

Paul Hoy: Hi! My name is Paul Hoy Cognos manufacturing industry director. Today Dan *[Inaudible]* and I will talk about the success our manufacturing customers have achieved in utilizing Cognos performance management solutions. Specifically, we will address how customers are leveraging IBM Cognos solutions to implement an effective sales and operations planning process that balances an organizations customer service, operational and financial goals. Progressive customers utilize Cognos to implement a complete performance management solution. Specifically, they seek to answer three fundamental business questions. The first deals around trying to gain visibility to how the organization is performing, typically this is the domain of scorecards and dashboards, organizations typically have a list of key performance indicators or metrics that they track on a regular basis to assess how they are doing performance wise and whether they are on track. The second fundamental question is why are we performing in a certain way? This is the area were customers try to get down to root cause and really identify drivers behind performance to understand how they can correct performance that is lagging or replicate performance that is doing well. This is the traditional business intelligence area of reporting an analysis and then the third question to implement a full performance management solution deals around what should we be doing? This is the multi scenario evaluation were customers will stimulate various alternatives to performance and look to test different models and different scenarios before determining the solution or the option that gives them the best fit for addressing customer service or operational issues. The key is to implement this performance management platform in a way that takes information from all of the transactional systems that address the day to day activities of the organization. It is not uncommon for our manufacturing clients to have anywhere from eight to a dozen different transaction systems in operation at any one time and as people look to assess their overall manufacturing performance, they are looking for a performance management visibility and tool set that pulls all the information from the transactional systems, puts it into that performance management warehouse and then provides flexibility for the users to answer the questions that we spoke of. Another way of looking at it is identifying how that manufacturing performance management framework works when it is actually put into a production environment. Typically organizations are monitoring their entire end to end performance using a series of metrics. Frequently these metrics follow the supply chain councils of score model. The score model looks departments end to end metrics dealing with every facet of an organization from planning production to sourcing it from suppliers to making goods delivering it to the customers and managing the return process if any. The score metrics are driven by the organizations sales and operations planning process, when organizations look to implement a full performance management review they will utilize sales and operations planning to unite the sales and marketing, production and supply chain and finance areas of the organization. As sales and operations planning is an industry standard process that many of our customers have implemented whether they name sales and operations planning by name or not they are going through the process that balances the various aspects of the operation looking at a demand plan, a supply plan and then managing that within the financial goals of the organization. So, the sales and operations planning process takes a higher level strategic view of the organization and then uses that view to align the daily and weekly operational metrics and the daily and operational supply activities of the organization. These activities have their own scorecards and

metrics so that I can monitor my day to day performance and make sure that is in line with the overall company goals. The plan that we have just spoken of pulls operations data from the numerous ERP supply chain manufacturing execution systems and other both internal and external data sources, so which is key to add value to the investment that organizations have made into the transaction systems by providing that visibility across the multiple systems, each transaction systems serves a critical role in the organization, but when we are looking at performance our manufacturing clients need to look at a process view across all the transactional systems and that is where the performance management framework that pulls information from all this data come into play and then finally on the right we see the recognition that each user may wish to consume the information is a different way or in a way that is most meaningful to the way that he or she does business. Specifically, some users will rely on scorecards and dashboards that are desktop based where they can come to monitor their performance on a regular basis. As the manufacturing environment grows more complex and the supply chains become more extended it becomes much more important for users to work in a exception based *[Inaudible]* in that case the users work with an event notification and an exception based alert system, so that the performance management solution can monitor all the metrics across the entire organization yet the users prompted to only take action on those that are outside the tolerances and that is where strong event notification and exception based dashboard and scorecard system become key to understanding that performance and then finally the IBM Cognos Mobile Solutions provide alerts reporting an analytics at the user level for those mobile users down to the wireless devices, so the key to an effective performance management solution is to pull information from multiple systems provide exception based information for the users and then provide that information in a way that matches their style whether it is desktop based or a mobile environment that pushes that out to the various users. We have spoken about sales and operations planning as the key to tie the organizational pieces together, sales and operations planning as I said before is an industry standard term that more and more manufacturers are looking toward that, many companies are moving toward taking disjointed or casual processes around demand planning, supply planning and financial planning and integrate them into a more coherent and unified process. Sales and operations planning becomes key as supply chains become more sophisticated, decentralized and out sourced. As customers become more demanding and as the market conditions change this sophisticated and decentralized supply chain has to provide almost real time visibility so that the organization can monitor their performance and react to changes in both demand and supply. So, as we look at these type of operating conditions there are certain characteristics of an effective sales and operations planning process. It must link the day to day operations with the business goals the planning and the financial planning, it is crucial that each of the daily activities links back to the overall company goal, so that the organization is unified from top to bottom and that unified from top to bottom and then also unified from the different functions, sales, marketing and operations each must use their own transaction systems and must operate autonomously to optimize their own function, but yet they must work in an integrated fashion so that the *[Inaudible]* between customer service, operations and financial performance can be managed. An effective sales and operations planning process models the effect of meeting the demand plan, so there is one company wide demand plan typically at a family level, typically over

a 12 to 18 month period if not longer and that demand plan then drives the overall view of the supply plan and the balance and trade *[Inaudible]* have to become visible and have to be made on a consensus basis and perhaps most importantly the trade off and the view of the plan has to be done in a way that there is visibility to the financial impact of that plan, that is on a P & L statement, a balance sheet, a cash flow and a working capital perspective, so it becomes key that these processes be tied together that it provides the visibility to the various elements of the plan and when used effectively the sales and operations planning process and the executive review process become the tool for senior executives to manage the business and provide the guidance to the day to day to activities. Cognos has recognized the impact of sales and operations planning on organizations and we have been approached by numerous companies to help provide templates and thought leadership in the sales and operations planning area, so what we have done is we have developed a *[Inaudible]* of blue prints around our sales and operations planning approach. Cognos performance blue prints are developed by the IBM Cognos innovation center for performance management. Blue prints are an effective way of delivering predefined data models, process models, work flow and policy guidelines to help organizations speed their software implementation. When used effectively blue prints allow companies to implement much more rapidly to take advantage of best practices, we develop the blue prints in conjunction with leading analyst and progressive customers through deploying quickly the organization is able to reach a quicker return on investment and the overall implementation project is streamlined and spread up by using some of the thought leadership and best practices of the blue prints. So, as I said before one of our key blue print areas in manufacturing is the blue print around sales and operations planning. Our sales and operations planning *[Inaudible]* develops a single integrated framework around sales and operations planning. We allow organizations through the blue print to create sales plans or demand plans and then reconcile those with the supply plan. The critical element is that each organization looks at their version of the plan with a view and a level of detail that is appropriate to each role. Sales and marketing can work in product families and geographies and time frames to forecast families and volume that demand plan is translated to the supply plan in terms of units and hours for labor hours or looking at machine hours or capacity hours that are required, on the finance side we translate all of that activity though a financial view both in terms of potential revenue dollars and cost side to help stimulate and model the financial perfect. A key element of the blue print is the ability to look at a demand plan, look at various supply options and then create ProForma financial statements, so that the organization is able to analyze the projected P& L and balance sheet effects of a demand plan being met in a certain way and then through integration of that sales and operations plan with the scorecarding analytics and reporting we are able to monitor that plan on an on going basis and make adjustments as needed when there are changes in the business circumstances that originally drove the plan. As we look at the sales and operations planning blue print more specifically we see that it provides the ability to look at and model sales volume and revenue at a variety of different levels that can include family level views looking at detailed sales forecast, the sales forecast can be generated within the blue print or imported from an external forecasting system. We can look at the effective new product introduction moving into new markets, changing product mix and volume and then looking at the financial impact of that, that demand plan is then used to

drive a supply plan, where I can then look at the product mix and then make decisions about allocating that product mix across various production plans, contract manufacturers or out sourced suppliers. The effective use of the supply plan and a concept of constraints allows me to model capacity, cost [Inaudible] inventory levels against those constraints at each plant level, so then I can look at the effect of meeting that demand planned at various plans looking at the impact on those constraints, each plant may have a unique cost structure, so by looking at the constraints, the labor cost, the material cost, sub contractor cost for out sourcing and then able to move product decisions and production decisions across plants identify the capacity, labor and material constraints and look at the financial impact so I build a Proform of P &L for each plant, so that i can make an educated decision about moving production across the plants doing the trade off between meeting customer demand, but doing in an way that optimizes profitability for the organization. An effective sales and operations planning process also has a strong executive review component. The executive review component is where the various pieces of demand information and supply information come together for the executives to make that financial trade off that Cognos S & OP blue prints supports this executive review by providing the [Inaudible] analysis where I can assimilate various financial statement impacts of the different sales and operations planning scenarios, so I can look at different combinations of demand and supply and model the various financial impact, I can make changes in each of the areas and have that flow through to the finances or I can make changes to the financial goals and have that flow back to determine the best mix of products combinations from a sales perspective or the best plant or sub contract manufacturing combination to meet the demand and then on an on going basis the business intelligence portion of the performance management solution provides the monitoring of key metrics such as sales, revenue, cost of goods sold, customer service and financial performance. This allows the organization to analyze performance on an on going basis, analyze the performance by a variety of categories such as division, geography, channel or product category and then make adjustments as needed to keep performance on track so that the organization can consistently meet their financial goals and financial targets.

Here we look at the sales and operations planning process that is enabled by the Cognos blue prints solutions. On the left we represent the traditional demand and supply systems that may be in place within an organization, these may be ERP, supply chain, manufacturing execution systems, various financial planning and budgeting systems that feed in the upper left and overall demand plan. That demand plan may consist of detailed forecast, collaborative bottoms up forecast developed in conjunction with customers, top down goals, it also introduces areas of new product introduction, new products that are coming to market so that the organization can model the effect of the changes to the demand and changes overcoming the product mix over a multi year period that generates a demand plan which then feeds a supply plan as depicted in the lower left. The lower left portion of the supply plan looks at factors such as plant capacity, plant cost, plant through put capability, contractor and supplier capability, the impact of bringing on new more efficient production machinery that may produce faster, but introduce new cost into the equation and then the supply plan feeds the fulfillment and distribution planning portion of the solution. The supply plan looks at the ability to produce the goods, the

fulfillment and distribution planning capability looks at the ability and cost of my organization to move goods throughout the extended supply chain and balance the trade off of supply and demand looking at customer fulfillment based upon various stocking decisions and utilization of various supply chain warehousing and distribution schemes. The goal of the sales and operations planning blue print is to then drive consensus by having an integrated yet distinct demand plan feeding the supply plan, each organization can work with tools that best model their approach, as we identify conflicts in meeting the demand plan through various supply models, those conflicts are highlighted and consensus can be reached through the executive review process, the executive review process is where we bring all of the various elements together and look at the financial impact and look at the various alternatives and model different scenarios, so what we have is a unique combination of Cognos planning and IBM Cognos business intelligence to do the initial plan, to monitor the plan utilizing business intelligence on an on going basis and then to make changes to the plan as my business changes and as I see alternative demand or supply scenarios that are necessary based upon current market and customer conditions. The Cognos sales and operations planning blue prints have been reviewed by numerous customers and analyst and have received great reviews for the way that they bring alignment and integration to the organization. Specifically, Ventana research sees great promise in the blue prints and their ability to bring a financial orientation to the sales and operations planning process, well many ERP systems provide forecast and also provide demand plan, it is very unique to find a combination of tools and solutions that brings the demand and the supply plans into a financial view and that is really the strength of the blue print and that it allows an organization to take all the pieces of the sales and operations planing process bring them together into one blue print and model the financial effects. Research from Ventana sows that there is tremendous return on investment that organizations can reach through an effective sales and operations planning process, Ventana rates customers on their performance ranging from market leaders to overwhelming gains and performance, so in doing the survey organizations that have implemented an effective sales and operations planning process report overwhelming gains *[Inaudible]* margin by aligning the financial and the operating plans they report overwhelming gains in their customer service and their financial performance and consistently integrated financial forecast and operations data it shown as a key to improving customer service, so these benefits come from an aligned sales and operations planning process and then the Cognos blue prints becomes an effective enable to help an organization achieve sales and operations planning. Hopefully this has given you a background of where we fit from a sales and operations planning process and some of the high level discussion of the functionality. What I would like to do now is turn it over to *[Inaudible]* the Cognos director of manufacturing industry solutions to demonstrate for us the Cognos sales and operations planning blue print.

Male Speaker 1: As you can see I have logged in to the Cognos connection and the supporting sales and operations performance portal that is it within the Cognos S & OP blue print. I have immediate visibility into the status of particular metrics which metrics are performing poorly, which metrics are performing on an excellent basis and how those metrics are trending. In addition I have a geographical report indicating that I have particular exceptions based on a forward looking view coming out of the S & OP process

the sales and operations planning process. In addition I may want visibility in to how particular contractors are performing in order to alleviate some of these productions constraints that I might be seen through my capacity in material exceptions available on my S & OP performance portal. I can see that *[Inaudible]* I have a particular material exception where the material ordered is actually less than the material required coming out of the S & OP process. In addition I have...additional supporting content, additional content that will allow me to quickly do analysis and get information appropriate to my role in the organization. I also have alerts that come through my event monitor that will allow me to quickly see the status of particular sets of data that are auto variance with commitments. But lets take a look at our metrics our on time customers shipments we seem to be having an issue there it is not only performing poorly, but it is trending down and we will jump directly into the metrics area in more detailed look at metrics and I can see that this particular metric on time customer shipments has been performing poorly over a fairly long period of time and I can scroll this data back and forth to see the effects of that metric against target and against any tolerances that would tell me whether or not that is getting worst or better. In addition I have other tabs here that will allow me to assign actions for this metric and track the actions that are happening on this metrics to increase its performance and I have the ability to drill down into diagrams to get the root cause analysis and what I can see is that my on time customer shipments are performing poorly and they are being impacted primarily by schedule to actual production, the schedule the actual production metric. I can drill on that metric and see further analysis that really it is a machine utilization problem and the quick thumb nail or the results of what is going on with machine utilization. Supporting this information...supporting this drill down analysis and this root cause analysis could be additional set of reports or dashboards. In this case I would like to highlight that I am going to open this in a new window and when I open that in the supply and demand dashboard and in a new window I am getting very quick visibility into what is going on with this particular machine utilization metric, I can see I have on a single page my forecast of demand by region this could be by product category or by plant, in addition the machine capacity that is being forecasted across these particular plants and where I may be having capacity utilization issues. I can also see on an actual basis what is going on as far as an attainment. I can see that in the Houston plant the volume planned was approximately 269,000 and we only produced 258,000 indicating...indicated in red only a 96% attainment of the plant, so definitely we have a problem in Houston just from a couple of screens we already have seen that I had a labor exception from our geographical map and I can see that the Houston plant is not meeting it is volume attainment. We could go into our demand forecast and update that forecast and or see how some of our demand planners or sales people might interact with the demand forecast or we could view the production plan and determine exactly what areas within the Houston plant where we may be having constraint issues across three major constraint areas those being material, labor and bottle necks or machinery constraints. We can certainly drill down into that in more detail, but a lot of the time that we have today lets take a look at the post production process or the portal supporting to distribution area in the organization. In this case once the production has been completed and we have updated our demand forecast we can feed that into the distribution module within the S & OP blue prints *[Inaudible]* to see where we may be having constraints issues within our distribution network. In this case I can see that our

distribution center in Harrisburg for a sub set of key resources in that distribution center whether it is loading or packing resources or particular machinery resources like a *[Inaudible]* or label or a shrink wrapping within a particular product category and within a particular version with multiple scenario, with multiple versions and *[Inaudible]* scenarios within the planning process to see where our required capacity is as indicated in the green versus our demonstrated capacity indicated by the blue line with the blue axes are the maximum capacity and in this case we can see that in July we are actually forecasting the required capacity to be higher than our maximum our demonstrated capacity for this particular resource and product family to meet the demand that is required from our demand forecast. In addition I can see that we have some distribution center exceptions within our self like *[Inaudible]* plant and the details are right here at our finger tips below and we can see that actually we are forecasting some *[Inaudible]* inventory to be negative based on the inbound shipments to this distribution center and the demand that is been placed on this distribution center. In addition I have a distribution center resource requirement summary showing me where my load versus capacity is surpassing the 100% mark and the ability to drill down into those to see exactly the what is going on with those particular assets. So, we will highlight that report and as we can...as we saw from our summary distribution center of resources requirements that we have some particular areas and we can see immediately that we have some problems within demonstrated capacity averages and maximum capacity averages within the consumer electronics area for our packing, palletizing, stocking and unloading resources within this particular distribution center. Again I could utilize the blue print that actually go in and plan, I could just take go directly to the update of the S & OP distribution plan and may be look to offload some demand that has been placed on this blue print on this distribution center or to allocate additional inbound shipments through this distribution center to alleviate the negative inventory issue that have been forecasted within this distribution center. Lets look at the S & OP executive review so everything gets pulled together within the executive review process, once we finished our demand plan the work flow indicating that everyone is complete the production plan and the balancing of the distribution center plans then it is time to perform the consensus meeting or the executive review meeting where we really pull everything together and can see the effects of this on financial metrics from a very higher level view in the organization. In this case I have a portal that gives me a indication of particular revenue attainment by business unit channel, by product category across the forecast periods, I can look at revenue growth percentages year over year by business unit, what we are forecasting is a percentage of new product revenue compared to current products and a over view of capacity utilization within a particular business unit in the organization. I can drill on that red bar and now we are provided with a filtered prop that allows us to go in and actually look where we may be having capacity issues across a particular product categories of business units or channels, in this case I can see that I am having capacity utilization issues across every product category in my channel and my business unit, so that is something that I need to really review within the planning process and so i can click directly on my review plan update and that takes me directly to the work flow that manages the executive review process and what I can see is that I am taking to a work flow and I can immediately I can see the status of particular business unit plans, whom the owners are of that plant, whom the reviewers are and some summary level audit

information around the last time data has changed, lets go into business unit one and once we have opened the template it gives us the ability to look at this executive review model in a multi dimensional view, so now I can slice and dice by product category, we will look lifestyle products, by channel or by region however you would like to define your organization within multiple versions of the plan and a couple of what if scenarios. In addition to other tabs that support this are the income statement any financial drivers that are used to drive the balance sheet cash flow statements and over to the financial summary, but lets focus on the executive review, again this is a blue print so any of the rows and columns are meant to be changed to match your organizations needs and it is very easy do that through a functional user that is no programming involved in this case we have defined the rows within categories so demand going down to an independent demand line, supply looking at inventory supplies and unit, cost of goods sold assumption down to capacity utilization and then the translation into the financial metrics of this plan so that we can feed that income statement balance sheet and cash flow. We are given the ability to select from drop down list so in this case may be would like to re forecast the business based on bookings rather than over written demand levels and we can mainly see the effect on projected days supply in the inventory, cost of goods and revenue and margin based on assumptions and drivers in this model, we may want to use over *[Inaudible]* demand to complete the rest of the forecast going forward through our executive review and then in light of particular of the tough conditions that are going on the market may be we would like to see the effect of a decrease of 10% in demand are going forward, so I just type in DEC 10 with a greater than sign and press enter and I mainly can see the effect of that lower demand on any inventory cost of goods, daily sales rates projected days supply again the financial metrics going forward, we may want to make a higher level assumption so I can make assumption of...I would like to hold these two yet what happens to 2007 overall demand if I were to decrease that by 10% while holding a couple of months constant and so I can immediately see it again the effect of that on my total view for the year and any break down by month looking across the demand and supply in financial metric calculations, so you are giving the ability to do what a scenario is very...very quick along with the ability to you know perform *[Inaudible]* calculations without having to do any programming across this blue print. Xx want to make some product level assumptions so I could go into a new product area, these could be products that are not even from your store systems not even planned within your ERP, may be I would like to bring in this new product and over write the demand for this new product that based on a faster product development cycle to take advantage of competitor weaknesses or something like that, so I can add annotations to that those could be included in reports and then if we were to do that may be we would like to increase this by 25% of going forward and utilize that from a new product level, I can also say that I have got additional alerts down within the executive review where we are looking at over capacity issues may be I would like to out source some products here, may be I think I can do...I can out source this 30,000 units to an out sourcer and then that would give me additional unit capacity here and then I can immediately see the effect of that in the over capacity issue going away. Any of these changes are then immediately viewable within the consolidated financials, so I can see the effect of my assumptions on supply and demand within the income statement within the balance sheet, within my cash flow statements and we pull it all together within a financial summary that gives us cross



financial statement metrics like return on equity, return on assets, inventory turnover ratios those sort of things so that we can use those as targets within our portal page for reviewing metrics as you see in the upper left hand side, so how we are comparing on an actual forecasted basis to plan and variance and those metrics out of performing *[Inaudible]* are performing great are indicated for me real time. So thank you very much for spending time today to review the Cognos S & OP blue print, we have looked at the sales and operation performance portal and the ability to review exceptions drill down into metrics see the effect and the root cause of particular problems within metrics drill over to a supply and demand area, update our supply and demand and a detail level review how those supply and demand metrics would then effect the post production or distribution aspects of our S & OP plan and then we pulled everything together within a executive review with the ability for the executive to review financial metrics and make decisions around very high level supply and demand metrics and the effect of those on an integrated set of financial statements.

Paul Hoy: Thanks Dan appreciate you taking the time to go through and really give us an overall view of end to end performance and how the linkage of portals to monitor performance really compliments my visibility into my performance and then provides the tools needed to identify areas that need change and then go in and take the corrective action. We have numerous example within the Cognos customer base where that visibility and the tool set to help drive changes and be responsive to change yields tremendous ROI for organizations and electronics manufacturer *[Inaudible]* utilizes the combination of the visibility of Cognos reporting with a continuous improvement program to identify areas of opportunity, make changes and then bring those changes into production through that combination they have reported over a 90% increase in gross margin *[Inaudible]* recently moved to out source elements of their manufacturing production and utilize Cognos supply chain visibility solutions to analyze contractor performance and keep track of their ability to deliver by identifying revenue that might be at risk and taking corrective action, they identified a 300% plus ROI in just four months. *[Inaudible]* truck division *[Inaudible]* took a very specific approach to managing suppliers, identifying supplier shortages and tracking rejects and holding suppliers accountable they point to a reduction in shortages by 50% and a reduction of reject by 30%. When we look at the benefits of an integrated sales and operations planning process, organizations such as Corn Star which produces the bottle that get utilized by consumer good organizations like Coke and Pepsi Corn Star uses the sales and operations planning blue print to allocate production across 15 different plants looking at the combination of capacity, transportation cost and operating cost within the plant to make allocation decisions, so they are able to make a financially driven decision that balances customer service and productivity similarly *[Inaudible]* is able to add value to a transaction system environment where SAP and *[Inaudible]* execute the day to day transaction system, but they utilized the Cognos sales and operations planning approach to help assimilate demand, assimilate various alternatives, model the effects of that and then when they have come up with a plan that meets all the requirements they execute that within the SAP and *[Inaudible]* environment. Hopefully, this has given you a feel for Cognos sales and operations planning solutions. I would invite you to look further into several areas to get more information, for information on Cognos overall

manufacturing performance management solution you can visit [Cognos.com/manufacturing](http://Cognos.com/manufacturing), to get more information on the sales and operations planning and other blue prints available you can visit [Cognos.com/innovation](http://Cognos.com/innovation) center with that I want to thank you for taking the time to lean about IBM Cognos manufacturing performance management solutions and how sales and operations planning can help drive real benefit into your organization through improved customer service better operational efficiency and improved financial performance thank you.