ADOPTING LEAN PRINCIPLES

What the experts say

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INTRODUCTION

It is always a privilege in life to learn from others. In business we are sometimes so focused on daily tasks that we lose or forget the opportunity to connect with experts who may already know the answers to some of our daily challenges or could provide new ideas and innovation to help us achieve our goals.

The purpose of this whitepaper is to share with you, the reader, some thoughts and experiences from three highly experienced professionals in Lean principles. Their extensive knowledge in this area will hopefully inspire you to think about further learning and adopting Lean in your own life and company. At the very least, I hope it will provide you with an appreciation of this topic and give you a foundation that can be leveraged now and in the future.

Let me introduce our guests to you:

Anurag Rai is the Business Transformation Lead Director for CapTech Consulting. He is a leader with international experience in building and deploying strategies to transform organizations leveraging his experience in Lean and Agile methodologies. His industry experience is across many business sectors including, hospitality, insurance, healthcare and financial services.

Cecile Roche is the Lean & Agile Director for Thales Group. At Thales, she is in charge of industrial performance and Lean/Agile implementation in Engineering and Manufacturing activities at the Group level. Along with Engineering and Manufacturing, Cecile's work has involved many different departments at Thales, including business and service teams. She is also the author of several books on Lean.

Anne-Lise Seltzer is the Executive Director of the Lean Institute of France. She works to support executives, managers and their teams who are embarking on Lean approaches. She works mainly in service sector industries and across many different organizational departments.

All three have many decades of diverse Lean experience between them and bring some excellent thought leadership, which I hope you will find valuable.

I have used excerpts from conversations with each person to highlight concepts and thoughts relating to some key questions and discussion topics. But before we get into their excellent observations, it is perhaps worthwhile reviewing some of the basic Lean principles.
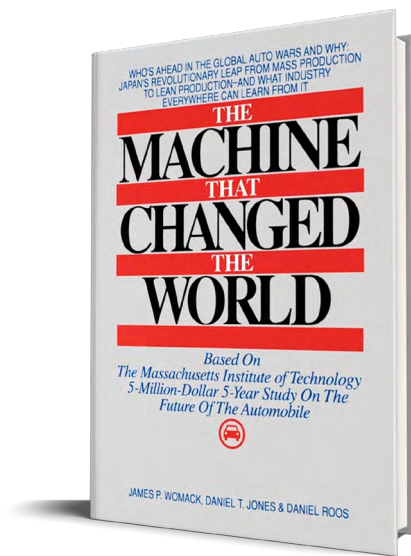
WHAT IS LEAN?

Muda, TPS, Kaizen, Gemba—Lean seems to be an ancient and mystical world of exotic concepts and philosophies. In reality, Lean was born out of simple necessities and a desire to work in more effective ways.

I won't recount the entire history (it is fascinating by the way) but beyond early origins, the first recognizable instance of transforming operations can be seen in Henry Ford's famous Model T production line in 1913. In the 1930s, Toyota built upon some of his thinking and invented the Toyota Production System or "TPS." Many concepts in Lean still use the original Japanese naming from these initial methods, such as Muda for waste and Kaizen for continuous improvement.

The principles were continuously used and in the 1990s the authors Womack, Jones and Roos published their summary of observations and wrote the book "The Machine That Changed the World." Some would say that this is where the aggregated concepts were first officially discussed and named collectively as Lean.

So, although the history and evolution is a long, global story, the concepts and principles have remained quite simple:

Focus on the customer and how to create value for them

People are the most important value – treat others with respect

Seek continuous improvement to close the gap between the current and ideal situations

Produce only what is necessary to reduce waste

Go and study what is happening in reality to inform decision-making

This is, of course, an overly brief summary but I think it's important to realize that Lean should not be perceived as just "something that was used in car manufacturing." Lean is actually a methodology and set of tools that can be immensely beneficial to all of us, no matter which industry or discipline we happen to work in. In fact, the automotive industry (although still evolving) has had decades of analysis, improvement and advancement—much of it thanks to Lean principles. Surely there are new frontiers that can receive similar benefits and become the next beacons of operational efficiency and human development?

It is time to look at where we are today and to see, with the help of our thought leaders, how we can now apply some of the Lean principles with fresh perspective and without constraint.

WHY IS LEAN IMPORTANT TODAY?

The pace of business continues to increase, largely due to "us." As consumers, we demand more customized products and innovation, faster and with perfect quality. This complexity has been compounded by recent global disruptions to make meeting customer expectations even harder. For all companies, this has been an unprecedented situation, but disruption should be accepted and responded to head-on.

The continuous learning and improvement from adopting Lean can help with this. **Cecile describes the situation in more detail as she talks about how Agility is a key element that companies need**.

Cecile: *"There is a word that is often used but often not understood: Agility. You have* ***volatility***, *meaning that you have a lot of change happening, but you have no idea when.* ***Uncertainty*** *means that you don't understand the causes of the effects. You have* ***complexity*** *and* ***ambiguity*** *from intricate causes and factors. If you look at these four words (VUCA), the question is how to learn and to be able to face this uncertainty and unexpected events. Agility is really the ability to face all this VUCA world of complexity. We just need to learn, continuously learn. And when you see Lean as a continuous learning approach, there is no other way."*

Using Lean to increase our agility can help prepare us for current and future disruption. It provides ways to meet customer demand but to do so with just the required amount of work and cost so that we do not overproduce and generate waste.

Achieving this goal is something that we should explore further, as it is inevitably not as simple as it sounds. It requires the appropriate mind-set and buy-in across many functions. Ironically, **Anne-Lise found this challenge to be one of the main reasons why Lean has been so rewarding for her**.

Anne-Lise: *"This is why Lean is so important and why I had a 'crush' on it. I have had jobs in other roles but this is the only discipline that brings together customers, company, the environment and the people. When I see the transformation in the teams that I work with, the trust and confidence that is developed, this is when I really see and experience the benefits of Lean."*

The fact that challenges require different teams and roles to work together is always going to make solutions harder to achieve. Part of Lean philosophy that is relevant here is "Gemba"—the ability to go and see what is happening, to visualize and understand the situation. This is critical as it addresses the common situation described by Anne-Lise.

> **Anne-Lise:** "...in organizations the people often don't speak about their problems, don't speak together every day or every week or every month. They don't know; they don't do the job of the others and they don't work together."

She goes on to say **how continuous improvement (Kaizen) can have such an impact on key goals** such as quality.

> **Anne-Lise:** "[In services] a lot of problems are about quality. You should make visible the errors without guilt and without pointing the finger, only analyzing the situation and the people. To make visible all the activities and flow and problems is the first step of Kaizen."

This also highlights another important aspect of Lean: **respecting people**. Teams are the lifeblood of our organizations and it's important to always have them engaged and contributing positively. Dealing with VUCA will always mean solving new problems, finding new methods and new thinking. This is the domain of the human spirit. Even if our operations are 100% automated, people will always make the difference to how agile we can truly be.

So, we can start to see how Lean can play a key role in helping us build resilience through agility. This helps us work better and more efficiently and ultimately to remain competitive whatever the global environment. **It should be a priority for all companies as Anurag points out**.

> **Anurag:** "I think more and more leaders are realizing that what made them successful in the past is perhaps not going to be the secret sauce going forward. The changing environment, technology and having so much data available means there is a transformation required to keep up with market and customer needs."

WHERE IS LEAN APPLICABLE?

If we agree that Lean is beneficial, the next question might be "where should it be applied?" If you are already familiar with Lean, then you were also probably aware of its origins in manufacturing and assembly lines. Its continued use there has been reinforced and respected universally but does that mean that Lean is only applicable to manufacturing and assembly operations? When I asked Cecile whether there was **any reason why other departments shouldn't also benefit from Lean**, her answer was quite direct.

> **Cecile:** *"No, of course not. Because you understand the point that Lean is a way to develop people through problem solving; I don't know any people in any company who don't have problems."*

In fact, part of the reason I was excited to interview our guests was because I knew that they worked across many different types of teams. Cecile does work with manufacturing, engineering and development but she has also had experience with supply chain, HR, finance, quality, sales and service. That's not to say that each type of team necessarily gets exactly the same benefit, but Lean is such a "Swiss army knife" of capabilities and can have tangible impact on many different types of environments. Take the basic concept or reducing waste, **as Anurag describes, waste can be meaningful in different contexts**:

> **Anurag:** *"It is not just in manufacturing. In manufacturing, if you have overproduction of cars or any kind of widgets, that's wasteful. Similarly, when we're building software and creating features, or attributes that have not been requested by our customers, then we actually have wasted time building something that is not going to get used. So, that's one of the key elements of Lean: to minimize or eliminate wasted time if possible."*

Waste can indeed manifest in many different ways but the impact on agility might be just as significant or even worse in some cases. As well as tangible waste, **what about areas where the cost could be immeasurable**?

> **Anurag:** *"There is also a lot of wasted opportunity. There is an opportunity cost to everything we do versus everything we do not do. Therefore, we should truly be focusing on the best thing that we can work on."*

A key Lean principle is **putting the customer first**. Everything we do in our companies is because we have a customer that is asking for something to be created and delivered. Even before we start ordering raw materials or writing code, the **applications for Lean can be applied all the way upstream, to the very source of innovation**.

> **Cecile:** *"We are deploying Lean all along the product lifecycle. We start with the business team or sales, project engineering and development, then industrialization, engineering, then production, manufacturing, then services and repair. We think and work in terms of the entire lifecycle because the flow is something that we want to apply everywhere."*

Anne-Lise is in agreement that the scope and benefit of Lean is broad across the organization but she does admit that some teams have a natural "affinity" for Lean and adopting the philosophies, for example.

> **Anne-Lise:** *"It's always easy to work with operational teams as they're always more willing to do Lean and find new ways to be more productive."*

Perhaps this implies that some teams might be less "willing" to jump on board the Lean bandwagon? This leads us nicely to our next discussion topic which asks whether there are "hurdles" we need to jump before we get to claim all the benefits that we are anticipating!

ARE THERE CHALLENGES IN ADOPTING LEAN?

Since we ended with a comment from Anne-Lise about how some teams adopt Lean easily, let's hear what she said when I asked her about her own experiences in the type of teams she saw benefiting from Lean.

> **Anne-Lise:** "Many sorts of teams. It can be field people working in business services, sales people, operational managers, call center staff, in-house health workers and all of the managers of these people, because if the manager is not in the game, it can't work."

A-ha. In true Lean style, we have revealed a new root cause for potential failure that was not what was expected. It is certain that different teams may have different approaches and attitudes towards Lean but here we have identified something much more important: **management buy-in and commitment to support and "be" Lean**.

It is perhaps not surprising to see this. If you think of any major project or initiative that you or your company has undertaken, you will have probably also seen that the success or failure of that project was heavily related to how much support it received at both the employee and middle and top management levels. It would seem that Lean adoption follows the same suit.

> **Anne-Lise:** "Without leadership engagement and involvement, it [Lean] is not possible or it's not sustained. So it's one of the key factors."

Adopting new technology or applications has always been challenging in the corporate world. Very often, software design looks like it might have been completed by aliens compared to what we expect in the consumer world. But although Lean can be aided by digital tools, it is a much more personal endeavor. **It's about human improvement and changing behaviors which has great potential but psychological implications as Anurag suggests**.

> **Anurag:** "Leadership roles are often thinking about change that has to be done by others. Very seldom do leaders actually reflect and think about how they need to change."

Sometimes, even managers that seem highly proactive and aggressive can subtly miss the point...

> **Cecile:** "Sometimes the manager says, 'I don't want to see problems, I want to see solutions'. But of course, if you want people to change their behavior, you need management to change their behavior also. This is done through practice."

Remember that Lean is all about finding solutions by revealing and understanding what's happening; by performing the Gemba walk to see firsthand and embrace problems so that solutions can be applied. But let's not lump all the blame on the managers; after all, Lean is about cooperation and respect between all the people involved in the environment. **Buy-in from management alone will not allow us to reach our goals either**.

> **Anne-Lise:** *"Different companies have different levels of involvement and challenges an willingness to change. If you start with the management it's great but you also need the team buy-in so it's important to have all levels engaged."*

This makes perfect sense and will be part of our discussion on how to get started later on. In the meantime, what other root-cause analysis can we do? Have we revealed and uncovered all the possible hurdles? Perhaps not. There is one other important challenge that was highlighted by our experts. It's a key perception that can lead to the potential failure of Lean adoption: Lean as a "project."

We are all familiar with transformational "projects" or "big-bang" implementations of new technology or processes. These initiatives are reliably bounded by the elements of scoping, kick-off, execution, completion, celebration and then—returning to "the way we used to do it" between three to six months later (well sometimes).

Lean is different. It's not supposed to fit into a finite project box and suddenly be a new way of working. Since it's enacted by a change in human behavior through practice, **it must be a gradual and reinforced change that becomes the new natural method** versus something that is forced. All of our experts will concede that they sometimes failed before they succeeded because of this. Cecile and Anne-Lise speak very candidly to their experience.

> **Cecile:** *"The reason why we failed the first time is the very classical reason in this case. It's because we considered that Lean was a process innovation and that's completely wrong. We considered that it will work by project and to calculate the ROI of each project."*

> **Anne-Lise:** *"Once you start considering Lean as a project, it is over. Lean must not be considered as a project. It is critical to explain to the client what can and can't be done and that Lean is not a project with a start, middle and end."*

Anne-Lise also further highlights the fact that the change must be organic and embraced by each and every one individually as an accepted part of their own behavior.

> **Anne-Lise:** *"There's very often some misconceptions about Lean. Often my clients say, 'come and help us to change our way of working.' I tell them, 'It's not my job. I will help you to think differently about your clients and problems, and it will change the way you work.'"*

These are certainly serious considerations for anyone embarking on a Lean journey but obviously not insurmountable. The question is really whether the journey is worth taking and if the view from the summit is everything that is hoped for and expected?

WHAT VALUE DOES ADOPTING LEAN PROVIDE?

The values behind Lean would seem to be ideally aligned to 21st century challenges: **customer first, people-focused, only what's necessary, reducing waste**—all matching our expectations for how to run an effective, agile and sustainable business. Shouldn't it then follow that the benefits are equally as aligned and impactful?

We can see evidence of the benefits from the manufacturing sector, which has been adopting Lean operations for decades. Many companies have achieved increases in product quality, employee satisfaction and profits while reducing lead times, waste and cost. But, if Lean is about improving the performance of teams, how then do we connect the behavioral change to the tangible metrics and KPIs of our corporate goals?

Let's first look at some traditional teams. Anne-Lise describes **the value from Lean adoption in the daily "Flash 5" standup meetings** of operational teams.

> **Anne-Lise:** *"Once they put in place these [Lean] principles they could not do without them. For managers, what really changes their way of working is the 'posture' they now have with their teams—the new way of working and being much more aware of their colleagues' opinions. Also, to be much more aware of the needs and expectations of their customers.*
>
> *These things are a real success when they happen because they are the hardest to change. It's a game changer for the company when managers adopt this change. You can see the benefits for the company quite quickly."*

Looking further into other parts of the organization, Cecile has seen **similar benefits of efficiency and effective collaboration** in departments where she has introduced Lean principles.

> **Cecile:** *"In engineering, we work on projects that are in more than one country, with teams that are in different organizations globally. I can tell you that it's a challenge, but we saw evidence of effective collaboration across disconnected departments."*

The collaboration of teams that are physically disconnected is one that we can all identify today. Intuitively, we know we will be more efficient if we are all sitting in the same room, but global organizations make that a rare occurrence. Still, collaboration with Lean principles can make a difference as Cecile experienced.

> **Cecile:** *"The very first effect is lead time reduction. And when you reduce your lead time, you save money, you save time, but you also increase quality. Another interesting example was regarding the negotiation of bids where we started to really collaborate more with the customer upstream."*

Moving to the opposite end of the spectrum from physical manufacturing, Anurag describes another use-case where using **Lean principles had a profound impact on a client's software application**.

> **Anurag:** *"We were working for a client whose app had many issues and was one of the most 'average' compared to their competitors. We started the journey of focusing on the customer and how to make the app customer centric. They built a small element of the app, had a focus group of customers that gave feedback and direction. Before they built the next version of the app, they built iteratively to get to a place that they could share it in small customer test groups. This was that Lean Startup mindset. Over a year and a half, it went from a 2.5 rating (out of 5) to almost 4.7."*

Putting the customer first and working with an agile methodology is a good recipe for success. However, it still requires the cooperation of many internal departments to be achieved. Anurag has also had experience with the **Value Stream Mapping process that has helped companies start their lean transformation**.

> **Anurag:** *"Large organizations especially have many divisions and departments that work in silos to deliver the final customer value and they have different objectives. By mapping your value process, you can figure out all the steps and all those elements, and you align them in a way that allows for the value delivery to be as smooth as possible. Organizations are embracing that Lean aspect, especially in today's world where things are changing so quickly."*

Earlier we spoke about disruption and agility as being focal points for this discussion. Unfortunately, when talking about disruption, we also have to talk more specifically about the Coronavirus pandemic as it has been one of the most significant disruptors we have ever known. Interestingly, our experts saw **some distinct benefits from Lean that helped some teams mitigate the disruption**.

> **Cecile:** *"In engineering, we had to learn and invent new ways of working with digital tools. When we worked with the mature 'Lean' teams it was much easier and we invented new ways of working faster than other teams. This is because the Lean teams were really in this mindset of solving problems, learning and testing things. Even before COVID, when we started to introduce digitalization at scale, it was much easier for the Lean teams to adopt digital solutions."*

Since the Coronavirus impacted companies and teams in unprecedented ways, introducing unforeseen problems and challenges, it would seem to make sense that teams that had embraced Lean might fare better. Anne-Lise had similar experiences.

> **Anne-Lise:** *"[During COVID] Managers that had gone through Lean transformation seemed much better at managing the crisis, to react and be flexible. They 'absorbed' the crisis in easier ways because of their learning and competence. It was easier for them to survive, and it gave them a resistance to chaos."*

And as she rightly concludes, we should all assume that disruption of some sort will be a part of our future, whether it's Coronavirus or stuck cargo ships in the Suez Canal.

> **Anne-Lise:** *"Today it's COVID but tomorrow it's something else. Lean companies are much more focused. It's also about working with confidence within your company. More confidence means less fear. With less fear, you feel more agile and less afraid and reluctant to change. Projects go way better because people are not as afraid of change."*

WHAT ARE THE LESSONS LEARNED?

Hopefully, at this point you are eager to embark on your own Lean journey. We will allow our thought leaders to provide you with some starting tips shortly but first let's recap a few **key takeaways that they found from both perspectives of Lean practitioner and Lean learner.** As expected, most relate back to the core principles that we discussed earlier.

> **Cecile:** *"The target of Lean is really not to say to people what to do (that is the process approach). What you need is to make people think of the situation and this is done through problem solving. That's a completely different approach."*

Setting the expectations in this way can have a profound impact on whether Lean adoption is successful within a company. We spoke earlier about buy-in at all levels but what's required is more than just a token commitment to "see how it goes." However, if you achieve this commitment then you start to see the benefit based on the changes.

> **Anne-Lise:** *"When you have the shift in attitude, it becomes about discussing a problem and finding the solution versus pointing a finger at the person who made the mistake. It's about how to understand and solve the problem as a team. It's a change in the leadership style."*

Asking someone to change their behavior can be awkward or difficult, sometimes even when it's desired. And simply asking someone to change in no way guarantees that they will do so. Cecile describes clearly how Lean accomplishes this.

> **Cecile:** *"In a classical approach, you explain to people that they need to change. You make a communication plan and training plan to explain to them the change management. Then you say you need to change your behavior, and then you will do things better. In Lean, we think differently, we think that we will change practices first, and then the behaviors will change."*

This is a subtle but important difference in helping employees and teams work more effectively. What it means is that Lean is best implemented in practice so that teams can see the impact and will want to change their behavior themselves naturally.

> **Cecile:** *"The reality of Lean and the success criteria is that the job equals current work plus Kaizen, meaning that the Kaizen is a part of your job."*

All commented back to Kaizen as a key principle of continuous improvement and that it takes everyone to be committed to achieve the end goals.

> **Anurag:** *"I think it is still a journey every day where something new uncovers itself, but it is the amount and level of leadership involvement in transformation that makes a difference."*

HOW TO START

Perhaps by now you have enough of the basic information to take the first step but are you certain about exactly how and where you will start? As you can see, there is plenty of deep learning to be gained but remember we are all "that" consumer that we mentioned right at the start: we want knowledge and results now! Well, everybody knows that you can accelerate the process by bringing in the consultant, right?

> *Cecile:* *"The usual way to proceed is to use a lot of consultants, and generally the risk in this case is that you are not learning; the consultants are learning a lot, but not you."*

Normally, that might seem a bit harsh but in the case of Lean it's actually a good statement to consider. Remember that Lean is not about forcing behavioral change or implementing a "big-bang" project. As a consultant herself, Anne-Lise is the first to acknowledge this and so she works very differently with her clients and encourages them to become more aware of themselves and their environment.

> *Anne-Lise:* *"Lean is all about apprenticeship and a personal learning path. People do too little of this reading and learning. Lean is a transformation, so it starts with transforming yourself and the way you work with others. By putting on Lean glasses and trying new practices with your teams and customers, you give yourself the ability to better understand situations, to learn from them and to be better armed and agile to anticipate the future.*

When she is engaged with her clients, she knows to work with them in incremental ways so that the change in practices is a natural transformation towards a Lean culture.

> *Anne-Lise:* *"I think my first job is often to place improvement in the company's work practices, the conditions of Kaizen. Very often it starts to make the activity visible through visual management. This allows everyone to visualize some of the problems, to learn to look at the problems and resolve them little by little."*

The message is clear that it's important to start by learning as much as you can about the Lean approach and methods to make sure that it is actually what is wanted, needed and possible. Also from the consulting viewpoint, Anurag is cognizant of the challenge and advises that **Lean may not be the best answer for every problem that exists**.

> *Anurag:* *"The most important thing is to truly embrace the fact that this is going to be an organizational effort, and also be very explicit as to why we are doing it and what we are expecting differently. It's extremely important to define the problem statement well, and understand what you will be embarking on, whatever it might be."*

Investing in yourself is always a good bet to make. As stated earlier, technology will evolve and come and go but human experience is a constant. We invest a lot in automation and software but sometimes not as much in the people who really drive our success. As Anurag goes on to mention, this might be the most important investment we could make.

Anurag: *"The way the future is going to unfold in my mind is that we're going to have more data and more AI models than we can ever imagine. It will be even more critical in the coming years to balance the huge data explosion and options and decisions with the need for simplicity. At the end of the day, the soft skill will perhaps become the hardest skill to find, when it comes to succeeding as a team and as an organization."*

Hopefully, reading this white paper would be considered as a good baby step in increasing your own soft skills but there are many valuable resources and organizations that are passionate about Lean and helping others learn and adopt it.

Anne-Lise: *"Besides reading, seek experience from others that have been there before you and can testify about the Lean transformation in their company."*

Cecile found similar challenges in personal expectations that showed the potential gap between the transformation that was wanted and the reality of how it was going to happen. Again, the hero in the story was a Lean expert that could help guide the journey.

Cecile: *"[They] met a Lean Sensei that helped to make the link between their strategy and their need for improvement. The Sensei helped to continuously make the link between the reality of the floor (the Gemba) and the strategy. By making this 'helicopter view' they could change their point of view."*

Whichever step you decide to take, self-learning or connecting with a Lean professional, never forget the first principle of Lean:

Cecile: *"The very first point is to understand the value for the customer and for making the right product. So, do the right thing, then do it right. But don't start by doing right something that is wrong."*

CONCLUSION

It is clear that adopting Lean can have a beneficial impact on both the people and the activities that we interact with every day. From continued use in traditional industries where it originated, we know that it has become an essential part of agile manufacturing but hopefully you now see that it can be adopted broadly across all industries and disciplines. The fundamental essence of Lean methods and tools are universally applicable to almost every one of us, no matter where or how we work.

It should also be clear that Lean is unique in the way that it can transform teams and organizations. This means that it should be considered and understood before casually designated as a strategic initiative. We spoke about some of the challenges, but every transformation has these, and the very challenges related to Lean are also the reason why some of the benefits are so impactful. In other words, understand and embrace Lean and you will see true transformation of people and culture that provides a lasting impact and resilience for sustainable business.

Have we left you with more questions than answers? If so, that's a good thing as it means there is a seed of interest planted within you. I certainly could not plan to provide all the answers in one white paper, but my hope is that you now have a perspective and appreciation for what might be possible in helping you and your company achieve some of your goals.

Certainly, we have all been a part of new and unprecedented challenges in recent history but that should be what we expect from any career or life endeavor and has always been part of the journey.

I would like to thank my three guests for their selfless gift of time and sharing. It was a pleasure to speak with them and to experience the passion that they have for Lean. I highly encourage you to connect with them and also read some of their own publications.

For myself and Dassault Systèmes, I am pleased we could facilitate the sharing of this knowledge and would encourage you to connect with us to hear more about our own Digital Lean solutions and how we are also helping companies adopt Lean within their organizations.

For more information on how to successfully adopt Lean principles leveraging a modern, interactive digital tool designed for operational teams anywhere, **read our eBook**.

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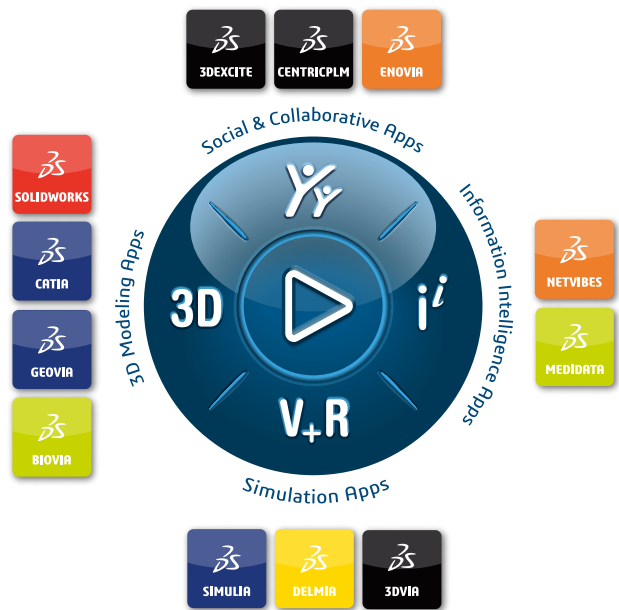Executive Director, Lean Institute of France
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