Microsoft Dynamic AX for Infrastructure Contractors

Gain Efficiency, Flexibility, and Insight with Professional Services for Microsoft Dynamics AX

PreludeSys India Limited

This document is a white paper prepared by PreludeSys India providing a detailed explanation on how Microsoft Dynamics AX can address the needs of an Infrastructure Contracting Company which is involved in infrastructure projects relating to electricity, railways, roads, ports, airports, irrigation, and urban and rural water supply and sanitation.
# Table of Contents

Industry Overview .................................................................................................................. 3
Challenges & Key Focus Areas for a Contracting Company .................................................. 3
A Guide to the Benefits of Professional Services Automation (PSA) Solutions ..................... 4
Overview of the Business Process of a Contractor .................................................................. 6
Typical Requirements and Pain Areas .................................................................................... 7
  Tendering and Bid Management .......................................................................................... 7
  Contract Creation ................................................................................................................ 7
  Project Execution ............................................................................................................... 7
  Project Closure .................................................................................................................. 9
  Financial Management ...................................................................................................... 9
Microsoft Dynamics AX for Contracting Companies .................................................................. 10
Addressing the Requirements in Microsoft Dynamics AX ........................................................... 11
  Opportunity Management .................................................................................................. 11
  Project Creation, Forecasting and Planning ...................................................................... 11
  Procurements ................................................................................................................... 12
  Inventory Management ..................................................................................................... 13
  Labour and Works Subcontracting .................................................................................... 13
  Site Management .............................................................................................................. 14
  Project Invoicing ............................................................................................................... 14
  Financial Management ...................................................................................................... 14
Independent Study: Microsoft Dynamics AX Customers Earn Strong ROI ............................... 15
Conclusion ............................................................................................................................... 15
INDUSTRY OVERVIEW
The fast growth of the economy in recent years has placed increasing stress on physical infrastructure such as electricity, railways, roads, ports, airports, irrigation, and urban and rural water supply and sanitation, all of which already suffer from a substantial deficit from the past in terms of capacities as well as efficiencies in the delivery of critical infrastructure services. The pattern of inclusive growth of the economy projected for the Eleventh Plan, with GDP growth averaging 9% per year can be achieved only if this infrastructure deficit can be overcome and adequate investment takes place to support higher growth and an improved quality of life for both urban and rural communities.

The Eleventh Five Year Plan has projected an increased spend for infrastructure development which would be 7.6% as compared to 5% in the 10th Five Year Plan. Total investment in infrastructure during the Eleventh Plan is projected at Rs 2056150 crore. This implies increased spend in infrastructure projects, which is a very good sign of growth for the contractors focusing on infrastructure projects such as electricity, railways, roads, ports, airports, irrigation, waterworks and sanitation.

CHALLENGES & KEY FOCUS AREAS FOR A CONTRACTING COMPANY
Time and cost over-runs in Indian projects often discouraged owners from undertaking such projects. Control of mega-projects must be catered for in the planning stage itself. The parameters to be measured or assessed, the method and frequency of reporting, and the levels at which corrective decisions are to be taken, should all be planned in advance. Client owners of projects in India will benefit immensely by drawing their attention to some important aspects of project control such as:

Resource Scheduling – The completion of a construction project is mainly governed by resource constraints. It is essential to develop a systematic method for the allocation of resources when the resources are limited and conflicting demands are made for same type of resource. This can be attained through proper resource smoothing or resource leveling. Procurement of resources must relate closely to the project schedule for operations and other resources.

Financial Control – It ensures that permissible limits are not exceeded in the total estimates for each project. Expenditures or liabilities are not incurred until funds are made available. The funds should be utilized in those duly authorized projects for which they are allotted and no others. Finally, it ensures that funds allotted in any particular year are spent within limits. Therefore it is essential to maintain correct and meticulous account of expenditure and liabilities to exercise effective financial control.

Budget Formulations and Periodic Review - Determining the planned the progress of each contract along with the requirement of stores is essential before the budget projection for capital works is made.

Expenditure reporting and monitoring - Financial control over construction projects is exercised by all levels of engineering authorities from the expenditure return. From these returns, deviations if any are detected by analyzing the trends of expenditure, vis-à-vis allotments. Thereafter remedial actions are initiated to ensure that the final expenditure in the financial year is contained within the budgetary allocation for the year.
A GUIDE TO THE BENEFITS OF PROFESSIONAL SERVICES AUTOMATION (PSA) SOLUTIONS

PSA solutions can be a powerful way to deliver value for the following PSO stakeholders:

- Current and potential customers who want innovative, high-quality work done on their schedule and within their budget limitations.
- Organizational leaders who need to manage the company to achieve maximum customer satisfaction and profitability, portfolio and business alignment, and responsiveness to change.
- Functional staff members who need to focus their time working on projects, not doing paperwork.
- Project managers who want to better manage teams and deliver projects on time and on budget, and whose teams require accurate time, expense, and status reporting, as well as resource and skill optimization.
- External customers, partners, and suppliers who require accurate invoicing, high-quality customer service, collaboration, and dispute resolution.

This section presents an overview of the types of benefits available to these stakeholders by using a PSA solution.

**Cost Reduction**

Minimizing unnecessary costs during difficult economic times is not just a return on investment (ROI) issue, but potentially one of market survival. And while lowered cost often is not thought of as a primary reason for implementing a PSA solution, many companies find that the efficiency and productivity gains of a PSA solution result in significant budgetary successes. Cost reduction comes from automating core business processes, improved invoicing, streamlined administration, and better resource time and expense tracking.

**Increased Revenue and Profitability**

One of the top reasons for investing in a PSA solution is the increased revenue and profitability that results from improved resource utilization, which ultimately leads to improved customer satisfaction and repeat business. Some organizations have already reported annualized ROI of 90 percent or more on PSA deployments. Payback on the original PSA investment sometimes can occur within six months, depending on the size and complexity of the solution.

**Greater Visibility into the Organization**

More timely and accurate access to resource and project data can enhance executive decision-making when it comes to prioritization of strategic services, projects, resources, and funding. The better visibility that accompanies a PSA solution also helps project and operational managers to optimize resources, while improving on-time and on-budget delivery. Many customers find this to be even more rewarding than originally anticipated.

**Improved Resource Utilization**

Having an effective time and expense record of resource usage can help your organization deliver significant benefits. PSA solutions can deliver real business value in migrations from best-available to best-fit project resources. Better alignment of people and skills to billable (and nonbillable) projects can result in resource usage gains averaging at least 2 to 5 percent, with consulting services achieving upward of 10 percent.

**Improved Team Collaboration**
Project managers can effectively manage teams even when spread over long distances, and teams can keep on top of their deliverables by using Web-based collaboration and communication portals. Portals offer the further benefits of personalized content to reduce information overload and aggregated content from multiple projects and sources to provide the project manager, resource managers, and company executives with views of their entire project portfolio.

**Process Improvement Across the Service Life Cycle**

In highly project-driven organizations, process improvements can reduce time to market while lowering development costs and improving quality. These benefits come from creating reusable templates and processes, automating core business processes, and more tightly integrating project planning, scheduling, and invoicing.

**Greater Customer Satisfaction and Loyalty**

Improved efficiency and productivity have little meaning if the customer is unhappy with the final results. Maintaining service quality and effective customer collaboration throughout the service life cycle can significantly improve customer loyalty and repeat business—the hallmark of a highly successful service organization. Ongoing measurement of customer satisfaction should be built into any PSA strategy.

**Reduced Billing Cycle Time**

A well-conceived PSA solution can calculate resource time and expense, and allocate them to real-time project schedules and customer invoicing to help PSOs lower financing costs with reduced billing cycle times. Streamlining this process contributes directly to bottom-line ROI results.

**Minimized Revenue Leakage**

When manual entry or separate systems must be used to invoice customers for services, funds can be lost through “revenue leakage”—the result of errors, or incomplete or lost paperwork. Minimizing this leakage includes accurately accounting for all billable time, chargeback, or equipment and material usage on service-related projects.

**Performance Data Integration**

PSA solutions that support both internally and externally focused services benefit greatly from an integrated IT architecture, including systems that share project, resource, and financial data for in-depth analysis throughout the service life cycle. Purchasing PSA modules that are not designed for smooth data integration can lead to increased IT support, maintenance, and product upgrade costs.

**Improved Service Agility**

By combining resource and project optimization with improved executive decision-making, PSOs can adapt quickly to sudden change. The ROI on service agility might not be easily measured, but agility plays a critical role when responding to changes in business priorities, competitive pressures, new technology, and economic downturns.
O
VERVIEW OF THE BUSINESS PROCESS OF A CONTRACTOR

Contractor typically undertakes contracting projects relating to electricity, railways, roads, ports, airports, irrigation, waterworks and sanitation. A generic summary of the business process of Contractor is mentioned below. Typically, the project engagement cycle for Contractor is as follows:

Tender & Bid Management: This is the first stage of project engagement cycle. In this stage, Contractor identifies and bids for project tenders. Based on the tender notifications received, Contractor estimates the project quotation and bids for the project. Earnest Money Deposit is also paid in this stage. Based on the bid evaluation, projects are awarded by the Government Agency to Contractor. Once the Contractor is awarded the project, Contractor enters into a contract with the Government Agency.

Project Planning and Budgeting: Once the project is awarded, then, Contractor undertakes a project planning exercise. If needed, surveys are conducted to arrive at an accurate estimate of the project. In this stage, the PERT charts are prepared based on the work breakdown, materials planned, and subcontracts planned. Based on this, the project budgets are arrived at.

Project Execution and Control: Once the budgeting exercise for a project is completed, Contractor starts the execution of the projects at site. The activities relating to execution of the project can be classified as material procurements, works subcontracting, labour subcontracting, expenses management and updation of work progress. Some of the salient points of the project execution are as follows:

- Purchase of materials may require Government Agency approval. In such a case, the purchase process of Contractor accommodates the Government Agency’s approval process
- Contractor subcontracts works to the subcontractor. There could be different types of subcontract works: (a) Work subcontracting with Labour Portion only (b) Works subcontracting with Labour and Materials (c) Back to Back Subcontracting.
- Labour is typically subcontracted to a labour subcontractor
- The sites are typically managed by the site supervisors. The site requests are typically in the form of material requirements and site funds requirements. The central office addresses the site requirements based on these requests. The site offices provide periodic updates to the central office based on which the central office maintains project control.

Project Invoicing: Periodic update about the progress of work is provided to Government Agency through submission of M-Book. Based on the M-Book records and milestones, Contractor invoices to Government Agency for the projects.

Project Closure: Once the project is completed, Contractor would perform a detailed handover process which would include handover of old materials, providing operational & user manuals and settlement of accounts.
TYPICAL REQUIREMENTS AND PAIN AREAS

TENDERING AND BID MANAGEMENT

- **Last Purchase Price:** Contractor typically finds it difficult to trace the last purchase price of the BOM that is required to be quoted in the tender.

- **Estimating tool:** Contractor requires a structured solution for facilitating the estimation process during preparing the tender quotations.

- **EMD Tracking:** Contractor pays Earnest Money Deposit (EMD) for every tender it bids. For the tender bids not awarded, Contractor would like to track the expiry dates of the EMDs so that it can take the necessary action in retrieving it back from the respective Government Agency. It would also like to track the amount of EMDs provided any given period.

- **Opportunities overview:** Contractor would like to have an overview of the tenders it has bid and the stage of the various tenders.

CONTRACT CREATION

- **Incorporating the terms of contract:** Once the contract is awarded, then, Contractor would like to maintain the repository of the contract documents (ex. LOA, Bank Guarantees, Contract Documents). Further it would like to incorporate the terms of the contract into a project such as Payment terms, payment schedule, retention money, penalties clause, time control clauses, cost control clauses, quality control clauses, completion clauses etc.

- **Recording the results of a survey:** The contractor would also like to incorporate the events relating to the survey in the project. Apart from this, if there has been a variation in the project estimation, as a result of the survey, it would like to incorporate the same.

- **Project Planning & Budgeting:** The contractor would like to perform a detailed project planning and budgeting exercise before it commences the project. It requires a solution that provides tools to facilitate the project planning and budgeting exercise and reduces time lags in the budgeting exercise.

- **PERT charts & Month Wise Execution Plans:** The Contractor requires a solution that should provide the PERT charts and Bar Charts to help in tracking the progress of the projects. Further it should also provide month wise execution plans so that the same can be put into action and tracked month-wise.

PROJECT EXECUTION

PROCUREMENT

- **Procurements to incorporate the Government Agency process:** The Contractor requires a solution that handles procurement process for materials requiring Government Agency approval. Its work flow should be able to incorporate the additional approvals & processes required from Government Agency before the materials are procured from the vendor such as Vendor Approval in Government Agency, Approval of GTP and Drawings etc. It requires a solution that incorporates additional workflow in the procurement process such as Inspection of materials by Government Agency, Issuance of Dispatch clearance etc.

- **Control over procurements:** The Contractor would like to have control over all cash transactions done from the head office. Some items may warrant procurement from local vendors at site. However,
Contractor would like to have control over the procurement process done at site and also have control over the disbursements to the local vendor.

- **Accuracy in Supply Chain**: The Contractor would like to ensure accuracy in the procurement process and consider the lead times required so that the items are reaching the site at the right time for project execution.

- **Timely Payment of Bills**: Based on the payment terms and the invoices received from the vendor (for both purchase vendors and subcontract vendors), the Contractor should be able to ensure timely payment of bills to its vendors so that it ensures good vendors relationship.

- **Ability to ensure accurate taxation**: As items are procured and dispatched from multiple states, the Contractor would like to ensure that taxes are accurately calculated considering different VAT structures during its procurement process.

**INVENTORY CONTROL**

- **Materials requirements plan**: The contractor would like to track the materials requirements based on the project plan, based on material indents and based on reordering policy and ensure availability of materials at site. Based on the requirements, it would like to initiate appropriate purchase action if necessary.

- **Site wise Materials Tracking**: The contractor would like to track materials sitewise. It would like the proposed solution to provide the on hand inventory, materials consumed, materials under purchase, purchase return – for every project.

**LABOUR & WORKS SUBCONTRACTING**

- **Database of Subcontractor’s Performance**: The contractor would like to have a repository of its subcontractors, based on its capability & capacity, and based on their performance in the past.

- **Tracking work in progress**: The contractor would like to track the work in progress of every subcontract order. Depending on the type of subcontracting (with / without materials), the contractor would like to keep track of the labour time and materials consumed on a periodic basis. It would also like to track the milestones completed.

- **Tracking labour hours spent & work completion**: The contractor would like to also track the labour hours spent for a project where labour is subcontracted. Based on the labour hours spent, the contractor would also to track the daily work completion.

- **Certification of milestones**: The contractor should be able to maintain a control check of ensuring certification of milestones before the payment to a subcontractor is made. At the same time, it should ensure that the payment process should not take huge lead times because of this control check.

**SITE MANAGEMENT**

- **Information Exchange between Site and HO**: The contractor wants a structured and effective system through which information exchange between site and head office is done without any time delays.

It wants a structured system where the following information is required from the site on a periodic / online basis: GRNs, QC Report, Materials Requisitions, Daily work in progress updates, Funds requirements, Labour time sheets, Shortage and excess reports.
Similarly, the contractor would like to ensure that the following information is available to the site on time: Purchase instruction with the tentative delivery dates, Funds transfer details, Work instructions etc.

**INVOICING**

- **Invoicing based on milestones:** The contractor would like to get alerts on the completion of milestones, based on which, Contractor may initiate invoicing to the respective Government Agency.

- **Providing M Book & Invoices in the Government Agency format:** The contractor should be able to automatically generate MBook in the formats prescribed by the respective Government Agency. Apart from that, every Government Agency has a particular format of invoicing. Contractor should be able to generate invoices based on the formats prescribed by the respective Government Agency.

**PROJECT CLOSURE**

- **Checklist of activities to be completed:** Based on the terms of the contract, Contractor should be able to maintain the checklist of activities that is required for the closure of the project. At the time of the closure, Contractor should be able to track the closure activities and ensure its completion.

**FINANCIAL MANAGEMENT**

- **Financial Reporting:** The contractor should be able to generate weekly cashflow requirements for each project and also know the weekly fund status for each project. It should be able to generate the necessary statements that is required to also report to its bank.
MICROSOFT DYNAMICS AX FOR CONTRACTING COMPANIES

Designed especially for use by contracting companies, Professional Services for Microsoft Dynamics AX, formerly Microsoft® Business Solutions–Axapta®, is an end-to-end business solution that integrates project, financial, and resource management capabilities to help companies increase revenues, lower costs, and contain risks. It helps the contractor to improve profitability, efficiency, and customer service, and to adapt more quickly to changing business conditions. The solution also enables Contractors to connect with customers and business partners more effectively, which can lead to greater customer satisfaction, increased employee productivity, and the flexibility required to seize new market opportunities.

Like all Microsoft Dynamics offerings, Professional Services for Microsoft Dynamics AX helps the contractor be more agile. Professional Services for Microsoft Dynamics AX helps break down boundaries between departments inside your company for increased efficiency and greater flexibility, so the contractor can respond quickly to changing business conditions. It helps remove restrictions that separate the contractor from customers and suppliers so you can work together in new ways to improve customer service, satisfaction, and retention. And Professional Services for Microsoft Dynamics AX eliminates barriers between the contractor and its employees, enabling them to be more effective in making better, faster decisions.
ADDRESSING THE REQUIREMENTS IN MICROSOFT DYNAMICS AX

Microsoft Dynamics AX 2009 is an ideal fit for business automation of the contractor. Some of the important functional features provided by Microsoft Dynamics AX 2009 are as follows:

OPPORTUNITY MANAGEMENT

Tender Notifications Management: Microsoft Dynamics 2009 provides the facility to create opportunities through which the tender notifications can be recorded. Based on this, the decision taken by the contractor to bid for the tender can be recorded. Tender fees can be paid through Dynamics AX and the tenders received can be uploaded in Microsoft Dynamics AX so that the tender documents are available for use from a common repository.

Quote Estimation and Tender Response: Once the tender documents are received, the contractor can carry out an estimation exercise for the quotation purpose. Microsoft Dynamics AX enables the contractor to define the project and carry out estimation process. Through this, the contractor can estimate the work (in the form of defining the Work Breakdown Structure), estimate for materials, labour and expenses for the tender. If the tender is similar to the one that the contractor had bid for earlier, then, through the functionality of “Project Templates”, the contractor can copy the existing project. One of the important aspects during the quotation was to get access to the last purchase price, which is also available as a feature of the solution.

Once the tender quotation is estimated, the same information can be exported to Microsoft Excel Spreadsheet or merged with a Microsoft Word Document, enabling the contractor to generate a tender response.

EMD Payment & Tracking: In order to bid for the project, the contractor has to pay the EMD to the respective Government Agency. In Microsoft Dynamics AX, the contractor can record the EMD fees. Tracking of EMDs is also made available as a feature – which has been developed by PreludeSys in Microsoft Dynamics AX.

Tenders Tracking: The contractor can also track the progress made in each and every tender bid in Microsoft Dynamics AX. The contractor can get an overview of all the opportunities and also track the stage of every tender bid.

PROJECT CREATION, FORECASTING AND PLANNING

Project Hierarchy: Microsoft Dynamics provides an effective and flexible mechanism to create projects. A project hierarchy can be created to incorporate multiple subprojects. Subprojects can be created up to “n” levels. This will enable the contractor to bifurcate any project to individual and measurable sub projects. Each of these sub projects can then be bifurcated to further sub-projects. By doing this, the contractor can organize its subcontracted activities and in-house activities effectively.

Fixed Price and Time & Material type of Projects: Microsoft Dynamics AX provides a facility to create both time & materials or fixed price project or a combination of both. Though most of the projects of the contractor are fixed price projects, it helps accommodate terms in some cases, where some of the materials are billed to the Government Agency based on the quantities used.

Project Forecasting: Microsoft Dynamics AX provides the facility to forecast / budget for the project once the contract is awarded by the Government Agency. Microsoft Dynamics AX provides multiple and user defined forecast models based on which a project can be forecasted. The forecast model used during quotation can also be copied and amended to a new forecast model while performing the forecasting exercise after the contract is awarded by the Government Agency. Forecasts can be created for activities, items, labour, expenses and fees. The cost prices and sale prices for every forecast also be provided which will help in project tracking.

During forecasting, Microsoft Dynamics AX provides the facility to define chargeability for every forecast line as chargeable or non chargeable. This helps the contractor to determine which forecast lines are chargeable to Government Agency and which forecast lines are not chargeable to Government Agency.
Planning and Scheduling: Based on the forecasts, the materials can be planned and the labour work centers can be scheduled. Microsoft Dynamics AX is seamlessly integrated with Microsoft Projects which enables automatic creation of Gantt Charts, PERT charts and BAR Charts.

Contract Creation: Once the Government Agency awards the tender to the contractor & signs the contract, the contractor can enter the terms of the contract in Microsoft Dynamics AX 2009. Terms such as Payment schedule, and payment terms can be incorporated in Microsoft Dynamics AX.

PROCUREMENTS

Materials Requirement Plan: Based on the materials planned in the estimation stage, Microsoft Dynamics AX 2009 helps the contractor in drawing up the materials requirements plan. Lead times can be predefined based on the vendors or items based on which procurements can be planned. Based on this, month wise procurement plan for projects can be generated.

Request for Quotation & Quotation Comparison: Once the procurement plan is drawn, Microsoft Dynamics AX helps the contractor in inviting quotations through the “Request for Quote” functionality. The terms for the quotation can be mentioned in the Request for Quote and can be sent to vendors either by print or electronically. Based on this, quotations from vendors can be recorded. Microsoft Dynamics AX also provides facility to compare the quote based on price, lead times and deviations in terms and conditions sent along with the RFQ. Based on this analysis, the contractor can select the appropriate vendor and create the purchase order.

Procurement based on Government Agency process: If the items procured require Government Agency approval, then, Microsoft Dynamics AX provides a workflow engine that can help in automation of the Government Agency Approval process. Based on this, PreludeSys has developed a detailed approval process as required by Government Agency.

While creating a purchase order, the contractor can identify the PO as the PO based on Government Agency Approval type, then, the contractor can issue a provisional Purchase order to the vendor subject to approval of GTP and Drawings from Government Agency. If the vendor is in the approved vendor list of Government Agency, then, Dynamics AX provides the facility to record this in the PO. When GTP and Drawings are received from the vendor, the same can be uploaded against the PO for reference and then sent to the Government Agency electronically for approval. If the approval is received from the Government Agency, then, the same can be recorded against the PO. Based on this approval, the contractor can release the confirmed PO to the vendor. Microsoft Dynamics AX also provides facility to record the inspection done by the Government Agency and the issuance of the Delivery Instruction from the Government Agency before requesting the vendor for the dispatch of the items.

Rate Contracts & Trade Agreements: Microsoft Dynamics AX also has the facility to define trade agreements and rate contracts with the vendors for items purchase regularly. Specific rate contracts vendor wise & Vendor item wise can be defined for different periods. Discounting agreements can also be defined vendor-wise and vendor-item wise. This enables the contractor to define rate contracts and vendor agreements for regular vendors.

Purchase & Payment Approvals: Microsoft Dynamics AX provides a comprehensive workflow module through which the contractor can define the approval process for any purchase document. The approval condition(s) could be based on any specific parameter or based on collection of parameters. For example, a work flow can be defined for approval of Purchase order (document) and the approval process can follow different work flows say based on Purchase order amount (parameter) greater Rs.75000 (Condition). Through this functionality, the contractor can define the approval process for purchase invoicing and payment to the vendor – which is currently a known requirement.

Payments to Vendors: Microsoft Dynamics AX provides a facility to track the payments due to the vendors based on the payment due date mentioned in the purchase order / purchase invoice. If need be, alerts can also be
configured to alert the relevant person on the payment due. This ensures that payments to the vendors are discharged on time and ensures good vendor relationship. While processing for payments, Microsoft Dynamics AX also provides the facility to check the materials receipts and the quality compliance for the materials received.

**Managing the tax payable:** Microsoft Dynamics AX is addresses the Indian Tax Compliance & Regulations at the time of purchase or sale. Microsoft Dynamics AX effectively addresses the Sales Tax, Service Tax, VAT and TDS and facilitates the purchase order processing. Further it also generates the relevant statutory compliance statements automatically to facilitate tax filing. This will ensure that quite a bit of manual process relating to generation and reconciliation of tax related details is solved at the contractor.

**INVENTORY MANAGEMENT**

**Sitewise Materials Tracking:** Through Microsoft Dynamics AX, the contractor can have an online on-hand inventory of materials sitewise. Through site integration, Microsoft Dynamics AX can facilitate, the materials receipts onsite and record the consumption details (project wise / subproject wise / activity wise) online. This ensures that the central office of the contractor have a track of inventory online.

**Tracking of Materials provided to Subcontractor:** In Microsoft Dynamics AX, every subcontractor site is also treated as another warehouse. When items are issued / shipped directly by vendors to the subcontractor, the same can be recorded. When the subcontractor consumes the materials, the contractor can record the item consumption journals against a project / a subproject / activity. Based on this, the contractor can have accurate information on the material on hand with the subcontractor.

**LABOUR AND WORKS SUBCONTRACTING**

Microsoft Dynamics AX provides facilities to manage different types of subcontracting engaged by the contractor with the subcontractors. The following types of subcontracting operations can be handled in Microsoft Dynamics AX to a fairly large extent:

- Works Subcontracting the labour portion only (materials to be supplied by the contractor)
- Works Subcontracting with labour and materials
- Back to Back Subcontracting (Works Subcontracting with labour and materials where the subproject is subcontracted to a vendor who has required approvals from the Government Agency)
- Labour Subcontracting (where only labour is provided to the contractor based on work completion model)

**Profiling database of subcontractors:** Microsoft Dynamics AX typically treats subcontractors as vendors. The vendors in Dynamics AX can be profiled as business sectors based on the nature of activity it can perform. This enables the contractor to profile the subcontractor based on its capability to deliver, geography and any user defined criteria.

**Issuing Subcontract orders:** Microsoft Dynamics AX treats subcontractors as vendors. A specific category can be assigned to subcontractors. Based on this, Microsoft Dynamics AX can issue subcontract orders for either labour portion or both labour and materials. If the subcontractor needs to execute a subproject / a specific activity within a project, then, the same can be indicated in the subcontract order which will enable tracking of a subcontract order. This tracking is a customized feature provided by PreludeSys in Microsoft Dynamics AX.

**Tracking Work in Progress:** Depending on the nature of subcontract, Microsoft Dynamics AX can provide facility to record the work hours and the materials based on the WIP updates received from the subcontractor. Rules can be defined in Dynamics AX to post subcontractor costs based on hours or any other unit of measure. Also depending on the subcontract, materials used can be defined as chargeable or non chargeable to the project. This enables the contractor to track the work in progress and yet handle the complex billing models with its subcontractors.
SITE MANAGEMENT

Microsoft Dynamics AX can seamlessly manage the communication between site and head office and also ensure timely availability of critical information such as Materials Requirements, Funds Requirements, GRN updates, Dispatch instructions etc. The basic premise for this is some sort of connectivity is available at site through which the site can access Microsoft Dynamics AX application or the enterprise portal of Microsoft Dynamics AX.

Managing Material Requests from Site: Microsoft Dynamics AX has a materials / purchase requisition functionality through which the site can raise materials / purchase requests to the central office. The head office can either dispatch the materials from its central warehouse or provide a delivery instruction to the vendor for delivery at site. The status of the transfer / purchase action can be viewed as a status update by the site.

Update of GRN & Inspection: Microsoft Dynamics AX provides the facility at the site to record the GRN and record the QC check updates from the site for the materials received as a result of transfer or production order. Once the update is made, the on-hand inventory of the site warehouse is automatically updated.

Record Daily Work progress: Microsoft Dynamics AX provides the facility to the site where the site supervisor can record the daily work activities in terms of activity updates, hours utilized against a project / subproject / activity, items consumed against a project and expenses incurred against a project. This ensures that project costs are online and updated.

Managing the site’s funds requirements: Microsoft Dynamics AX can track the cash advances paid to site supervisors and have an overview of the funds movement of the site bank accounts. Since the site expenses management is managed online in Microsoft Dynamics AX, the contractor can have a better control over the site financial operations.

PROJECT INVOICING

Providing M Book to Government Agency: Microsoft Dynamics AX provides details of M-Book through its transaction reports. Through the transaction report, Microsoft Dynamics AX can provide the materials usage and labour usage for all the projects and subprojects for different date intervals. This ensures that the contractor has the required information for updation of MBook. Microsoft Dynamics AX may have to be customized to provide the MBook in the required Government Agency formats.

Invoicing based on Milestones: Through on account invoicing and invoice proposal, Microsoft Dynamics AX can trigger the payment schedule based on due dates. However, in order to achieve true milestone billing, Microsoft Dynamics AX may have to be customized to some extent.

FINANCIAL MANAGEMENT

Microsoft Dynamics AX provides comprehensive functionality of Financial Management that can address the needs of the contractor. The financial management in Microsoft Dynamics AX can address General Ledger, Accounts Receivables Management, Accounts Payables Management, Cash & Bank management and Fixed Assets management. It also provides detailed project accounting features that would be extremely important to the contractor. Apart from this, Microsoft Dynamics AX can handle multiple companies and can automate intercompany financial transactions. Microsoft Dynamics AX is also Indian Tax compliant – which means that it can handle the statutory tax compliance as well.
INDEPENDENT STUDY: MICROSOFT DYNAMICS AX CUSTOMERS EARN STRONG ROI

Microsoft Dynamics understands that today’s sophisticated business management software buyer demands applications personalized for their business at the lowest possible total cost of ownership (TCO). According to Nucleus Research Inc., a global provider of ROI-focused research and advisory services, 75 percent of Microsoft Dynamics AX solution customers interviewed achieved a positive ROI from their deployments, with an average payback period of only 23 months.

In the Nucleus Research survey,1 Microsoft Dynamics AX compared favorably with other business management software vendors, some of which failed to show a positive ROI regardless of length of deployment. According to the survey report, “Companies cited four key benefits leading to a positive ROI from [Microsoft Dynamics AX]: staff reductions, reduced IT costs, improved customer and partner satisfaction, and improved operations and visibility.”

The report states, “Fifty-six percent of [Microsoft Dynamics AX] customers were able to directly reduce staffing costs as a result of their [Microsoft Dynamics AX] deployment.” In addition, 44 percent of customers reduced IT costs as a result of their Microsoft Dynamics AX deployment, and 75 percent reported “improved operations and visibility.” Microsoft expects that the wizard-based configuration and system setup tool will further accelerate the strong ROI results demonstrated in the independent study.

CONCLUSION

Contractors today face a whole new set of challenges: a deluge of information, constant demands on attention, new skills to master, and pressure to be ever more productive. Professional Services for Microsoft Dynamics AX gives the contractor new ways to link islands of information and streamline processes to help it deal with a complex, information-rich environment. The contractor can then use your time better to seize emerging opportunities, build stronger customer relationships, and deliver world-class customer service.

In addition to providing the contractor with new and better ways to work, Professional Services for Microsoft Dynamics AX can be tailored with add-on functionality while maintaining low TCO, so you can adapt and upgrade your solution over time with less risk and expense. The highly flexible, layered architecture—a major benefit over competitors’ solutions—enabling to provide valuable customizations and extensions to the Microsoft Dynamics AX product line to fit the contractor’s unique vertical business needs. So the contractor can invest in your future with a solution that is backed by a vast network of Microsoft solution providers and independent software vendors, all dedicated to helping ensure that your Microsoft Dynamics AX solution changes and grows alongside your business.

At Microsoft & PreludeSys, we believe the keys to helping businesses be more agile are to empower individual workers with tools that improve efficiency, enable users to focus on the highest-value work, maximize the impact of employees and workgroups, and drive deeper connections with customers and partners. If you are looking for ways to gain operational agility and efficiency; gain deeper insight into business opportunities, information, and processes; and maintain control of your business processes and remain in compliance with corporate, client, and government policies and regulations consider taking your PSO to the next level with Professional Services for Microsoft Dynamics AX.

---End of Document---