

# TEAMWORK AND PLANNING - THE KEYS TO AN EFFECTIVE, ROBUST PHARMACEUTICAL SUPPLY CHAIN

A conversation with Rich Musa, Cipla Therapeutics

## ABOUT

Rich Musa is the supply chain lead for a start-up branded products venture with Cipla. He has been in the pharmaceutical industry for more than 25 years, working in manufacturing and support functions and is an expert at planning and forecasting. Moderator Ben Locwin is a healthcare executive with quantitative and qualitative analytics expertise. He works with senior managers at biopharmaceutical, vaccine, and medical device companies to market at higher velocity and with higher quality.



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*BL: Pharmaceutical supply chain management is a complex topic - covering everything from sourcing through manufacturing to distribution. The foundation of any effective supply chain is having the right amount of raw materials to support production - however understanding the exact quantities and timings involved is a challenge. What are the key considerations for effective materials forecasting?*

RM: From a supply chain management perspective the key is a establishing a really good relationship with either your demand planners or directly with the commercial team depending on how the organization involved approaches forecasting.

Without that relationship all you have is a number that you plug into SAP and you'll plan against that. The problem with that approach is that you are relying on the system the system, this it will do its job but you won't know for sure.

You really need to work with your commercial team and understand what the potential is on the high and the low end to ensure you have enough product to sell without product you will need to scrap because it goes out of date.

RM: And how much risk you want to take in your planning depends on what you are making. If it's a very high margin product with a low cost maybe you're willing to take the extra risk and hold more months of supply on hand.

But if it's a low margin product you really don't want to have a lot of scrap or any additional carrying or storage costs.

So you really need to take that all into account not just plug a number into SAP. If it's a high margin product what happens if demand doubles? You don't want to leave all that profit on the table. Planning is vital.

*BL: So it sounds like it's a fine balance between the financials, the storage costs, the expiration dates and the criticality of the material?*

RM: Exactly. It really comes down to the financials. Is there enough profit margin to warrant risking the extra carrying costs or the extra space?

The biggest part of it is the scrap, usually. How much are you willing to risk having scrap material? If it's a high margin, high cost product maybe you want to take the time, effort, money to do extra stability studies to extend your shelf life.

*BL: How should companies go about estimating risk in supply chain management?*

RM: It's really about taking a look at the pros versus the cons. You have to balance the risk versus the potential benefit.

Again if you're making 95 % profit on a product and the cost is very low, maybe you're willing to keep two years of product on hand - if the expiration date is five years - just to make sure that you can sell to your customers at that profit margin.

*BL: What tools are available to help supply chain managers understand risk?*

RM: If you're talking about risk from a manufacturing perspective you really want to try to do either an FMEA [Failure Mode and Effect Analysis] or have a robust business continuity plan in place to make sure there isn't risk associated with manufacturing downtime.

The last thing you want to do is to have demand and not have sufficient product. You want to make sure there aren't any hiccups in the supply chain. Risk management tools will help you define where your weak points are and implement remediation to prevent any lack of robustness in your supply chain.

*BL: Moving on to the wider supply chain, most pharmaceutical products rely on a network of suppliers and service providers. As a supply chain manager, how do you go about ensuring supplier commitment and minimize the risk of disruption?*

RM: Lots of times, even if you're manufacturing in-house, you're relying on downstream suppliers. So the impulse is to reflect this in the contract through strict terms - if my supplier doesn't deliver they have to pay X. But it's very difficult to get those sort of terms into a contract, most people won't accept them.

So what you really need to do is work with your supplier to implement mechanisms on their side to reduce risk. You want to make sure that in the contract they have a business continuity plan. You might want to require, for example, that the supplier maintain a certain amount of safety stock.

You want to make sure that they have a good system to oversee their suppliers. That's usually done through the quality side of it. Normally in the pharmaceutical space it is a quality requirement that suppliers have a good oversight and an audit plan for their own suppliers.

Another of the clauses I always like to have in a contract is the requirement that the supplier is able to supply against your forecast and, at any time, meet your forecast plus 25 %. It helps the supplier understand they're accountable for meeting your requirements even in a dynamic environment

*BL: Why is business continuity planning so important?*

RM: It's probably the most important thing that you'll have in your contract from a supply chain robustness standpoint.

At some of the larger companies there are resources internally to aid business continuity planning. But, for firms that lack an internal resource the best approach is to hire expertise because a lot of times suppliers will be smaller companies that don't have that level of sophistication. They don't have dedicated risk management folks that know exactly how to implement a business continuity plan.

So offering those resources - even if it costs a little more upfront - will definitely save you down the road.

There are business continuity plan templates that show you how to assess risk and walk you through the whole thing and if you couple that with a consultant or an internal expert you can go through that with your supplier upfront. The key is to make sure that the supplier commits to business continuity planning in the initial agreement.

*BL: When does it make sense to involve backup suppliers, from a supply chain management perspective?*

RM: In every job I've ever had a boss saying "Hey we got to have a backup supplier here, this product is giving us x millions or billions dollars of revenue" and you know, in the cases where we're talking billions, maybe it makes it makes some sense.

But if you are talking about a finished good that requires some specialty equipment or holding capacity it can be really difficult or impossible to implement a system of backup suppliers because contractors wants to just hold unutilized capacity just in case.

It's prohibitively expensive. Maybe if your product is really worth a lot you could build in some sort of mechanism with your supplier to allow for backup suppliers, but I would say that's rare for a specialty product.

*BL: Also if you use backup suppliers it places demands on your own resources. Is there a cut off where it becomes hard to justify such an approach?*

RM: You have to support and manage backup suppliers with your internal resources - from regulatory standpoint, from a tech transfer perspective - so there's resources internally plus there are big costs on the supplier side to maintain unutilized capacity.

So again it make sense in some circumstances absolutely but in other instances there are definite cons. I don't know if there's a specific cut off, rather it's a matter of doing the financial analysis and assessing the probability of failure versus how much it's going to cost you to avoid that failure down the road.

*BL: How useful is third-party analysis when looking at a potential suppliers supply chain vulnerability?*

RM: The short answer is very.

There are companies that can evaluate a supply chain one two three four steps back, all the way back to, for example, the rubber trees producing the rubber used to make bottle stoppers. They can evaluate every critical component that goes into your product and give you a vulnerability analysis and routine reports on developments

I'm going to use the example of rubber trees again – say there is a monsoon and the entire rubber tree farm is wiped out - you'll get an update on that with an evaluation of what that's going to mean for rubber availability.

You can work with these third-party analysis firms to really highlight the critical items in your supply chain. You walk through that evaluation with them looking at all the components and figuring out where the real risks are and they'll do all the research for you.

This case study was originally presented at Evaluating Biopharma's Supply chain challenges online and interactive event

You can watch Rich's case study in full and on demand [here](#).

Details of future Evaluating Biopharma events can be found [here](#).

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