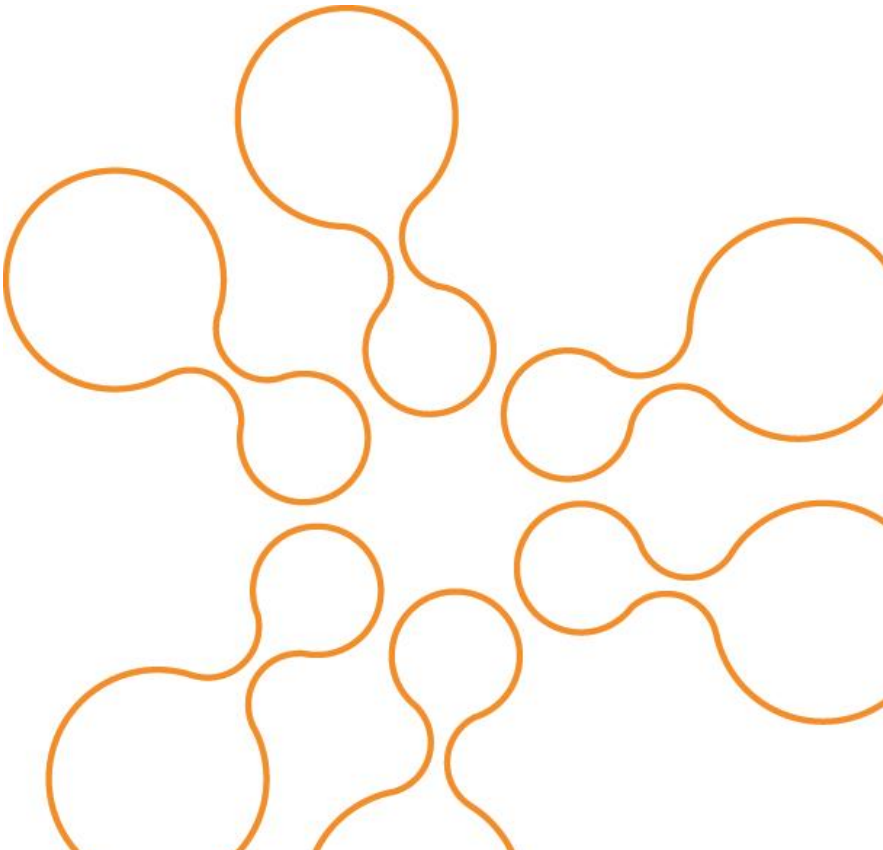
rootstock

Implementation Guide



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Preface

This section covers:

Introduction

Rootstock is committed to the successful implementation of its Rootstock ERP Modules at all of its Customers. Our simple goal is to insure that every system licensed provides the highest possible return on investment for our Customer in a reasonable amount of time. Enterprise Resource Planning (ERP) in an on-line, real-time Cloud Computing (SaaS) environment can be a very beneficial tool in the management and success of a manufacturing, distribution and supply chain business. It does, however, require a significant level of knowledge, dedication and discipline from staff, and the commitment and support (and direct assistance when necessary) of top management. With these elements in place, Rootstock stands ready to guide and assist each Customer in the successful implementation of its Rootstock ERP system. Rootstock's staff has implemented over hundreds of ERP solutions nationwide in a wide variety of operating environments. Rootstock's service offerings and approach to Customer Implementation Projects are explained in the following sections.

The most important section in this entire document is the Benefits and Challenges, and specifically the Challenges section that discusses the customer's commitment to the project.

Also please read the 'Programming Requested Enhancements' section, and Parking Lot Items. Unless expressly defined in the Statement of Work, customer-perceived requirements for system enhancements or customizations, creating Salesforce workflows, creating Salesforce user profiles, addition of custom fields to Rootstock objects, and creating requested 'Custom Reports' are NOT included in the Rootstock Implementation Services and would be additional charge items.

Benefits and Challenges

In today's increasingly competitive business environment, nearly all companies face the challenge of finding ways to increase their effectiveness and ability to stay ahead of (or keep up with) the competition. In

this situation, many companies invest in a new or upgraded ERP solution as a helpful step toward this goal. Because the implementation of a modern Cloud-based ERP solution can have a substantial effect on any

business, it is imperative that the highest company management be involved in the selection and implementation of a new ERP solution with at least the following understandings **of the Benefits**:

- An ERP solution will provide more timely, accurate and useful information to management.
- An ERP solution will enable your organization to be more productive. With a modern Cloud-based ERP, your organization will be able to access the Module from any place, at any time and from any browser-based device.
- An ERP solution will directly and/or indirectly create improved business processes, even allowing for organizational or process improvements that previously may not have been possible.

and of the Challenges: Executive management's involvement will be required. Cross-organizational procedures, organizational changes, or policy changes may be needed to improve fundamental business processes.

The key will be to make that involvement effective, and some key aspects of this involvement include:

- Executive Sponsorship and commitment. If any business operating system is going to get implemented, it will require executive sponsorship. The organization must recognize that the executive (*and in small companies this is the CEO*) are committed to having the ERP implemented. The implementation of an ERP system affects every department (Engineering, Procurement, Materials, Production, Sales, Accounting). There will be changes to present procedures and it may be that the changes in one department seem like 'extra work'; yet for the efficient operation of the entire organization there is less work and more timely information available once the system is live. Another key component of executive sponsorship is that the entire organization should know that the Project Manager is 'empowered' by the Executives to get the ERP system implemented in a timely fashion. It is a good sign that the implementation is on the right track when the CEO or COO is the Executive Sponsor and illustrates their commitment to the entire organization that they are behind the implementation of the ERP system.
- An effective Project Manager for the company, well-respected throughout the organization, will help keep executive management involvement balanced. This individual's time commitment is not insignificant and the more time dedicated to the project management on a daily basis will go a long way in insuring that the implementation will completed in a timely fashion.
- This will also require more work from Process Owners who will learn the application and function as an in-house resource.
- In addition, while not as much as the Customer's Project Manager and Process Owner, every successful implementation has some time commitment from the key IT resource that is familiar with the Salesforce administration.

The time and effort required to implement a new ERP solution is usually underestimated. The most common areas that are underestimated include:

- There is always data clean-up and conversion, whether from another automated system, a manual one, or a combination of both.

- The process owners who want to undertake business process improvements typically don't take into account the interaction required with other process owners in discussing the best approach to 'change management' across departments.

It is little wonder that the evaluation, selection, and implementation of such an Enterprise-wide solution are considered a significant effort, especially in a small or medium-sized business. Rootstock staff's collective experience in ERP Implementation Projects removes a great deal of the difficulty and unknowns from its Customer's Implementation Projects.

Introduction to an Implementation Project

All system Implementation Projects, regardless of their size, require the same general flow of events. Depending on the specific nature of an Implementation Project, the individual steps of the Project may be emphasized or de-emphasized, lengthened or shortened, or reorganized in sequence, but all steps must be taken, or at least their omission must be appropriately justified. A well-planned and executed implementation of the system is critical to the short-term, efficient utilization of the Customer's staff as well as the long-term success of the resulting system. Implementations can take from a few months to as long as a year depending on the size of your organization, the number of physical locations involved, the number of operating units (divisions) being implemented, the number of staff being trained, etc. and the commitment of the customer to dedicate its staff to the implementation of an ERP solution. Experience has proven, however, that implementations taking a protracted length of time rarely experience the total benefits and resulting return on investment offered by the new ERP solution. Rootstock cannot tell you exactly how long your particular implementation will take because the elapsed time to implement *your* new ERP solution will significantly depend on the resources that you commit, their timely availability, and effective utilization.

Steps in the Implementation

1) Planning Track
2) Configuration Track
    a. Software Load
    b. Initial Configuration and Kick-Off
    c. Sandbox Refresh
    d. Go To Meetings preparing for the BRD
    e. Business Requirements Definition (RS - On Site)
    f. Sandbox Configuration
3) Training Track
    a. Core User Training
4) Pilot Track
5) End User Training
6) Readiness Review
7) Go Live

An Implementation Project has many steps. Some of these steps must be accomplished in a particular order, while others are practically independent of other steps. Think of there being five "tracks" or parallel sequences of steps. The tracks can proceed independently, except that the shorter tracks generally need to be completed by a certain point in the longest, or primary, track. These tracks, their steps, and their tie-in with each of the other tracks are explained on the following pages.

The five tracks of an Implementation Project are as follows:

- The **Planning Track** includes collecting key operational information from the Customer; selection of the Rootstock Project Manager and the Customer Project Manager; holding the Kickoff Meeting to launch the implementation effort; development of the Project Plan; and selection of the Pilot Team.
- The **Configuration Track** includes setting the basic system configurations which includes system parameters, profiles, permissions, etc. on the Force.com platform plus initial "seeding" of a Sandbox environment for use in subsequent tracks.
- The **Training Track** includes steps to educate and train customer personnel on the Force.com platform (as it relates to Rootstock); general business, industry specific and Rootstock concepts; training on the Rootstock ERP Modules (first for the Pilot Team and ultimately for general users). It should be noted that End User Training is normally the responsibility of the customer's Pilot Team; as well as training the Customer's Salesforce Administrator and other Information Systems personnel on Rootstock specific topics.
- The **Pilot Track** is the **primary track** of the Implementation Project, and includes project planning and management; documentation; business process analysis and mapping; the Conference Room Pilot; identification of potential enhancements to be performed by either the Customer, Rootstock or a third party; and final planning for "going live."
- The **Conversion Track** includes identifying all data that must be loaded into the system; analyzing its format and content, and determining how best to load it into the system; developing custom conversion strategies (programs, scripts, routines, API's, etc.) where appropriate; and performing the actual conversion just before "going live."

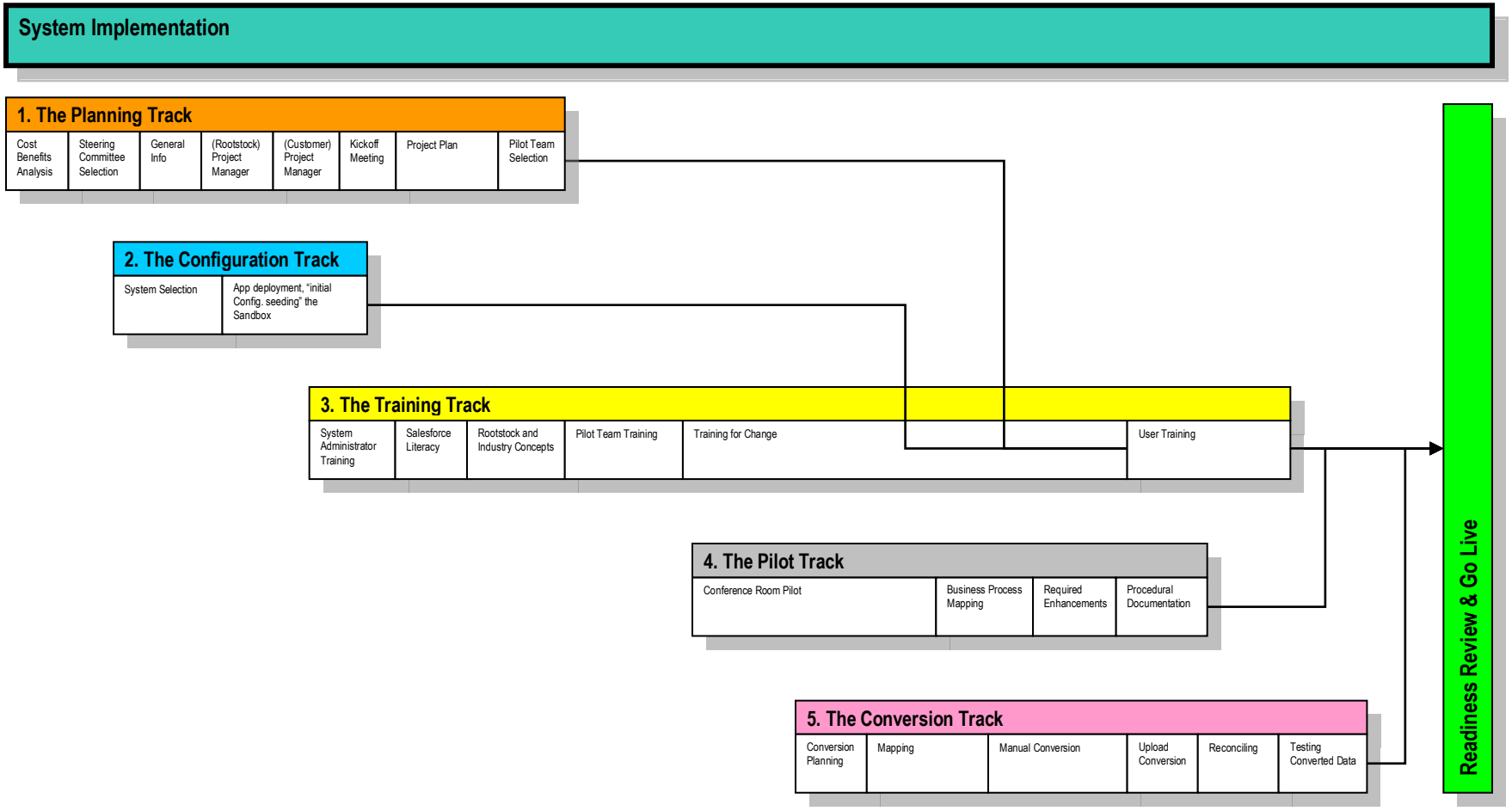
Once these tracks are complete, Rootstock will conduct a **Readiness Review** with the Customer to verify that all required elements are in place prior to going live.

Summary

Putting these tracks and their activities together to complete the Implementation Project requires a great deal of effort, dedication, intensity, and commitment from the Customer's Project Manager and the Core Users/Process Owners (both oftentimes referred to as 'Power Users') that comprise the Pilot Team, the Rootstock Project Manager, the Rootstock Manufacturing Lead Consultant, the Rootstock Accounting Lead Consultant and other involved Rootstock staff. The potential prize is a smooth-running Rootstock ERP solution in the Customer's environment, contributing to a well-organized and efficiently running Customer business – exactly the result Rootstock seeks and promotes with all of its Customers.

Implementation Flow Chart

This chart illustrates, in general terms, the typical flow and order of actions and activities associated with the implementation of Rootstock. While each Customer is unique and must fine-tune the implementation process to fit their needs, most will find that the Tracks and basic tasks outlined in this chart are applicable.



The Planning Track

This section covers:

- Steering Committee Selection
- General Information
- (Rootstock) Implementation Team
- (Customer) Project Manager
- Kickoff Meeting
- Project Plan
- BRD (Business Requirements Definition)
- Pilot Team Selection

For more details, please see these related documents:

Rootstock Project Plan

Steering Committee Selection

Depending on the scope of the implementation (i.e., multi-company, multi-division, multi-site, etc.), some Customers may want to establish an Executive (or Steering) Committee to provide a high level of executive guidance to the Project, to monitor schedule and budget performance, and to resolve policy issues that the Pilot Team and/or the Project Manager may bring to their attention. A Steering Committee is usually suggested on those very large implementations when there are many departments, process owners and even a number of plants getting implemented. The committee usually consists of members selected from among top management. Its members possess the authority to authorize all expenditures associated with the project (as well as set priorities for assignments), and determine allocation of personnel and related resources. If conflicting projects compete for the Customer's attention, the Steering committee will help maintain focus on the implementation as appropriate. The committee members will provide direction and input when specific problems or hurdles arise that the Pilot Team members themselves are not able (or are not authorized) to resolve.

General Information

Once all agreements are in place, the Customer will be asked to provide information about its key personnel (name, contact information, position and responsibility for the Project), its products, and other pertinent information.

Rootstock Implementation Team – Typical Roles and Responsibilities

While the number of Rootstock consultants, as well as overall roles and responsibilities, can vary depending upon the number of Rootstock licenses purchased and the overall scale and scope of the implementation, typical roles would include:

1) Executive Sponsor – Responsible for working with the remainder of the RS implementation team to help get the implementation started, ensure it is proceeding to schedule, and serves as the first escalation point for the customer if there are any issues that the project manager either cannot address or the customer is more comfortable addressing with someone else. Also may be a part of the Business Requirements Definition as well as the scope definition of any enhancements.
2) Project Manager – Primary contact for the customer. Responsible for managing the overall day-to-day efforts of the Rootstock implementation team and ensuring the project is successfully implemented.
3) Mfg Lead Consultant – Subject Matter Expert (SME) on Rootstock manufacturing. Responsible for configuring and implementing the Rootstock solution, as well as providing Rootstock training.
4) Accounting Lead Consultant –SME on key accounting integration packages with Rootstock, as well as the required accounting set-up within Rootstock. Responsible for configuring, implementing and training on Financial Force accounting (if installed); responsible for training on set up and interfaces (e.g., file import/export) for other accounting packages.

Note that, depending upon the specific implementation, some of these roles could be combined and filled by a single Rootstock consultant. The Project Manager and Manufacturing Lead Consultant roles, for example, are frequently filled by the same individual. All roles on the Rootstock implementation team will have customer-billable hours as part of the overall implementation, billed per the specific customer Agreement. Customer-billable hours include both customer meetings as well as tasks and activities required which do not directly involve customer resources but are required to support the implementation (e.g., scenario testing, meeting follow up, internal Rootstock implementation team meetings, email processing, addressing/responding to general questions, etc.).

The Rootstock Project Manager role is not intended to supersede the Customer Project Manager; it is the Customer Project Manager who has the primary responsibility for the overall implementation. The primary resources required for a successful implementation are customer resources, controlled and influenced by the Customer Project Manager (not Rootstock).

The Project Manager is Rootstock's Professional Services staff member assigned as the primary interface to the Customer, to organize and lead the Rootstock effort of the Implementation Project. The Project Manager provides or schedules other Rootstock staff to provide ORG (ORG is a term used to define the Customer's Salesforce.com instance into which the Rootstock Modules will be deployed) Configuration and training, application software (Rootstock) installation and training, training in the use of Rootstock support procedures, and assistance and guidance in all aspects and events of the Implementation Project. The Project Manager functions as the Customer's primary interface to Rootstock during the training and pilot

phase and the initial "live" operation, generally monitoring and guiding the project and satisfying the Customer's needs for helpful resources. The Project Manager also acts as advisor to the Customer's Project Manager and Pilot Team (comprised of the Customer's Core Users/Process Owners) in the application of the Rootstock system. The Project Manager may be a frequent visitor to the Customer site, but much of his work will be done from Rootstock's office as well.

(Customer) Project Manager

The assignment of this individual is the single most important item that will increase the probability of a successful implementation. This is the individual selected by the Customer that is assigned to organize and lead the Customer effort for the Project. This should be a high-level manager or executive. It is very important to the success of the Implementation Project that the Customer's entire organization recognize that the Implementation Project and subsequent live operation of the system is "Customer owned." One important factor in assuring this recognition is that a senior manager or executive of the Customer organization manage the Project. The Project Manager's responsibility is to manage the overall system implementation, schedule, coordinate (or supervise) the activities of the Customer's Pilot Team, and to communicate the status of the Project to the Customer's executive management.

The Rootstock Project Manager will provide support and advice as requested to the Project Manager. These two managers will function as each company's primary interface. It is to be expected that they will also communicate after the implementation as it relates to 'ongoing training' and 'system enhancements' and other 'post go live' discussions that may ensue.

Kick-off Meeting

After formal agreements (the Subscription Service Order and the Statement of Work) between Rootstock and the Customer are completed, the first "official" event of the Implementation Project is the Kick-off Meeting. Rootstock is represented by the Project Manager and either (or both) the VP of Sales and/or the VP of Customer Services. The Customer is represented by the Project Manager and other top-level management personnel directly involved in the implementation.

The purpose of the Kick-off Meeting is for Rootstock to explain the flow of the Project, and to explain both the Customer's and Rootstock's responsibilities related to the Project. Specific subjects addressed at the Kickoff Meeting include: The customer kick-off meetings are typically short (30 minutes) and the following is accomplished:

1) Introduction of team members (who does what on each team – Rootstock + Customer)
2) Discussion of near-term schedule – i.e., what the customer can expect leading up to the BRD. That which the customer can expect prior to the BRD is:
    a. The Rootstock software load on their org. This is an activity managed by Customer Support
    b. Start of the accounting configuration where a request is made for a copy of the Customer's Chart of Accounts. Rootstock starts working with the accounting department in this regard.

c. GTMs which focus on their process and configuration. (See below: '**Rootstock GO TO MEETINGS IN PREPARATION OF THE BRD'**)

During the 'KICK OFF MEETING' Rootstock will review some of the key tenets discussed in this implementation guide that was to be reviewed at contract execution. Most of that which will be discussed includes commitments and time allocations. This includes:

- Rootstock Project Manager responsibilities
- Customer expectations
- Data conversion
- The Force.com ORG setup and update
- Pilot Team selection
- Customer Project Manager responsibilities
- Project Plan development
- Rootstock expectations
    - Review of the sales proposal and the formal agreements
- Pilot operation and purpose
- Pilot training
- General User Training
- Live implementation

At the conclusion of the 'Kick off Meeting', both companies discuss the next step which is the establishment of the schedule for the first on-site visit and plan for the BRD as well as the 'GO TO MEETINGS' in preparation of the BRD.

While not part of the standard implementation, there are additional topics that may surface. These may or may not be discussed during the KICK OFF MEETING.

- Business process mapping (BPM)
    - It should be noted that the business process maps are developed by the customer. While the sales engagement may have a process flow for the demo, the business process maps are the departmental process flows.
    - These Business Process Maps are usually developed as an adjunct of the CORE USER Training prior to the pilot. At the very least the customer should develop a process flow which depicts the flow of their business and those areas that correlate to the Rootstock ERP system.
    - If the customer DOES want Rootstock to assist in BPM, then it would be a separate milestone likely BEFORE the on-site BRD, and may require its OWN on-site time.

      SPECIAL NOTE, SHOULD ROOTSTOCK ASSIST IN A BPM. Depending on the size of the organization, customers may have quite a volume of SOP (Standard Operating

Procedures) and Business Flows. It should not be expected that Rootstock is to review these documents as part of the implementation, as this is what is part of Business Process Mapping, and can take many hours depending on the amount of material that needs to be reviewed. Also, while these BPM may be helpful in understanding more about the business, there is typically much information that may be very detailed and not relevant to getting a company 'up and live'. Therefore if there is an expectation that Rootstock is to review this material, they should be provided a 'guided tour' by the 'Process Owners' as the most 'cost effective method' for Rootstock's participation in the BPM. And as noted above this is an additional task to that which is typically done by Rootstock during an implementation.

- Rootstock enhancements and customizations (policies) which is described in the Customer Support Manual

Rootstock 'GO TO MEETINGS' in Preparation of the BRD

After the Kick Off Meeting, and in preparation of the BRD, the Rootstock Project Manager will schedule 'GO TO Meetings' (GTM) with the Customer. These GTMs are "configuration GTMs" and they are on the milestone schedule. Typically, there are at least 2, and they are usually 1.5 hours, sometimes longer. In these GTMs, Rootstock Professional Services will re-visit information passed to them from Rootstock Sales (as appropriate) and they address both fundamental items regarding the configuration as well as beginning discussions on topics that will require some thought/discussion from the customer prior to the BRD. Rootstock will use these GTM discussions to be able to set an appropriate Agenda for the on-site BRD. As an example – if Rootstock determines in these discussions that the customer has decided to expense all labor, and has no interest in using anything but one-step Routings, then not that much time will be spent on Shop Floor in the BRD.

Rootstock Project Plan

Immediately after the Business Requirements Definition (BRD), the Rootstock Project Manager and the Customer Project Manager (and others as needed) will meet to discuss, establish, and document the goals and expectations of the Project, and to lay out a detailed Project Plan for the Implementation Project. The Project Plan includes events, dates, and responsible parties for the events that make up the Project Plan. Typically, a Project Plan addresses the following and similar items: While the project plan detail is worked out after the BRD, once the project scope and processes are fully developed; there is short term plan worked through after the Kick-Off – which includes the schedule for the BRD.

Items in the project plan include:

- A plan for business review definition (BRD)
- Application training for the Pilot Team
- Conference Room Pilot planning
- The Force.com ORG setup and update
- Implementation planning
- Key Project milestones

- Staff requirement planning
- Success criteria
- The general Project organization
- The Pilot Team and its members
- The Pilot Team leaders and their responsibilities
- The Steering Committee and its members (optional)

Project Planning generally involves a number of sessions over the course of the implementation in which the Rootstock Project Manager and the Customer Project Manager discuss business objectives, the Pilot, training, and conversion strategy.

Rootstock has a project plan for the management and allocation of its resources. The customer should have an overall project plan for the entire project. Who manages the Customer's project plan and the format of the plan is discussed during the BRD. Rootstock typically advocates that the customer updates their project plan with input from Rootstock.

The Rootstock Project manager will incorporate those discussions into revising the Project Plan and schedule, as well as projecting key milestones such as the Pilot start and completion dates and conversion and live implementation dates. Completing the Project Plan involves an honest and thorough examination of a Customer's business and technical operations, covering all areas that will be controlled or affected by the use of Rootstock software. This Project Plan takes into consideration the extent to which the company should apply ERP systems to their operation.

Once the Rootstock Project Plan is completed, it is then maintained and modified by the Rootstock Project Manager. At least bi-weekly, the Customer Project Manager should meet with the Rootstock Project Manager and Pilot Team to review progress against the Project Plan, make new assignments, and identify and resolve problems or conflicts.

BRD (Business Requirements Definition)

Depending on the Customer's business, this is a review of the user's functional processes (e.g. for a Manufacturer areas such as Engineering, Procurement, Sales, Cost Accounting and Inventory Control Processes, etc.; for a Distributor, areas such as Procurement, Sales, Warehouse Management, Replenishment Planning, Cost Accounting, etc.) (see **BRD Outline in the Appendix**). While some of the questions may have already been addressed in the product demonstration phase of the Rootstock sales process, there are always questions and business processes that were not addressed during the demo(s). It is strongly advised that senior management, capable of and with the authority to re-define business processes as appropriate, take advantage of system capabilities as they participate in the BRD process (and also the PILOT Track). For those questions that were not addressed in the product demonstration, it is advisable for the Customer and Rootstock to review the questions in the BRD outline, thinking about 'current' and 'revised' business processes using the Business Requirements Definition as the basis for the entire Pilot process. It is intended that the 'power users' gather any documentation that they deem appropriate from the various departments to these BRD sessions. One for one 'mapping' the Rootstock

system to the current (or proposed) processes of the customer is the customer's responsibility during their Pilot phase. The BRD is not intended as a 'substitute' for this functional/departmental process mapping.

While there are template agendas (see BRD Agenda in the Appendix), the actual BRD agenda and topics are typically customer-specific, as determined by the GTMs that are conducted prior to the on-site. Part of the function of the BRD is for the Rootstock Team to actually see the customer's operation. The BRD is typically 2 - 3 days on site, and includes throughout this time the Rootstock and Customer implementation teams. Who actually goes on site for Rootstock would depend on size and scope of the implementation.

The BRD is typically performed by one or more Senior Rootstock Consultants that have both an in-depth understanding of manufacturing, distribution and supply chain processes as well as a very good understanding of the Rootstock Software Modules. The Senior Rootstock Consultants may include the Manufacturing Lead Consultant, the Account Lead Consultant and the Project Manager.

Additional time spent because of items discovered in the BRD process that require special business procedure / system 'workarounds' may incur time that is in addition to the original estimate, depending on the amount of time incurred in analysis, meetings and documentation provided. If there is a question as to whether or how the Rootstock product may support a particular business function or if there is a question as to whether there should be a change to the business process and the answer isn't immediately forthcoming, the Rootstock Project Manager will denote these as 'parking lot items' that can be addressed during the course of the implementation. In fact, it is often the case that any questions that require time for discovery and/or response may be put on a 'parking lot list' to keep the BRD schedule on track. This 'parking lot list', which originates during the BRD, may be augmented during all stages of the implementation and are part of the Project Plan document. If there are more than 25 open parking lot items at any time, this should be a cause for concern and both the Rootstock project manager and the Customer project manager should review the list and make a determination as to why that is. It may be that there are too many system 'work arounds' or that there is more than the usual amount of requested product enhancements or customizations. In any case a discussion should ensue to insure that everyone has the same expectation as it relates to the objectives of the implementation and what is achievable prior to 'go live'.

In many cases the Manufacturing Lead Consultant and the Rootstock Project Manager are one and the same person. And it is the Rootstock Project Manager that will be the interface between the Customer and the rest of the Rootstock Organization (Technical staff, Support Staff and Executive Staff).

Pilot Team Selection

Along with the Customer Project Manager, the Pilot Team (comprised of Core Users and Process Owners) bears most of the responsibility for a successful Implementation Project. Pilot Team members must possess full knowledge (in aggregate) of how the company conducts its business today and how it wants to conduct business in the future after the Rootstock Implementation Project is complete. Generally, the Pilot Team will consist of about three to eight members, depending on the size of the company, one from each major discipline – or major department or area of expertise – within the company. In selecting Pilot Team members, one must acknowledge that their involvement in this undertaking will be such that it will be in addition to the time spent in doing their typical job. The members of the Pilot Team should be selected because they possess the following qualifications:

- They are completely knowledgeable about operations within their area of expertise.
- They understand the way their function fits within the company's operation.
- They are generally management or a respected senior operations staff member (and can make decisions on behalf of the company).
- The Core Users (or Power Users) own the business processes and ideally are the participants in the pilot. They are the individuals who have been trained, thus they conduct the pilot.

- They are respected within their discipline and within the company.
- They are good team players.
- It is suggested that all participants in the pilot have exposure to the Salesforce UI conventions. If they have had little or no exposure, then prior to their starting the pilot they should get training on Salesforce at least enough to know the basics of the screen navigation and capabilities.

The Configuration Track

This section covers:

- Other Software Products installed in the ORG
- ORG Configuration

For more details, please see these related documents:

Rootstock Configuration Workbook

Other Software Products installed in the ORG

Very early in the Project, and often before the contract is finalized, the Customer must select the software products that will make up the overall ERP system. They may decide that there should be additional software that works in conjunction with Rootstock ERP to provide the complete functionality they require. Rootstock will generally recommend products if the Customer asks for such recommendations, but the decision lies with the Customer. Products from which to choose may include (but are not limited to) the following:

- SALESFORCE CRM
- FINANCIAL FORCE
- QUICK BOOKS
- AVALARA
- ZENCRAFT

ORG Configuration

The software configuration of ORG is a critical element of the success of the Project. Because of the critical nature of this function, Rootstock strongly recommends that customers have Rootstock Professional and Technical Services personnel work with them on this setup. This also includes working with Rootstock Professional and Technical Service personnel assisting them on the setup of Salesforce Profiles for the two default profiles that Rootstock provides. Rootstock implementation contracts include the provision that

Rootstock Technical Services staff deploy Rootstock into the Customer's Salesforce ORG including the initial Rootstock configuration settings.

Rootstock's service includes:

- Planning the deployment of the Rootstock Software Modules
- Mapping the initial configuration settings
- Deploying Rootstock Software Modules
- Setting up the Salesforce Sandbox and populating the initial pilot data as necessary.

The Rootstock effort is typically all "off-site time". This effort typically involves one day of planning, and one day of deployment and setting the configuration and testing the configuration. This step is not tied to any specific event in the implementation sequence. It is completed as soon as the Salesforce ORG is available and always prior to initial Training

Additional documentation that should be read by the customer concerning the configuration of the software includes:

1) The documentation describing the Salesforce email templates, pdf's. Refer to the Rootstock Email Template Document on the Customer Doc Webpage.
2) The documentation regarding what Rootstock does and does not do concerning setting up and maintaining PROFILES. Refer to the Rootstock Profile and Access Control Document on the Customer Doc Webpage.

The Customer Doc Webpage can be accessed at:
www.rootstock.com/customer-document-resource-center/

The Training Track

This section covers:

Salesforce Administrator Training

Rootstock recommends that each customer have a Salesforce System Administrator, responsible for ongoing Salesforce platform maintenance. Rootstock does not perform this training. Rootstock does not conduct Salesforce Administrator Training. A good starting point is the Salesforce Training Catalog, which can be accessed through a Salesforce login at:
https://help.salesforce.com/htsctrainingcatalog/

This catalog lists both free online and fee based courses. Using the 'Job Role(s)' filter in the lower left and selecting 'Beginning Administrator' will filter the list to include the recommended courses below (as well as many others):

Getting Started: Administering Salesforce
Managing Users and Troubleshooting Login Issues
Getting Started with Managing Data

In addition, the System Administrator should also have a firm grasp of the relationship of Standard Objects/Standard fields and Custom Objects/Custom fields, and how they could be linked to create custom reports. The System Administrator should also become familiar with the Salesforce Dataloader product for exporting data to Excel CSV files and loading data from Excel CSV files, especially during the startup and implementation process.

Pilot Team Training

Pilot Team Training, is designed to provide the Core Users with the system knowledge they need to perform their Pilot. This training includes an "end-to-end" (order to cash) complete cycle for each key process area, including accounting; it should be noted that the Customer is responsible for developing, as part of this training, their internal documentation – for their use in training and Go Live – of how they will use the system.

The Pilot Team's main task is to "fit" Rootstock into the company's business and operations, adjusting both where necessary to arrive at the best fit and a stronger resulting business. To perform that task, the Pilot Team must become knowledgeable of Rootstock software, its operation, capabilities, options or choices, relative to the way the company operates. Pilot Team Rootstock training is not intended to make "expert" users of Pilot Team members. Rather, it is intended to give Pilot Team members a base of knowledge of Rootstock that then allows them to progress through the Pilot. A good rule of thumb is to plan for Pilot Team members receiving 3 hours of training for each application area that the Customer intends to implement.

The initial area of operational training for the Pilot Team is Rootstock navigation. Essentially, navigation training shows how to operate the Rootstock ERP Software and it covers for each Module the Customer will be implementing, what each menu item means, what it does, and how the menu screens work. The general Pilot Team Rootstock training covers all Rootstock Modules to be implemented by the Customer. It is generally a good idea for the Pilot Team members to take part in all areas of training – that is, for all Modules. First, this gives all Pilot Team members first-hand exposure to all Rootstock Modules which will be beneficial during the Pilot and in the future. Second, this gives all Pilot Team members an idea of how each Module interacts with other Modules as Rootstock is an integrated system. Third, all Pilot Team members take part in discussions that determine how to perform various business functions in Rootstock. The object of the Pilot Team Training is to insure that the Pilot Team becomes familiar with all the functional aspects of Rootstock so they can plan and execute their own pilot with assistance from Rootstock only in key areas. Rootstock recommends a thorough walk through of critical areas – in most companies this will include (at a minimum) Sales Order Management, Inventory Management, Cost Accounting and integration with financial accounting Modules.

Change Management

Many organizations underestimate the impact that their ERP project will have on their people, roles, skill requirements and on the structural organization of the company as a whole. Successful change management is one of the most important factors in determining the success of the project. Experience tells us it is usually not carried out effectively. Perhaps it is because many organizations are uncomfortable with the soft, psychological nature of change management and therefore, do not give it the support that is required.

In simple terms, effective change management ensures that the Customer's organization and personnel are ready, willing, and able to embrace the new business processes and systems that are called for in an ERP implementation. More often than not, staff members will resist change unless they are given a good reason not to. In order to avoid this type of situation, various strategies may need to be designed to both communicate to and positively influence potential resistors. The tactics used need to be varied according to people's level of influence, as well as their ability to impact internal situations.

A network of project representatives throughout the organization supports the most successful communication strategies. These people serve as two-way conduits of information, helping to distribute project-related information and material while also providing valuable, honest feedback to the Pilot Team regarding any and all potential trouble spots. The members of the Customer's change management

initiative need to be well respected and trusted at all levels of the organization and should be connected with a healthy, personal, inter-company network. They, along with the Customer Project Manager, will play a major role in this effort. Outside of traditional user training, the change management project team should strive to provide training in a wider sense. The desired business objectives related to the new solution need to be outlined, and a thorough explanation of new business processes, people's new roles, and all aspects of the new system should be addressed. Formal training sessions provide a great forum in which to communicate these objectives and to influence personnel in regards to increased acceptance of the delivered solution.

End User Training

Training of 'users other than' the Core Users and Process Owners is 'End User Training'.

Depending of the Customer's business, this could include training of Engineering, Purchasing, Sales, Receiving, Shipping, Stores, Production Control, Material Control, Cost Accounting personnel. The topics that will need to be covered are also dependent on the type of business the Customer is in and which Rootstock functions they will be implementing (see table below):

Manufacturing	Distribution	Supply Chain
Product data management	Product data management	Direct/drop ship management
Sales order management	Sales order management	Outside process management
Returns processing (RMA)	Returns processing (RMA)	Subcontract purchases
Forecasting	Forecasting	Vendor inventory management
Material requirements planning	Replenishment planning	Vendor/buyer collaboration
Purchasing and receiving	Purchasing and receiving	Data collection and management
Inventory management	Inventory management	Cost accounting
Warehouse management	Warehouse management	
Data collection and management	Data collection and management	
Cost accounting	Cost accounting	
Capacity management		
Shop floor execution		
Data collection and management		

Unless otherwise specified in the Statement of Work, the 'power users' that participated in the Pilot will perform this End User Training (versus Rootstock). They will be using the customer-developed documentation from the Core User/Process Owner training, with Rootstock assisting (if necessary).

It is also very possible that Rootstock may support the 'power users' in 'training of specific areas' that can be done over with web sessions without Rootstock traveling to the customer's site.

If it is decided that Rootstock will participate in the End User Training, then the requirements of using Rootstock personnel for any of the End User Training and estimated fees should be discussed towards the end of the Pilot.

The Pilot Team's last major task is to determine and establish any unique training requirements, and to document them for training the users (including new users after implementation). All users of the system should be trained within the two-week period just prior to taking the system "live." There are three general approaches to User Training: Training by the Customer Pilot Team; Train-the-Trainer; and Training by Rootstock Professional Services staff.

- **Training by the Pilot Team**
  Having now conducted the Pilot, the members of the Pilot Team are at this point the most knowledgeable people regarding how Rootstock will be used within the company. Knowledge-wise, they are perhaps the most appropriate people to provide User Training, as they will be able to answer questions and explain some Business Process Mapping decisions made during the Pilot. However, the Pilot Team members' ability as trainers is something that the Pilot Team, and perhaps Customer management, must judge. Training by the Pilot Team will promote the very important "Customer ownership" of the Implementation Project within the organization, insure the Pilot Team's attention to detail during the Pilot, and minimize the Customer's dependency on Rootstock over the long term. Rootstock's goal is to prepare the Customer's team to be self-sufficient as quickly as possible.

- **Training by Rootstock Staff**
  The Customer may elect to have Rootstock Professional Services staff provide End User Training. In order to provide this training, Rootstock would still use the customer-developed documentation that would have been created during the Core User Training. Because Rootstock staff is not present at all times 'on site' during the Pilot, Rootstock will not know this information without the Pilot Team's input. Even with this input and preparation, Pilot Team members will need to be available during Rootstock-conducted End User Training to answer questions and perhaps to explain some Business Process Mapping decisions made during the Pilot. At the Customer's option, Rootstock can also provide manufacturing, distribution and supply chain concepts training during this training phase. Combining both concepts and user training during this phase provides the Customer's staff with basic industry best practice and business understanding in addition to the specific procedural steps they must follow, generally resulting in a more knowledgeable Customer staff.

Pilot Track

This section covers:

Conference Room Pilot

Having received Pilot Training, the Pilot Team begins the Conference Room Pilot, so-called because it is a simulation of the company's business, completely controlled and performed from within a conference room or similar facility. The Pilot is completely under the control of the Customer's Pilot Team, though the Pilot Team will generally look for directional guidance from the Rootstock Project Manager or Manufacturing Lead Consultant in order to take advantage of the Project Manager's experience in prior Implementations. The general flow of a Pilot is as follows:

- Establish Pilot controls: which product(s) will be piloted (that is, represented in the Pilot); in what sequence will modules (or applications) be piloted; which key personnel will pilot each module; how will results of the piloting be reviewed and evaluated; what is the overall schedule.
- Set up controls and early data tables (i.e. objects): system-level and module-level control tables; user menus; general ledger account structure; manufacturing account structure; product commodity codes; financial statement formats.
- Build "static" tables:
    - **for Manufacturers:** Customer data; engineering and inventory data; bills of material; salesman data; vendor data; inventory locations and initial balances; work centers and routings; project structure and project data; manufacturing costs.
    - **for Distributors:** Customer data; product and inventory data; product configuration data; salesman data; pricing and promotion data; vendor data; inventory locations and initial balances; project structure and project data (optional); costs.

- Build:
    - **for Manufacturers:** planning tables: material requisitions; forecasts.
    - **for Distributors:** planning tables: material requisitions; forecasts, warehouse info.
- Conduct "business cycle" piloting:
    - **for Manufacturers:** process customer sales orders; perform planning; process material requisitions; process purchase orders; process work orders; perform customer shipments and close sales cycles; perform accounts receivable functions; perform accounts payable functions; process accounting and "cycle close" data. As part of this process, the customer should use some of their own departmental process flows. As part of, or as an adjunct of Core User Training, it is suggested that the core users should have already accomplished their business process 'mapping' of the Rootstock system to their present processes so that they can (a) gauge how the system supports their business and (b) determine where they now have the opportunity to improve and change business processes.

      Often, the customers have not done a complete mapping all on their own; they are just being trained in the Rootstock Software and don't typically have the knowledge to do so. However they do know their flows and many do mapping of their general processes because it is an aid to their understanding the software. If it appears that this would be a significant undertaking, Rootstock would suggest breaking it out as a separate milestone, assisting as required.

      Oftentimes, the executives of the company will use their own version of a business flow to gauge which of the core users should be involved in a pilot. In larger organizations, core users will create more detailed departmental process flows are created so that the general users can be more easily trained.
    - **for Distributors:** process customer sales orders; drop ship/direct ship (if applicable) perform replenishment planning; process material requisitions; process purchase orders; perform customer shipments and close sales cycles; process returns; perform accounts receivable functions; perform accounts payable functions; process accounting and "cycle close" data. As part of this process, the customer should use some of their own departmental process flows and attempt business process 'mapping' of the Rootstock system to their present processes so that they can (a) gauge how the system supports their business and (b) determine where they now have the opportunity to improve and change business processes.

      Perform period-end processing: perform month-end accounting close; perform history data "rolls"; review analysis reports; perform year-end processing
- Evaluate Pilot results: review issues and expectation differences; identify user procedures to be developed; identify required customizations.

Pilot Team members will experiment with the Rootstock Modules, individually in their specific areas of the system and as a team. Concurrently, the Rootstock Project Manager will provide them application instruction/advice, and re-engineering consulting as necessary. During this process, the Pilot Team will

discuss and decide how the many facets of the system will be specifically applied to their unique environment, and any required or desired re-engineering will be discussed and decided upon. The Pilot Team will review the results of each step to ensure that the process is working to their satisfaction, make any necessary changes, and then repeat the steps until they are satisfied with the entire process. This phase of the Pilot can take as little as a few weeks to a month or more, depending substantially on the available time and the commitment of the Pilot Team members and the scope of the project. As noted earlier – Rootstock is typically on-site and involved during the pilot (or in certain areas of the pilot) and this anticipated time included in their total hourly estimate – they would not conduct the Pilot on their own. If the customer believes that they can conduct and manage the Pilot on their own, then it is suggested that Rootstock be involved to 'kick off the pilot' and be available for at least some of the final Pilot Sessions. For example, it is advised that the Rootstock Project Manager be on site (or attend through a 'Go To Meeting' session) on those Pilot sessions which involve the interaction of Engineering, Purchasing, Production and Sales. Those Pilot sessions which have a majority of the group participation can be very effective if they involve Rootstock; even if it is in a 'Go To Meeting'. The Rootstock ERP solution is a large application and 'Pre Pilot' Training is helpful for the informed user to conduct their own pilot; but experience has shown that 'Pre Pilot' Training does not provide all of the answers that one needs to complete a thorough Pilot Training. If Rootstock is on site while the Pilot is going on, then they can respond to Ad hoc questions as they arise. If Rootstock is not on site while the Pilot is going on then there needs to be periodic 'go to meetings' with Rootstock to insure that the Pilot is proceeding as the Customer and Rootstock expected.

The Rootstock Senior Rootstock Consultant(s) using the information garnered from the BRD will setup and prepare some basic system setup data for Conference Room Pilot. Often times the 'prepping' will involve requests from Rootstock technical staff requesting how to accomplish certain business practices because of the unique nature of the variants associated with functional processes. Also, it is expected that the Senior Rootstock Consultant(s) that participated in the BRD will also be doing the Pilot Prep and the Pilot participation and will request that as part of the setup they have a subset of data that can be used for "seeding" the sandbox (e.g. in the case of a Manufacturer - the bill of material, routing (if available) and forecast).

As noted, the Conference Room Pilot is essentially a series of hands-on sessions giving the users an opportunity to work with Rootstock Modules using Customer data in the sandbox. It is the time and opportunity to review all aspects of the Rootstock ERP solution and correlate these functional aspects of the Rootstock Modules to the Customer's environment. The results of the Conference Room Pilot will be used to make the go-ahead decision of when to implement Rootstock in a live operation. A portion of this Conference Room Pilot will be attendance in meetings discussing company policies and procedures as deemed necessary by Customer and Rootstock in determining the setting of key fields and indicators in the Rootstock Modules. (See **Template of Pilot Project Activity Plan – in the appendix –** which will be used as a basis for setting up a tailored plan based on the results of the BRD.)

The Conference Room Pilot is also a method of providing the Customer's General Users' access and a preview to the Rootstock Modules prior to the formal End User Training. This "preview" to Training includes hands-on input into the Rootstock Modules where the users are given the opportunity to practice inputting transactions in order to see the results obtained from Rootstock and to validate the Pilot Team's

assumptions. This interactive mode of previewing provides the best possible experience for the users because there is no better way to validate assumptions than actually inputting transactions into Rootstock, making mistakes, and learning how to prevent or correct the mistakes made. The Conference Room Pilot allows the Pilot Team members and a select group of General Users to enter information into Rootstock and have the Rootstock Modules edit and process that information, and calculate and output the results.

It is expected that Rootstock staff will not be engaged in all of the Pilot activities and that once the Pilot Team (aka 'power users') are trained, Rootstock personnel's participation will be more of an advisory role than in the 'project lead – classroom instruction' role, which is their role for most of the Pilot Team Training portion of the Training Track. This advisory role can be performed either 'on site' or via 'Go To Meeting' sessions and is generally limited to not more than 5 Pilot activity sessions.

Note: The Sandboxes in a Salesforce ORG can be 'refreshed' from a Production ORG (but not vice versa) and therefore the 'Pilot Data' established and built in the Sandbox ORG cannot be 'pushed' back to the Production ORG. It can be saved in the Sandbox and used for future testing or training. However, most Customer's choose to 're-establish' a Sandbox for future training by refreshing from the Production ORG after 'go-live' (this way Customer personnel are working with recent and accurate data).

Configuration

Rootstock is an extremely flexible ERP solution. While this is very good for the user, it does require that the Customer "map" its business processes into Rootstock capabilities. This means selecting the right Rootstock options to make Rootstock procedures "match up" to the way the user does business, or engineering a change in the user's procedures to "match up" to the way Rootstock works. Typically, this process begins after the Kickoff Meeting and continues through the Pilot, but most of the work is accomplished within the framework of the Pilot. It includes mapping of engineering processes, inventory, work order, sales order, MRP and business planning processes, procurement processes, product costing and accounting processes, and perhaps others. Where this mapping does not correctly or completely handle a given situation, re-configuring the software may be required.

Programming Requested Enhancements and Parking Lot Items

A need for custom enhancements to the standard Rootstock Modules to accommodate specific business processes can surface at any time:

- during site surveys and product demonstrations prior to finalization of agreements between the Customer and Rootstock with the details to be worked out during the Pilot.
- during the Implementation Project; generally, if a need exists, it will become evident either
    - during BRD or
    - during the Pilot

Customer-perceived requirements for system enhancements or customizations are reviewed with the Rootstock Project Manager to insure that the solution does not already fulfill the need. These initial requests surface as 'parking lot items' as part of the Pilot process or Business Requirements Definition. Since the project plan is a 'living document', these parking lot items are typically added to the project

plan during the BRD, and the Pilot. When such a need is confirmed, the Rootstock Project Manager and the Customer Project Manager will jointly determine if there is to be a work around or a request to Rootstock Product Development to provide a rough ball park estimate for a paid for enhancement or a custom modification to the product. It may even be the case that a given 'parking lot item' will result in the specifications for the enhancement and that there is agreement on the schedule and cost before proceeding. The target for completion is generally some time during the Pilot (to allow for testing), or at least prior to "going live." Any such requested enhancements, can delay the original intended 'go live' date that was discussed during the sales process or initial Project Planning. Not all 'parking lot items' will result in changes to the Rootstock Software Modules. Oftentimes, it is decided that these items or enhancements are not required to 'go live'; or that the cost of the enhancement to the Rootstock Software Modules is not worth the 'benefit'.

Requesting enhancements to the Rootstock Software Modules can be minimal and therefore added for a minimal fee or they can be major and quite expensive. Therefore, some of the considerations on whether to accommodate these items should include:

- Ideally the Customer can perform their own Salesforce workflows and addition of custom fields to the objects without having Rootstock change the standard Modules. In those instances, the customer may desire the possible engagement of Rootstock's professional and technical services on a time and material basis that can provide assistance as requested.
- The Customer may request 'custom reports' or capabilities that Rootstock will quote on a case by case basis. There is a procedure defined in the Rootstock Customer Support Manual as to how Rootstock goes through an estimating, quoting, specification signoff process with the Customer.
- Anything added by Rootstock that does not become part of the Rootstock standard product offering will incur an additional 'annual support fee' as well as the cost of creating the enhancement**.** This 'annual support fee' is equal to 25% of the 'one time charges' for the creation of the enhancement.
- The Customer may request that a 'standard capability' that Rootstock intends to incorporate in its Modules be moved up (expedited) in the Rootstock's development schedule. While Rootstock will charge for this type of expedited service of adding a planned enhancement (at the rate of $200 per hour), there will be no 'annual support fee' levied on these enhancements
- The requirements of additional enhancements and estimated fees can be discussed during and even after the Pilot.

Procedural Documentation

Rootstock recommends that during the Pilot and shortly after its completion, the Pilot Team develop its own internal documentation that (1) covers all operating procedures for all business processes within the company (as determined or decided during the Pilot), and (2) conforms to the company's normal standards for such procedural documentation. It also serves as future training material for new staff using the Modules.

The Conversion Track

This section covers:

- Conversion Planning
- Mapping
- Manual Conversion
- Upload Conversion
- Reconciling
- Testing Converted Data
- Data Conversion Activity

History Data

Most non-transactional data from the current ERP system can be uploaded into Rootstock using standard Salesforce tools, including Data Loader and Custom Import. Examples would include Customers, Items, and BOMs.

Rootstock maintains standard documentation of available data loads; not all data can be loaded. If specific data is required for which Rootstock does not have an existing data load, then Rootstock can provide a quotation for supporting the required data load.

Rootstock does not maintain standard data loads for transactional history data – for example: PO Receipts, shipped Sales Orders, Inventory Adjustments. If this type of transactional history is required, Rootstock can provide a quotation for supporting the required history data load.

Conversion Planning

Every Rootstock ERP solution implemented will have some plan for conversion of existing data into the Rootstock objects, whether it is a full conversion from a previously automated system or a first-time implementation that has data files stored in Excel spreadsheets. The Customer must always make multiple decisions (and occasionally unique decisions) as to how the required data is to be transferred from its current form to the Rootstock database. The data may have to be “cleaned up” (corrected) and made consistent, or purged of out-of-date portions. Some data may be transferred electronically, and new and unique conversion scripts, routines, programs or APIs may have to be created. It should be noted that the implementation does NOT include Rootstock development of any custom scripts or APIs. Rather, standard Data Loader functions are used and standard Rootstock documents supplied. It should also be noted that

all Rootstock objects loads are not supported via the Salesforce Data Loader; there is a list of objects that are supported which can be discussed during the conversion planning. Other data may be small in volume or inconsistently formatted. If this is indeed the case, the better decision may be to manually input the data, depending on volume. It may be the case that a customer, whose legacy data does not easily conform to the straightforward input, may require some customization to get their data loaded. Overall conversion planning also includes estimating the resources needed for conversion, estimating costs that will be encountered during conversion, and establishing timeframes for testing the conversion process for each type of data. The implementation estimate in the customer's proposal/contract excludes this activity as there is no way to guess this ballpark ahead of time. Rootstock can assist in this area at the standard Professional Services Rate.

Object Mapping

Whatever process is used for transferring data from the outgoing system into the new Rootstock Software Modules, but especially in cases where data is to be transferred electronically, the data in its existing form must be "mapped" into the correct Rootstock Object's data fields. This mapping requires knowledge of the data in its current format – generally provided by the Customer – and also knowledge of data fields and their use within Rootstock – generally provided by the Rootstock Project Manager (some of which is covered and discussed during the Training Track).

Manual Conversion

The Rootstock Project Manager will review with the Customer the pros and cons of manual conversion (where individuals enter data by hand into Rootstock). This approach is best suited for "static" data, that is, data which changes infrequently, such as customer and vendor records. Although some mapping is required, it is often less complicated than mapping required for Upload conversion. However, converting data manually usually takes longer than an upload conversion and always includes the risk of human error. Time and energy must also be expended in the selection and training of the personnel involved with the process. Efforts should also be made to audit in a systematic way the work performed by those manually keying in data. Finally, data entered into Rootstock manually must be maintained and kept up-to-date from the time it is entered into the Module until the go-live date.

Upload Conversion

As with the manual conversion process, there are pros and cons associated with converting data electronically with the use of Salesforce's Data Loader, Special Upload Programs/Scripts/Routines that might call the standard Rootstock APIs. It should be noted that the customer should have IT resources if they try to use an API – even if it is one that Rootstock already has. For each type of data, the Customer is responsible for creating a method to extract/pull data out of the old system and to provide the data in the format used by Salesforce Data Loader. Whomever the Customer selects for writing such extract/pull and format programs/routines should be familiar with the outgoing system and should be included in the mapping process. Rootstock is rarely engaged to create these extract/pull and format programs/routines for taking data from the old system, as the customer knows more about that source system than does Rootstock.

Reconciling

Reconciling is the process of comparing the data transferred into Rootstock against that found in the outgoing system, whether the data was converted manually or electronically with Upload Programs/Scripts/Routines. Discrepancies between the two systems must be identified during reconciling and will drive corrections to the mapping, data entry or upload efforts. During reconciling, each upload program must be tested to make sure its output is in the right format, and the data must be test-uploaded (a preliminary conversion) to make sure that the process works correctly. This reconciliation of the two sets of data is the responsibility of the Customer Team. It should be noted that the upload processes for any type of data occur first in the customer's sandbox, in addition to the Pilot.

Testing Converted Data

While *reconciling* is the limited focus of verifying the accuracy of transferred data, *testing* is nothing less than a series of rehearsals for the entire company leading up to the switchover from the outgoing system to Rootstock.

If the Customer configures their production org to exactly match their legacy ERP system, then creates a sandbox environment from production, then there are key transactions that could be processed in the sandbox org as they process them in their legacy production system. Purchase order receipts, sales order fulfillments in addition to some inventory transactions are the more common transactions that are reviewed. Also, the impact on the financials should be reviewed in both systems to insure that the cost accounting is properly done. Also the inventory on hand balances can be compared as well.

The company's users could therefore perform a series of these pre-defined transactions in the outgoing system. These users will then reproduce the same transactions using Rootstock. The output of both systems is then compared to verify that each is identical; or if there are differences, they should be explained. This process not only tests the use of Salesforce's Data Loader, Special Upload Programs/Scripts/Routines and the data being transferred, but also the skills and knowledge of the users who have been trained in Rootstock. In addition, such tests are usually the first time that the Customer's systems are put under the kind of performance load that may be expected during normal operations.

Data Conversion Activity

As mentioned earlier, Rootstock has created 'import' techniques/code and tools (CSV imports; Data Loader) which facilitate the process of the user inputting their data. There is a charge for training on the use of these tools and there is a charge associated with any manpower assistance provided during conversion. If Rootstock Professional and Technical Services are used for assistance in the Data Conversion Activity, there is no charge for the software using these 'import techniques' and programs; however, all professional services and additional Rootstock technical services time is chargeable should the Customer want assistance from Rootstock in this endeavor.

Analysis of Customer's data and practices required to develop the scripts for conversion is a separate chargeable activity if required and is not part of the BRD or Pilot Activity; it is also not in the original estimate as it is difficult to assess how much Rootstock participation is required, if any is required at all.

If it is determined that “custom customer specific” Data Loader and/or Special Upload Programs/Scripts/Routines will be created, then this could be discussed at any time during the implementation and will be estimated so the Customer can make an informed choice between doing the conversion manually, using their IT resources or using Rootstock services.

It is also strongly recommended that “any data which is expected to be loaded into the production org should first be test loaded into the Sandbox, which will validate both the data load process and the data formatting”.

The requirements of using Rootstock personnel for any of the Data Conversion Activity and estimated fees will be discussed towards the end of the pilot. Oftentimes, prior to contract, it is not known what the scope of the activity will be and the Customer assumes that they can do this without Rootstock’s assistance. It is always good to validate this assumption towards the end of the pilot. It is often the case that now, with a more informed user, they can indeed undertake the data conversion activities on their own with a modest amount of Rootstock assistance.

Readiness Review and Go Live

This section covers:

- Rootstock 'Go Live' Readiness Review
- Rootstock Readiness Review Template
- Go Live / Live Implementation
- Rootstock 'Go Live' Support
- On-Going Telephone Support
- Post Implementation: Additional Modules

For more details, please see these related documents:

- Rootstock Customer Support Manual

Rootstock 'Go Live' Readiness Review

Based on the experiences of the implementations to date, there are a number of items that should be 'checked off' to make sure that they were completed in the Pilot and End User Training.

Some of those items reviewed include:

- **Verification that all users have been trained on their respective functions.** It is not uncommon for the Rootstock Support team to ask "*Wasn't this user trained and/or this business function* validated *in the pilot*?" To minimize the "operator error" and to 'minimize' training provided by the Rootstock support team, a list of business functions will be provided and the user(s) and super user(s) responsible for the business function will be noted. Many of the standard business functions are performed during the pilot, but oftentimes functions such as 'material movement' reversals, and labor reversals were not necessarily done in the pilot but should be practiced before going live. The Readiness Review is a verification that the users have been trained on key business processes. The Sandbox can be reviewed to see if the following data exists:
  - Commodity Code Maintenance and System Configurations to make sure that production and sandbox have comparable set ups
  - Item and Product Maintenance
  - Routings
  - Setting up the Salesforce Accounts (i.e. Customer/Vendor Master files) with the proper default information

  - Setting up the Dimensions
  - Order to Cash
  - Procure to Pay
  - Work Order processing and Scheduling and Capacity Planning (for Manufacturers)
  - Material Requirements Planning
  - The Cost Transaction Audit Trail can be run and sorted by transaction type to validate who (and how often) transactions were played in the system.

- **A review with Accounting will be done to insure that they are familiar with the General Ledger transactions that are created by the PO receipt, Inventory Material Movement, Work Order transactions and Sales Order fulfillment transactions**. Reviewing these transactions will validate that the pilot was complete and the End User Training was accomplished. The Cost Transaction Audit File created transactions that were passed to the General Ledger or Accounts Payable or Accounts Receivable. The readiness review will determine which, if any, of these transactions were reviewed by Accounting.
- **It is suggested that the Rootstock Project Manager or Manufacturing Lead Consultant be involved in doing the Readiness Review with the Customer's Project Manager to make sure that all of the following static master files have been established**.
  - **For all Manufacturing and/or Distribution Customers:**
    - System Setup, Commodity Code, Item Master data (Products; Engineering; Inventory; Purchasing and Cost)
    - Division Master File
  - **For Manufacturing Customers:**
    - Engineering Change Control and Bill of Material
    - Routings

Any custom scripts and custom forms that may affect the Rootstock code should be noted so that the Rootstock Customer Support is aware that these custom scripts and forms have been done. Oftentimes there are problems that surface only to find out the problem is a result of custom scripts written in such a manner that they cause Rootstock transactions to fail.

Readiness Review Template

Taking a business live on a new ERP solution requires a great deal of planning. An important part of that planning is making sure that certain requirements have been met regarding training of the Customer's staff, executing a Pilot, support from critical vendors, and other areas. Rootstock provides a Readiness Review Template as a guide to prepare for live operation. When the Customer is ready for live operation, Rootstock will review the Readiness Review Template with the Customer. The readiness review template is provided to the Customer as a 'draft' based on their specific configuration. References back to the process flows and training that have been done are used to develop the customer-specific template. This process uses terms

that are meaningful to the customer. There is of course commonality across customers (e.g., a PO Receipt).

Go Live / Live Implementation

Even after a great deal of planning, training, and other preparation, "going live" with a new ERP solution is a significant step. Many steps simply cannot be completed until the Customer is literally in the "going live" process. Activity on an old system must be frozen; perhaps a complete inventory must be taken; current transaction-oriented data must be converted or entered; and static and history data may require updating. Newly trained users must bring their new knowledge into use. All of this activity must mesh together for a successful completion of the Implementation Project. Perhaps the most critical element of implementation planning is the actual "go live" process. Will the implementation be "phased in" or will it be a "single-point-in-time" implementation or conversion? Either method can be correct and successful, depending on many different considerations. The Rootstock Project Manager can assist the Customer in the evaluation of which course the Customer wishes to choose. Whichever approach is taken, it should be considered that the Rootstock Project Manager and/or Manufacturing Lead Consultant be on-site for a period during conversion and 'go live'. This means that Rootstock, in addition to the BRD and Pilot, is also on site during the Go Live operation to provide general support, "one on one, fill-in-the-voids training" as may be required, and to insure fast response should emergencies arise. In addition, Rootstock staff will be standing by to offer any required assistance. Three times on site would be preferable – and ideally there are the hours in the proposal to cover it, a travel budget noted, and that the customer supports the time prior to starting the project.

Rootstock 'Go Live' Support (some specific considerations)

It is important to understand that some of the following items may be applicable to a particular Customer's implementation and go-live. The Rootstock Project Manager (and possibly other Rootstock resources) will guide and support the Customer through this phase. However, the Customer needs to be aware of and involved in each of these (and possibly other specific considerations) for a successful 'go-live':

- There are many general business areas supported by the Rootstock Modules. While it typically makes sense to implement all of the functionality of Rootstock at once, there are times when a phased approach makes sense.
- The actual 'Go Live' plan, with Rootstock's requested assistance, actually starts at the BRD and continuous validation ensues as the user completes the pilot and becomes more informed about the Rootstock system. The actual plan may be finished prior to the Readiness Review and prior to 'GO Live'; but there should be ample time to schedule Rootstock professional services to support both the Readiness Review and the 'GO Live'. 'GO Live' must also consider the state of the data conversion.
- The Customer should consider having Rootstock be 'on site' in the Customer's facility working with the Customer's personnel responsible for the functionality being implemented as it is being put into the live production environment for the first time. Those areas below which contain ***'on site' should be considered*** are functions where the customer should consider having Rootstock personnel on site as that portion of the functionality is 'turned on' in production:

- For all Manufacturing and/or Distribution Customers
  - System Setup, Commodity Code, Item Master, Product Master
  - Inventory Addition and Adjustment at start up ***('on site' should be considered)***
  - Sales Order Entry and Sales Order Shipment ***('on site' should be considered)***
  - Purchase Order Entry and Purchase Order Receiving ***('on site' should be considered)***
- For Manufacturing Customers
  - Engineering Change Control and Bill of Material
  - Routings
  - Work Order Cycle (Issues, Labor bookings, Receipts) ***('on site' should be considered)***
  - Work Order Cost Analysis ***('on site' should be considered)***
  - MRP and Supply Demand Review and Firm Requisitions / Work Orders ***('on site' should be considered)***

On-Going Telephone Support

As a user of Rootstock, the Customer is entitled to receive Rootstock support. The customer should read the Customer Support Manual regarding how they log tickets which they have access to on the Customer Page of the Rootstock Website. Telephone support is limited to assistance when a Rootstock Module malfunctions with a defect that can be reproduced on Rootstock's own operating environment (ORG) on the Salesforce.com Platform, or when the Module fails to function as designed when it is being used as intended. Rootstock also provides assistance to analyze and correct data that has been corrupted by a verified program defect. The Customer is also entitled to all improvements, extensions, updates, and other changes to Rootstock that are made available, without a separate charge, to general licensees of Rootstock. In order to continue receiving these benefits, there are certain minimal obligations the Customer must meet. For example, they must provide Administrative access to their Salesforce.com ORG into which the Rootstock Modules have been deployed. More information is provided in the Customer Support Manual.

Post Implementation: Additional Modules

As the company's business grows and evolves, so too will its application requirements. Rootstock understands that fact, and is constantly enhancing and developing its product to satisfy customer needs. At times, the Rootstock development team enhances the usefulness of its software; at other times, totally new Modules are released. Should the Customer decide to evaluate a new module, Rootstock welcomes the opportunity to demonstrate the merits of the new functionality and provide the guidance necessary for the Customer to make an educated decision on whether to implement a new module. However, once such a decision is made, one might ask "what exactly *is* involved in adding major new functionality to the Rootstock ERP solution?"

Basically, adding new Modules is a "mini" implementation. The fundamental steps that were followed when first implementing Rootstock now serve as a guide for implementing additional Modules. Rootstock is experienced in this area and will work to prevent any missteps during this critical phase. Key elements of the initial implementation come into play once again. Therefore, in addition to the Module itself, the Customer's contract for additional Module(s) will include such items as consulting time for analysis of current business processes, deployment of the Module(s) into the Customer's Salesforce.com ORG, training and pilot assistance, and post-implementation support. Because Rootstock staff has found these items to be as critical for a successful implementation of additional Modules and/or major functionality as they were for the initial implementation, we stipulate their inclusion in the contract.

What are the Customer's responsibilities when adding new Modules? A review of this Implementation Guide provides the answers. The Planning Track section of this manual outlines steps vital to the success of the initial implementation including selection of various team members, a kickoff meeting, and project plan. These same steps will be repeated, to varying degrees, as the task of adding functionality to the existing ERP solution begins. Depending on changes to the Customer's organization and the time frame in which additional Modules and/or functionality are required, the Customer may need to adjust its Steering Committee, Project Manager, and Pilot Team members for this new phase.

The Configuration Track section of this manual outlines steps to be taken *before* the exact Modules are even selected.

The Training Track section discusses specific areas of training required after the new Modules are deployed into the Customer's ORG. While focused on more defined areas, the same type of training will again be required to necessitate the best use of the new Modules/functionality. Perhaps new employees will be introduced to Rootstock who require basic training in the general use of the solution. Others will only need training that covers the additions or changes.

Some typical questions that will need to be answered include:

- Will the Pilot Team be trained and then train users themselves, or will the Rootstock Project Manager handle all of the training?
- Who in the organization will be the "project representatives" and what role will they play in this phase?

After all of these decisions have been made, The Pilot Track section provides guidance to help ensure that all business needs will be met. It outlines the requirements for a successful Conference Room Pilot and stresses the importance of business process mapping. It recommends that the Pilot Team develop internal documentation which covers all operating procedures and discusses the steps necessary should the need for custom enhancements arise. While much less involved than the initial implementation, the Pilot is a critical aspect of this "mini" implementation and will need to be well planned and executed.

In the initial implementation, conversion of existing data was a consideration that had to be addressed. The same *may* be true again.

Questions that would likely need to be answered include:

- Does the new module replace manual systems currently in use?
- Or does it replace a home-grown or older system on premise legacy system containing electronic data essential to the use of the new Module?

Following the steps outlined in The Conversion Track section of this manual will help cover all conversion issues.

Finally, the Readiness Review and Go Live section provides a Readiness Review template that will help determine whether the new Module/functionality is ready to be "switched on". It also discusses on-going email, telephone and implementation/consulting support the Customer can expect from Rootstock as the process moves forward.

By viewing the implementation of additional Modules/functionality and/or major enhancements in a way similar to the initial implementation, the Customer can expect a successful journey. Rootstock will be there to provide the guidance, encouragement, and technical expertise so that the Customer can reap the many benefits of its Rootstock ERP solution "in the Cloud".

Appendix I

The BRD Agenda is customer-specific. It is not simply a list of all functions and then discussion on each function or field. It is targeted, based on the outcome of previous customer sessions and discussions. For example, if earlier discussions have determined that the Customer will not be using Project Control, then Project Control is not discussed in the BRD. The BRD is process focused – with the Deliverables including the Project Plan and the Configuration Workbook. A limited sample is below.

The following is a sample of items discussed in the GTM meetings and in the BRD. If Rootstock has determined during the GTM that that certain areas will need more time/focus, then more time is allocated to those areas.

Topic	Day	Time

Introduction/Facility Tour

Rootstock - Overview

Purpose of Business Requirement Development (BRD)

- Set-up/Configure System in Sandbox to support business processes
- Implementation Objectives

Sandbox/Prod Org Process

System Navigation and Help

RS Documents (already forwarded)

Salesforce Tools

Custom Fields

Users, Profiles (RS Mfg User Profile), Printing Templates

User Training – Power User Training, End User Training, Pilot

Go-live Planning

"Parking Lot"

Rootstock Hierarchy and Set-Up

Rootstock/Salesforce– Items/Products/BOMs

Concept of Items and Products

- Nomenclature
- Serial/Lot #'s

Types of Products – [AS APPLICABLE]

Creating/Maintaining Items and Products

- Products in Salesforce

Commodity Codes, Product Groups
- Suggested Options

UOM Conversions

REV Control [AS-APPLICABLE]

Building BOMs in RS (Subcontract) – [AS-APPLICABLE]
- Built in Rootstock or Other (Eng System)

Accounting – Workbook – GoToMeeting Session)
- FF Users
- COA – Suggested Changes
- Reporting Hierarchies
- Dimensions
- FF Accounting Workbook

Project Control [IF APPLICABLE]

Home/Not Home – Items (for set-up)

Project Numbering, Auto Project Create

Shop Floor

Routings (Assembly Steps/Operations/Tasks)
- Sample Routing

Work Centers and Calendars

Departments – Overhead Charges

Processes

Default Routings – Commodity codes

Sales Orders

SF – Opportunities/Quotes – Expected Processes

RS Sales Order
a. Construct, Set-Up and Pricing (SF, RS)
b. Fulfillment (Pick/Pack/Ship), Freight, Commissions, Credit Checking
c. Numbering

Expected SO Process
- SO Example(s)
- Post Go Live

Work Orders

Labor and Quantity Booking
- Mfg user (Labor Only)
- Booking UI

WO Material Issue/Backflush

Timing of WO's

Inventory Locations

- Location IDs
- Loc Nums (static/dynamic)

Accounting – Workbook GoToMeeting Session II

- Invoicing – Set-up (JE/Invoice – Implications)
- FF – Accounting Workbook

Vendors and Customers

Customers

- Salesforce Accts, Rootstock, Customer Class codes (default values)
- Customer Addresses
- On-going maintenance/creation

Vendors

- Salesforce Accts
- On-going maintenance/creation

Purchase Orders

Direct Material

- Expected PO process(es) – timing of PO's
- Creating/Maintaining PO's
- Receiving Inspection
- PO Approvals
- Indirect Material – Receipts/Authorizations

OVERALL – Process Re-Cap – SF/Rootstock/FF

Project Plan Development

Wrap-Up/Next Steps

BRD Questions to be addressed if applicable

This section is to provide a list of topics and questions that can be used during the BRD sessions.

1. Company Overview

Describe the company organization. Include:

- Manufacturing plants
- Inventory location
- Distribution locations
- Sub contract manufacturers
- Centralized sales order entry location
- Consolidation warehouses
- Consignment inventory
    - Vendor consignment
    - Sales consignment inventory
- Describe the inter-company relationships
- Describe the business supply chain from component sourcing through end customer delivery
- Currency requirements
- Products manufactured or distributed
- Type of manufacturing
- Regulatory requirements

- Are 3PL (Third party logistics) companies a component of your business model? If yes, describe?

- Are contract manufactures a component of your business model? If yes, describe?

2. General Requirements

Define the company requirements in the following areas

Growth Potential – describe the growth plans of the company.

Integration – are there integration requirements for this company with other manufacturing software?

Password security – describe the software password security requirements? Is there a password standard compliance?

Menu Variations by individual – is there a requirement that software function access be configurable to the individual?

Decision support – describe the requirements for decision support? Include comments on automated reports; event notification; work flow; dashboard; graphical requirements; other?

Multiple manufacturing plants be supported – is there a requirements that multiple manufacturing plants be supported with this software? If yes, describe the relationship between the plants. (Diagrams helpful). Also, in a multi plant organization describe the purchasing, sales, materials management and engineering organizational processes and support across multiple plants – if any. Include discussion concerning warehouses as well and which plants have 'off site' warehouses.

3. Items

This section is about the part that the company manufacturers and purchases.

Number of PN characters – Describe the part numbering format. Length of part number?

Part description – Describe the formatting of the part description? Standard company dictionary used? Standard abbreviations? Standard format?

Drawing numbers – are drawing numbers to be associated with part numbers?

Pattern numbers- are there pattern/mold numbers to be associated with the part numbers?

Reference designators – are there drawing reference designators to be associated to a part number?

Attachments – are the attachment documents to be associated to parts? Internal specification sheets? Catalog diagrams? Vendor specification sheets?

Manufacturer part numbers – are manufacturer's part numbers to be assigned to part numbers?

Make, Buy – Is the same part manufactured and purchased? If yes, describe your decision process. When a part is made or purchased, describe the cost calculation requirements.

Commodity code (or Item Grouping) – is the concept of a commodity code presently used at the company?

A, B, C class – is the concept of A,B,C part stratification presently used at the company?

Lead time – are lead times currently used at the company? Manufacturing lead time? Purchasing lead time?

Method of costing – Is standard cost used? Is average cost used? Other (such as FIFO for some of the parts in an average cost environment)

Unit of measure – are units of measure defined? Standardized? Are the multiple units of measure assigned to the same part (engineering, sales, inventory, purchasing)? Describe?

Unit of measure conversion – is there a requirement to convert from one unit of measure to another unit of measure?

Part memo – is there a requirement to add free form notes to a part record? Describe how this is used?

4. Bills of Material

The bill of material is the definition of the structure of the material used to manufacture a product.

Number of indented levels – how many levels are there in the bill of material?

Bill of material definition approaches – are the bill of material written in: Unit format? Batch format? Percentage format?

Flattening the bill of material for production – is there a requirement to be able to "flatten" the engineering bill of material to represent the actual manufacturing processes?

Similar bills of material – are bills of material copied from to another to create new bills of material?

Memo field – is there a requirement to add free form notes to a bill of material parent part?

Operation usage – when configuring the bill of material, is the part used to be associated to a specific manufacturing operation?

Component scrap/yield – in a specific bill of material, does a component have a yield factor?

Is there a requirement for reference parts to be identified to a bill of material?

Is there a requirement of reference designators be related to the component bill of material record?

Is there a requirement that drawings be referenced to the component bill of material record?

5. Manufacturing Routings

A Manufacturing routing is the definition of the sequence of activities needed to manufacture a part.

Routings – are manufacturing routings required? Describe the requirement?

Move time – are move times required to be included between operations.

Operation comments – is the ability to enter free form operation comments needed?

Alternate Operations – is the function of an alternate operation needed?

Significant operation numbering – if routings are currently used, does the operation number have significant meaning? (e.g. 1101 is always sawing).

Operation descriptions – are free form descriptions of operations activity required.

Operation sequencing – are the manufacturing operations performed sequentially? Concurrently? Describe.

Work center identification – are work center defined to the manufacturing operations?

Machine on an operation – is there a requirement to identify a specific machine to a work order operation?

Operation times – what types of operation times are required for the manufacturing routings?

- Labor run time
- Labor set up time
- Machine time

Operation time methods – how are the operation times expressed? Time per piece? Time per batch? If a job shop or machine shop and working on a quantity of one, describe how one determines progress of completion within a single long running operation.

Current routing time unit of measure – what is the current method of specifying time in a routing? Decimal hours? Other?

Sub Contract operations – are subcontract operations required?

Do the products, and methods of manufacturing, lend themselves to “family” or “commodity code” routings be defined?

6. Engineering Change

Engineering change control is the ability to control part revisioning and manage the implementation of the part revisioning.

Engineering Revision Control – does the company use engineering change control? If yes, describe the steps, sign offs, approvals, etc.

Engineering part revision – does the company use or require engineering part revision control? If yes, describe the revision numbering. Describe the use of revision control.

Engineering effectivity date – does the company use effectivity dates for parts. That is a date, when the part is in effect to include in planning.

If the installation will be multiple division, will engineering change be in use in all divisions.

If the company is multiple division, will the engineering change order function be used in all divisions.

If a PLM software in installed, is the ECO/ECR control resident in the PLM software or will be it be resident in the manufacturing software.

7. Shop Floor Definitions

The shop floor definitions are used in the configuration of the routings. This is defining the manufacturing resources to the software for planning and execution purposes.

Shop floor definition activities are required to support the creation of the manufacturing routing for a part.

Labor grades – does the company have labor grades with hourly labor rates defined?

Departments – does the company have defined departments within manufacturing? A department is typically thought of as an area in manufacturing in which like functions are performed (e.g. Assembly, test).

Work Centers – are the manufacturing departments sub-divided into work centers? Note: A work center typically identifies a grouping of like machines or like skills.

Machine Masters – is planning and scheduling required by specific machines? If yes, are individual machines associated to a unique identifier?

Manufacturing processes – are there specific work instructions, quality documentation that should be associated to a manufacturing operation?

Available resource capability.

8. Product Lifecycle Management (PLM)

Product life cycle management software provides functionality to manage and control product definition from inception through to retirements.

Is a product life cycle management software active in the company? If yes, supplier?

Describe the PLM function currently in use.

Describe the PLM function planned to be used.

Is it desired that the PLM software be integrated with Rootstock?

If a PLM software is installed, is the ECO/ECR control resident in the PLM software or will be it be resident in the manufacturing software.

9. Cost Methods

STANDARD COST

A standard cost method is the setting of the cost of a part for a specified period of time and using this as a basis to calculate planned part cost and to measure performance to the standard in the areas of purchasing and manufacturing.

Is standard cost to be used within the company? If yes, which divisions?

Describe the standard cost elements in the context of the following types of cost.

- Labor
- Material
- Labor Overhead percentage
- Material Overhead percentage
- Fringes percentage

- Subcontract material
- Subcontract labor

AVERAGE COST

An average cost methodology is calculating a new average cost each time a transaction increasing inventory is processed.

Is average cost to be used within the company? If yes which divisions?

Describe the calculation of the average cost relative to the following?

Is there a concept of FIFO costing for purchased items?

Current inventory on hand and current inventory on hand value, to which is added the incoming transaction quantity and value and a new average is calculated which is: Net total cost divided by new total inventory equal new average cost.

8. Work Order (Manufacturing)

A manufacturing work order is the authorization to the plant to manufacture a part. A work order includes the elements of components, material, labor hours and labor costs. Work orders also an important aspect of manufacturing scheduling and planning.

Manufacturing Work Orders – are manufacturing work orders required for the company? All divisions or selected divisions?

Are work orders to be manually entered?

Is the job 'built' for a sales order so that there will be the requirement to define work orders for a sales order?

Are work orders to be generated by material requirements planning?

Copies standard BOMs – Should the work order use a copy of the engineering bill of material as the initial source of component demand?

Are the work order material components required to be maintainable in the work order?

Copies standard routings - Should the work order use a copy of the manufacturing engineering routing as the initial source of manufacturing routing?

Are the routing operations required to be maintainable in the work order?

Work order specific configuration – is there a requirement to allow the work order to document the "as built" configuration of the part being produced.

For materials?

For manufacturing routing operations?

Other

Rework work orders – are parts reworked? Are rework work orders required to complete the rework?

Is there a disassembly process whereby a work order is disassembled into component pieces and the good pieces returned to stock?

Work orders for indirect labor – are work orders for indirect labor required? If yes, describe the indirect labor to be capture?

Work Order material pick list – are work order material pick lists required for distribution to the stockroom?

Shop Floor traveler – are work orders travelers, print outs of the work order component requirements and routing operations steps required?

Bar coded documentation – is there a required to have salient on the work order printed with a bar code format? If yes, what is the bar code format required? What data is required to be bar code format printed?

Is scrap reporting required? If yes, describe the types of scrap?

Are parts that require lot control manufactured to a work order?

Are the work orders comprised of standard bills of materials (i.e. components) or does every work order have a different component set for a given assembly?

Are the work orders comprised of a standard set of labor and/or machine operations (i.e. routing) or does every work order have a set of operations for a given assembly?

9. Work Order Labor and Quantity Booking

This includes reporting labor incurred and quantities produced to be reported to a work order.

Is labor booked to an operation?

Are there set up labor hours?

Are there run labor hours?

Are the machine hours?

Are quantities produced to be booked to an operation?

Are the labor and quantity bookings to be used for scheduling and capacity planning?

Are the labor booking values to be used in the calculation of manufacturing labor costs charged to the work order?

10. Work Order Transactions and Costing

Interfaced to inventory – is inventory interfaced to work orders for the issuing of component materials or sub-assemblies to work orders?

Labor booking – are labor booking required for:

Set up labor

Run Labor

Machine labor

Supports miscellaneous charges – is there a requirement to record “other charges” to a work order?

Are overhead costs to be booked to work orders? Do these overhead charges include:

Labor Overhead

Machine Overhead

Fringe Overhead

Other

Detailed transactions recorded to a work order - when inquiring on a work order, are summarized totals for charges, deductions, variances, labor transactions, materials transactions, sub contract transactions required?

Work Order Variance reporting – is financial work order variance reporting required?

Work order charges – is it required that material, labor, and overhead transaction show quantities (where appropriate), dollars (where appropriate) and both (where appropriate)?

When receiving a part produced on a work order into inventory,

Is a lot number to be recorded for the item received?

Is a serial number to be recorded for an item received?

Is there a requirement to attached production documents to the specific work order?

11. Shop Scheduling

Shop scheduling is the functionality to plan and schedule manufacturing using the operations and times defined for a manufactured part.

Shop floor scheduling detail level – is shop floor scheduling needed at the:

Work Center Level

Machine Level

Infinite scheduling – is infinite shop floor scheduling applicable?

Can assign work priorities – do you require the assignment of manual override priorities?

Work center loading analysis –

Is an inquiry of the shop load in a specified area required?

Is a printed report required for the shop load in a specific area required?

Work center queue times – are move times required?

Operation move times – are move times between operations required?

Concurrent operations – is the function to concurrently schedule multiple work order operations required?

Work order status report – is an inquiry or report of the released work load on a work center a requirement?

Work center/machine availability – on scheduling reports, is the visibility of available hours in a work center a requirement?

Dispatch list presentation of released work order to the manufacturing floor?

12. Purchasing

Purchasing encompasses the activities associated with the creation of requisition, converting the requisition to a purchase order and receiving the purchased materials into inventory.

Multiple vendors – are multiple vendors used to purchase the same part?

Preferred vendors – is there the requirement to designate specific vendor as the primary or "preferred" vendor"?

Manufacturer part numbers – is there a requirement to have part/vendor specific pricing?

Creating requisitions – is there the requirement for direct material to:

Manually create requisitions

Calculate and plan requisitions as an output of material requirements planning

Are requisitions manually converted to purchase orders?

Are requisition automatically converted to purchase orders?

Can requisitions be partially converted to purchase orders?

Line part scheduled dock date – is it required for each line part on the purchase order to have a scheduled dock date?

Are subcontract manufacturers used?

Does the company supply component materials to the subcontract vendors?

Purchasing reports – describe the purchasing reports currently used?

Purchase order follow-up

Purchase order late

Other?

Vendor performance – is vendor performance measured? If yes, describe the calculation?

What are the integration requirements for purchasing:

Accounts Payable

Inventory

Material requirements planning

General Ledger

Is purchase price variance a requirement?

Are purchase orders received through via EDI? Other electronic means?

What are the methods of communicating a purchase order?

- Print and mail
- Fax
- E-mail

Is a purchasing transaction history audit table required?

Is a receiving history audit table required?

Are the following purchase order lead times used:

- Requisition convert?
- Vendor lead time
- Vendor ship lead time
- Requisition firm
- Requisition approve
- Incoming inspection

Is there vendor consigned inventory? Describe.

Is the contract manufacturing where the company supplies some of the components to the contract manufacturer?

13. Purchase Order Receiving

Purchasing receiving is the activity for receiving the purchased item against the purchase order into inventory.

When receiving a part to a purchase order:

- Is inventory to update?

- Is the purchase order to update?

- Is open payables to update?

Is a receiving traveler required?

Is lot number recording required?

Is serial number recording required?

Is there a requirement to process Returned Material to the vendor?

Is there a requirement for open purchase order reports? Describe.

14. Inventory Management

Inventory management are the activities associated with the reporting, costing and transaction of parts in inventory.

Cost of inventory valuation

Average cost?

Standard cost?

Is there an existing warehouse location identification schema defined? Describe.

Inventory Transactions – what types of inventory transactions are required?

Work Order component issue

Work Order production receipt

Inventory adjustment

Cycle count transactions

Scrap transaction

Inventory add transactions

Purchase order receipt transactions

Sales order fulfillment transactions

Is backflushng used?

Is the same part in inventory stored in multiple locations within the same warehouse?

Additional inventory control parameters:

Do inventory parts require lot control?

Do inventory parts require serial controls?

Is expiration dating required?

Is lot or serial traceability required through all levels of the bill of material? Sales order fulfillment? Purchase order receipt?

If lot or serial control is being used, is expiration dating a requirement? If yes, explain how it is used?

Is an interface to the following required:

General ledger
Work Orders
Material requirements planning
Sales order entry
Purchasing

15. Warehouse Management System

Warehouse management system is a specific application that is used to manage and control material movement and order picking.

Is there an existing WMS?

Are the plans for a WHS? If yes, who is or is being considered as the vendor?

16. Master Production Scheduling

The MPS is the software functionality which supports the review of the demand-supply plan by summarized time periods. The information used in the MPS is:

Demand is the forecast, customer orders or lower level demands.

Supply is the open purchase order and requisitions; planned or in process work order.

Displayed is the period available to promise and projected period inventory.

Is there a production forecast by part?

Sales orders by part?

Is available to promise required?

Is the forecasting of a service part required?

17. Material Requirements Planning

This the calculation process of gross to net requirements calculation to include a:

Forecast

Sales order

Bill of material

Inventory

Purchase orders and requisitions

Work orders and planned work orders

What is the MRP planning horizon?

What is the longest cumulative lead time for a product?

Are the following interfaces required?

Sales Forecast

Product configuration

Purchase orders and purchase requisitions

Inventory

Work Orders

Are the following methods of material planning applicable?

- Order point
- Lot for Lot
- Days cover
- No planning
- Safety stock
- Minimum order quantity

Describe the frequency of the running of MRP?

- Daily/weekly

- What criteria will determine MRP frequency?

Is there a requirement for MRP planning to include “effectivity date”?

18. Capacity Requirements Planning

Capacity requirements planning is the planning activity to calculate resources (labor and machines) to support the making of the master schedule.

What is the business resource constraint:

- Material, Labor resources, Machine resources?
- Describe

Capacity interface

- Interface to Material Requirements Planning
- Interface to shop floor definitions
- Released work orders
- Sales Orders

How frequently will CRP be run?

19. Bar Code /Data Collection Functionality

NOTE: Rootstock Data Collection functionality is associated with reporting transactional activity using the bar code as the basis of the reporting. Records are inserted into the Rootstock SYDATA object, and processed using Rootstock triggers, as if the transactions had been entered using the Rootstock standard User Interface (UI).

For more details, please see these related documents:

Rootstock Bar Coding and Data Collection

Is the bar code data collection system currently installed:

If yes, who is the vendor?

Describe the current installation

Describe the planned or current uses of bar code printing

Sales orders; purchase orders; work orders; attendance labor reporting; physical inventory; cycle counting

Describe the planned or current uses of bar code reading

20. Manufacturing Forecasting

Forecasting is the development of an anticipation of future customer sales orders.

Describe the current forecasting process:

Is the current forecast provided with:

Part number/forecast date range/quantity

What is the periodicity of the forecast?

Uniform through the horizon?

Variable over the horizon?

What is the forecast horizon?

What is the forecast horizon as related to the cumulative material lead time? Greater or less?

What is the current method of forecast generation?

Can the forecast be exported via CSV spread sheet?

21. Sales Order Entry

Sales order entry is the function which enters the customer sales orders to the software. The sales order is identified by customer number. The individual line items on the sales order hold the part information and the required ship date to the customer.

Describe the sales order entry and fulfillment channel in detail.

Who are your customers?

- End users
- End users via distributors
- Distributors

Are sales orders immediately available for demand planning or is there a business review of the sales order prior to including the sales order in demand planning?

What are the methods by which sales orders are received?

- Manual
- EDI
- Internet
- File imports
- Quotations converted to orders

What are the techniques by which sales orders are entered?

- Single line entry
- Multi-line entry
- Copy an existing order
- Convert from a quotation
- File import
- Customer direct entry

Do sales orders require:

- Line part shipments
- Multiple-ship to addresses
- Drops ship functionality
- Line part material availability

Describe all sales order pricing methods:

Are finished goods inventory consigned to a 3rd party? If yes, describe the business processes?

What are the required interfaces:

- Interface to General Ledger
- Accounts Receivable
- Interface to Inventory
- Interface to Accounts Receivable
- Interface to Materials Requirements Planning

22. Sales Order Fulfillment

Sales order fulfillment is the process of recording the movement of the product from your facility to the customer.

What is the method of processing sales order shipment?

- Ship only
- Pack and Ship
- Pick, Pack, Ship

Is there a requirement for interfacing to FedEx, UPS?

Is a sales order pick list used?

Is there a requirement to reverse sales order shipments? If yes, describe the process.

Is end part serial number tracking a requirement?

Is lot tracing required?

Is there a warranty period for shipped product?

Are goods previously shipped to a customer returned? Describe the process.

23. Project Control

Project control is the function to provide an internal management planning and control function for all operations aspects of a customer activity, from forecasting, sales orders, manufacturing, procurement and shipment. Project control is a tailorable function to be active or inactive.

Is there a requirement for manufacturing project control (job control)?

If yes, are the following required:

- Project budget
- Project actuals
- Project specific general ledger accounts
- Cost source by part? Or cost source by project?

If a project function is required, is MRP planning by project required?

If a project function is required, are there common parts which are “shared” between projects?

Is inventory and inventory planning by project?

Is purchase planning and purchase orders by project?

Are sales orders entered by project?

Are manufacturing work orders planned and executed by project?

24. Data Migration

Data migration:

Is there data in an existing software system to be migrated into the Rootstock software? If yes, describe:

- Items
- Bills of material
- Cost

On-hand inventory
Sales orders – open
Sales orders – history
Purchase orders – open
Purchase order – history
Manufacturing routings
Inventory location schema
Other:

25. Mobile Features

All features of the Rootstock Software Modules are available from mobile devices that support the commonly used browsers (Google Chrome, Safari and Firefox). This method of access is suitable for accessing the Rootstock Software Modules from laptops, iPads, Android tablets, etc. However, special screen layouts are usually desired when accessing from very small screen devices (e.g. iPhone, Andriod phones, iPods, etc.). Rootstock provides a limited number of these special screen layouts and will add more over time. If a particular customer has a need for custom screens of this type, Rootstock Professional and Technical Services personnel are available to create these at an additional fee. These will be quoted as required.

26. Salesforce Communities

Implementation of the Communities is normally very unique to each Rootstock customer. Therefore, the standard Rootstock implementation does not include any design, build, test and deploy activities to establish Communities for the Rootstock customers.

27. Salesforce Workflows and Rootstock

The powerful Salesforce Workflow enables you to set up *workflow rules* that identify what kinds of record changes or additions trigger specified *workflow actions*, such as sending email alerts and updating record fields. The standard Salesforce Workflow engine can be employed with Rootstock but with some limitations on which Rootstock objects may be updated by the Workflows. The Rootstock Implementation does not include development of Salesforce Workflows. Rootstock can provide guidance but does not quote on Workflow development. The Rootstock Project Manager will work with the Customer's Project Manager to assist and guide as to which objects may be updated by Workflows. Rootstock does have a list of hardened objects and these are the Rootstock objects that can be updated in the Workflows. (Please refer to the document on hardened objects on the Customer Web Page). All others can still be referenced and changes can drive other actions (email alerts, updates to customer custom objects etc.).

28. Standard Rootstock Reports

The Rootstock Software Modules come with numerous standard reports. During the standard implementation project, Users are trained on where to find the reports, how to launch the reports on either an ad hoc basis or on a scheduled basis. It is assumed the User is familiar with the

Salesforce Reporting tool and the ability to clone a standard Rootstock report to create a customer specific version of these report. Any additional training on creating reports is out of scope but can be provided at an additional fee.

29. Customer Custom Reports

Customer specific reports are not included in the standard implementation. Any customer specific reports to be created by Rootstock as part of the implementation must be called out in the Sales Proposal and the Statement Of Work (SOW). Customer's custom reports (which could even include using Rootstock standard report templates) are not supported by Rootstock Support.

30. Collaboration Capabilities

The Salesforce platform offers a number of features to allow collaboration within the customer's enterprise and with parties outside the customer's enterprise. Implementation of these features for collaboration purposes are well documented by Salesforce in its extensive online documentation libraries. Rootstock does not train or suggest customer specific use of these capabilities and therefore any time spent on these capabilities will be quoted separately from the implementation project described in the Sales Proposal and the Statement Of Work (SOW).

Appendix II

The PILOT Agenda is customer-specific. The pilot is tailored based on the outcome of BRD; these are some of the pilot activities that are most commonly piloted.

Activity

Architecture

Enter company
Enter divisions
Enter sites

Material Control

Need site/warehouse location schema
Need to identify backflush locations
Designate locations as nettable, non-nettable

Company

Designate as centralized engineering
Enable ECO/ECN

Manufacturing Account Numbers

Define manufacturing sub ledger accounts
Enter manufacturing sub ledger accounts with cross reference to NS, GL accounts
Add manufacturing sub ledger accounts to commodity codes

Commodity Codes

Define and enter inventory commodity codes
Subassembly CC
Finals assembly CC
Written work instructions for user training and ISO compliance (as required)

Manufacturing User Numbers

Enter manufacturing users

Engineering Item Numbers

Pilot migration program – if possible (Note: Initial load without ECO but with ECR)
Manual Entry
Written work instructions for user training and ISO compliance (as required)

Item Inventory Records

Pilot migration program – if possible
Manual entry
Set backflush flag
Written work instructions for user training and ISO compliance (as required)

Item Inventory Balances

Pilot migration program-if possible
Manual inventory add transaction
Manual inventory adjust transaction
Verify transactions
Written work instructions for user training and ISO compliance (as required)

Bill of Material

Pilot migration program-if possible
Manual entry
Written work instructions for user training and ISO compliance (as required)

ECO/ECR

Create an ECO – phase in
Move ECO through status (Pending, Released. Implemented)
Verify MRP planning for each status
Verify phase-in date
Create an ECO – phase out
Move ECO through status (Pending, Released. Implemented)
Verify MRP planning for each status
Verify phase-outdate
Written work instructions for user training and ISO compliance (as required)

Shop Floor

Define department
Define work center
Define machine center
Define operation process
Written work instructions for user training and ISO compliance (as required)

Routings

Define default routing for the commodity codes; with time

Routings for internal manufacture

Routings with subcontract manufacturing operation

Written work instructions for user training and ISO compliance (as required)

Forecast

Import forecast for a rolling 3rd month from the current month (current month +2). (Note: Current month and current month + 1 are sales orders). Forecast is entered divisions specific.

(Note: Consider how the forecast for an item is spread within the month, e.g. weekly forecast vs on month total forecast.)

Written work instructions for user training and ISO compliance (as required)

Sales Orders

Enter SO

Ship sales

Change SO line quantity

Change SO line date

Delete SO line

Cancel sales order shipped short

Written work instructions for user training and ISO compliance (as required)

MPS Review (prior to MRP run)

Import forecast using CSV format

Verify forecast details

Verify sale order item details

Verify MRP planning logic (gross to net calculations)

Written work instructions for user training and ISO compliance (as required)

MRP Launch and verify output (PO and WO)

Verify it runs to completion

Verify demand

Verify supply

Verify the MRP planning logic: Lot for lot, days supply and order point.

Written work instructions for user training and ISO compliance (as required)

PO Requisition

Audit MRP order policy calculation for requisition generation

Firm requisition. Firm and change requisition (date and quantity

Approve
Convert to PO with changes (date and quantity)
Split one requisition to two vendors
Written work instructions for user training and ISO compliance (as required)

Purchase Order

Manual PO entry
Change PO line quantity
Change PO line date
Delete PO line
Note: Certicell has added PO line item dates, ETA and original receive by date
Review PO line item data in details
Receive PO line item
Verify transaction PO receipt transaction
PO for work order subcontract activity
Written work instructions for user training and ISO compliance (as required)

Work Orders

Firm work orders
Release work orders
Extract components
Extract routings
Generate pick list records
Add/change/delete work order components
Add/change/delete work order operations
Print picklist
Print traveler
Manual issue of component to work order
Report operation quantities
Verify backflush
Report labor to work order operation
Receive finished item into inventory
Manual - rework work order
Written work instructions for user training and ISO compliance (as required)