promise dates at the order entry stage, taking into account factors such as material availability, production capacity, and remaining operations. This enables accurate estimation and quoting, managing customer expectations and improving order accuracy.

The Order Management module provides comprehensive control and visibility over the order lifecycle. It generates requests for material and capacity requirements in make-to-order environments, tracks the effects of order changes, and suggests customer chargebacks when necessary. Additionally, the system can provide ERP visibility to customers, allowing them to project future potential orders and track milestones from order acceptance through production.

Materials Management is an integral part of our solution, ensuring efficient handling, tracking, and control of materials. The system generates kitting schedules that match production requirements, provides alerts when production is behind schedule, and generates on-time delivery reports for materials required for jobs. It also includes features such as warehouse slotting, inventory quality analyses, cycle counting capabilities, and documented storage environments for materials with shelf life requirements.

In conclusion, we emphasize our qualifications and commitment to project success, drawing on our experience in managing large-scale digitalization projects. Our proposed solution addresses the specific requirements of BEAKA Manufacturing in Manufacturing Operations Management, Quality Management, Planning & Scheduling, Estimating & Quoting, Order Management, and Materials Management. The appendices accompanying this proposal contain the proposed system prototype, detailed specifications, diagrams, team resumes, and

relevant reference documents, providing further insights and support for our proposed solution.

We are confident that our technical solution will enhance BEAKA Manufacturing's operational efficiency, improve quality control, optimize planning and scheduling, streamline order management, and enhance materials management. By embracing digitalization and advanced technologies, BEAKA Manufacturing will gain a competitive edge in the industry, achieve better customer satisfaction, and foster continuous growth and success.

3.2. Methodology

A software development methodology outlines the framework and processes used to plan, execute, and manage software projects effectively. As we employ Agile software methodology, our development process emphasizes flexibility, collaboration, and iterative delivery. Agile promotes adaptive planning, continuous improvement, and rapid response to change throughout the software development lifecycle. Key principles include customer collaboration, working software over comprehensive documentation, responding to change over following a plan, and delivering value incrementally through short development cycles called sprints. This approach fosters close collaboration between development teams and stakeholders, enabling faster feedback loops, enhanced transparency, and the ability to prioritize features based on customer needs. By embracing Agile principles, we aim to deliver high-quality software solutions that meet evolving customer requirements and drive business value effectively.

3.1.1. Software Development Methodology

ATS uses an innovative approach to software development through the adoption of the Agile-methodology, a dynamic and collaborative framework designed to enhance project flexibility, responsiveness, and overall success. Embracing Agile-principles, our team ensures seamless

adaptability to changing requirements, continuous delivery of high-quality increments, and improved stakeholder collaboration. With a focus on iterative development cycles, frequent feedback loops, and transparent communication, our Agile-driven solution guarantees a faster time-to-market and heightened client satisfaction. We experienced the transformative power of Agile, where we prioritize customer needs, foster team empowerment, and achieve unparalleled project outcomes.

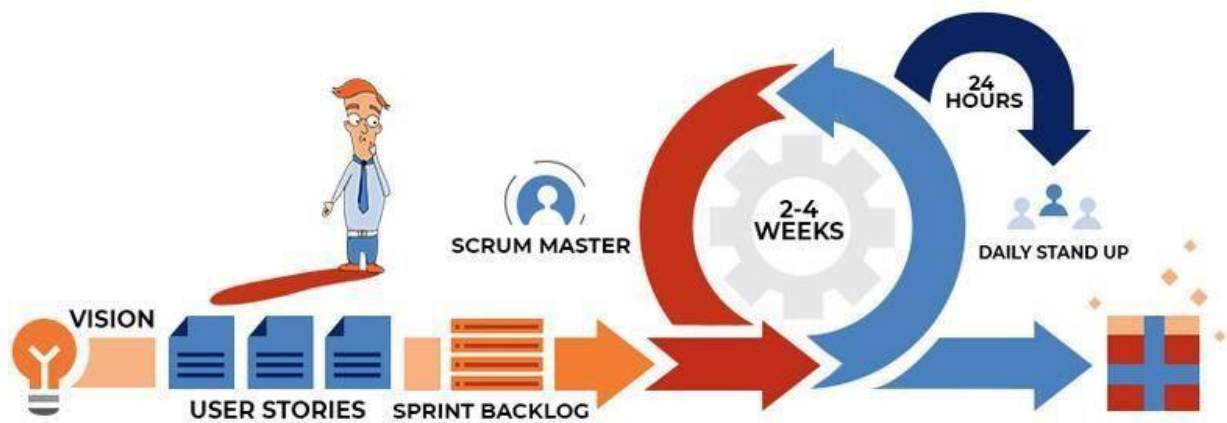


Figure 2: Software Development Diagram

3.1.2. Phases of Agile Scrum Model

Step 1: Product Backlog Creation

Developing a product backlog, which is a list that contains features to be implemented during the development process. It's ordered by priority and every item is referred to as a User story. These user stories are actual product requirements that will be implemented during the software developing process.

Step 2: Sprint Planning and Sprint Backlog Creation

Sprint planning is the crucial ceremony in Agile software development methodologies, particularly in Scrum. It's a collaborative event where the Scrum Team, which typically includes the Product Owner, Scrum Master, and Development Team, come together to plan the work to be done during the upcoming sprint. The primary objectives of sprint planning include:

1. **Setting Sprint Goal:** The team discusses and agrees upon a clear goal for the sprint, aligning it with the overall project objectives and product roadmap.
2. **Backlog Refinement:** The Product Owner presents the prioritized items from the product backlog, in the form of user stories or tasks, to the Development Team. During this process, the team discusses and clarifies the requirements, estimates the effort needed for each item, and breaks them down into smaller, actionable tasks if necessary.
3. **Capacity Planning:** The Development Team examines its capacity for the sprint, considering factors such as team member availability, skill sets, and any potential constraints. This helps in determining how much work can realistically be taken on during the sprint.
4. **Task Selection:** Based on the sprint goal and capacity, the team collectively selects a set of backlog items to work on during the sprint. These items are typically chosen from the top of the prioritized product backlog and should contribute towards achieving the sprint goal.
5. **Creating the Sprint Backlog:** Once the backlog items are selected, the Development Team creates a detailed plan for how they will implement each item, breaking them down into specific tasks or sub-tasks. This plan, known as the sprint backlog, outlines the work to be done and serves as a guide throughout the sprint.

Step 3: Working on the Sprint. Daily Scrum Meetings

This is the period during an Agile development cycle, typically lasting two to four weeks, where the Scrum Team focuses on completing the tasks and user stories committed to in the Sprint Planning meeting. This phase is characterized by intense collaboration, incremental development, and frequent feedback loops. During this phase there is a daily short scrum meeting which lasts a maximum of 15min where the team members synchronize to each other, discuss progress made since the last meeting, identify any obstacles or impediments, and plan the work for the upcoming day.

Step 4: Product Increment and Sprint Review

Sprint review is a meeting held at the end of each sprint where the overall product increment that was built during the sprint will be demonstrated and inspected to gather feedback from stakeholders. At the end of each sprint, the goal is to deliver a potentially shippable product increment, which is a usable and potentially releasable version of the product.

Step 5: Retrospective and Next Sprint Planning

Retrospective is the final stage of a sprint for the team to discuss and reflect on the previous sprint and identify opportunities for improvement in processes, teamwork, and product development. During the retrospective, team members discuss what went well during the sprint, what could be improved, and any specific actions they can take to address these improvements. It's a collaborative and introspective session aimed at fostering continuous improvement within the team.

3.3. Project Reporting

The project management and other team members of the project will collaborate for the successful delivery of the project. Apart from informal interactions, formal meetings will be held regularly and various written reports and deliverables are exchanged between the BEAKA and ATS.

SN	Reporting and Communication Mechanism	Frequency	Output	Distribution Tool
1	Project Kick-off Meeting	Once	Meeting Minutes	E-mail
2	Technical Committee Meetings	Bi-weekly	Meeting Minutes	E-mail; Signed copies to members
3	Interim Project Progress Report	Monthly	Report	E-mail
4	Formal Project Progress Report	Bi-Monthly	Report	Formal Document

Table 1: Reporting and Communication Mechanism

3.4. Change Management Process

In the partnership between Ashewa Technology and BEAEKA General Business, effective change management is crucial for a successful Ashewa SmartERP implementation. This process ensures that BEAEKA can seamlessly transition to a more efficient system, improving overall operations and productivity. Below are the steps Ashewa Technology will take to manage this change:

Step 1: Assess the Current State

- Conduct a Needs Analysis: Collaborate with BEAEKA to understand existing workflows and identify improvement areas.
- Identify Key Stakeholders: Engage BEAEKA's management and staff to ensure all affected parties are involved.

Step 2: Develop a Change Management Plan

- Set Clear Objectives: Define specific goals for BEAEKA's Ashewa SmartERP implementation.
- Create a Comprehensive Roadmap: Outline the steps, timeline, and resources required for a successful transition.

Step 3: Engage Leadership and Stakeholders

- Secure Executive Support: Work with BEAEKA's executives to ensure leadership support.
- Regular Communication: Establish regular updates to keep stakeholders informed about progress and anticipated benefits.

Step 4: Prepare and Train Employees

- *Tailored Training Programs*: Design custom training sessions for BEAEKA's different user groups.
- *Develop User-Friendly Documentation*: Provide guides and FAQs to assist BEAEKA employees in adapting to the new system.

Step 5: Adjust Organizational Processes

- *Redesign Workflows*: Collaborate with BEAEKA to align existing processes with the Ashewa SmartERP system's capabilities.
- *Implement Industry Best Practices*: Integrate proven methods to enhance efficiency and effectiveness.

Step 6: Monitor and Support Post-Implementation

- *Establish Ongoing Support*: Set up a helpdesk to address BEAEKA's queries and issues.
- *Collect Feedback*: Regularly gather input from BEAEKA's users to identify areas for improvement.

3.5. Risk Management Process

Ashewa follows a professional Risk management process for identifying, assessing, and mitigating potential risks that may impact project success. The process involves several key steps to effectively manage risks throughout the project lifecycle:



Figure 3: Risk Management Process

Identification: identify potential risks that could arise during the development process. This involves brainstorming with project stakeholders to identify possible threats to project objectives, such as technical challenges, resource constraints, changes in requirements, or external dependencies.

Assessment and Prioritization: Once risks are identified, they are assessed to determine their likelihood and impact on project objectives. Risk assessment involves evaluating the probability of each risk occurring and estimating the potential consequences on project scope, schedule, budget, and quality. After assessing the risks we will be Prioritized based on their potential impact on the project objectives, data security, and operational effectiveness. The risks will be categorized into a high, medium, and low priority for effective risk mitigation planning Risks are typically categorized based on their severity and priority.

Mitigation Planning: After assessing risks, mitigation strategies are developed to reduce the likelihood or impact of identified risks. Mitigation plans may include preventive measures to avoid risks from occurring, such as improving project planning, enhancing communication, or implementing quality assurance processes. Additionally, contingency plans are prepared to address risks that cannot be entirely avoided, such as developing alternative solutions or allocating additional resources.

Monitoring and Control: Throughout the project lifecycle, risks are continuously monitored to track changes in their likelihood or impact and ensure that mitigation strategies remain effective. Regular risk reviews are conducted to assess the status of identified risks, evaluate the effectiveness of mitigation measures, and identify any new risks that may arise. Risk logs are updated to document the status of risks and track their progress over time.

Response Planning: If a risk materializes, response plans are executed to address the impact on project objectives. Response plans may involve implementing contingency measures, such as reallocating resources, adjusting project schedules, or communicating with stakeholders to manage expectations. The goal is to minimize the negative consequences of risks and maintain project progress toward achieving its objectives.

Lessons Learned: After the project, a lessons learned session is conducted to evaluate the effectiveness of the risk management process and identify areas for improvement. Lessons learned from managing risks in the current project are documented and shared with project teams to inform future projects and enhance risk management practices.

3.6. Data storage, Data Backup and Data Restoration

Data Storage

In the manufacturing sector, effective data storage is paramount for managing and preserving critical operational information. Our proposed data storage solution for BEAEKA addresses the complex needs of the industry, encompassing diverse data types such as production reports, inventory logs, equipment specifications, and quality assurance records.

Our solution is designed to handle extensive data volumes while ensuring rapid access and secure management for authorized personnel.

Cloud-based storage emerges as the ideal choice for manufacturing enterprises, offering unparalleled scalability, adaptability, and accessibility. With our cloud storage solution, manufacturing data can be securely stored on remote servers, enabling seamless access from any location with internet connectivity. This architecture not only caters to the dynamic nature of manufacturing data but also guarantees data integrity and availability through redundancy and backup functionalities. This mitigates the risk of data loss stemming from hardware failures or unforeseen disruptions. By implementing our cloud-based data storage solution, BEAEKA's manufacturing facilities can streamline operations, enhance data security, and pave the way for future scalability and innovation.

Data Backup

Ensuring the integrity and availability of data is paramount for BEAEKA Manufacturing operations. Our proposed data backup solution addresses this need by providing robust protection against potential data loss stemming from various unforeseen circumstances such as hardware failures, cyber-attacks, or natural disasters.

We propose the implementation of automated backup procedures at regular intervals to securely duplicate all critical data. This proactive approach to data backup not only safeguards against potential loss but also ensures quick recovery in the event of a disruption, minimizing downtime and operational impact.

To bolster security, all backup data will be encrypted during transit and storage. This encryption protocol ensures that sensitive data assets remain shielded from unauthorized access or interception, thus preserving the confidentiality and integrity of BEAEKA's valuable data assets.

By adopting our comprehensive data backup solution, BEAEKA Manufacturing Industry can fortify its data resilience strategy, mitigate risks, and uphold the continuity of its operations even in the face of unforeseen challenges.

Data Restoration

In the dynamic landscape of BEAEKA Manufacturing Industry's robust data restoration capabilities are imperative for swiftly recovering from any potential data loss incidents. Our proposal emphasizes the implementation of features such as point-in-time recovery, empowering administrators to restore backup data to specific timestamps or versions with precision, thus minimizing any potential disruptions to service.

Furthermore, our proposal advocates for the integration of self-service restoration options, placing the power of data recovery directly into the hands of users. By enabling users to initiate restoration procedures independently, BEAEKA can reduce reliance on support resources while enhancing user autonomy and satisfaction.

Through the adoption of our comprehensive data restoration proposal, BEAEKA Manufacturing Industry can fortify its data resilience strategy, ensuring uninterrupted service and maintaining high levels of user satisfaction and trust in its operations.

3.7. Deliverables

Deliverables and artifacts of this project that are expected to be finalized and delivered during the process include:

Table 2: List of Deliverables

Milestone	Description	Deliverables
Project Kick-Off Meeting	Project team meets, SOW reviewed, project plan finalized	Signed SOW, Project Management Plan
Requirements Gathering Complete	Functional and technical requirements documented	Functional Requirements Document (FRD), System Design Document (SDD)
System Configuration Complete	Ashewa Smart ERP configured based on specifications	Configured system, User accounts and permission matrix
Customizations Developed (if applicable)	Approved customizations developed and tested	Developed and tested custom modules/functionalities

Data Migration Complete	Client data migrated to Ashewa Smart ERP	Data migration plan, Migrated data
System Testing Complete	All functionalities, including customizations, thoroughly tested	Test plan & execution reports, Documented defects & resolutions
User Acceptance Testing Complete	Client approves system functionality	UAT completion report
User Training Complete	End-users trained on how to utilize the system	User manuals, Training materials
System Go-Live	Successful launch of Ashewa Smart ERP for Client's use	Go-live confirmation, Initial support log

3.8. Training and Capacity Building

Providing training and capacity building to enhance the skills of system users is vital to guaranteeing the successful and optimal utilization of the system. Below is an extensive manual outlining the process of creating training programs tailored to the end-users:

Customized Training Manual: The Customized Training Manual serves as a comprehensive resource aimed at optimizing the utilization of the smart ERP system, thereby improving the quality and efficiency of the whole manufacturing process. It offers a structured set of guidelines and instructions tailored specifically to the needs of the users within BEAEKA.

This manual is meticulously crafted to provide detailed guidance on various aspects of the system usage, ensuring that users understand how to effectively navigate through the system, perform essential tasks, and leverage its features to their fullest potential. By offering clear and concise instructions, the manual empowers users to streamline their workflows and achieve greater productivity in their day-to-day activities.

Hands-on Training: We provide Hands-on training as a learning approach where participants actively engage with the system on their work space, rather than simply observing or listening to instructions. This type of training typically involves practical exercises, simulations, or real-world scenarios that allow participants to apply the knowledge and skills they are learning in a hands-on manner.

Interactive Workshops: The interactive workshops provide a dynamic and engaging learning experience that empowers participants to actively participate, collaborate, and learn from each other. By fostering interaction, collaboration, and hands-on learning, these workshops promote deeper understanding, skill development, and long-term retention of knowledge.

Technical Support: The continuous and ongoing technical support we provide for one year after Go-live is essential for ensuring smooth operation and user satisfaction with the system. By establishing such technical support BEAEKA demonstrates its commitment to user satisfaction and ensures that system users receive the assistance they need to overcome technical challenges and maximize their productivity with the system.

Administrative Training: Providing comprehensive training for system administrators, BEAEKA ensures system admins have the expertise and capabilities to effectively manage and support the system, contributing to its reliability, security, and overall success.

3.9. Roles and Responsibilities

ATS Responsibilities:

- Assign a dedicated project manager who serves as the primary point of contact for the client.
- Collaborate with the client to define project requirements, goals, and objectives.
- Develop a detailed project plan, including timelines, milestones, and resource allocation.

-
- Provide a qualified team of developers, quality assurance specialists, architects, and other necessary resources.
 - Design and develop the software solution according to the agreed-upon specifications.
 - Conduct regular progress meetings and provide project status updates to the client.
 - Ensure that the developed software meets quality standards and performs as expected.
 - Provide technical support and maintenance services post-implementation as per the agreed-upon terms.
 - Adhere to agreed-upon budget and timeline constraints.
 - Protect the confidentiality and security of the client's data and information.

Client Responsibilities:

- Clearly communicate project requirements, objectives, and expectations.
- Provide necessary access to relevant systems, data, and resources.
- Collaborating with ATS in defining requirements and providing feedback during system design and testing.
- Ensuring availability of key stakeholders for meetings, training sessions, and user acceptance testing.
- Collaborate with the project manager, product owner, business analysts, and other stakeholders to define project milestones and deliverables.
- Provide timely feedback and approvals at key project stages.
- Allocate appropriate resources and budget for the project.
- Review and sign off on project deliverables as per the agreed-upon schedule.

3.10. Project Human Resource

Ashewa Technology adopts a dynamic and scalable approach in structuring its project teams for system development initiatives. When embarking on a new project, Ashewa's management assembles a dedicated project team, carefully selecting professionals with

diverse skill sets and expertise to ensure comprehensive coverage of project requirements. This agile-based team structure allows for adaptability and agility in responding to evolving project needs, fostering collaboration and innovation throughout the project lifecycle.

Project Team Structure

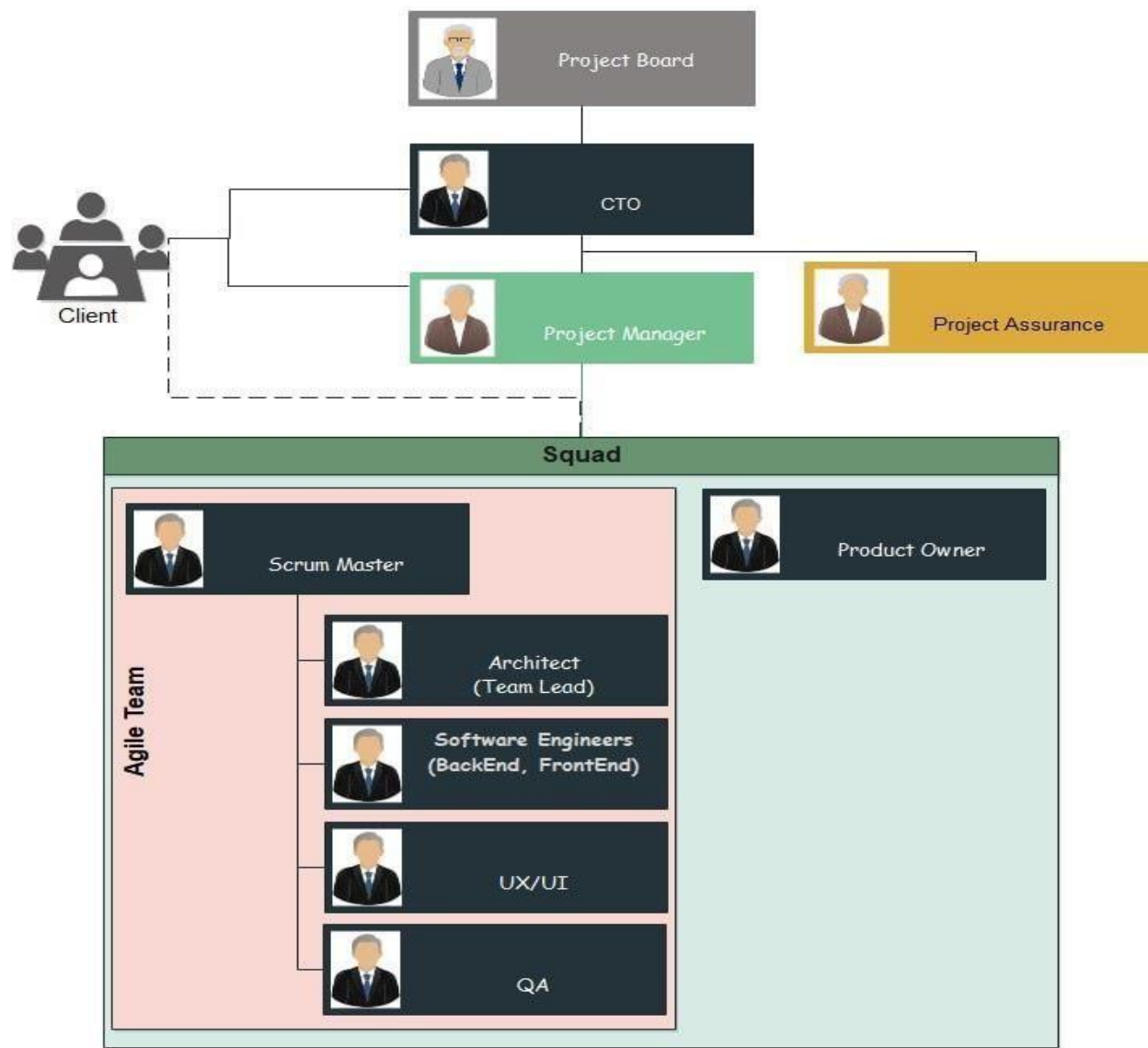


Figure 5: Project Team Structure

Beaeka ERP Project Squad

S.N	First Name	Role
1	Endashaw Aweke	Project Manager
2	Demis Abera	Product Manager
3	Natan Endrias	Implementation Manager
4	HannaMariam Mersha	Functional Consultant/PO
5	PRANSHU TIWARI	Functional consultant
6	Kirubel Wondimagegnehu	Software Engineer
7	Yayal Abayneh	ERP Tech Lead
8	Meseret Tizazu	Software Engineer
9	Juhar Yimer	Software Engineer
10	Hiwot Desalegn	Quality Assurance
11	Shambel Mebratu	DevOps Engineer
12	Addis Alemayehu	Implementer and Support
13	Dirb Fisha	Implementer and Support

SEE THEIR CV's IN DIFFERENT FILE

Appendices:

- 1) Detail Work Break Down
- 2) Our Clients
- 3) Our Partner
- 4) Certification and Recognition
- 5) Sample List of Our Works
- 6) Service Level Agreement (SLA)

Detail Work Break Down

Task Name	Duration
Project initiation	7 days
Project kickoff	
Develop Project Charter	
Initial Setup	
Create Inception Report	
Requirement Analysis and Planning	15 days
Requirement gathering Human Resource Management	
Requirement gathering Accounting and Finance	
Requirement gathering Supply Chain Management	
Requirement gathering Manufacturing	
Develop Software Requirement Specification document	
Initial Backlog Planning	
Phase I	
Development & Customization	32 days
General ERP configuration	
Component setup & customization: Human Resource	
Component setup & customization: Accounting and Finance	
Testing and Quality Assurance	23 days
Test Case Preparation for HRMS	
Test Case Preparation for Accounting and Finance	
Test execution HRMS	
Test Execution for Accounting	
Super User Training	3 days
Human Resource Management	
Accounting and Finance	
End User Training	3 days
Human Resource Management	
Accounting and Finance	
User Acceptance Testing	4 days
Prepare UAT Check List	
Set up user Credential	
Execute UAT	
Deployment, Data Migration & Go Live	4 days
Data Migration	
Go Live	
Phase II	

Development & Customization	42 days
Component setup & customization: Supply and Chain Management	
Component setup & customization: Purchasing	
Component setup & customization: Warehouse Management	
Component setup & customization: Inventory Control	
Component setup & customization: Sales and Distribution	
Testing and Quality Assurance	33 days
Test Case Preparation and Execution for Supply and Chain Management	
Test Case Preparation for Purchasing	
Test execution Purchasing	
Test Case Preparation for Warehouse Management	
Test execution Warehouse Management	
Test Case Preparation Inventory Control	
Test execution Inventory Control	
Test Case Preparation Sales and Distribution	
Test execution Sales and Distribution	
Super User Training	4 days
Training for Purchasing	
Training for Warehouse Management	
Training for Inventory Control	
Training for Sales and Distribution	
End User Training	4 days
Supply Chain Management	
User Acceptance Testing	6 days
Prepare UAT Check List	
Set up user Credential	
Execute UAT	
Deployment, Data Migration & Go Live	6 days
Data Migration	
Go Live	
Phase III	
Development & Customization	35 days
Component setup & customization: Manufacturing	
Component setup & customization: CRM	
Component setup & customization: Fleet Management	
Testing and Quality Assurance	26 days
Test Case Preparation for Fleet Management	

Test execution Fleet Management	
Test Case Preparation for Manufacturing	
Test execution Manufacturing	
Test Case Preparation for CRM	
Test execution CRM	
Super User Training	4 days
Manufacturing	
CRM	
Fleet	
End User Training	4 days
Manufacturing	
CRM	
Fleet	
User Acceptance Testing	5 days
Prepare UAT Check List	
Set up user Credential	
Execute UAT	
Deployment, Data Migration & Go Live	5 days
Data Migration	
Go Live	
Monitoring and Follow-up	172 days
Continuous Monitoring	
Documentation and Reporting	
Maintenance & Enhancements	
Functional Support	
Technical Support	

Our Clients



Our Partner



Certification and Recognition







Copyright & Neighboring Rights Registration Certificate

Application No.

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- U.S.P. / Name: NEW STRONG MEN'S HEALTH TONIC
 U.S.P. / Sex: M/F Nationality:
 U.S.P. Address
 City - Country: AUSTRIA Regional State - N/A
 Tel# +91 Sub-city: FL P.O.Box:
 RCR Warehouse: yes RCR Label# FL R House No- 302389A
 RCR #PC / Tel. No.: +359 22 66 20 24 F.R.# P.O.Box:

2. Blind-Field / Creative Work.

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2.2. PSE-01 Type: TSP01-NC TSP01, 3rd PSE-01 Sub-type:
2.3. TSP01 #1 / Registration Date: 03/02/2018 Y.P.
2.4. TSP01 #1C / Registration No: 500025
2.5. TSP01C #1C#1 CMPS# CMPS#01#1: Certificate's Date of Expiry: 06/02/2018 Y.P.

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⁺ This synthesis has to be increased every 2 years.



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 አዲስ አበባ
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ከሰላምታ ጋር

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ADDIS ABABA CHAMBER OF COMMERCE AND SECTORAL ASSOCIATIONS

Document No: DR/ACC/146

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Our Ref. No: *subashon*

Issue No: 1

March 07, 2022

TO WHOM IT MAY CONCERN

This is to certify that ASHEWA TECHNOLOGY SOLUTION SHARE COMPANY is a member of the Addis Ababa Chamber of Commerce and Sectoral Associations.

Any assistance extended to ASHEWA TECHNOLOGY SOLUTION SHARE COMPANY and its General Manager, DANIEL BEKELE would be highly appreciated.

Sincerely,

[Signature]
Manager, Certified
& Auditors

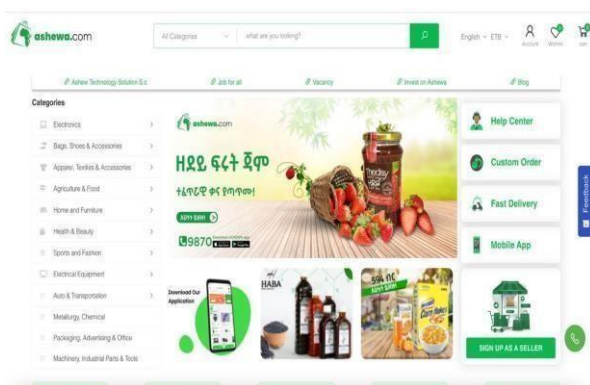
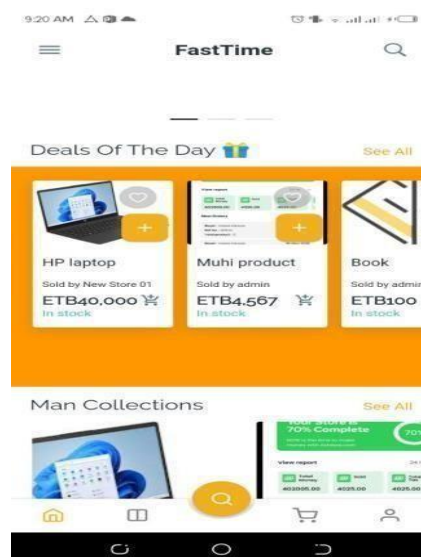
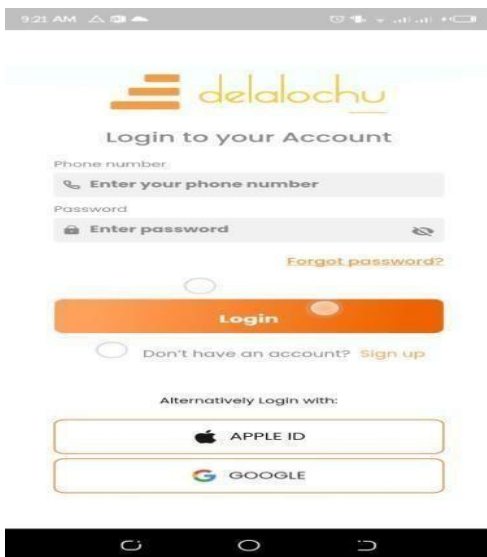
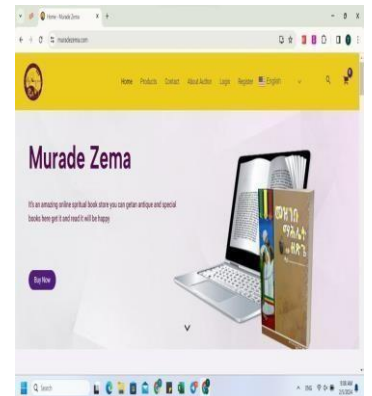
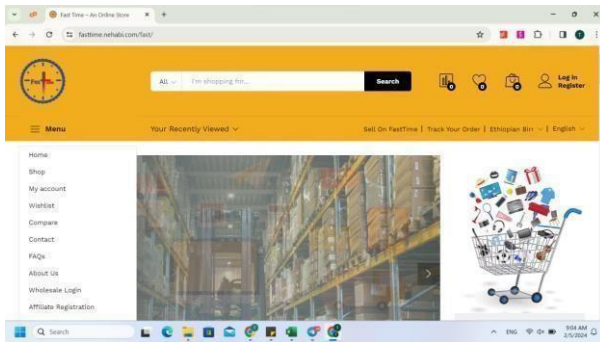


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Member of the International Chamber of Commerce

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Sample List of Our Works



II. Service Level Agreement

4.1. Introduction

This Service Level Agreement (SLA) sets forth the terms and conditions governing the development, warranty, maintenance, and support services provided by Ashewa to the BEAEKA for the Smart ERP system development. This agreement encompasses a one-year warranty period following the Go-Live date, along with continuous maintenance and support thereafter.

4.2. Scope

The agreement entails the development of the Smart ERP system and Delivery to meet specified requirements, followed by a one-year warranty period post-implementation. Subsequently, continuous maintenance and support services will be provided beyond the warranty period, encompassing troubleshooting, issue resolution, and software updates. Additionally, the system's performance will be monitored and reported on regularly to ensure optimal functionality and address any emerging concerns promptly.

4.3. Development and Warranty Services

4.3.1. Development of ERP system and Delivery

Ashewa is responsible for developing the Smart ERP system development and Delivery in accordance with the specifications outlined by BEAEKA. Development milestones and delivery schedules will be collaboratively established and communicated to BEAEKA, ensuring transparency and alignment throughout the development process.

4.3.2. One-year Warranty Period

Ashewa offers a one-year warranty period for the ERP system development and Delivery starting from the Go-Live date. Throughout this warranty period, Ashewa is committed to promptly addressing any defects or issues within the system, at no additional cost to the BEAEKA, ensuring smooth operation and functionality of the system post-implementation.

4.4. Maintenance and Support Services

4.4.1. Service Availability

Maintenance and support services provided by Ashewa will be accessible 24 hours a day and 7 days a week, ensuring continuous availability to address any issues or concerns that may arise. Additionally, any planned maintenance activities will be communicated to the BEAEKA in advance, allowing for proper coordination and minimizing disruption to operations during maintenance windows. This proactive approach aims to maintain the smooth functioning of the ERP system development and Delivery while accommodating necessary maintenance activities.

4.4.2. Response Time

Ashewa commits to responding to support requests within the following time frames, based on the severity level of the issue:

- Critical: 1 hour
- Major: 4 hours
- Minor: 8 hours

4.4.3. Issue Resolution

Ashewa is committed to diligently resolving any reported issues within the agreed-upon time frames. Throughout the process, the BEAEKA will be kept informed of the progress of issue resolution, ensuring transparency and effective communication between both parties. This approach aims to address any concerns promptly and maintain a high level of satisfaction with the ERP system development and Delivery's performance and support services provided by Ashewa.

4.4.4. Escalation Procedure

Should any issues remain unresolved, the BEAEKA retains the right to escalate the matter to higher management levels within Ashewa. To facilitate expedited issue resolution, Ashewa will provide clear escalation contacts and procedures, ensuring that any outstanding concerns are promptly addressed by the appropriate personnel. This proactive approach underscores Ashewa's commitment to resolving issues efficiently and maintaining a high standard of service delivery for the ERP system development and Delivery.

4.5. Maintenance Activities

Regular maintenance activities, encompassing updates, patches, and system checks, will be conducted on a quarterly basis to uphold the optimal performance of the ERP system development and Delivery. These maintenance tasks will be meticulously planned to minimize disruption to the operations of the BEAEKA, ensuring that critical functions remain unaffected while maintenance is underway. This proactive scheduling aims to balance the need for system upkeep with the seamless continuation of BEAEKA's operations.

4.6. Reporting

4.6.1. Performance Reports

Ashewa will provide quarterly performance reports to the BEAEKA, comprehensively outlining system availability, response times, issue resolution metrics, and any other pertinent performance indicators. These reports serve to provide transparent insights into the ERP system development and Delivery's operational efficiency, ensuring that BEAEKA remains informed of its performance and facilitating data-driven decision-making for continuous improvement and optimization.

4.6.2. Service Review Meetings

Quarterly service review meetings shall be conducted between BEAEKA and Ashewa to discuss service performance, identify areas for improvement, and review upcoming maintenance

activities.

4.7. Security and Confidentiality

4.7.1. Compliance

Ashewa is obligated to adhere to all pertinent regulatory standards concerning data security and privacy. This commitment ensures that Ashewa maintains compliance with relevant laws and regulations governing the protection and privacy of data. By upholding these standards, Ashewa guarantees BEAEKA that the ERP system development and delivery will operate within the parameters of legal and regulatory frameworks, safeguarding sensitive information and ensuring confidentiality and integrity throughout its lifecycle.

4.8. Miscellaneous

4.8.1. Amendments

Any alterations or adjustments to this Service Level Agreement (SLA) must be mutually agreed upon and documented in writing by both Ashewa and the BEAEKA. This provision ensures that any modifications to or provisions of the SLA are formally recognized and acknowledged by both parties, maintaining transparency and clarity in the contractual relationship. By requiring written agreement for amendments, potential misunderstandings or disputes can be minimized, and the integrity of the SLA can be preserved.

4.8.2. Governing Law

This SLA shall be governed by and construed in accordance with the laws of Ethiopia. By providing additional details and elaborating on each section of the SLA, both Ashewa and the BEAEKA can ensure a comprehensive understanding of their rights, responsibilities, and expectations throughout the duration of the agreement

