

HOW-TO-GUIDE:
**JUSTIFY A
SUPPLY CHAIN
PLANNING SYSTEM**



It's been so many years that we have been selling, implementing, and maintaining Supply Chain Planning systems and all kind of related services around that. And yet there is always at least one person involved with the project that asks how do we justify this **"SUPER-DOOPER"** planning system to our executives, to other managers, or just about anybody who asks why you want to bring about this change?

The natural reaction has always been to start crunching the numbers and talk about ROI and how much inventory will be reduced (the CFO loves that), or how your delivery performance will be increased (the sales guys really support that), or how your profitability will be improved (The CEO starts getting his pen out), etc. etc. But at the end of the day there are more basic reason why a good planning system can make all the difference in the world, without all the math. This is the focus of this ebook, to discuss why systems can plan faster, better, and with more consistency, **so that you can sleep better at night**. Oh, by the way, if somebody asks you next time why we need a planning system, you can just smile and email this to them, and we'll do the same.



WHY DO YOU NEED A SUPPLY CHAIN PLANNING SYSTEM?

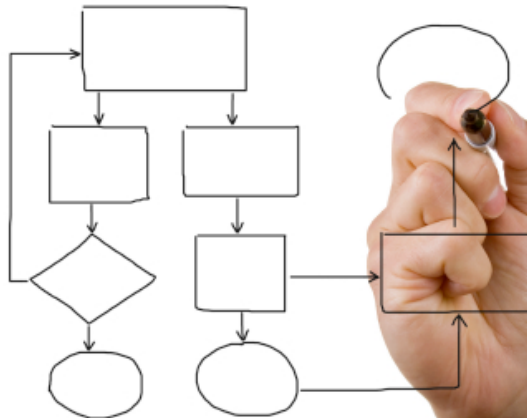
(A NON-QUANTITATIVE ANSWER)

1. SYSTEMS ENFORCE GOOD PRACTICES AND PROCESSES
 2. YOU CAN PLAN MORE OFTEN, EVEN **HOURLY**
 3. SYSTEMS ARE FAST, **REALLY FAST!!!**
 4. SYSTEMS STREAMLINE PROCESSES AND HOLD NO GRUDGES
 5. THEY CAN TIE PLANNING TO EXECUTION
 6. THEY CAN MODEL THINGS
 7. THEY CAN FLAG PROBLEMS AND **don't fall sleep**
 8. SYSTEMS DON'T LIE – NO OFFENCE TO ANYBODY
 9. DO THINGS THAT ARE IMPOSSIBLE FOR EVEN EINSTEIN TO DO
 10. YOU CAN THROW AWAY THE SPREADSHEETS...**PLEASE!**
- ii. More Beer!**



SYSTEMS ENFORCE GOOD PRACTICES AND PROCESSES

Companies spend a lot of time and money to design business processes but as their business changes, or people change, the **processes are not followed or gradually changed**. Systems enforce good practices and show (provide visibility) when something is not completed, or done right. For example, having the capacity to respond to a customer can be calculated based on good data as to how much you have, how much you are using and how much more can be obtained. In the absence of good data and systems to do real-time analysis, this becomes either guess work, or left to people with years of experience. Even at that, it is not clear how good of a decision is made by the experts. Systems also enforce availability of good and reliable information, e.g. inventory, capacity, cost of suppliers to be used, potential shortages—again, all in almost real-time basis.



YOU CAN PLAN MORE OFTEN

The more frequently you plan the less inventory you are likely to generate and better serve your customers.

In the absence of systems planning can be done at best once a week. And even if possible, most manual models (e.g. spreadsheet) are inaccurate, lack necessary detail, and are too high level. The right system enables you to examine your plans based on changing demand, market conditions, inventory availability, supplier capacity, and revenue goals twice a day rather than once a week, or even on hourly basis. This can have a huge impact on the company's performance in cost savings and customer delivery performance.



SYSTEMS STREAMLINE PROCESSES AND CREATE **VISIBILITY**

Do you have hundreds of sales people all over the world, or even just a few regionally, making(up) their own forecast? How do you keep track of exceptions, how do you keep track of their accuracy and reward them for it? How do you ensure you know the exceptions (e.g. changes in forecast by more than 5% from their previous forecast)? How do you aggregate their forecast into product families? And how do you commit to them based on realistic availability of capacity at the same time ensuring that you are building the right product mix and meeting your revenue goals? These are all disparate business processes in sales, inventory, and operation planning that systems can bring together, integrate, and create **TRANSPARENCY** across different processes so that left hand knows what the right hand is doing.



SYSTEMS ARE FAST!!!

People cannot collect and calculate as fast as systems can--It does not matter how many people you have assigned to plan and respond. Let's take an example here: without a system, Available-to-Promise information would take days or weeks and it still wouldn't be accurate. So you may do what most companies do which is to use some made up number based on fixed and standard lead-time for each product. That's where the inaccuracy comes in and leads to either excess inventory or inadequate customer service levels. For ATP to be accurate, you have to check for inventory, current allocations, current capacity, current WIP, current supplier capacity, etc. All of this information resides within different departments and locations around the world. Only systems are capable of doing this and performing this task by checking hundreds of variables including inventories, capacity at current allocations, customer priorities, mix of products, cost, methods of delivery, and much more in order to ensure an accurate response.

No matter how many bright people you put on this, because of diversity of the data that is needed, it would take a long time. In fact, by the time you collect the data it is already too old for analysis.

Systems can do this **stuff** in the speed of real-time, and hence improve velocity of doing business, all together.



THEY CAN TIE PLANNING TO EXECUTION

What do you do when you receive the news of a potential late delivery from your supplier? What alternatives do you have? Can a faster method of transportation help? Would it be cost justified? Systems can do these kind of analysis ahead of time, or at least when the event is made known, and offer the best scenarios and options.

Or you can just fight fires on the shop-floor!



THEY CAN MODEL THINGS

Systems can model your planning processes and manufacturing environment--YES...EVEN YOURS! Only if we could get a dime for every time some operational managers told us that their environment is too unique, too complicated, too crazy to model...

And once the modeling is done , you can predict events in the future—i.e. Planning systems can predict late orders, late production, lack of capacity, P&L forecast based on real supply chain constraints. They can also run scenarios when unexpected events occur, such as epidemics, strikes, market crash, etc. Therefore you have more time and options at hand to prevent inventory build up, and reduce cost, or all kind of other good things for your supply chain . In the absence of a planning system, arbitrary and subjective decisions are made based on people's experience, motives and relationships which may not necessarily be in the best interest of the company.



THEY CAN FLAG **problems**

Systems show **inefficiencies** in the operations, suppliers, as well as customer service in an almost real-time manner. Supply chain planning systems are “active” rather than “passive”, such as databases and spreadsheets. This means if there is too much

inventory or **obsolete** inventory sitting somewhere they would know. If some suppliers are constantly

late, causing delivery issues, systems can alert the users. If certain customer or sales person produces

inaccurate forecast then system would create exception reports.

If a customer’s order can be delivered on time using substitute parts or made in some other locations at higher, or lower cost, system would offer that as an alternative. None of the above can be done with traditional systems unless there is an expert who is actively looking for such alternatives. Systems can do this a lot faster and more efficiently.



SYSTEMS DON'T LIE!

Systems show performance measures and **OPERATIONAL FACTS as they *are*, not *presented* by the very people who are supposed to be measured by it—e.g. inventory reduction goals, customer delivery performance, supplier performance based on contractual agreements and so on.**





DO THINGS THAT ARE IMPOSSIBLE FOR EVEN EINSTEIN TO DO!

Systems can perform tasks which are almost impossible for any person, or group of experts, to do. An example of that is ATP , mentioned earlier. Another example is Multi-echelon inventory optimization. In other words, for each product how much inventory do we keep at each level of supply chain in order to meet certain level of customer service. The different layers of inventory are production buffers at multiple sites, finished goods, distribution center inventories, etc. In most cases, there are millions of dollars of inventory which are wasted by keeping the wrong mix of products, at the wrong location, which also hurts your delivery performance.

So, You Are Not Short of SMART PEOPLE. . . **this Stuff is really HARD!**



YOU CAN THROW AWAY THE SPREADSHEETS

Spreadsheets are by far the most popular tool in Planning...But its also the biggest hurdle!

Why? spreadsheets are **passive** and therefore do not alert what the issues are. They are programmed to do what the user wants to see rather than understanding the complexity of the supply chain. They do not integrate different business process and every department uses their own set of spreadsheets. In most cases, Spreadsheets use **fixed** lead-times and are incapable of understanding capacity of the suppliers, and tie them to inventories, or the customer requested dates.

They are also **incapable of scaling** as the suppliers change, acquisitions are made, business grows, users change, and so on. Spreadsheets have very **little analysis** capability such as MEIO or optimization. And they lack the ability to tie different KPI's based around the same parameters. For example, how does one tie late deliveries to supplier delays vs. unrealistic commit date? Or how do you tie demand planning and sales forecasting to capacity optimization and inventory target levels using spreadsheets? The only way is through subjective means and extremely slow manual intervention. Trusting your business to spreadsheets is a very risky proposition!

MORE BEER!

Allow me to elaborate, there are some good reasons to justify a supply chain planning system, whether its for demand management, inventory optimization, supply planning, sales & operations planning, and almost any other planning process that you can think of. But you have to pick the right planning system for your size, complexity, and requirements. There are many of them out there so do your research and evaluate diligently. We have a number of free resources to help you with this step. Start with the [Adexa Supply Chain Planning Blog](#), we tend to regularly post very practical and informative articles to save you time--and hopefully some money.

Now to the point. We have seen a lot of companies that want to go-it-alone and try to build "in-house" planning systems. To our experience, in most cases that we have seen, this has turned out to be a very time-consuming, rather futile, and money-pit of a project. **we have been doing this planning stuff for a long time**, and it has taken years, hundreds of very smart people, and millions of dollars to develop, build, maintain, support, and service these highly intelligent systems. So chances are pretty good that you will reap the benefits (without having to waste time, money, and very precious resources) by just putting some effort into picking the right planning system rather than trying to build one yourself.

Let's put it this way, we have some very well-know customers around the world in semiconductors, Electronics, CPG, General Manufacturing, Textiles, Chemicals, Pharma and even some very big breweries (we have two of those) but that doesn't mean that we are going to start making our own beer, and turn our developers into brew-masters, as good as that may sound!

Instead we help them make a lot **MORE BEER!**



ABOUT THE AUTHOR



K. CYRUS HADAVI, PH.D., President, Chief Executive Officer and Chairman of the Board, founded Adexa in 1994 with a dual mission: to enable enterprises to deliver higher earnings per share AND improved customer service. His strategy was to increase operational and financial performance with intelligent business planning solutions. Prior to founding Adexa, Dr. Hadavi directed implementations at i2 Technologies, Inc., delivering business solutions to Fortune 500 companies. Before that, he helped pioneer next-generation distributed problem-solving applications at Siemens. While at Siemens, Dr. Hadavi served as Adjunct Professor at Columbia University, where he taught courses on the application of computer science and artificial intelligence to the manufacturing environment.

Besides publishing numerous articles on supply chain management, manufacturing and e-commerce, Dr. Hadavi is a frequent speaker at business venues worldwide. He holds a B.S. degree in electrical engineering and an M.S. degree in industrial management from the University of Birmingham, UK. He also holds an M.S. degree in computer engineering from the University of Southampton, UK, and a Ph.D. in electrical and computer engineering from the University of Michigan

Contact: chadavi@adexa.com

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