

## THE NEW ADAPTIVE ENTERPRISE: RETHINKING THE WAY FOR NOT BEING PRECISELY WRONG

We have been taught to live in a world of discrete and exact numbers: exact amounts to sell monthly in a sales plan, static parameters in business plans for this year, precise values in annual budgets, and specific actions that are based on the fulfillment of all those numbers. That's fine in stable and predictable environments. **But a study developed by Deloitte University Press found that in the last 5 decades the return on assets has decreased 4 times**, despite the fact that productivity has doubled and technology has improved as never before. Why? Was not the promise of productivity and technology leading to more profitable and sustainable scenarios?.

Part of the problem is based on the fact that times have changed and we are facing dynamic, complex and unpredictable conditions that turn companies and their business environments into Complex Adaptive Systems (CAS) while the models we use to manage these environments are based on linear systems, which were the conditions we used before: smaller portfolios, more tolerant clients, more stable demand, less complex operations processes, among others.

Which companies still have these conditions of the past? Every time we ask this question in front of audiences of tens or hundreds of managers, few or none raise their hands.

At some point in history when conditions changed, some of the assumptions that hold conventional management models became obsolete, but we continue to apply them in a forced way to a different reality. The result of managing a system with the wrong assumptions often leads us to be exactly wrong. Doing this productively and with the help of technology only makes us produce more irrelevant information to get to the wrong place in a faster way.

We need a new set of assumptions, a new way of thinking about our companies and their environments, that is capable of managing

them as Adaptive Complex Systems (CAS) that face dynamic and volatile conditions. The best examples and analyzes about how to understand and manage such systems come from sciences such as physics or biology, which take a good number of years of advantage in this field to other areas such as business

management.

What are some of those obsolete assumptions of the linear systems on which conventional management models are based and why do we replace them for rethinking our business models?

Let's see some ones...



## PLANNING, SALES AND OPERATIONS: VALIDITY AND ACCURACY OF PREDICTIONS

A linear system assumes that it is possible to predict any variable with reasonable accuracy and precision in the short and medium term. An example of this is the managerial desire to have accurate sales plans or getting static budgets that are met. When Heisenberg wanted to accurately predict the position of an electron in an atomic system, he realized that the prediction he was making became obsolete during next second because these elements travel at an amazing speed. Something similar happens to meteorologists with the weather forecast, although the technology has improved a lot: nobody believes them.

We are faced with environments with greater variability, and a complex adaptive system (CAS) must assume that no prediction is accurate, nor does it remain valid for a long time. This is the new assumption. Therefore, the most relevant demand information will come from the demand closest to the present, in the same way that the most accurate weather forecast is that which observes a weather phenomenon in real time. That observation is in the here and now, and technically it ceased to be a forecast even if we call it that. In an environment of high variability and complexity, use an MPS that results in planned orders based on assumptions such as that you can have a discrete and accurate number for short-term demand per SKU-week or that materials and capacity will be available when they are required, will produce irrelevant information to make exactly wrong decisions. We need to find the missing link of business tactics that can replace the MPS by planning based on ranges and not discrete numbers,

and that takes into account the variability we face and the complexity of our current reality. This link already exists and is known as **Demand Driven S&OP**, and was co-created among others by Dick Ling, father of S&OP and MPS, and who currently maintains that these concepts became obsolete. Therefore, I would take these affirmations seriously.

On the other hand, making a detailed sales plan for the entire portfolio every month at the SKU-region-week level will mean losing part of your limited time in the products of regular demand, when we all know that in those lines many times what we do for projecting is "copying and pasting" or dragging cells from a spreadsheet that we know will change as actual demand deviates from the planned demand, causing ongoing reprocesses that create

variability throughout our supply chains and models of deal. The new complex and dynamic reality should lead us to plan the regular demand by segments or families, while we create models of operations that can serve the real demand with speed and flexibility and we focus the time freed up to increase the quality

and the collaboration in the extraordinary demand to understand better the variability that we are going to face, to understand deeply what profile of product portfolio we manage, and to analyze the strategic and tactical decisions in multiple "what if" scenarios, and not in discrete numbers. These are some of the ideas held by the new generation of **adaptive S&OP**. A dream is not coming true because predictions are and will remain inaccurate in our current conditions, no matter how much money and effort you spend on it. Do what the survivors do in biology: adapt!



## FINANCES AND INDICATORS: LOCAL VERSUS GLOBAL

The way to obtain the best possible result in a linear system is to ensure that each part of the system is optimized separately, since this result is obtained by adding the local results of each part. The best example of this is the focus on cost. The total cost of a product is the sum of the costs of all the processes in which value is added. This means that if each party works separately to be more productive, the cost goes down and in the end the overall result will be better. We also have management indicators that defend these assumptions: unit costs, OEE and other efficiency metrics. However, in sciences such as physics and other areas, Einstein argued that "for a system to reach its maximum (global) efficiency, some of its elements must be inefficient (locally).

What would happen to the overall result of a system if its elements have different capacities, but are all very productive and efficient? The overall result would continue to mark the resource with less capacity and the flow of remaining materials or services would only be waste in the short term. Excellent local efficiency with poor overall efficiency: the opposite of what Einstein describes also happens, because the fixed cost component is so named because it does not vary in the short term and therefore focusing on the cost is only relevant for tactical decisions or strategic, and not for operational decisions (which are what we take in purchases, distribution and production every day or week). Why then do we guide and measure operational decisions with local efficiency

metrics and cost? Again we find a linear assumption hurting us.

This is due to the fact that supply chains, service processes and manufacturing plants are not linear systems, but rather complex networks that more closely resemble an Adaptive System in which, by focusing on the management of the relevant flow of materials and information that it traverses it transversely, the global result is determined only by some of its elements. This is the new assumption. It is necessary that we develop management models where the center is flow, and not the cost. That does not mean that the cost is not important, but that it should not occupy the first place to make decisions. Everything that improves the flow optimizes the total cost, but some actions that improve the cost deteriorate the flow. This will require the development of a new flow-based metrics dashboard, while



those based on cost are rethought to align with the flow, changed or eliminated, throughout the length and breadth of the company. This is the management challenge for financial executives and other members of senior management. If you are not sure about this, remember the last time you tried to be very efficient everywhere, and ended up manufacturing, buying

or shipping what you did not need to invoice in the short term, and still keep it in the warehouse.

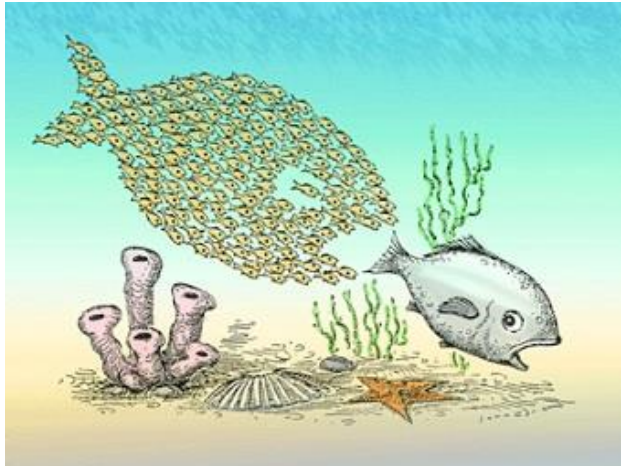
## CONTINUOUS IMPROVEMENT: OPTIMIZATION OR LEARNING?

Optimization is the final weapon of most managers and engineers. But an adaptive complex system is not predictable, and by

definition optimizing this type of systems becomes an oxymoron. This is another assumption inherited from linear systems, which are susceptible to optimization in any of its elements. However, the new assumption is that you can learn from an Adaptive Complex System and continuously improve it. How? In

linear systems the relevant information to learn and improve is in the gaussian bell and outliers are discarded, which we derogatively call anomalies, while in CAS relevant information for on-going improvement is precisely in the outliers. The understanding and mitigation of these outliers will produce the ability to produce a probability distribution with an increasingly robust and slender bell, which is synonymous with a process under control.

**ALFONSO NAVARRO BUSTAMANTE**  
CEO – K2 Solutions & MIDAS Consulting Group  
Demand Driven Institute Affiliate  
Partner of Supply Chain Excellence Community  
[info@k2sol.co](mailto:info@k2sol.co)  
[www.k2sol.co](http://www.k2sol.co)



We need new adaptive business models that feel comfortable with volatile, uncertain, complex and ambiguous (VUCA) environments, able to make operational decisions without precise numbers, analyzing multiple tactical and strategic scenarios and avoid that the variability and complexity we face cause damages to the business. If you want

to learn more about how to apply CAS concepts and principles to transform your company and your tactical and strategic planning processes, S&OP, finance and operations with this new adaptive model, please come to our next Demand Driven Leader Program: <http://americaempresarial.com>. The right time for adapting your company is... NOW!

**ALFONSO NAVARRO BUSTAMANTE Eng, MBA, DDLP, DDPP, TOC-ICO Certified, IC3PM**

Consultant and International Speaker in Strategy and Operations with more than 17 years of experience in implementations with large companies in Latin America and Asia in sectors such as consumer goods, assembly plants, clothing, fashion, footwear, pharmaceutical and healthcare labs, manufacturing, food, metalworking, cardboard and plastic, for their purchasing, production, distribution and retail processes. He is a well-known



Strategy and Operational Excellence Expert recognized for their significant results refocusing strategy of his clients, building Sustainable Competitive Advantages, redesigning their Supply Chains, building and improving their S&OP processes, and achieving superior performance in service levels, inventory turnover, sales, thereby increasing their profitability and reducing the pressure of more investment because of the growth or financial situations of these organizations. As international speaker and post-degree professor, he has trained thousands of executives and professionals in these areas. Currently, he is the Executive Head of K2 Solutions, K2 Asia Logistics and MIDAS Consulting Group, which are dedicated to improve companies' performance through investment solutions, logistics integrated solutions and consulting solutions, Demand Driven Institute's Affiliate for Latin America and member of Supply Chain Excellence Community.

***If you wish more info about Adaptive S&OP, Demand Driven MRP or Demand Driven S&OP, please contact to Alfonso Navarro Bustamante:***

***[info@k2sol.co](mailto:info@k2sol.co)***

***[www.k2sol.co](http://www.k2sol.co)***

***Mobile Phone & Whatsapp: +57-3008151499***

