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Sage X3

Capabilities Guide

Sage

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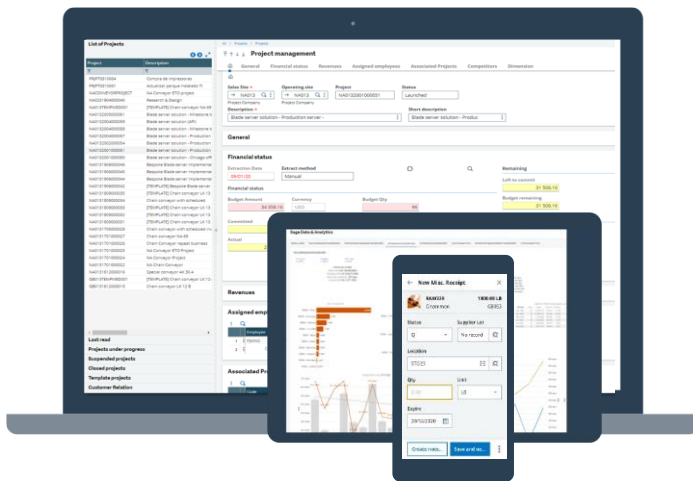


Introduction

Sage X3 allows you to take control of your entire business, from supply chain to sales through to aftermarket while providing you with a faster, more intuitive and tailored business management solution so you can drive greater efficiency, increase your flexibility and have the insight that will help you to thrive and stay competitive in the face of growing complexity.

With integrated management for all your business processes and comprehensive industry-specific capabilities Sage X3 will help you transform how you manage your people, processes and operations allowing you to embrace change at speed.

Available in the cloud or on premise and trusted by over 7000 customers in 80 countries Sage X3 is designed and built on a flexible data model, with open APIs to provide you with the flexibility to meet your individual needs.



Faster

With Sage X3 you will experience faster process cycle times, whether it is moving inventory more quickly, rapidly responding to your customers, or making decisions more quickly because you have instant insight into performance and costs. With its ready-to-use infrastructure you can deploy across your business units faster, and quickly deliver new capabilities and features to your users.

Simpler

With intuitive data visualization and easy to use process flows you can be confident that Sage X3 will simplify the management of your operations - whether they are all in one location or across multiple sites and countries. With Sage X3 in the cloud you can be assured of on-demand access to all functionality, and simpler software management with less dependency on expensive IT resources.

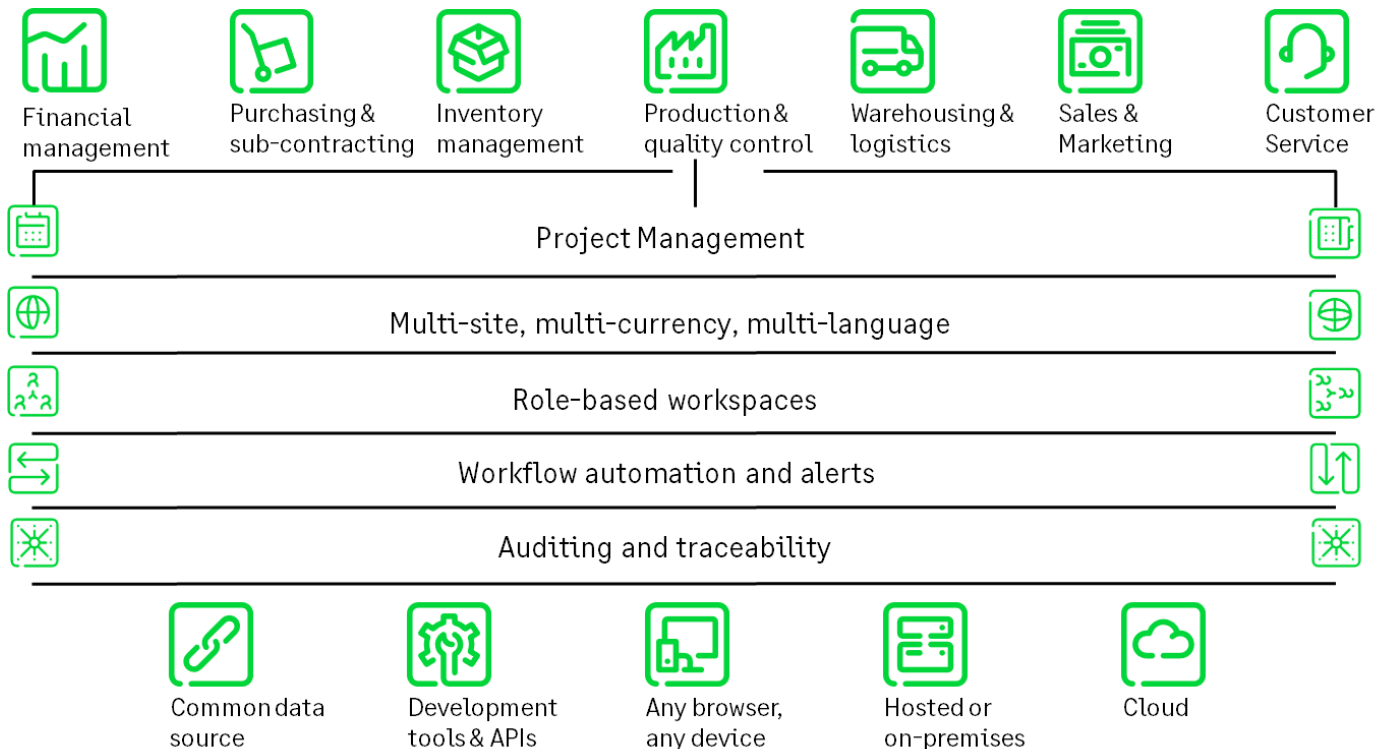
Flexible

Sage X3 is founded on a flexible and extensible data model with multi-company, multi-legislation and multi-language and will scale with your business. APIs, web services and upgradeable customization will allow you to extend and tailor the solution to meet your unique business needs today and tomorrow.

Overview

Sage X3 transforms how you manage people, processes and operations, allowing you to embrace change at speed. With Sage X3 you will experience an integrated management for all your business processes with a solution that is rich with industries.

Discover how Sage X3 production, financial, and supply chain management capabilities deliver you with the visibility and insights you need to stay compliant, adapt to changing customer demands, go to market quickly, and manage your bottom line. In each of the following chapters you will show how Sage X3 will help you gain complete business capability.



Financial Management

1.1 Budgets and Accounting

1.1.1 Functional domains

- General ledger
- Account payable / Account receivable / Cash
- Cash management
- Cost accounting
- Expenditures
- Budget and Commitments
- Financial reporting
- Fixed Asset management

1.1.2 Financial data model

General context

- Sage X3 is multi-language, multi-company, multi-site, multi-currency, multi ledger, and multi-legislation by design.
- Multi-language: Ability to speak the language of users and partners. It includes the user interface and descriptions.
- Multi-company: Ability to manage several companies in the same database. It enables an organization to share the same repository while dedicating some data to one or several site/companies.
- Multi-site: Ability to manage several

structures within a company, due to business, organizational, or geographic needs.

- Multi-currency: Ability to manage transaction currency. The amounts in this transaction currency are translated into a 'ledger' currency.
- Multi-ledger: Ability to define several ledgers for one company. Ledgers can be shared or dedicated.
- Multi-legislation: Ability to manage several companies located in different countries. In this case, local rules are applied depending on the context. These rules can be defined using user-designed settings or may include dedicated processes.
- Close periods or journals once for multiple companies/ledgers
- Activate balance controls when closing one or a group of periods

Models and ledgers

- Each company is linked to an accounting model that defines the ledgers used (up to 10).
- A ledger is characterized by one currency, one calendar, one chart of accounts and analytical dimensions
- Up to 9 analytical dimensions may be defined for a ledger, up to 20 analytical dimensions for a model
- The charts of accounts and dimensions

can be shared or specific to several entities

Companies and sites

- Multi-site, multi-company
- Group of sites and companies may be defined for an aggregate crossed view (by activity, function, geographical location), in inquiries or reports
- Each company is associated with one accounting model and one legislation
- Automation of inter-site transactions
- Automated inter-company transactions in purchases and sales modules
- Open all periods for all ledgers for selected companies in a single action

Currencies

- Unlimited number of currencies and exchange rates, manually entered or imported
- Unlimited number of rate types – daily, monthly, average, budget...
- Currencies may be linked to accounts and business partners
- Transactions entered in foreign currency, converted into the ledger currency
- Automatic rounding
- Automatic exchange variances when matching
- Asset / liability conversion at end of period/year; actual or simulated

Calendars

- A calendar per ledger; Up to 24 periods per calendar
- Year-initial period for carry forward and year-end period for closing adjustments
- Monthly and annual closing process, with automatic recognition of upstream transactions, accruals, and functional controls

Journals

- Unlimited number of journals
- Pre-defined types (sales, purchases, inventory, miscellaneous operations, carry-forward, closing), shared or specific to a ledger
- Validity date-controlled
- Close journals independent of period closure
- Site, company, group of sites allowed
- Frequent accounts, dis-allowed accounts

Accounts

- Length of account fixed or variable, numeric or alphanumeric, configurable
- Validity date-controlled
- Restriction by site, company, group site
- Financial and quantity elements recorded
- User definable management rules (class, matchable, centralized, collective, dimension(s), tax management, default

sense, normal sense of balance, transactions for debit/credit, intercompany partner etc.)

- Propagation rules between ledgers
- Up to 9 dimensions (e.g. department, cost center, product line, etc.)
- Multi-level structures (pyramids), up to 99 levels, unlimited number of pyramids

Business partner

- Unique business partner identification, additional information based on roles (customer, supplier, carrier, factor, sales rep.)
- Rules (payment terms, tax management) distributed per company and per role
- Miscellaneous business partner, such as bank or bank accounts
- Unlimited number of addresses (Ordering, delivery, billing, payment, etc.)
- Unlimited number of bank identification numbers per address
- Linked business partner such as customer ship-to, bill-to, and pay- by as well as supplier buy-from, invoice-from, and pay-to, factor, group and risk
- Risk management (commercial, financial), user definable controls on values outstanding

Dimensions

- Validity -controlled
- Site, company, group of sites allowed

- Restricted combinations of accounts and dimensions, restricted combinations of dimensions and dimensions
- Financial and quantity
- Multi-level structures (pyramids), up to 99 levels, unlimited number of pyramids
- Pre-defined distribution keys
- A post entry, distribution process that distributes charges and products according to user definable and iterative rules.
- Quantity or financial (Example: Distribution of rent in proportion to area (m2) occupied by cost centers)
- Calculated by quantity or costs (Example: Distribution of marketing charges in proportion of sales of product lines)
- Intercompany partner and flow
- Debit or credit default flow, according to the account
- Inter-company partner management
- Pre-consolidated balance sheet and ledger justifying inter-company transactions and aggregating the accounts according to the rules for the consolidation chart of accounts
- Intercompany mapping at site level

1.1.3 General Ledger Accounting

General characteristics

- Status (temporary, definitive)
- Simulated active or inactive

- Model templates
 - User definable transactions, defined by/for the users, automating default values and controls
 - Manual journal entries, batch entries
 - User-defined templates automating recurring journal entries
- Automatically reversing journals
- Automatic inter-site transactions and balancing of accounts on linked accounts
 - Automatic inter-company transactions and balancing of accounts on linked accounts (please check availability in your region)
 - Recurring journal entries (fixed, variable), with automatic balance calculation
 - Automatic journal entries reversing at a user defined date
 - Automatic rounding rules in currency conversions
 - Currency conversions selectable among fixed rate, lower-value, and higher value
 - Run currency conversion calculations using a pivot currency (triangulation between currencies)
- Electronic signature of journal entries (detection of any changes in critical information after validation, whatever they have been made)
- Manual or automatic matching (by reference, description, ledger amount, currency amount, by passing balance).

Matching is accompanied by the following

automatic functions:

- Automatic generation of matching variance below a user definable threshold
- Automatic generation of exchange variance for currency transactions
- Archiving of matching to restore the situation of matchable accounts to date
- Currency rates on-demand

- Multiple fiscal year reporting

Closing

- Automation of accruals: Invoices to be received, invoices to be issued, etc.
- User definable controls of closing reports: Completeness of records, checking balances, etc.
- Fiscal year-end closing per site or per company
- Automatic generation of adjustment journal entries account to account (optional)
- Automatic generation of the result and the carry-forward
- Generation of automatic journal entries from model templates with amounts calculated by user definable formulas (e.g. quoted part's account balance multiplied by a coefficient)

Declarations (please check availability in your region)

- Tax management

- On debit, on payment
- Tax prorate management
- Suspension of tax
- Services
- VAT return report
- VAT box codes
- VAT return posting
- EU VAT
- VAT on pre-payment, on unpaid items
- Para-fiscal taxes
- Report for goods tax declaration per country/region
- (EU Intrastats)
- Report for Country code of Origin and Customer VAT fields (EU Intrastats)
- Report for services tax declaration (EU Intrastats)
- Tax reporting management
- Tax declaration process activation per legislation
- Entry type grouping
- Calculate and extract multiple VAT returns
- Declaration at site level
- Deliver generic VAT return process
- Track deleted payments
- VAT return adjustment posting
- VAT formula management
- VAT duplicating forms
- VAT framework controls

1.1.4 Accounts payable / receivable

Invoicing

- Invoice types (invoice, credit note, debit note, proforma)
- Unique numbering (supplier invoices)
- Legal information management
- Automatic calculation of open items based on the payment terms
- Automatic tax calculation (VAT, parafiscal)
- Withholding taxes calculation
- Allocation of charges to dimensions
- Automatic inter-site transaction management
- Automatic inter-company transaction management
- Recurring invoice management with alerts, workflows and traceability
- Electronic signature of AR invoices
- Create, post and pay prepayment invoices

Open items management

- Automate the calculation of open items

for invoices, from the shipment date and the payment term

- Payment schedule management (unlimited number of open items for one invoice)
- Definable transactions for changing open items, according to user rights (Payment mode, due date, pay approval, dispute, etc.)
- Consolidation or expand open items
- Approval for payment, with definable workflows

Credit management

- Payable/receivable, factor, group and risk business partner management, which may or may not be the same
- User definable rules for calculating business and financial risk
- User definable rules for calculating due amounts, workflow validation
- Charges/discount management
- Aged balance through inquiries with full upstream / downstream traceability, or through reports
- Collection of due amounts by reminder campaign management
- User defined reminder campaign management rules, by representative, risk, group business partner, statistical family, etc.
- Mark business partners as remindable / non remindable and set minimum threshold, by currency

- Global reminder, global per level, global per delay, detailed per invoice
- Letter, e-mail, telephone, fax, link to the customer service management to create tasks automatically
- Up to 9 levels of reminder, with definable text for each level
- Calculation of charges for delayed payments, calculation of interest notes
- Credit policy management and credit level messaging
- Bad Debt and AR write-offs
 - Define the type of bad debts to be managed (impairment, doubtful receivables, and write-offs) and the automatic journals and analytical dimensions applied for journal entries.
 - Search for existing bad debts and filter by type, entity, company and date.

Payment process

- Definition of banks and cash, unlimited number
- Bank or cash entries
- Automated payment processing, including international context:
 - User definable processes, defining steps and controls
 - Automation of specific operations such as prepayments made/ received, compensation, payment

- variances, bank charges
 - Automatic user definable posting and matching
 - Transfer/debit automation by automatic proposals submitted for validation
- Quick entry by picking open items
- Automation of inter-site, inter-business partner, inter-collective transactions
- Payment in foreign currency, Payment in a currency other than the billing or bank currency. Automating cross-currency journal entries
- Payment balance declaration to prepare periodic statistical declarations on non-resident payments and receivables/liabilities
- Automatic discount/charge and exchange variance management
- Prepayments with tax management and reports
- Prepayments on order, with full/partial matching against the invoice
- Automation of unpaid postings:
- bank charges management, charges
- re-invoicing, transfer to doubtful
- collective, tax adjustments
- Taking into account the local specific legal and fiscal rules for the country: Letter-check, draft, direct debit, domiciliation, transfer to be made, deposit
- User definable function to describe bank formats, delivering a library of ready to use formats
- Compliance with SEPA SCT and SDD for the Euro SEPA payment transactions
- Mandate management for direct debits (SDD), including managing mandates and integrating mandates into sales and accounts receivable process
- Define XML bank files for direct debit or credit transfer when required by banks
- Integration with Sage Pay to manage online, face-to-face, and phone payments (Available in the UKI only)
- Create multiple bank files from one remittance group depending on selected splitting criteria

Bank reconciliation

- Reconciliation (Bank G/L entries mark)
- Bank statement reconciliation
- Bank statement entered or imported. Structure of the bank statement file is user definable with a dedicated function. It is also easy to include new formats.
- Automatic bank statement reconciliation (Statement vs ledger)
- Tools for manual reconciliation: sorting and searching by amount, type, description, date, reference (N° check, etc.)
- Enter manual payment adjustments. to account for bank fees related to processing check payments.
- Select reconciliation date when

launching Bank reconciliation reports

Advanced Bank Statement

- Import bank statement files. Structure of the bank statement file is user definable with a dedicated function.
- Run a process to automatically match each bank operation in the statement to open items or payments according to user-defined search criteria
- Review the result of the automatic matching and process additional manual matches/entries if necessary
- Generate payments after completion of the matching
- Post these payments using the standard payment functions (Payment entry/Remittance generation)
- Bridge with bank statement reconciliation
- Transfer reconciliation marks to bank journals
- Secure and control users who have the ability to manage bank account details for payments, or at the BP level.

Factoring

- Receipt generation and printing
- Receipt posting
- Magnetic file generation
- Payment notification
- Outsource payment collections from customers

Employee expenses

- Personal information entries
- Decentralized expenses entries – access rights and confidentiality
- User definable cost types (Travel, hotel, taxi, etc.)
- User definable caps on reimbursement, user defined
- thresholds for reimbursement (e.g. km, etc.)
- Tax management
- Reports
- User definable workflow for validation
- Automatic user definable posting
- Control reporting

Cash forecast and bank positions

- Translation of sales and purchase documents in future cash issue/entry
- One-off and recurring additional events (payroll, taxes, etc.) with rules management
- Analysis of the future cash position by aggregating issues or entries with the current bank positions

Extension to expert modules

- Transfer to treasury cash flow forecasts, with user definable information
- Short term open items: payments processed
- Medium term open items: Image of

unbalanced open items

- Transfer of cash balance to accounting

1.1.5 Budgets

Analytical budgets

- Define unlimited number of budgets based on:
 - Level: company or site
 - Currency
 - Calendar, which can be different from the G/L calendar (period, start and end).
 - Chart of budget accounts, which may be dedicated, or shared or derived (grouping) from G/L or analytical ledger
 - Up to 9 crossed dimensions that may be dedicated, or shared or derived (grouping) from G/L or analytical ledger
- For a budget, unlimited number of versions, with a status (development, active, closed)
- Budgets transactions by direct entry or by updated records for tracking the changes
- User definable transactions
- Automatic distribution of an annual budget per period, with seasonally adjusted distribution rules
- Automatic procedure for creating a budget version from another version, or a budget by another. Definition of budget formulas (deferral of the initial budget,

actual, reassessment by coefficients, etc.)

- For charges:
 - Budget control from commitments, simultaneously on up to 10 budgets
 - User definable workflow validation of commitments, with signature approval cycle depending on whether the budget is exceeded or not
 - Management of key responses and actions, if no appropriate response, if the required response time is exceeded, escalation, etc.
- Standard inquiries comparing the budget, commitments and actuals, with a configurable level of detail, audit trail justifying accumulation by detail, financial data extraction including budget records, implementation of business intelligence standard universes

Operational budgets

- Setting budget structures and roles (managers, recipients, hierarchical structure of control, reporting and approval)
- Split budget by projects, envelopes, exercises, budget lines. Annual or multi-year envelopes. Multi-year budgets are particularly usable for investment budgets.
- Configurable workflow for approving various budget levels
- Reserves management, outcome amounts

- Expense control from commitments, electronic approval
- Revisions, transfers between budgets
- Procedure for closing with user definable carry-forwards
- Off-budget lines management

Expenses commitments

- User definable function – input or import
- Linked to the purchase transactions, optional generation of pre-commitments (from purchase requests), generation of commitments (from purchase orders)
- On request/order date or receipt forecast date
- With/without non-deductible tax
- Pre-commitments balance while ordering, commitment balance while receiving or invoicing
- Commitment control, with user definable signature workflow, which may be different depending on whether the budget is exceeded or not
- Carry-forward of commitments from one year to another
- User definable reporting comparing budget, pre-commitment, commitment and actual

1.2 Fixed assets

1.2.1 Fixed asset management framework

Fixed asset management in accordance with

IAS/IFRS

Depreciation context and plans

- Depreciation context based on Accounting data model to manage a Fixed assets data model in a currency, according to a financial year and interim period schedule
- Accounting and fiscal depreciation context linked to the Company accounting data model:
 - Chart of accounts to determine economic depreciation
 - fiscal plan to determine accelerated depreciation or claw back
 - fiscal plan to determine deferrable depreciation and manage deferred depreciation
- IAS/IFRS depreciation context linked to the IAS/IFRS accounting repository (consolidated accounts)
- Ability to manage up to 15 depreciation plans per fixed asset
- IFRS interest posting

Depreciation methods

- Large list of depreciation methods (Straight line, Declining, Residual, Gradual, Production Unit, Constant, Accelerated, etc.)
- Depreciation method management by non-financial unit,
- determined by the rate of fixed asset usage
- Option to configure other depreciation

methods

- Depreciation basis and method specific to each plan

Association of values

- Consistency of depreciation methods via an identification system depending on the value:
 - of the Fixed asset accounting code
 - or the Fixed asset family
- Create a linked expense to a fixed asset that is not already linked:
 - Select standalone assets based on custom criteria
 - Add new expenses to the asset

Extended fixed asset record

- Dual valuation and dual account posting, according to the Company accounting repository and according to the Group accounting repository
- Identification of Type of holding: “Owned”, “Leased”, “Rented”, “Franchised”, “Projected”
- Business sector to manage VAT deduction rules
- Visibility of the various depreciation plans on a configurable timescale: option of automatic depreciation plan calculation
- Traceability of physical and analytical movements
- Traceability of renewals for “Franchised”

assets

- Link to related physical element(s) for barcode registration and control stock count purposes
- Link to contract for “Leased” and “Rented” assets
- Link to production plan for assets depreciated by
- Non-financial unit
- Management of data relating to vehicles in order to produce a preparatory statement for declaration

1.2.2 Fixed asset life cycle

- Traceability of Capitalized expenditure
- Taken from records of purchase invoices and third-party supplier invoices
- Creation of Fixed assets from Capitalized expenditure
- Splitting of Capitalized expenditure
- Grouping of Capitalized expenditure
- Fixed asset breakdown management
- Discounting of depreciable costs and depreciation bases, due to additional credit notes or invoices or due to adjustments of VAT deductions
- Commissioning of fixed assets
- Allocation of Fixed assets: geographical and analytical
- Creation and updating of depreciation plans

- Change of method: duration, mode, prospective or retroactive, in accordance with plan standards
- Impairment management, for recording a loss in addition to the loss recorded through depreciation
- Revaluation management, according to market value or by application of a coefficient
- Splitting of fixed assets, for reallocation or partial issue
- Intra-group transfers: spinoff, merger and demerger operations. Option of simulation before execution.
- Asset issue (sale, disposal, loss), with calculation of capital gain or loss
 - These actions can be carried out individually in a fixed asset record, or applied in batch mode to a selection of assets
 - Ability to run closing process in simulation mode
- Run a simulation on actual or provisional asset disposals and track:
 - Complementary tax depreciation amounts (provision and reversal) when selecting the Accounts depreciation plan.
 - Tax reinstatement depreciation amounts (provision and reversal) when selecting the Finance depreciation plan.

1.2.3 Interim statements and closing

- Interim statements according to the period breakdown of the Accounting repository, for provisional or final posting of the depreciation and movements for the period
- Traceability and reporting of fixed asset and depreciation transactions by account and by heading
- Journal of detailed account entries
- Closure of fiscal year after application of annual VAT deduction adjustments for partial taxpayers and registrants
- Option of processing the first interim statements for the following fiscal year before closure of the current fiscal year
- Ready-to-use reports to obtain your fixed asset position and movements; BI universe with reports

1.2.4 Fixed asset stock count

- Records of registered physical elements
- Physical element bearing the barcode registration, linked to the fixed asset: n physical elements per fixed asset
- Allocation and movement management at Physical element level, with a validation phase to pass the movement on to the fixed asset: Change of location; Asset issue
- Manage control stock counts, to check the validity of fixed asset accounts
- Collection of registrations with a Pocket PC (Windows mobile) fitted with a barcode reader and Sage Inventory Tools software to manage stock counts
- Automatic comparison of stock count file

and Physical elements records in order to identify and correct variances or suggest updates

commitment reports

1.2.5 Fixed asset financing

- For leased or rented equipment: management of the lease or rental contract:
 - Identification and characteristics of the contract; payment schedule
 - Generation of account entries for the company accounts and consolidated accounts: reprocessing of the fee if the asset is depreciated in the IAS/IFRS accounting data model
 - End of contract management: equipment returned to lessor or purchase option exercised by acquisition of the equipment
 - Production of financial

- Management of equipment subsidies:
 - Calculation of subsidies allocated to investment projects, posting to fixed assets, calculation and posting of the reintegration.

1.2.6 Franchised asset management

- For equipment made available to the company by a franchisor, generally a local authority:
- Management of franchise contracts and riders: extension of the franchise with effect on fixed assets
- Calculation and posting of provisions for renewal
- Financial depreciation
- Renewal of franchised assets and traceability of renewals
- Customer invoice creation on sale of fixed asset

Supply Chain Management

2.1 Purchasing

2.1.1 Purchasing data model

Supplier

- Supplier breakdown: ordered, invoicing, paid and group
- Multi-address and multiple bank details
- Management of contacts by address
- Management of discounts/bank charges
- Multi-type and multi-due date payment modes, with management of alternative payment modes
- Commercial and financial monitoring
- Minimum order value
- Multi-line orders
- Supplier quality monitoring
- Supplier ranking
- Supplier work-in-progress control:
 - Real-time work-in-progress status
 - Configurable work-in-progress control (hold/release, etc.)
- Inquiries with audit trail ranging from general to detailed:
 - Commercial risk analysis by site, company or folder
 - Financial risk analysis by site, company or folder
 - Multi-collective account inquiry
 - Recent transactions inquiry
 - Commercial history inquiry
 - Supplier prices inquiry
- Supplier reminder by undelivered orders on outstanding products

Product categories

- Grouping of products with similar management rules
- Rapid creation of a product inheriting the default management rules and values for the category
- Association of management rules relating to inputs and issues
- Association of configurable allocation rules
- Association of configurable valuation rules

Products

- In stock or not, management of serial

numbers, lot numbers and sub-lot numbers

- Default supplier per product and per product/site
- Version number (Major and minor version)
- Commercial products, service provision or sub-contract provision
- VAT and parafiscal tax management
- Product reference, product description, units, minimum purchase quantities customizable by supplier
- Identification of direct order suppliers by product
 - Inquiries with audit trail ranging from general to detailed
 - Price catalogue inquiry
 - Stock inquiry by site
 - Product cost inquiry
 - Competing product inquiry and association
 - Product installed base inquiry

Units

- Stock units
- Packing units with fixed or variable conversion factors
- Commercial units (sales, purchases)
- Configurable unit conversion rules for taking from another unit: unpacking, incomplete unit management, unit splitting

- Stock label management by packaging

Prices & Discounts

- Configurable price structure by supplier
- Configurable multi-criteria prices
- Price management by currency, coefficient, quantity or
 - configurable formula
- Inter-company prices
- Prices applicable by date slots (promotions)
- Prices applicable by line and/or by document
- Discounts and costs by line and by order, as a value, as a percentage, as a cumulative total, cascaded
- Simulation of price application
- Archive of prices and discounts applied
- Supplier catalogue import
- Advanced purchasing cost management can include supply chain costs in total purchase costs

2.1.2 Inter-company/inter-site transactions

- Automated management of commercial transactions between sites belonging to the same company or between sites belonging to different companies:
 - Inter-company pricing
 - Retail sale orders generated automatically from purchase orders

- Contract orders generated automatically from purchase orders
- Sub-contract orders
- Inter-company invoicing with generation of purchase invoice control on customer site
- Management of logistical transactions between sites belonging to the same company or between sites belonging to different companies:
- Inter-site deliveries
- Inter-site receipts with inheritance of the stock characteristics of the corresponding deliveries
- Customer or inter-site returns with inheritance of the stock characteristics of the corresponding supplier returns
- Immediate inter-site stock movements for sites geographically close to each other
- Setup movement rules and processes to declare subcontracting flows

2.1.3 Commercial documents

- User-configurable entry transactions (quick entry)
- Configurable purchasing cycle:
 - RFQ (Request for Quotation)/Purchase request/Order
 - Purchase request/RFQ/Order
 - RFQ/Order
 - Order/Invoice

- Order/Receipt/Invoice
- Order/Invoice/Receipt
- Direct invoice

- Automatic or manual numbering
- Unlimited links between documents
- User definable printable text in document header, footer and lines
- Custom order code identification by line

2.1.4 Advanced Purchasing Costs Management

- APC (Advanced Purchasing Costs) enables users to foresee the purchase costs for international imports using international standards (incoterm) or inland purchases
- Estimate the purchase cost of a good, along with the logistic operations included in the supply chain
- 2 methods of managing APC:
 - Landed cost coefficient
 - Cost Structure
- Reconciliation between the Cost and the Additional Invoice
- On supplier order: purchase cost by line or total, detail by cost nature
- Every step in the transportation of goods can be defined by a cost with different cost calculation
- The cost structure is the list of costs for a transport, including all of the steps.
- Cost-structure affected by product,

product-supplier, or product-supplier-site by site

- Management of product costs on the shipment

2.1.5 Request for Quotation/Call for tenders

- Request management (multi-product and multi-supplier)
- Request printout by supplier
- Taking purchase requests into account
- Tender comparison
- Responses and reminders
- Price line generation

2.1.6 Expenditure authorization

- Real-time budget monitoring management
- Budget control (with warning or freezing) by value or quantity, with override limit by user
- Configurable signature processes for purchase requests, orders and contract orders with additional process in the event of budget overrun
- Main and deputy signatory management, switching
- Workflow engine incorporated into the process
- Automatic generation of pre-commitment (purchase request) and commitment (order) entries

- Disengagement from the previous stage at every stage of the transaction
- Automatic generation of entries and direct posting of realized amounts on budget line (invoices receivable, credit notes receivable, invoices, additional invoices and credit notes)
- Audit trail from Purchase request, Order, Receipt and Invoice to corresponding accounting document

2.1.7 Purchase requests

- Purchase request entry and printout
- Querying and justification of prices applied
- General or commercial purchase requests
- Reorder suggestions taken into account
- Requests for Quotation taken into account
- Manual or automatic purchase request balance
- Order generation depending on authorization
- Associated order inquiry

2.1.8 Supplier orders

- Entry and printout of supplier purchase orders or contract orders with delivery schedule
- General or commercial purchase orders
- Rider management
- Pre-payment management

- Validation and signature process
- Reorder suggestions
 - Purchase requests and sub-contract orders taken into account
 - Request for quotations taken into account
- Automatic generation of direct orders from customer orders with traceability (direct order or order on receipt)
- Manual or automatic purchase order balance
- Back order management
- Querying and justification of prices applied
- Order progress (traceability, receipt, invoices, etc.)
- Inquiries with audit trail:
 - Receipt and invoice inquiry
 - Consumed purchase request inquiry

2.1.9 Purchase workflow

- Purchase requests, orders, and open orders to sign
- Signed requests, orders, and open orders
- Historical purchase open orders, and purchase documents signed
- History of documents on which there is an approval or rejection
- Cancellation of the signature action for a

document.

2.1.10 Logistics

- Optimize freight cost and quantity optimization according to container capacity
- Plan shipments based on product in a container and track the movement of that container from supplier to delivery location
- Supplier shipment coordination to reduce transportation costs
 - Identify other products and suggestions for the supplier
 - View trends to order based on history in product usage
 - Container capacity freight costs estimating
 - Container selection to identify weight and volume capacity
 - Compare selected lines with available capacity
 - Manually enter weight & volume fields when needed
- User Step Tracking (to specify customized tracking by setting a list of steps)

2.1.11 Decision aid tools

Buyer's workbench

- Consumption of suggestions and purchase requests
- Direct orders

- Supplier choice
- Option to modify the usual direct order supplier
- Standard, inter-company or inter-site order generation

Overall schedule

- Multi-site analysis by product family or product
- Critical orders highlighted
- Order grouping
- Generation of orders, delivery requests or purchase requests

Workbench

- Single-site, single-product analysis
- Order grouping
- Generation of orders, delivery requests or purchase requests

2.1.12 Stock valuation

- Cost monitoring: global, detailed and at a specific date
- Standard cost, Revised standard cost, Average unit cost, Average lot cost, FIFO, LIFO, last purchase price and simulated cost, standard price and simulated price
- Distribution coefficient
- Valuation of sub-contracted work-in-progress
- Adjustment of supplier invoice (value, quantity, exchange rate)

- Adjustment of additional invoice (carrier invoice)

2.1.13 Stock

- Traceability
- Actual or projected stock inquiry with first availability date
- Detailed stock inquiry
- Inquiry by storage site or consolidated inquiry
- Stock movement history inquiry
- Stock in transfer and transit inquiry (inter-site or inter-company)

2.1.14 MRP calculation

- Point/periodic/inter-site reordering
- MRP calculation
- Purchase recommendations for specific Project and tasks
- Calculation according to safety stock

2.1.15 Receipts

Direct receipt or receipt by order line picking

- Receipt of inter-site shipments or inter-company shipments
- Receipt of sub-contracted services
- Detailed receipt or quick receipt on the dock with management of storage plans to supplement stock information
- Sub-contract stock issues

- Location, supplier or internal batch and serial number management
- Receipt position (invoices, returns)
- Stock label printing
- Suspended movement and stock-out processing

2.1.16 Quality assurance

- Batch and sub-batch number management
- Serial number management
- Use-by date management
- Stock status management: accepted, rejected, inspected
- Re-inspection date management
- Stock sub-status management
- Quality control record creation
- Quality control procedures with analysis request
- Expiry date management
- Upstream and downstream traceability management

2.1.17 Returns

- • Creation of returns by selecting receipt lines or direct entry
- • Reincorporation of returned quantities on order
- • Generation of corresponding credit note

2.1.18 Supplier invoices

- Configurable invoice types
- Recording and checking
- User authorization based on payment level authorization
- Invoice/Receiving slip/Order reconciliation
- Credit note/Return/Invoice reconciliation
- Additional invoices and credit notes
- Breakdown of invoice footer elements by line
- Value adjustment of stock movements according to invoice variances
- Additional invoice of shipment (to create invoices for carriers, forwarders, other service partners directly for a shipment)
- Define estimated date for service contract invoices

2.1.19 Integration to accounts

- Invoices receivable
- Credit notes receivable
- Supplier invoices
- Pre-commitments and commitments with budget control
- Pre-payment management
- Stock movement posting
- Posting of sub-contracted work-in-progress

- Analytical dimension type management
- Tax
- VAT on debits and receipts
- EU Intra-community VAT
- Parafiscal tax by value and as a percentage
- Formulae applicable to parafiscal taxes (threshold, quantity, etc.)

2.1.20 EU Exchange of goods declaration (EGD)

- Customs nomenclature incorporation and product record association interface
- Registered Export (REX) identifier
- Recording of data necessary for exchange of goods declaration (rules, natures, delivery conditions, etc.)
- Extraction function for transactions subject to declaration, with option to modify extracted information
- Report for checking information subject to declaration
- Management of specific local features of the EGD report (Portugal, UK, Italy, etc.)

2.1.21 Sub-contract management

- Sub-contracted service or production (components or materials supplied and not supplied)
- Sub-contract bill of materials
- Sub-contract order

- Sub-contract lead time by supplier
- Suggestion and generation of sub-contract orders following net requirements calculation
- Material reorder and deliveries
- Allocations/De-allocations
- Sub-contract order consumption monitoring
- Projected sub-contract cost calculation and inquiry
- Sub-contract cost price calculation and inquiry

2.2 Inventory Management

2.2.1 Stock data model

Product categories

- Grouping of products with similar management rules
- Rapid creation of a product inheriting the default management rules and values for the category
- Association of management rules relating to inputs and issues
- Association of configurable allocation rules
- Association of configurable valuation rules

Product base

- Technical information
- Management information

- Commercial information

Multi-unit

- Stock units
- Packing units with fixed or variable conversion factors
- Commercial units (sales, purchases)
- Configurable unit conversion rules for taking from another unit: unpacking, incomplete unit management, unit splitting
- Stock label management by packaging

Multi-site and multi-company

- Inter-site and inter-company transfer order management
- Inter-site reorder
- Picking location and sub-contract location reorder

Multi-warehouse

- Stock access control:
- By user group and by transaction type
- Grouping of locations in warehouses

Multi-location

- Location structure definition
- Fixed or random storage
- Location allocation policy
- Location release policy
- Third-party stock management

License Plate Number (LPN)

- LPN identification
- Products assignments to LPN in stock entries
- LPN availability on every stock transactions
- Split/Merge operations
- Stock issue of products in/on LPN
- Available for standard Sage X3 Mobile Automation transactions (distribution)
- Manufacturing flow support
- Improved performance when creating a license plate number on the fly on stock receipt flows

2.2.2 Quality Assurance

- Batch and sub-batch number management
- Use-by date management
- Serial number management
- Stock status management: accepted, rejected, inspected
- Re-inspection date management
- Stock sub-status management
- Quality control record creation
- Quality control
- Sampling management (ISO 2859)
- Expiry date management
- Upstream and downstream traceability

management

2.2.3 Stock movements

- Receipt, quick receipt on dock, storage plan
- Use Licence Plate Number (LPN) to move multiple associated stock items
- Internal movements, grouping, ungrouping
- Shipment preparation
- Delivery (Order, picking list)
- Load preparation (post-load preparation, manual load preparation)
- Customer and supplier returns
- Stock counts
- Allocation plan to work-in-progress
- Grouping/Ungrouping

2.2.4 Cumulative stock totals

- Physical stock
- Allocated stock
- Reserved stock
- Controlled stock
- Available stock
- Ordered stock
- Projected available stock
- Missing stock
- Transferred stock

- Stock in transit

2.2.5 Stock inquiries

- Summary stock schedule by period
- Detailed stock schedule
- Inquiries with audit trail ranging from general to detailed:
 - Stock by site
 - Stock by batch
 - Stock by serial number
 - Stock by location
- Current stock
- Available stock
- Projected stock
- Stock past use-by date or inactive
- Stock movements
- Allocation details
- Expired stock
- Traceability inquiry upstream, downstream, by batch or by part
- Stock by version number (Major version)

2.2.6 Stock count management

- Stock count session management, incorporating stock count lists
- Comprehensive perpetual stock counts by location, by product
- Configurable stock count transactions

- Reorder management
- Calculation:
 - economic order quantities
 - reorder points
 - safety stock
 - maximum stock
- MRP calculation
- Periodic reorder
- Reorder when reorder point reached
- Preparation area reorder
- Sage X3 Mobile Automation with handhelds (distribution)

2.2.7 Stock valuation

- Standard price
- Revised standard price
- Simulated price
- FIFO price
- LIFO price
- Weighted average price
- Last price

2.2.8 Analysis tools

- Consumption analysis
- Histories
- Stock Valuation reports
- Stock turnover, etc.

2.2.9 Integration to accounts

- Posting of stock movements with aggregation criteria
- Multi-dimension analytical incorporation

2.2.10 Additional on-premises capabilities

The following additional capabilities and web-based functions are available to customers opting for a private cloud deployment, either on-premises or partner-hosted.

Sage X3 Mobile Automation with handheld devices (Distribution)

Secure shop floor execution and automation of processes including:

- Purchase receipts
- View purchase order to receive
- View purchase order
- Putaway
- Stock changes
- Location reordering
- Stock by location
- Stock by product site
- Pick ticket
- Miscellaneous receipt
- Miscellaneous issue
- Intersite transfer
- Subcontracting transfer

- Stock count including counts for products managed by global serial number
- Stock change by LPN
- Group LPN
- View stock by LPN
- Product descriptions
- LPN linking and unlinking
- LPN splitting
- Label printing
- Messages display with a sound
- Stock count in blind mode

2.3 Sales Management

2.3.1 Customers

- Customer breakdown: ordered, delivered, invoiced, group, payer, risk and factor
- Multi-address, multiple delivery points, multiple bank details
- Management of contacts by address
- Management of discounts/bank charges
- Multi-type and multi-due date payment modes, with management of alternative payment modes
- Reminder management:
 - Multi-level reminders
 - On minimum threshold
 - Individual or mass customer

hold/release on multiple criteria

- Factoring
- Commercial and financial monitoring
- Minimum order value
- Customer credit control:
 - Real-time customer credit situation
 - Configurable credit control (Company, Folder, hold, etc.)
- Customer inquiry with audit trail ranging from general to detailed:
 - Commercial risk analysis by site, company or folder
 - Financial risk by site, company or folder
 - Aged trial balance inquiry
 - Account inquiry
 - Recent transactions inquiry
 - Commercial history inquiry
 - Customer prices inquiry
 - Customer installed base inquiry

2.3.2 Sales representatives

- Allocation of sales representative's commission by multi-criteria configuration
- Multiple sales representatives per order with automatic allocation

- Management of targets by sales representative
- Allocation of sales representatives by market sector
- Planning or recording of commercial actions (appointments, calls, tasks, etc.)
- Printing of commission allocation notes

2.3.3 Prospects

- Prospect management and follow-up
- Sales contact follow-up
- Allocation to a market sector
- Conversion to customer

2.3.4 Carriers

- Carrier management
- Pricing by weight and volume, by time slot and by region
- Invoicing by threshold
- Simulation tools

2.3.5 Product categories

- Grouping of products with similar management rules
- Rapid creation of a product inheriting the default management rules and values for the category
- Association of management rules relating to inputs and issues
- Association of configurable allocation

rules

- Association of configurable valuation rules

2.3.6 Products

- In stock or not, management of serial numbers, lot numbers and sub-lot numbers
- Version number (major and minor version)
- Commercial products, service provision and after-sales
- Commercial bill of materials or kit type products with option and variant
- Alternative and/or replacement product
- Associated packaging (load preparation)
- VAT and parafiscal tax management
- Commercial information (base price, theoretical price, floor price, minimum margin, etc.) with entry control
- Loan, direct order authorization
- Audit trail inquiries ranging from general to detailed:

Price catalogue inquiry

- Stock inquiry by site
- Product cost inquiry
- Competing product inquiry and association
- Product installed base inquiry

2.3.7 Units

- Stock units
- Packing units with fixed or variable conversion factors
- Commercial units (sales, purchases)
- Configurable unit conversion rules for taking from another unit: unpacking, incomplete unit management, unit splitting
- Stock label management by packaging

2.3.8 Prices & Discounts

- Configurable multi-criteria prices
- Price management by currency, coefficient, quantity
- or configurable formula
- Management of free products
- Inter-company prices
- Set sale price as a coefficient of purchase price
- Prices applicable by date band - promotions
- Prices applicable by line and/or by document
- Discounts and costs by line and by order, as a value, as a percentage, as a cumulative total, cascaded
- Simulation of price application
- Archive of prices and discounts applied
- Price catalogue
- Price revisions

- Price import
- Price rules can be set based on the country and state of delivery
- Tax code management within sales documentation
- Discount policy management for multiple tax levels on the same sale documentation

2.3.9 Inter-company/Inter-site

- Automated management of commercial transactions between sites belonging to the same company or between sites belonging to different companies:
 - Inter-company pricing and price recalculation
 - Retail sale orders generated automatically from purchase orders
 - Sale orders generated automatically from contract purchase orders
 - Inter-company invoicing with generation of purchase invoice control on customer site
- Management of logistical transactions between sites belonging to the same company or between sites belonging to different companies:
 - Inter-site deliveries
 - Inter-site receipts with inheritance of the stock characteristics of the corresponding deliveries

- Customer or inter-site returns with inheritance of the stock characteristics of the corresponding supplier returns
- Immediate inter-site stock movements for sites geographically close to each other
- Management of inter-company credit levels and price controls

2.3.10 Commercial documents

- User-configurable entry transactions (quick entry)
- Configurable sales cycle:
 - Quote/Order/Invoice
 - Order/Invoice
 - Quote/Order/Delivery/Invoice
 - Order/Delivery/Invoice
 - Delivery/Invoice
 - Counter invoice
- Automatic or manual numbering
- Unlimited links between documents
- Management of printable text in document header, footer and lines
- Identification by custom order code

2.3.11 Commercial configurator

- Choice of products, options and variants
- Creation of multi-level technical data and rules

- Incorporated into quotes and orders

2.3.12 Quotes

- Entry/printout of quotes for customers or prospects
 - Delivery address, shipping site, delivery time on quote line
 - Real-time margin calculation
 - Validation and signature process
 - User control of minimum margin and/or floor price
 - and/or minimum value and/or quantity
 - Querying and justification of prices applied
 - Validity date monitoring
 - Open quotes report
 - Pro forma invoice calculation and printout
 - Define rules and processes for sales quotes
 - Document counter for each type of sales quote

2.3.13 Orders

- Configurable order type:
 - Retail orders
 - Loan orders
 - Contract orders (delivery schedule, ahead/delay)

management)

- Order entry/printout for customers and prospects with automatic prospect to customer conversion
 - Rider management
 - Order progress
 - Querying and justification of prices applied
 - Total or partial quote conversion
 - Delivery address, shipping site, delivery time, carrier, etc. on order line
- Delivery routing available, including mapping
 - Real-time margin calculation
- Validation and signature process
 - Back order management
 - User control of minimum margin and/or floor price and/or minimum value and/or quantity
 - Order book
 - Pro forma invoice calculation and printout
 - Direct purchase order (direct or receipt) or work order generation by line
- Pre-payment management with option of order suspension
- Generate a sales order from a quote

- Define rules and processes for sales orders
- Document counter for each type of sales orders
- Manual hold on sales order
- Sales order flow management when credit limits are reached.

2.3.14 Sales workflow

- Sales quotes, order, and open order to sign
- Signed quotes, orders, and open orders
- Historical sales quotes, orders, and open orders signed
- Viewing the history of documents with an approval or rejection
- Cancellation of the signature action for a document

2.3.15 Allocation

- Customer reservation with validity end dates
- Posting of reservations on orders
- Manual or automatic stock allocation with configurable criteria
- Manual or automatic de-allocation
- General or detailed allocation
- Stock-out management
- Allocation inquiry

- Controls during stock issue on available stock at the effect date to manage strict chronological stock flow when issuing stock.

2.3.16 Logistics

- Shipment preparation management
- Automatic picking list generation or manual creation
- List of products to be delivered
- Run code management
- Full or part delivery of orders or order lines
- Direct delivery of materials to a sub-contractor
- Load preparation management, for recording purposes or post-load preparation
- Load preparation list, load preparation labels
- Picking list, delivery note, etc. printout
- Management of carriers and associated costs
- Customer return management with or without quality control
- Sage X3 Mobile Automation with handhelds (distribution)
- Stock
- Upstream/downstream traceability (Batch, Serial no.)
- Actual or projected stock inquiry with first availability date

- Detailed stock inquiry
- Inquiry by storage site or consolidated inquiry
- Stock in transfer and transit inquiry (inter-site or inter-company)
- Document tracking to the Shipment and Transport
- Management on inbound shipments
- Management of none invoiceable deliveries

2.3.17 Loans

- Loan note entry and printout
- Open loan monitoring
- Traceability by serial number and batch number
- Return management
- Unreturned goods invoicing

2.3.18 Invoicing

- Configurable invoice type
- Invoice printing with number of copies configurable by customer
- Automatic or manual creation
- Invoicing by customer, order, delivery note, delivery point or period
- Printout of invoice statements by customer or period
- Automatic or manual invoicing of service requests (intervention, parts)

- Automatic or manual invoicing of maintenance contracts (revision by index in particular)
- Automatic invoicing of inter-company stock movements
- Scheduled invoices management
- Electronic signature of invoices (Detection of any changes in critical information after validation, whatever they have been made)

2.3.19 Incorporation into accounts

- Customer invoices
- Invoices for issue
- Pre-payment management
- Stock movement posting
- Analytical dimension type management

2.3.20 Tax

- VAT on debits and receipts
- EU Intra-community VAT
- Parafiscal tax by value and as a percentage
- Formulae applicable to parafiscal taxes (threshold, quantity, etc.)

2.3.21 EU Exchange of goods declaration

- Customs nomenclature incorporation and product record association interface
- Recording of data necessary for the

exchange of goods declaration (rules, natures, delivery conditions, etc.)

- Extraction function for transactions subject to declaration, with option to modify extracted information
- Report for checking information subject to declaration
- Management of specific local features of the EGD (Portugal, UK, Italy, etc.)
- Attach Economic Operations Registration an Identification (EORI) number to the relevant import and export documents. You can now attach your EORI number to companies, sites and BPs.

2.3.22 Sales statistics: examples

- Sales Order turnover by product (by customer, family, sales representative, geographical area, etc.)
- Sales Order turnover for the day
- Invoiced turnover by product (by customer, family, sales representative, geographical area, etc.)

2.4 Customer Service

2.4.1 Marketing

Competing products

- Competitor product number management
- Comparison of strengths and weaknesses by product

Call script

- Production and modification of questionnaires

- Information collection during phone campaigns
- Assisted approval of third-party databases and participants

Marketing campaigns

- Marketing campaign and scheduled budget monitoring
- Detailed campaign inquiry and multi-level monitoring of current marketing operations enabling complete monitoring of the entire audit trail
- Microsoft Word mail merge available for quick and easily mass mailing of marketing campaigns; mail merge uses templates you have stored, allowing for visuals to be included

Direct mail wizard

- Recipient selection
- Handling of panels generated from advanced targeting
- Sample display
- Message design or emailing retrieval
- Sending method selection
- Sent history creation
- Feedback summary in table format
- Access to detailed information to monitor the entire audit trail

Phone campaign wizard

- Panel definition or retrieval
- Call breakdown by cross-referenced criteria

- Call script definition and retrieval
- Feedback inquiry
- Access to detailed information to monitor the entire audit trail

Trade show wizard

- Exhibition characteristics entry
- Feedback inquiry
- Access to detailed information to monitor the entire audit trail

Press campaign wizard

- Press campaign characteristics entry
- Feedback inquiry
- Access to detailed information to monitor the entire audit trail

2.4.2 Commercial action

Prospects/customers

- Main and temporary sales representative management
- Automatic handling of checks linked to conversion of prospect to customer

For customers:

- Token credit and points debit management
- Customer installed base inquiry
- Sold-to-party association
- Planning or recording of commercial actions (custom orders, tasks, appointments, calls, service requests, warranty requests, service contracts)

- Global pre- and after-sales history inquiry for creation of an audit trail
- Customer installed base inquiry

Participants

- Independent participant management
- Management of relationships with third parties, companies, sites, users and accounts
- Market sector management
- Customer/prospect/contact portfolio segmentation
- Manual or automatic multi-criteria allocation of main and temporary sales representatives

Calls

- Incoming call recording or scheduling of calls to be made
- Association with a custom order
- Option of fuzzy date management
- Automatic call forwarding
- Call attempt management
- Call number search
- Price search
- Call script running
- Commercial action planning: custom orders, tasks, appointments, service requests

Appointments

- Appointment scheduling

- Association with a custom order
- Option of fuzzy date management
- Multi-participant schedule conflict control
- Direct de-scheduling of conflicting participants
- Resource reservation management
- Meeting address search
- Commercial action planning: custom orders, tasks, calls, service requests

Tasks

- Management of commercial actions other than calls or appointments
- Association with a custom order
- Requester delay alert management
- Commercial action planning: custom orders, appointments, calls, service requests

Synchronization with MS Outlook

- Contact synchronization between Outlook and Sage X3
- Commercial action synchronization between Outlook and Sage X3 (tasks, calls and appointments)
- Workbench of records to be synchronized
- Mass processing and update tracking option
- One-click email from customer service functions
- Access to solution functions from

Microsoft Outlook client (rich content and hyperlinks in emails)

Custom orders

- Competitor management
- Sales cycle monitoring from start to finish,
- with process automation
- Associated custom order management
- Handling of checks linked to quote creation
- Commercial action planning: tasks, appointments, calls, service requests
- Quote history by custom order

2.4.3 Customer Support

'Sold to' parties

- Management of several 'sold to' parties per customer
- Configuration of information held against sold-to-parties

Service providers

- Service provider partner skills management
- Area of activity management
- Management of financial conditions of collaboration

Products

- Automatic generation of customer installed base on validation of sales movements

- Model contract specification (loan, warranty, service)
- Token credit and points debit management
- After-sales bill of materials management
- Product type: miscellaneous, spare part, labor, travel expenses, service contract
- Automated stock issues on consumption of spare parts managed in stock

Customer installed bases

- Automatic generation and updates from deliveries, returns, etc.
- Loan units installed base management
Physical location management
- Splitting by geographical location of installed base
- Breakdown of results by customer type: direct customer, wholesaler or retailer
- Associated service contract history (applicable cover and warranties)
- Installation history

Service contracts

- Optional approval from a model contract
- Management of different service contract types
- Definition of area of application of cover, management of charging threshold by installed base, component, skill (option of adding restrictive financial rules)
- Definition of cover, management of charging threshold by installed base,

component labor

- Definition of area of application taking into account cost constraints
- Automatic generation from sales movements
- Automatic creation from accumulation of purchasing credit
- Automatic management of revaluations, renewals, etc.
- Invoicing schedule calculation
- Management of quality constraints by severity level
- Automatic invoicing
- Invoice, due date and payment history
- Revaluation and renewal history

Warranty requests

- Warranty coupon management

Service requests

- Option to allocate a sold-to-party per user
- Automatic allocation to skills family
- Identification of installed base and associated after-sales bill of materials
- Option of allocation to:
 - dispatches
 - employee
 - queue
 - commercial department

- Automatic request coverage control
- Automatic time-stamping
- Points consumption in accordance with flat rate and additional debit rules
- Consumption options:
 - Parts (stock management)
 - Hours of labor
 - Travel expenses
- Automatic invoicing
- Solution identification and definition
- Operations planning and recording
- Planning of actions to be performed and recording of completed actions
- Request status history
- Modification history
- Escalation history
- Operations
- Automatic search for skilled, available employees
- Automatic search for skilled service providers in the area of competency
- Schedule conflict control
- Resource reservation
- Operation address management
- Spare parts consumption and stock issue monitoring
- Knowledge base search for solutions

- Report entry

Knowledge base

- Search by: multiple key words, original request, solution, skills family, employee, creation date, content
- Decision aid tools

Marketing schedule

- Multi-level view of active campaigns and operations enabling complete monitoring of all activities
- Marketing campaign and scheduled budget monitoring

Diary – pre-sales workbench

- Graphical display of commercial activities (tasks, calls, appointments)
- Daily weekly or monthly views (days worked or working days)
- Commercial employee time management
- Outstanding activities: appointments, calls, tasks, custom orders, marketing campaigns
- Late activities alerts
- Review prospect/customer and participant histories for each type of activity
- Accelerated contact search on calling and call forwarding function
- Call script running
- Audit trail, access to details of each activity

- Option to save reports
- Third-party and participant search
- Commercial action planning: custom orders, tasks, appointments, calls, service requests

Diary – after-sales workbench

- Open and pending service requests
- Pending and delayed operations
- Dispatching content
- Employee and queue load statistics
- Temporary employee management
- Search:
 - for solutions
 - for service requests
- Operation planning or recording
- Plan actions to be performed and record completed actions
- Service request tracking
- Third-party or participant identification
- Inquiries:
 - Service requests
 - Queues
 - Employees
 - Skills
 - Escalations

Manufacturing

3.1 Data Model

3.1.1 Manufacturing management

- Association of categories and product families, etc.
- Different management methods (on order, from stock)
- Allocation of reorder policies, seasonality
- Data used for management control
- Multi-production unit
- Association of attachments

3.1.2 Product design/New Product Introduction

- Bill of materials design process
- Revision management
- Planned cost calculation for the design bill of materials
- Management of new materials
- Pilot management
- Publication of:
 - New materials to production
 - New bill of materials to the products and manufacturing

bill of materials

- Store - circuit & drawing references can be recorded against production BOM component records
- Manage production of prototypes by Work Order:
 - Record notes when testing a design revision
 - Separate production BOM for each revision of a design product
 - Record a work order to create a prototype of the new design product
 - Track production of a prototype product

Once approved, the designed product can be released and produced in multiple alternatives

3.1.3 Bill of materials management

- Multi-bill of materials (Commercial, Production, Sub-contracting, etc.)
- Current bills of material
- Formula % bills of material
- Mass maintenance
- Manage changes on a product and bill of materials

- Control the use of a product for a version number in different flows (Sales, Purchases, Manufacturing, Subcontracting, Stock issues)
- Version management (Major and minor version)
- Track changes to versioned bills of material

3.1.4 Technical data management

- Calendar and timetable management
- Work center group management
- Work center management:
 - Machine, labor, sub-contract center
 - Multi-work center
 - Calendar exception management
- Routing sheet management:
 - Multi-routing sheet
 - Current operations
 - Parent routing sheets
 - Standard operations library
 - Change of units
 - Operation sub-contracting
 - Inter-operation scheduling principles
 - Plan association
 - Mass maintenance of technical data

- Product and technical data configuration via configurator, also accessible in quote and sales order management
- Use of data generated by configurator
- Version management (Major and minor version) in the routing
- Mass replacement and deletion in versioning
- Critical changes (add, update, remove) in versioning

3.2 Production launch

- Multi-product work order launch
- Multi-level work order launch
- Work order feasibility test (trial kit)
- Material and load updates
- Manage potency and adjust quantity required
- Scheduling function
- Order smoothing
- WO updating
- Production folder
- Production monitoring (WO by WO or mass)
- Management without WO
- Import WO without production routing

3.3 Overall schedule

- Multi-site analysis by product family or product

- Critical orders highlighted

3.1.1 Workbench

- Single-site, single-product analysis
- Order grouping
- Planners' and Buyers' decisions and analysis
- Production indicators
- Use of resources
- Delay analysis
- Lead-time analysis
- Operations output
- Material output
- Production output
- Sandbox environment
- Real-time costing updates
- Automated creation of new inventory items

3.1.2 Inquiries

- Stock-in-progress by product
- Load stock-in-progress
- Current projected stock
- Material stock-outs
- Material consumption
- Industrial cost price analysis
- Allocation details

- Orders to be rescheduled
- WO progress
- Monitoring by WO
- Sub-contracted operations

3.4 Automatic processes

- Mass allocation/de-allocation
- Series WO re-planning
- Mass scheduling/un-scheduling
- Automatic launch
- WO suspension/re-activation
- Direct work order
- WO and/or mass operation shifts

3.5 Reorders

- Reorder when reorder point reached
- MRP reorder (on order, from stock):
 - Configurable reorder policies (MRP, technical batch, cover and seasonal safety stock)
 - Requirement origin traceability (pegging)
- Inter-site reorders based on conclusion of contracts between two partner sites

3.6 Management control

- Valuation and overheads section definition
- Projected cost calculation (standard cost, revised standard cost, simulated cost,

budget cost)

- Production cost price calculation (projected/actual)
- Stock-in-progress valuation
- Variance analysis by product
- Work-in-progress accounting interface (stock movements and time spent)
- Multi-dimension analytical interface

3.7 Non-Conformance Management

- Direct Non-conformance for a product or without product
- Non-conformance triggered from a document:
 - Customer Return
 - Purchase receipt
 - Production Tracking
- Automatically preloaded with the document link
- Link Non-conformance on document header or line
- Link production tracking line with License Plate Number for manufactured product not managed by lot.
- Root causes analysis
- Status management (New, in progress, Plan, Implement, Complete, Closed)
- Action plan Preventive or Corrective actions

- Management of priority and deadline monitoring
- Report on the root causes analysis

3.8 Change Control Management

- Manage all changes made to a product or system
- Enter a change, review the potential impact and send to approval
- Full traceability and security that changes are done only by authorized users

3.9 Configure to order

- Custom order management and monitoring of production (customized or special product)
- Custom order creation from quote
- Custom order broken down by batch or task (design, sub-contracting, production, costs, etc.)
- Custom order line budget definition (entered or calculated)
- Sub-custom order management
- Posting of purchases and time spent per custom order
- Custom order progress monitoring
- Projected, committed and actual budget monitoring and control
- Macro load schedule per custom order
- Custom order balance sheet

Additional on-premises capabilities

The following capabilities are available to customers opting for a private cloud deployment, either on-premises or partner-hosted.

3.10 Weighing scale

- Weigh scale definition in technical data
 - Weighing box and box grouping
 - Scales authorized for different weighing stations
- Material weight management during production process
- Workbench for selection of work orders for weighing
- Management of different types of raw material (Excipients and Materials QSP and Rectification materials)
- ISH (Instructions, stock and handling) technical data sheet
- Weighing and weighing reconciliation
- Container management
- Weighing status
- Interface with weigh scales

3.11 Planning

- Trial kitting
 - Calculate production capacity for a specific date
 - Trial kitting action added to ordered quantity field in sales Orders function
- Projected consumption management

- Master production schedule (multi-site, use of macro bills of materials (Planning BOMs), macro routing sheets, operational plans, budget, simulation)
- MRP calculation:
 - Multi-site
 - Suggestion analysis
 - Re-planning messages
- Prevent 'not managed' products being considered on the worktable

3.12 Shop Floor Tracking

- Collection of labor time
- Direct labor (setup and run)
- Indirect labor (breaks and indirect time)
- Actual and elapsed time
- Multi-tasking (synchronized or unsynchronized)
- Automatic breaks
- Time and attendance (Clock in/out)
- Indirect Time Entry (Clock in/out)
- Break Time Entry (Clock in/out)
- Team Entry
- Shop Floor Tracking Workbench

3.13 Sage X3 Mobile Automation with handhelds (for Manufacturing and Distribution)

- Material consumption

- Production declaration
- Production time monitoring
- Shop floor tracking
- Stock management rules
- Production declaration (Manufacturing)
- Time tracking (Manufacturing)
- Production label printing (Manufacturing)
- Material consumption management (Manufacturing)

3.14 Application extensions

- PLM Connector (Product Life Cycle Management)

Project Management

4.1. Project planning & management

- Integrated into all X3 processes, Project link with quote, purchasing, sales, work order and MRP
- Project Work and Product Breakdown Structure (PBS and WBS) Multi-level description of the tasks, preparing the operational and manufacturing process
- Task dependencies / Task operation dependencies
- Task progress estimation
- Advanced project duplication function
- Analytical dimensions initialized for Project management on manufacturing documents
- Define an estimated progress on budgets
- Import a project

4.2 Project tracking

- Project Snapshot
- Global Project overview task and budget

- Cost type management
- Project billing

4.3 Financial follow up

- Project billing center
- Project Cost Breakdown Structure (CBS) Multi-level description of budgets, allowing the project cost follow-up
- Multi-project consolidation
- Financial follow-up function to monitor the budget and expenses of projects
- Financial snapshot and comparison
- Stock allocations on project tasks
- Expenses link with project
- Saleable
- Sold product
- Schedule invoice

- Create non invoiceable deliveries from project tasks
- Milestone billing
- Credit memos
- Time billing
- Multi-projects billing center
- Financial overview with sales deliveries (to manually allocated products on projects)
- Project billing with credit memos

4.4 Time management

- Employee assignments (to assign employees to an operation)
- Time entries to enter the time spent on a project at the operation, task and budget level and separate grouped time entry lines into separate, individual lines
- Duplicate the time spent from one week to another when creating time entry records
- Time entry control
- Weekly timesheet tracking
- Activity tracking templates
- Record time for non-project activities such as administrative time, annual leave and sick leave
- Time category initialization
- Currency rate and remaining load update in Time summary table in Weekly timesheet function.

- View and modify the Currency rate for a specific timesheet quantity.
- Analytical dimensions Time entry detail screen.
- Filter employee time records by Operating site.
- Load and capacity – graphical view of employees workloads

4.5 Revenue recognition

- Revenue recognition rule attached to the project:
 - Free percentage of completion (entered)
 - Cost-based percentage of completion (Calculated)
- Traceability and justification of the calculation:
 - Actuals are extracted from the G/L, Free definition of actuals based on the chart of accounts
 - Forecasts are extracted from the last financial snapshot.
- Periodic Revenue recognition process:
 - Calculation of a proposal
 - Ability to adjust the result by authorized users
 - Validation and automatic posting
- Calculate actuals through dimensions

Reporting and Business Analytics

5.1 Decision aid tools

Sage X3 provides comprehensive features that enables users to analyze data in a self-service manner and to take the right decisions. Realtime analytics, alerts, and notifications empower each role in your organization to respond quickly to changing business conditions.

5.1.1 Reporting and Analytics

- User-defined dashboards based on trigger events
- Configurable inquiries on any data table, with automatic or manual joins, sorting and selection
- Inquiries to search and filter predefined data collections using a variety of prebuilt parameters
- Requesters define a data view by selecting from the available fields
- in one or more database tables
- Audit trail from cumulative total to detail
- Library of over 400 reports supplied as standard, including legal reports
- Automatic printout triggering and generation of Word, Excel, text, HTML, or PDF files

For companies that want to go further, Sage X3 is able to connect with any Business Intelligence technology. Visit the Sage X3 Complementary

Solutions (<https://www.sage.com/en-gb/sage-business-cloud/X3/complementary-solutions/>) catalog to learn about:

- Sage Data & Analytics provides users with a hub for managing all data from multiple sources, and built-in data models for reporting
- Sage Intelligence to help business users reduce time spent on analysis and reporting
- Advanced BI powered by Business Objects is designed for customers with very large data volumes or specialized reporting needs

5.1.2 Financial Reporting

Please check availability in your region.

Overview

- Ability to design, distribute, and consume reports through a common Microsoft Excel interface, with the sweet spot being on financial reporting
- Report on data from most external systems (ODBC-compliant databases)

Versions available for on-premise and online customers

Scope

- Strong financial reporting options

- 100% Excel experience
- Multi-data sources (all ODBC compliant databases)
- Real-time financial data after running reports

Main functions

- Strong financial reports (Layouts include Income Statement, Balance Sheet, Cash Flow, Trial Balance)
- Two options for creating, customizing and designing your financial reports
- Financial reporting consolidations
- Secondary functions
- Dashboards, and Operational reports
- Library of additional financial and operational reports available through Sage Intelligence Report Utility

Analytical functionality

- Quick visibility into formulas and tree structure
- Create dashboards of your KPIs with Excel charts and graphs
- Drill-down to GL account balances and GL transactions

- Fast processing and quick dynamic updates to data
- Account roll-ups
- Multi-currency support
- Supports powerful dimensional filtering
- Queries and formulas
- Usability
- Intuitive on premise and cloud user interface
- Self-service analysis
- Self-service design of new financial reports
- Distribution and Scheduling
- Variety on helpful resources to get you started
- Ready to use reports
- Analytical Income Statement layouts
- Analytical Trial Balance
- Financial Balance Sheet
- Financial Income Statement layouts
- Financial Trail Balance

User Workspace

6.1 Homepages

- Users access through landing pages
- Landing pages are designed to give the user an overview of the data and access to visual process maps.
- Access to functions and data available is based on security rules in place for the role and user.
- Role-based landing pages can be personalized to suit the unique needs of the individual user by the user or by the administrator
- Add and remove data to suit user needs
- Change data within the page for quick access to most relevant data
- Navigation with always-on breadcrumb trail and keyboard shortcuts.
- Bookmarks in menu or as a collapsible bar
- Navigation through site map with a left panel to navigate per module, collapsible sections, and search feature
- The function breadcrumb and a search for function, available from any page
- Inclusion of internal dynamic data in portal
 - Query results in table or graph format
 - Statistics results in table or graph format
- Calendars
- Table of Contents favourites management
- Inclusion of external dynamic data in portal
 - External URLs
 - Notes
 - Documents (PowerPoint, Word, PDF, etc.)

6.2 Online help center

- Up-to-date documentation without user installation or maintenance required. No sign in required to access the Sage X3 online help center. Available at <http://online-help.sageerp3.com/erp/12/>
- Interactive in HTML, customizable
- Functional documentation (by function and in field)
- Technical documentation (Data model, dictionary, entry points, detailed description of standard configurations supplied)
- Access to tutorials, videos and how to guides

6.3 Decision aid tools

6.3.1 Decision aid tools

- Statistics based on trigger events defined as a batch or in real time:
 - Multi-level analysis by up to 8 criteria
 - Configurable interval (day, week, fortnight, month, etc.)
 - Comparison of values and quantities over several periods, rankings and classifications
 - Graphical presentation and publication via portal
 - Complete audit trail from cumulative total to detail
- Standard integration of advanced Business Intelligence solutions
- Transfer to Excel simply by clicking on any query screen
- Advanced marketing targeting:
 - Physical counts, extractions, merge data from the database
 - Direct mail generation or export of results to Excel
- Link explorer:
 - Manual or automatic hyperlink creation with configurable semantics between information
 - Links can be defined by user group, viewed as a tree structure for navigation by clicking. For example, a link can be established between product and customer, with the semantic “customer

particularly satisfied with product”

6.3.2 Inquiries

- Configurable inquiries:
 - In presentation (list and order of columns)
 - In data selection (memos defined by users and/or jointly)
 - Audit trail can be followed at all levels
- Integrated requester used to create inquiry screens on any table in the database, with automatic or manual joins, sorting and selection, zoom, etc.

6.3.3 Printouts

- Based on SAP Crystal Reports™:
 - Library of over 400 reports supplied as standard, incorporating specific legal reports for the legislations supported
 - Automatic printout triggering, with configuration depending on context, real-time or deferred, with screen display (Web and client-server), on file, on printer
 - Generation of word, Excel, text, HTML, PDF files

6.3.4 Search

- Allows users to easily find data or functions by searching a keyword for the data that is included on the pages or

select only a subset of the data searchable. (Excludes content of attached documents)

- Based on Elastic Search™

6.3.5 Online document storage

- Document saving (Microsoft Office, Adobe PDF, and more)
- Document sharing with defined teams or tagged for later access

6.4 Mobility Framework

- Optimize mobile presentation
- Customize web app with WYSIWYG mode
- Personalize the layout
- Application manager: installation and setup applications
- Offline mode: allows users to create the expenses notes in “draft mode”. By returning to Online mode users will be able to synchronize drafts with Sage X3
- Application update: At any time, users can reinstall applications. This action guarantees that application is always up to date with the latest updates.

6.4.1 Microsoft® Office integration

This feature is only available for Windows Client environment with local Office installation.

- Integration with Word, Excel, and PowerPoint, Outlook
- Plug-ins included to create a tab within your programs for simplified integration.

- The plugin accesses Sage X3 as a client while applying access and user rights.
- Meta data is available to define the data to read and to set up filters.
- Document storage allows users to save their Word, Excel, and PowerPoint documents to Sage X3

Integration examples

- Word: insert data into documents, create documents from your data, and mail merge using templates
- Excel: export data and create direct links between your data and workbook; data can selectively be refreshed
- PowerPoint: data integration, including import data and charts directly into PowerPoint; the integration allows you to refresh the data with the click of a button

6.4.2 Interactive graphical processes

- HTML 5 compliant web interface for use with multiple browsers
- Web browser functions, like back button or F5 to refresh the page, remain in place for intuitive user experience
- Use
 - Processes organized by role with which user groups are associated, enabling graphical, interactive, customized transaction representation. For example, a common portal can be created for buyers, different portals for each sales representative, a portal for financial controllers, etc.

- Table of Contents-based structure
- Integrated into the landing pages
- Tab definition by authorized user, by drag & drop from existing process list
- Process editor
 - Customizable fund management
 - Ready-to-use graphical element libraries
 - Visual configuration (text font, color, frames, etc.)
 - Link to functions, URLs or published documents, for example company procedure documentation
 - Configurable Process Table of Contents
 - Easily add pages to Favorites bar with one click for easy navigation to often used screens
 - Easily map addresses with Google Maps to simplify navigation to customer sites or for routing of multiple sites

ccmail

- Execution of actions
- Configuration
 - Function triggering the transaction, and the operations involved (creation, modification, deletion, printing, validation, predefined action).
 - Additional conditions (modified fields, selection from record content, launch parameters for printouts or tasks, etc.)
 - Recipient list depending on the context (internal users, third parties identified by code and function within the company)
 - Message text and any attachments
 - Reply conditions (contextual link to a function and data linked to the original context, insertion of links to trigger actions by clicking in the message, etc.)
 - Storage of information linked to the context in a log table

6.5 Workflow engine

- Configurable triggering, on any management event:
- Message sending by any MAPI-compatible messaging system (Outlook™, Lotus Notes™, etc.), SMTP/POP3 and

6.6 Customizing the interface

- Generators are used to define the following by simple configuration:
 - Inquiry screens
 - Movement entry screens (presence of fields, number

- Of tabs, default rules)
 - Use of customized business vocabulary
 - User styles (for highlighting by color, font, background color, screen fields depending on context)
 - Other interface elements (properties of each record, left-hand browse list, etc.)
 - Interactive graphical processes
- Vocabulary customizing function
- Personalize mode allows users to configure a page in responsive design to:
 - Organize blocks and sections in staked or in column mode
 - Hide elements on mobile and/or desktop type devices, or make elements a collapsible block
 - Based on this information, the layout adapts automatically to the size of the screen and the size of labels (that depends on the language)
 - The action panels are also adapted to the device (on the right of a desktop page, at the bottom of a mobile page)
- Landing pages can be personalized by:
 - Adding and maintaining widgets
- Personalize icon displays a tool bar for users to modify the page design from the following options:
 - Select an element, make it visible or invisible on desktop and/or mobile.
 - Organize sections and blocks in columns or staked mode, add line breaks in the field organization
 - Preview changes and see how they will look with the page's left and right panels
 - Ability to save several personalized layouts for a single page, that can be shared or assigned to a single user

Administration and Support

7.1 General Configuration

- Folder concept
 - Used to define data structures and management rules common to a set of companies
 - With folder types (operating, test, development) and inheritance rules that can be defined between folders
- Management rule definition
 - By folder, company, site, user
 - With rule inheritance

7.2 Structure

- Sage X3 is:
 - Multi-company and multi-site
 - Multi-lingual
 - Multi-currency
 - Multi-ledger
 - Multi-legislation
- It manages the following types of business partners:
 - Multi-type (customer, supplier, carrier, representative, sold-to-party, service provider, etc.)

- Multi-address
- Multi-contact
- Multiple bank details
- Multi-collective

7.3 GDPR tooling

- Helps a company to meet GDPR compliance with a visual process that:
 - Provides access to the Data Administrator homepage
 - Provides access to the functions relate to GDPR compliance
 - Provides the identity of the Data Protection Officer from the Contacts tab in the company settings
 - Generates a list of companies in and outside of European Union and identifies the associated Data Protection Officer
 - Generates a list of the data types related to personal information
 - Exports all fields associated with an individual
 - Provides tools enabling a

search on personal data

- Provides access to personal data records (Users, Business partners etc)
- Provides templates for the export of personal data records
- Extracts all phones numbers and emails when required to address a situation where data has been breached

company, group of sites, site

- By group of logical data (access codes to accounts, budgets, third parties, technical data, etc.)
- By configurable user role (for example customer, supplier, sales representative, payer, etc.); external third parties can be given access just to the information relating to them.

7.4 User and security management

- Administrators can access a landing page that allows management of multiple functions from a single page. This includes assigning users to roles, groups, and collaborative teams
- User definition
 - Administrator and sub-administrator definition by function
 - User and messaging address hierarchies for workflow
 - Set of definable settings by user
 - Access control
 - On functions, transactions, fields
 - View, modify and execute access
 - Information restricted depending on user
 - By group of companies,

- Traceability and security

- Single login allows users to connect to multiple folders across legislations or folders for easy user management
- Ability to manage a second level of signature to sign modifications on critical fields
- Compliant with corporate security tools: LDAP, oauth2 (Google account, Microsoft live), SAML2 and Sage Id (Single password)
- Option 'Remember me' (4 weeks) brings the same comfort to users than a strict SSO
- Management of numbers of simultaneous connections by account and user group
- User monitoring and configurable trace of operations performed by user
- Time-stamped trace of modifications
- Definition of user and

messaging address hierarchies

- Database-level traceability (triggers) with configurable storage of values before and after modification
- Security configuration
 - Platform components are connected through certificates
 - Configurable http security policy with whitelist definition, allowed domain list, allowed encryption algorithms
 - Configuration of http security header options
 - Whitelist of external URLs which run in iframes
 - Manage external URLs called in service mode

7.5 Deferred tasks

- Deferred query server for automated launching of functions, in particular:
 - Data integration/extraction
 - Deferred printouts
 - Operation such as account closure, matching, mrp calculation, reordering, etc.
- Subscription definition on a monthly, weekly or daily frequency basis, with operating calendar management
- Deferred task launch and satisfactory completion control
 - Monitoring screen

- Task launch deadline
- Automatic interruption of tasks that take too long
- Completed operations tracing
- Task chaining
- Task launch and control by depositing of files

7.6 Operational management

- Save functions
- Alert configuration (log files)
- Monitor
 - Batch tasks in progress
 - Connected users
- Purging and archiving
 - Definition of information retention time before archiving and before purging in number of days or years
 - On-line viewing of archived data with the same reporting tools as for current data
- Launch product updates with one click, patch from a .zip file

7.7 Accounting engine

- Any management document (invoices, stock movements, payments, WIP, etc.) can generate entries in a configurable manner. These entries can be exported to external software or be integrated directly into accounting. Option of multiple posting (for example into

company accounts and IAS accounts).

7.8 Connectivity between applications

7.8.1 Electronic Document Interchange (EDI)

- Perform secured data exchanges for sales and purchase events
- Handle universal EDI formats according to EDI partners, companies or business partners rules
- Generation of XML files including attachments and signatures

7.8.2 Import/export templates

- Import and export data in different formats:
 - Variable length with separators (spreadsheets, for example),

- Fixed length

- XML
- Code conversion tables
- With over 100 standard templates provided:
 - Basic records (third parties, customers, suppliers, products, bills of materials, etc.)
 - Movements (orders, invoices, delivery notes, stock movements, budgets, entries, commitments, accounting data for consolidation, stock reports, stock movements, prices, etc.)
- Definition of sequenced imports/exports:
 - Interfaces with remote databases (multi-site architecture, systems integration)

Cloud Connectivity

8.1. Cloud Capabilities

API definition in accordance with web services standards (WSDL/SOAP), invocation of external web services and external publication of web services.

- Performance optimized storage
- Amazon Elastic Block Store (Amazon EBS)

allows dynamic compute capability, high performance, secure (encrypted), highly available and low latency storage for application and backups

- Secure access to the environment through the use of SSL/TLS certificates
- Disaster recovery offered through AWS, enabling rapid recovery of your IT

infrastructure and data.

- Automates upgrades and updates of hardware and infrastructure
- AWS RDS offering elastic, highly scalable database management in the cloud
- AWS Auto Scaling that offers on-demand environment scalability to manage demand spikes
- • Web Services testing to analyze bottlenecks and volume
- Secure node.js platform for SOAP web services to improve cloud compliance, deploy web services easier and keep compatibility with previous web services and subprograms
- Use APIs in interactive mode, to manage HTTP call to an external web server, Batch task creation, send rich mails and manage asynchronous calls
- Optimize exchanges based on data volume through load balancing sessions

8.1.1 Customization

- Complete the business logic possible through the integrated object 4GL with new Sage X3 objects
- Complete the Dictionary with new tables, screens, objects, data types, with marking of objects or object elements with dedicated activity codes to ensure durability
- Update and upgrade management with protection and retention of specific features developed
- Entry point access to new objects

- Use of standard component libraries
- Check customizations made within folder and validate compliance with the update best practices tool
- All types of customization possible through the integrated object 4GL or via web services to Sage X3 objects or methods (in any language on the market)
- Dictionary customization (tables, screens, objects, data types) with marking of objects or object elements with dedicated activity codes to ensure durability
- Entry point access to all standard objects
- Eclipse development environment

8.2 Integration

8.2.1 Data Integration API

REST based API enables Developers to automate existing Sage X3 File Import / Export infrastructure, by facilitating the secure transport of data files.

Providing a simple means of storing and sharing files to control the sequential exchange of data at defined intervals, the API is ideal for managing small batch import jobs and larger scale data ingestion operations.

- Importing Data to Sage X3
 - API uploads data files to a secure endpoint
 - Files are validated, virus checked and automatically downloaded to the X3 import folder
- Exporting Data from Sage X3

- Data is exported to files in the Sage X3 export folder
- Sync process uploads exported files to a secure endpoint
- APIs list, download and delete exported files from the endpoint

- Customization audit tool

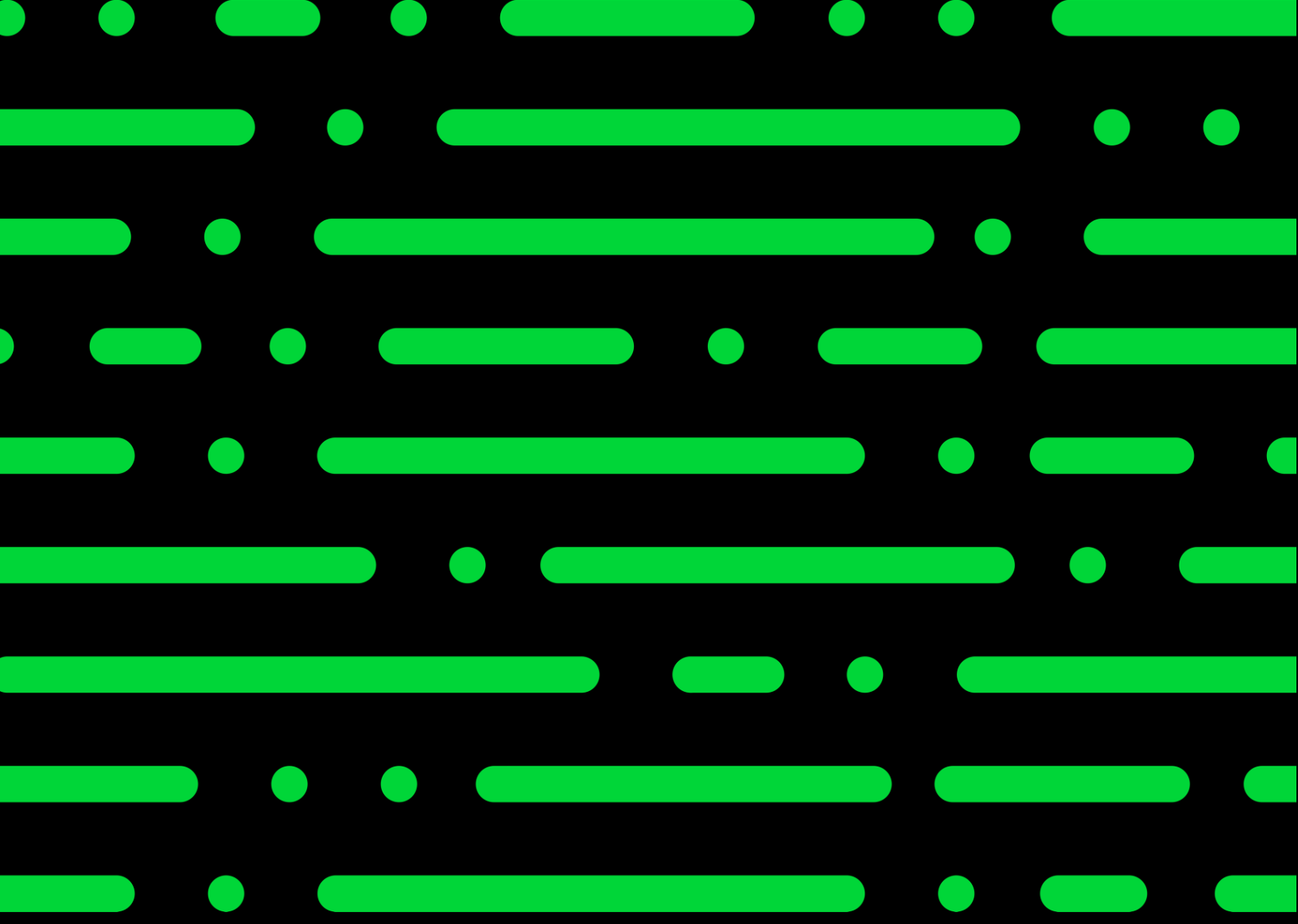
8.2.2 GraphQL API

Provides developers with a simple to use, secure and highly functional service to build real-time responsive application integrations. GraphQL APIs can be used on a sub-set of Sage X3 entities currently focused to inventory and distribution functions.

Available operations include:

- Queries (Read)
 - Companies
 - Sites
 - Customers
 - Addresses
 - Contacts
 - Sales Reps
 - Products – Categories and Sales
 - Stock
 - Sales Invoices
 - Sales Orders
 - Timesheet Entries (Project Management)
- Control Accounts
- User capacity variation
- Timetable schema
- Project user
- Work Order
- Product
- Product site
- Available currencies
- Project task
- Task category
- Task category operation
- Time category
- Transaction for Production Tracking
- Employee ID (Manufacturing)
- Work Order Operations line
- Work Order materials line
- Business Partner (read)
- Customer (read)
- Rate type added to currency rates
- General balance (read)
- Journal entry lines
- Work center
- Work center group
- Project budget

- Project
- Assignment
- Project Operation
- Supplier (read)
- Finite scheduler
- Mutations
 - Sales Order (Create)
 - Currency rates
 - Materials consumption in a work order tracking
 - Completed quantity for work order tracking
 - Time Entry Line
 - Work order operation
 - Operations
 - Journal entry



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