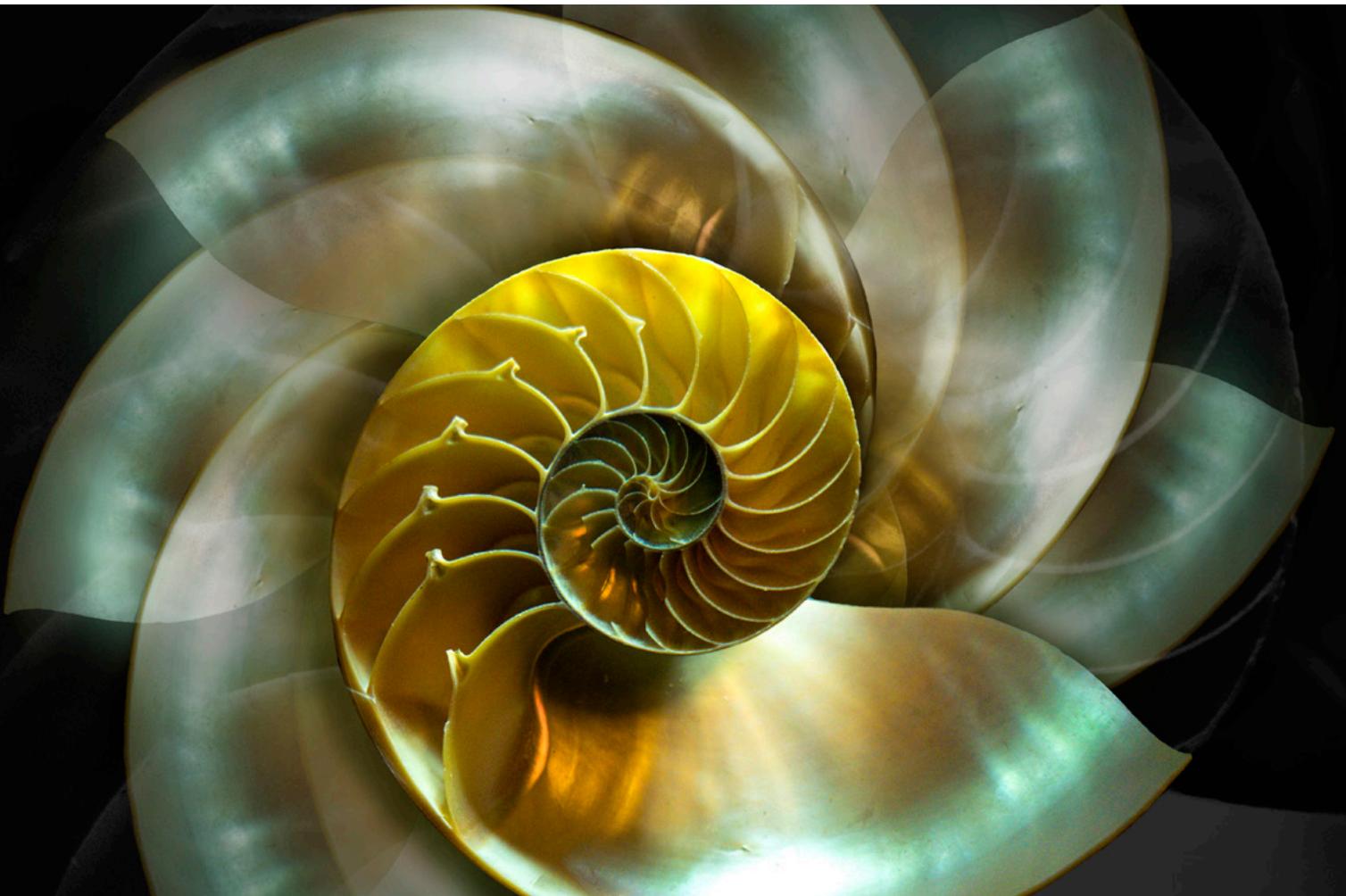


The Operations 4.0 podcast: A new continuous-improvement cycle

Ops 4.0 helps businesses understand their greatest challenges, and solve ones that previously seemed beyond reach. It also means committing to a transformation that never entirely ends.

Yogesh Malik and Rafael Westinner



In this final episode of the Ops 4.0 podcast series, McKinsey partners Yogesh Malik and Rafael Westin start by discussing how Ops 4.0 enables greater predictability and precision in identifying the root causes of problems. Consequently, a company can address questions that previously seemed too resource-intensive to consider—in 80/20 terms, shifting them from the “20” category (not worth tackling) to the “80” category (worth the effort). The conversation concludes with a summary of the cultural factors that help organizations succeed in adopting Ops 4.0.

This transcript has been lightly edited.

Rafael Westin: We’ve talked about Ops 4.0’s benefits and the advantages of looking at it in an integrated way. Another [outcome] is predictability, giving you the ability to be more consistent and targeted in looking at root causes. And I think one of the main problems—when we talk about chronic problems—is not identifying the real root cause.

And just to try to illustrate it with an example: it’s an example in mining. The company was struggling with chronic equipment bottlenecks—problems happening throughout the different machines at different stages of the line, from the maintenance of the crusher to some of the [equipment] change-ups.

The [real] difficulty was that the bottlenecks continued to change. And then, [what] is even more critical—is that all the tools that they knew up to then [weren’t enough]. So in this case, for instance, they had full Lean and overall equipment effectiveness (OEE) deployed, but the tools, the KPIs, and the stuff that they were measuring were not enabling them to actually identify where the problems lay.

And to make it even worse, they couldn’t pilot enough [ideas]. Everything was so interconnected that whenever they changed one variable, they were experiencing changes or problems in other areas.

The solution was basically around creating a digital twin. The whole operation was reproduced with a 3D digital twin, and what this did was enable a lot of scenario testing and simulation—very quick iterations to test individual variables and see the complexity of interactions, how one thing was connected to the other.

And this [allowed] them to, in a very agile way, be able to start putting out the fires, and also learn about the process—learn how to best control it and learn how to identify or match symptoms with elements to tackle.

Yogesh Malik: That’s a good one, Rafa. Let me share one from my side also. In this case, this industrial company had high complexity and low volumes. So when you looked at their spend, none of the parts would be in a particular commodity or category [that accounted for] more than 1 percent of the total spend. A huge amount of fragmentation.

The chronic problem for them was that it was just impossible to focus on such a fragmented spend to do any kind of clean-sheeting or should-cost work, and negotiate part by part. From an 80/20 perspective, all these things always ended up in the 20 percent. Everyone knew that there was opportunity, but no one had ever been able to focus on that, just because of the number of hours to get the work done.

Previously it used to take many dozens of hours to create the first should-cost model for a particular component. Every [subsequent] model would take a few minutes or sometimes a few hours, because in the next component, a bunch of dimensions would change: sourcing location, material, coatings, all those things.

So they used one of the advanced analytics techniques of parametric clean-sheeting. You build one should-cost model, and then you do a lot of statistical analysis to figure out the correlations

between different physical dimensions and characteristics of a part, and [the part's] overall cost. [When] you feed those characteristics in, in a matter of a few minutes, you can create should-cost models of hundreds and thousands of similar parts. Once you deployed the power of analytics to that spend, which always came as the 20 of the 80/20, there was a huge amount of [pricing] gaps [identified].

Now, the next challenge is, hey, we can't go and negotiate with suppliers these thousands and thousands of parts. But again, using digital technologies, you can quickly share those results of the gaps [analyses] with the suppliers and are able to negotiate with them. [The company] agreed on a cost model with the suppliers, so that they don't have to negotiate each and every part number, but they can negotiate the overall cost formula with them.

Hence they were able to get a lot of impact on an area of the spend that previously was not able to be focused on, not because there was not the opportunity, but just because of the time it took to get there.

So that's one of the things we are seeing is tables are turning; because of the technology you can still create a lot of impact out of the 20 of the 80/20 [that you couldn't reach before]. You don't have to totally ignore it, because previously you had to put effort in it. By the enablement of technologies in procurement engineering and in supply chains, you can equally focus on the tail-end, because data and analytics and digital helps us address those pretty quickly.

Moderator: Those are great examples of companies that are really using Ops 4.0 to solve problems that were not previously surmountable. Yogesh and Rafa, how do these transformed organizations feel to their leaders? What can they confidently ask their people to do today that seemed impossible before?

Yogesh Malik: Organizations, when they are on this path, don't "finish" [their] transformation. And the core reason is because the underlying technology is also evolving and improving and changing and becoming better every day. So this is about getting to a different fitness routine, or different exercise routine than before. And you don't stop—you say, okay, now I have better exercise routine by which I'm going to be much more healthy, and I will have a better life.

I think that the successful markers of an organization that is on this transformation via Ops 4.0 are, number one, they always have a business-value-back strategy [through ascending] horizons. [First, they ask,] "What are we going to focus on in the next two years?" And one or two things, not twenty. [Next,] "What are the technologies that we are going to keep, and as they mature we should take leverage of them over the next four to five years." And then lastly, "What are the business models, revolutionary things that could happen and we need to keep evaluating over the next seven to ten years?" So that's the horizon-based strategy, if the organizations have their strategy around those three time horizons, but focused on business value, that's marker number one.

Marker number two is that there are clear success stories of not only pilots but scale-up. They can point to one thing or maybe two things [where they can say,] "this is where we piloted and we scaled up and we have a new way of working, and by the way, we are getting impact out of it also."

The third marker is around how many of these initiatives are cross-functional, because if an organization is shooting for the next 20 percent productivity jump, it will come by breaking down the silos of legacy functions also. So those are at least three that I will share, but I'm sure, Rafa, you have a few more to add to that in terms of what a successful transformation journey looks like.

Rafael Westinner: Yes, Yogesh, I think if the group could see us talking now, they would see me continuously nodding to your points, because this really resonates. I think the markers that you're describing are right on the money. I would try to summarize it even more. I think for me, the main attributes are, one, being impact-driven. And I'll describe in a second with a couple of examples. The other one is having an organization that is bolder, so more willing to take risks and to drive stuff. And a third one is having a group that has the satisfaction of actually generating impact.

One of the clients that I've been working with, we started through an Ops 4.0 transformation, again looking into individual plants. So it was all still within this pilot logic, highly successful, and as we moved forward, basically we were able to engage more and more. Breaking the silos was done relatively quickly, [even though] the organization also tended to be super decentralized and relatively hierarchical...it really took a lot of convincing at very different levels of the organization until we managed to get going.

But once the impact and the change of working really began, and we had scalability in hand, there was a big change in the leadership. They went from a mindset of, "Yes, there's great impact and whatever comes is fantastic"—to being bolder and saying, "For the next year, we need to make sure that instead of tackling the next ten or the next fifteen P&L units, which are factories, let's go and tackle them all." This meant close to 80 [units].

Just having the confidence to know that this was going to work made them bolder and much more willing to take that risk, because they knew what was behind it.

Yogesh Malik: Fantastic. And Rafa, it's always great to talk to you, my friend. Super exciting for both of us, and hopefully some of the parts that we

have shared, we'd love to hear from people who are able to get an opportunity to listen to this podcast.

Rafael Westinner: Likewise, it's a pleasure talking to you, and I really want to thank you for the opportunity for being able to talk to everybody on this. It's a topic that you and I are super passionate about, and hence we really follow with our hearts, and we put all our energy into it, so it's been a pleasure.

Yogesh Malik: Thank you. Let's go get the next jump of 20 percent productivity impact by Ops 4.0.

Moderator: Thank you all so much for joining this segment of the Ops 4.0 podcast series. If you have ideas for future Ops 4.0 podcasts or questions that you'd like Yogesh and Rafa to tackle, please shoot them over to Christine Decker Miller. ■

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