

A graphic at the top of the page featuring two golden, complex mechanical gears. The left gear is set against a blue background with white arrows, while the right gear is set against a yellow background with white arrows. A large, curved golden arrow connects the two gears, pointing from the left towards the right. The title 'NAV 2009 IBP Process' is overlaid in a white banner across the center of this graphic.

NAV 2009 IBP Process

Dynamics NAV
Integrated Business Planning
Role Tailored Model

White Paper

August, 2009

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INTRODUCTION

What is the Integrated Business Planning?

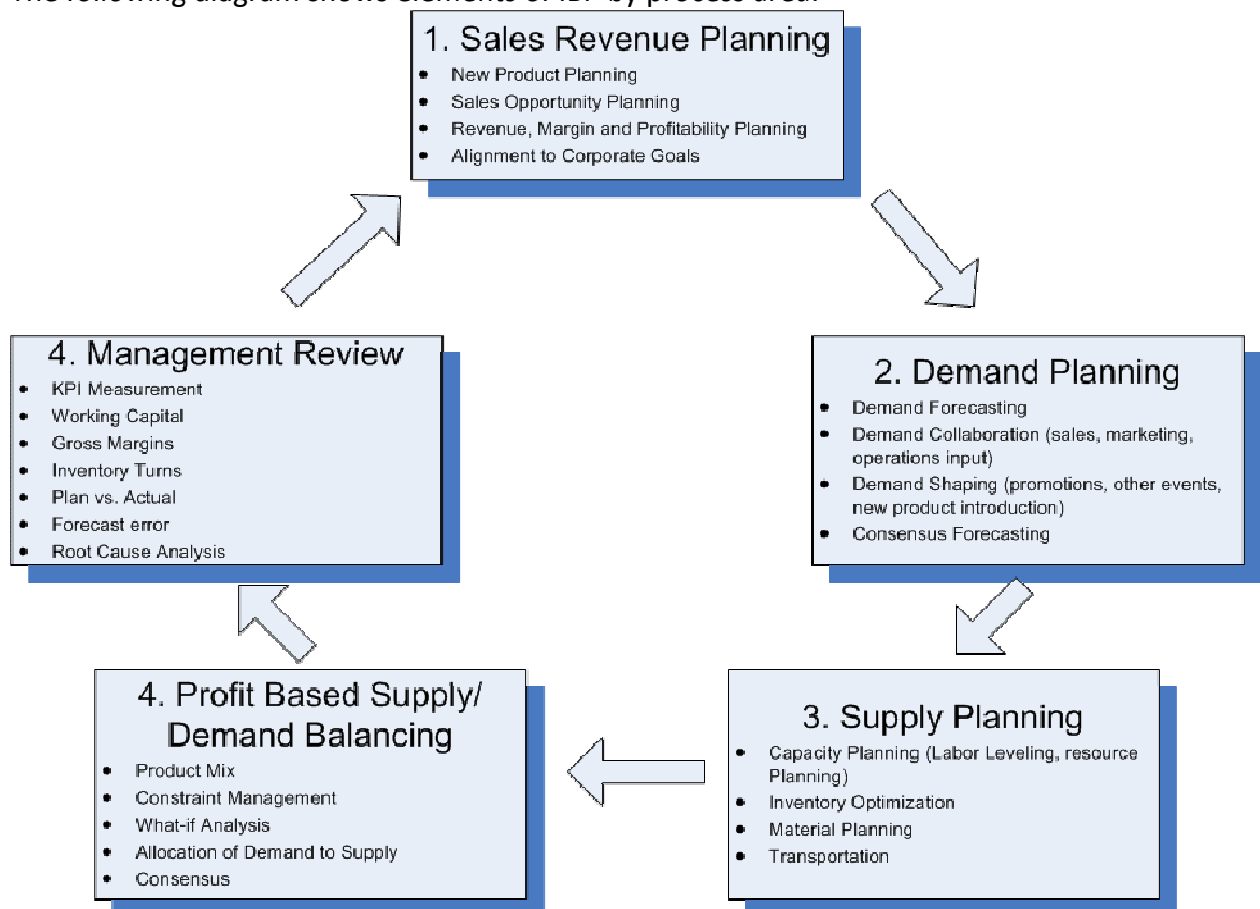
Gartner defines Integrated Business Planning (IBP) as: *“A set of systems, processes, and set of competencies that forms the strategic alignment and modeling capability that is missing from the traditional operationally focused sales and operations planning (S&OP) processes. IBP links corporate performance management to S&OP, with capability for strategic and financial modeling and analytics”.*

IBP starts with strategic planning when company management sets targets for sales, profit, products and markets. Different approaches to achieve defined targets are evaluated and picked. Samples of such approaches can be:

- Expanding to different markets
- Introducing new products or brands
- Improving operational capabilities
- Creating partnerships with other players
- Acquiring Competitors

Once a Strategic Business Plan is developed, IBP process links strategic targets with lower level operational planning and tactical decision making. All downstream plans linked to the specific business targets and build with consideration of company strategic goals.

The following diagram shows elements of IBP by process area:



1. **Sales Revenue Planning** – strategic targets are converted into specific revenue targets by product group, opportunity forecast and market region.
2. **Demand Planning** – starting with statistical forecasts and follow through collaborative forecasts, demand shaping and consensus forecasting. The end result is unconstrained demand planned down to SKU, customer and region level.
3. **Supply Planning** – produces realistic supply plans by considering capacity, material, transportation and other non financial constraints for a medium to long term time period.
4. **Profit-based Supply Demand Balancing** – applies optimization strategies and produces adjusted and balanced supply and demand plans while maximizing profit.
5. **Management Review** – involves review of IBP from different perspectives based on the established Key Performance Indicators. When gaps are identified, analysis is performed to identify the source of the problems and the business model is adjusted accordingly.

Integrated Business Planning vs. Sales & Operations Planning

APICS defines S&OP as “the function of setting the overall level of manufacturing output (production plan) and other activities to best satisfy the current planned levels of sales (sales plan and/or forecasts), while meeting general business objectives of profitability, productivity, competitive customer lead times, etc., as expressed in the overall business plan.” In most cases this does not include the financial plan, capital plan and other company strategic goals. IBP is the evolutionary extension of the Sales & Operations Planning concepts. IBP extends S&OP to a multi-dimensional, cross-functional process that focuses on aligning Demand, Supply and Financial management operations with company strategic goals and objectives. The following table summarizes some of the key differences between IBP and S&OP:

| Area | S&OP | IBP |
|---------------|--|---|
| Key Objective | Balancing Supply and Demand | Applying business optimization strategies to Demand, Supply and Financial management operations with the aim of achieving company strategic goals and objectives |
| Technology | Monthly/Quarterly review of supply and demand based on nonintegrated sources and without visibility to company strategic goals. Most companies use sets of Excel Spreadsheets updated manually for every planning review | Integrated planning environment with visibility to causes and effects of every decision from Supply, Demand, Financial and Strategic point of view. Minimum monthly reviews with ability to efficiently handle exceptions in between. Workflow driven planning process. |
| Process | Rigid – focused on demand and supply balancing. | Model based with “What if” capabilities focused on optimization and exception handling. |
| Collaboration | Inward focused | Focused on collaboration with customers and vendors |

It is not a secret that about 80% of business improvement possibilities lay within process and only 20% within systems. About 90% of companies are successfully using Excel for S&OP but a few Information System features that are not accessible in Excel are absolutely vital for the success of the IBP initiatives:

- Business Modeling and Optimization Tools

Role Based Workflow Management System

- Integrated planning environment linked to various sources of companywide information available in real time to all participants

ROLE TAILORED INTEGRATED BUSINESS PLANNING MODEL

What is The Role Tailored Integrated Business Planning Model?

In order to develop the best ERP system Microsoft conducted 1100 usability and research studies involving 10,000 participants. During over 1700 annual site visits were customers were studied in their own environment and their real world work styles and behavior were recorded. The result of these studies was The Microsoft Dynamics Customer Model:



Today, the customer model consists of the following elements:

Models of companies for small and midsize businesses, as well as complex departments within large organizations.

61 "personas" or "user profiles" which represent a typical view of the people that can occur within an organization defined primarily by the collection of roles they have. (A role is a specific grouping of tasks that a persona is responsible for or participates in.)

Five midsize business departments (Operations, Finance, Human Resources, Sales & Marketing, IT & Partners)

15 typical departmental organization charts showing how the personas are typically organized in these five departments

33 process groups that represent the work people do within business scenarios

155 processes and subsequent tasks and steps defined across the 33 business process groups



This model has been used to develop Microsoft Dynamics products and was presented to the partner community to help develop “best in class” ISV solution. You can find more information about The Microsoft Dynamics Customer Model at <http://www.microsoft.com/dynamics/en/us/familiar.aspx>

The Role Tailored Integrated Business Planning Model (RTIBPM) is the extension of the Microsoft Dynamics Customer Model that has been developed in order to build Integrated Business Planning System based on the Microsoft Dynamics NAV product.

RTIBPM consist of Persona Definitions, Integrated Business Planning Process Model and a set of Templates to support processes. 15 Persona roles were adjusted to fit the process model that includes 17 base processes with over 80 tasks. Each persona is assigned to multiple steps that require producing one or multiple documents.

The Role Tailored Integrated Business Planning Model

RTIBPM consist of Persona Definitions, Integrated Business Planning Process Model and the following set of “personas” from The Microsoft Dynamics Customer Model has been extended to fit Integrated Business Planning:

| | Persona | Description |
|---|---|--|
|  | Charlie <i>President</i> | <ul style="list-style-type: none"> Charlie keeps the business viable by determining product and company direction. He is involved with all departments and depends on accurate information from his staff. Participates in developing and approves company business model Defines company strategic vision Defines KPI metrics and sets goals Approves a detailed set of corporate and divisional objectives Approves Product Release Plan Approves Sales Plan Approves Marketing Plan Participates in Executive S&OP Meeting |
|  | Vince Operations Manager | <ul style="list-style-type: none"> Vince ensures the timely and cost-effective delivery of products by managing the operations of the logistics, production, service departments. Participates in developing a Strategic Plan Participates in developing the company business model Defines Supplier Network Defines Distribution Network Defines Plant Network Approves Product Release Plan Approves Balanced Sales & Operations Plan |



| Persona | Description |
|--|--|
| | <ul style="list-style-type: none"> Leads Executive S&OP Meetings |
| Inga Purchasing manager Logistics | <ul style="list-style-type: none"> Inga sources the right quality product from the right supplier at the right price. She understands supplier performance, and the supply chain-related departments. Inga delegates day-to-day purchasing activities to Alicia. <hr/> <ul style="list-style-type: none"> Participates in developing Supplier Network Defines Supplier Performance KPI's Collaborates with Suppliers Defines Purchase Optimization Parameters Participates in Executive S&OP Meeting Participates in Developing Balanced Supply, Demand, Financial Plan |
| Alicia Purchasing agent Logistics | <ul style="list-style-type: none"> Alicia orders materials and supplies. She follows up on PO confirmations and partial receipts. She also researches suppliers to get the best quality products at the lowest price. Alicia reports to Inga. <hr/> <ul style="list-style-type: none"> Creates Material Requirement Plan Places Orders, Prepares Contracts Monitors Suppliers Performance |
| Emil Product Designer Production | <ul style="list-style-type: none"> Emil designs new products and modifies existing products. Emil is technical, but also spends considerable time searching for the least expensive components. <hr/> <ul style="list-style-type: none"> Participates in developing Product Release Plan Participates in Developing Marketing Plan Participates in developing Strategic Plan Participates in Executive S&OP Meeting |
| Karl Materials Manager Logistics | <ul style="list-style-type: none"> Karl ensures that materials come in and products reach their destination on time. He ensures that replenishment and shipping processes are optimized for reliability, speed and cost. <hr/> <ul style="list-style-type: none"> Creates Distribution Transportation Plan Creates Material Delivery Plan Defines Purchase Optimization Parameters |



| Persona | Description |
|--|---|
| Tony Production manager Production | <ul style="list-style-type: none"> Tony works with product development, process engineering, and sales to make production decisions. He ensures the necessary resources are in place and that the production plan is being carried out properly. <hr/> <ul style="list-style-type: none"> Participates in developing Product Release Plan Participates in developing Plant Network Approves Master Production Schedule Participates in Developing Balanced Supply, Demand, Financial Plan Defines Production Optimization Parameters |
| Oscar Process engineer Production | <ul style="list-style-type: none"> Oscar often receives specifications for new products from Emil. He defines the necessary processes to make the product; Occasionally he and Emil make prototypes together. <hr/> <ul style="list-style-type: none"> Participates in developing Product Release Plan |
| Eduardo Production planner Production | <ul style="list-style-type: none"> Eduardo manages scheduling and planning of production. He often needs to reshuffle existing orders to make room for more urgent orders. He considers exceptions to be the rule. <hr/> <ul style="list-style-type: none"> Creates Master Production Schedule |
| Sara • CFO | <p>Sara develops the financial plan and goals for the company, and then constantly monitors performance against them. Others rely on her to assess the financial viability of opportunities. Sara relies on Ken, Phyllis, Vince and Kevin to provide her with the information she needs for business insight.</p> <hr/> <ul style="list-style-type: none"> Participates in developing Strategic Plan Participates in developing company business model Approves Rough Cut Cash Flow Forecast Approves Rough Cut Profit Forecast Participates in developing KPI metrics Participates in Developing Balanced Supply, Demand, Financial Plan Participates in Executive S&OP Meeting Monitors Company performance |

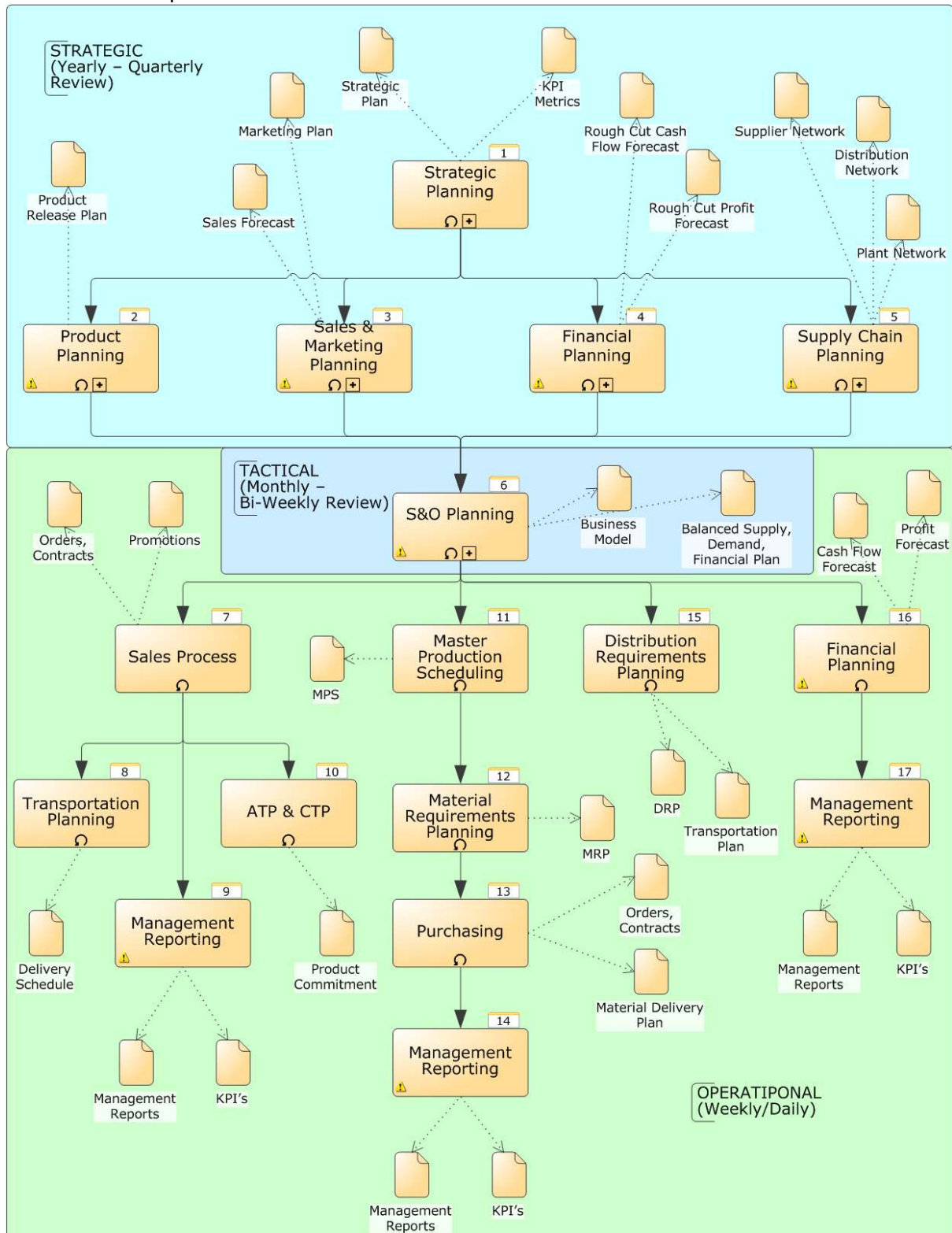


| Persona | Description |
|---|--|
| Ken Controller | <ul style="list-style-type: none"> Ken tracks the department's financial goals. He continually improves processes to achieve financial goals. He proposes and helps implement changes to optimize performance. He may approve documents and payments. <hr/> <ul style="list-style-type: none"> Creates Rough Cut Cash Flow Forecast Creates Rough Cut Profit Forecast Creates Cash Flow Forecast Creates Profit Forecast Participates in developing KPI metrics Participates in Executive S&OP Meeting Participates in Developing Balanced Supply, Demand, Financial Plan Creates Management Reports Creates KPI Results Monitors Company performance |
| Kevin • Sales manager • Sales | <p>Kevin manages sales reps for his area and tracks how they are doing. He helps them to close sales and may do limited selling himself</p> <hr/> <ul style="list-style-type: none"> Participates in developing company business model Participates in developing KPI metrics Approves Sales Forecast Participates in Developing Balanced Supply, Demand, Financial Plan Approves Customer Contracts Suggests and/or Approves Promotions |
| Nancy • Super sales rep • Sales | <p>Nancy handles all customer interactions, including finding leads, fulfilling orders, up selling, and dealing with service issues. In the simpler sales situation, Nancy does the job of David and Michael combined.</p> <hr/> <ul style="list-style-type: none"> Participates in Creating Sales Forecast Creates Customer Contracts Propose Promotions |
| Julia Marketing Executive Marketing | <ul style="list-style-type: none"> Julia manages sales and marketing strategy. She monitors marketing effectiveness and industry success. She builds, presents and argues the business case for the Sales and Marketing budget. <hr/> <ul style="list-style-type: none"> Participates in developing Strategic Plan Participates in developing company business model |



| Persona | Description |
|---|--|
| | <ul style="list-style-type: none"> • Participates in developing KPI metrics • Participates in developing Marketing Plan • Participates in developing Product Release Plan • Participates in Developing Balanced Supply, Demand, Financial Plan |
| Benjamin Marketing manager Marketing | <ul style="list-style-type: none"> • Benjamin is one of several marketing managers who handle marketing for a group of product families the company sells. <hr/> <ul style="list-style-type: none"> • Participates in Creating Marketing Plan |

The following Diagram shows IBP processes by process group and planning horizon with deliverable components:



Each process consists of multiple tasks assigned to one or multiple personas with detailed instructions, training videos and recommendations of “best practices”. Model is constantly improving based on our and our customer’s experience. (You can review current stage of the model at www.rt-it-group.com)

INTEGRATED BUSINESS PLANNING SYSTEM FOR MICROSOFT DYNAMICS NAV

Integrated Business Planning System (IBP System) for Microsoft Dynamics NAV was developed based on the RTIBPM and automates most of the process. The system combines information from multiple sources and creates an Integrated Planning Environment necessary to perform planning operations. The central part of the system is the Business Modeler that allows creating multiple company models and performing “What-If” simulations with different parameters. Each model is linked to the ERP data that allows to monitor planning performance seamlessly

Following table summarizes available system features by process:

| Process | Futures |
|---------------------------------|---|
| 1. Strategic Planning | <ul style="list-style-type: none"> • Business Modeler allows to build multidimensional business model • Dynamics NAV BI allows to set up KPI metrics and monitor company performance |
| 2. Product Planning | <ul style="list-style-type: none"> • Business Modeler allows setting up new product introductions on aggregate (product group) or SKU specific level • Statistical Forecast allows setting up new item introductions • Dynamics NAV allows setting up product specifications by Plant on SKU or aggregate (product group) level. |
| 3. Aggregate Sales Planning | <ul style="list-style-type: none"> • Statistical Forecast allows creating ‘Best Fit’ statistical forecasts by Distribution Center and/or Sales Channel on SKU or aggregate level • Collaborative Forecast allows using customer supplied or externally created forecast • Business Modeler allows setting up Marketing Events on SKU or aggregate (product group) level that will override Forecasts with support of “Product Cannibalization” • Business Modeler allows creating Sales Forecast based on Statistical Forecast or Consensus Forecast • Financial Budgeting allows setting up budgets by Marketing Event, Sales Chanel, Sales Region, Product Group or other dimensions. |
| 4. Aggregate Financial Planning | <ul style="list-style-type: none"> • Business Modeler creates sales, COGS and gross profit forecast based on Sales Forecast • Business Modeler allows setting up driver (what are you trying to say here?) based financial budget. Drives are linked to other part of the model such as Sales Plans or Product Release Plans. • Financial Budgeting allows setting up expense budgets by different dimensions • Financial Budgeting allows combining multiple budgets into single company wide forecast • Cash Flow Management allows creating Cash Flow Forecast by combining data from Accounting System, Business |

| Process | Futures |
|------------------------------------|---|
| | Modeler and Expense Budgets |
| 5. Supply Chain Planning | <ul style="list-style-type: none"> • Dynamics NAV allows setting up supplier network on material SKU level • Business Modeler allows setting up distribution network and perform “what if” analysis of distribution cost • Business Modeler allows setting up plant network and perform “what if” analysis to determine capacity constraints (RCCP) |
| 6. S&O Planning | <ul style="list-style-type: none"> • S&O Planning Dashboard allow combining Sales Forecast, Financial Forecast and Supply Chain Models to come to single balanced Supply, Demand and Financial Plan • S&O Planning Dashboard supports “Consensus Forecasting” process • S&O Planning Dashboard automatically controls performance of the model • Business Modeler proposes optimal parameters for the Distribution Network and Plant Network • Dynamic Safety Stock calculates safety stock based on desired customer service level |
| 7. Sales Process | <ul style="list-style-type: none"> • Dynamics NAV supports sales process out of box • CRM System allows setting up promotions or marketing events and track their performance • Statistical Forecast allows adjusting forecasts with consideration of promotions and marketing events |
| 8. Transportation Planning | <ul style="list-style-type: none"> • Transportation Planning allows creating delivery schedules with optimized truck loads • Transportation Planning allows creating optimized truck routes |
| 9. Sales Management Reporting | <ul style="list-style-type: none"> • Reporting System provides reports for Sales, Profitability, Customer Service Level, Late Shipments, Out Of Stock, Lost Sales • Dynamics NAV BI allows creating KPI reports and dashboards |
| 10. ATP&CTP | <ul style="list-style-type: none"> • Dynamics NAV support ATP and CTP functions out of box |
| 11. Master Scheduling | <ul style="list-style-type: none"> • Dynamics NAV creates master production schedule by Plant by SKU based on the Demand Plan supplied from S&O Plan. • Dynamics NAV supports finite loading • Dynamics NAV supports multiple replenishment system – M-T-O, M-T-S, A-T-O |
| 12. Material Requirements Planning | <ul style="list-style-type: none"> • Dynamics NAV creates Material Requisitions based on MPS • Dynamics NAV supports multiple replenishment policies – Fixed Reorder Quantity, Min/Max, Time Phased • Dynamics NAV supports multiple order optimization policies |
| 13. Purchasing | <ul style="list-style-type: none"> • Dynamics NAV supports Purchase process out of box • Vendor Collaboration allows providing vendor with material purchasing forecast for management VOI. |

| Process | Futures |
|---------------------------------------|---|
| | <ul style="list-style-type: none"> • Purchase Order Optimization creates optimized orders based on truck load using EOQ calculation |
| 14. Purchase Management Reporting | <ul style="list-style-type: none"> • Vendor Performance Reporting – late deliveries, quality problems, short shipments, cost of ordering • Cost Variance Reporting • Dynamics NAV BI allows creating Vendor related KPI reports and dashboards |
| 15. Distribution Requirement Planning | <ul style="list-style-type: none"> • Dynamics NAV creates distribution requirement plan by Plant by SKU based on the Demand Plan supplied from S&O Plan. • Transfer Order Optimization creates optimized orders based on truck load using EOQ calculation |
| 16. Financial Planning | <ul style="list-style-type: none"> • Business Modeler creates profit forecast and cash flow forecast based on the Demand Plan supplied from S&O Plan and other setup parameters in the system. • Business Modeler uses driver driven methodology linked to other parts of the model |
| 17. Management Reporting | <ul style="list-style-type: none"> • Financial Reporting allows setting up multidimensional reports that combine information from financial budgets, accounting system and business modeler. • Dynamics NAV BI allows creating Finance related KPI reports and dashboards |