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A Frost & Sullivan Virtual Think Tank

# How to Unlock Continuous Innovation in a Digitally Transforming World

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Sankara Narayanan, Senior Industry Analyst at Frost & Sullivan, recently hosted a Virtual Think Tank on the topic of How to Unlock Continuous Innovation in a Digitally Transforming World. Narayanan led a group of industry experts as they discussed the impact of innovation in an ever-changing business landscape.

**Moderator:**



**Sankara Narayanan V**  
Senior Industry Analyst  
Frost & Sullivan

**Panelists:**



**Dominique Hanzi**  
Head of IT and Business  
Applications, DIH Technology



**Jeff Stiles**  
VP Solution Marketing  
Oracle



**Cherie Humphries**  
VP, ERP Implementation  
Williams



**Stefano Mariani**  
IT Manager  
Alcar Ruote SA

## The Need for Continuous Innovation

Global events and disruptions large and small have affected us in many ways, by directly affecting production and demand, altering manufacturing and supply chain operations, and creating supply chain and market disruptions. Companies that are innovative, resilient, and adaptable to disruptions, companies that can anticipate risk, quickly change course when necessary, grow faster than the market and increase their market share, can successfully thrive in these new environments.

As a result, companies are investing more in innovation. And naturally, their leaders are now driving change, prioritizing creating new products and services more than anything else. Part of the challenge stems from finding and choosing the right ideas to invest in, getting them to market, and optimizing them over time. But many companies are finding it difficult to coordinate all the required processes and access the right data across various supply chain functions and departments to get those ideas to market quickly. This is because their current business applications are not really designed to meet the digital requirements of today's innovation, and they were not built to support complete service offerings like products-as-a-service.

Companies are therefore thinking differently about innovation, which is a means of business survival. For instance, a recent Frost & Sullivan customer survey revealed that companies that are using legacy systems and point solutions are unable to keep up with the rapid changes in today's business landscape. Other, more innovative companies have connected data and processes in the cloud, which gives them a competitive advantage and supports today's new business models.

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However, unlocking continuous innovation has several dimensions including defining what innovation is, and what every company should aim for as part of continuous innovation and making it a priority for the organization. In addition, organizational challenges, the implications of continuous innovation for executive teams and the vision for the future of innovation differ by company. But the need to innovate new products, services, and business models to capture revenue streams is always there.

Amid this scenario, Frost & Sullivan research shows that a unified business platform can create a strong scalable foundation for continuous innovation. It streamlines processes and allows standardized information to flow from idea capture to design and all the way through manufacturing and service. Having this platform in place can accelerate global product launches, service and business model innovation, and time to market share. And most importantly, companies can anticipate and exceed their customer expectations.

## What is Innovation?

**Alcar Ruote** develops, manufactures, procures, transports and markets steel wheels for the automotive aftermarket. Alcar Ruote, over the years, has improved its manufacturing capability to create and deliver new products to the market in less time and at a competitive price. The company can design and manufacture a new wheel in just a few weeks; this is because the innovation in its hardware and software support Alcar Ruote's manufacturing processes.

Speaking with Frost & Sullivan, Stefano Mariani, IT Manager, from Alcar Ruote SA, noted that "Innovation is the capability to capture the product information just after a new car is released and develop products to be ready on the market as soon as possible." As there is a tight interaction between product information management (during the development) and the supply chain in their cloud software, a consistent product record drives all the downstream activity through manufacturing at Alcar Ruote. Frost & Sullivan finds this is a good approach as it aligns with what many other companies are doing.

Once the information is captured, the supply chain process and the development process are activated in parallel. This is because the lead time of the deliveries from large steel manufacturers is in the order of weeks. So just after Alcar Ruote has an idea of the raw material needed for the production of its wheels, it forecasts and then activates the supply chain to be ready with the raw material while the development and the tooling process for a new product is being completed. To this end, Jeff Stiles from Oracle stated, "Customers tell us that having a single product record and bill of materials are essential for planning, for sourcing, for making, and for delivering service."

Frost & Sullivan finds that innovation is also about creating new business models and having a consistent methodology on how the new business models and projects are evaluated. For instance, **Williams**, which provides infrastructure that safely delivers natural gas products to fuel a clean energy economy, announced a new clean energy commitment this past summer.

Williams handles about 30% of the natural gas in the United States. As the company continues to leverage its natural gas-focused strategy and the technology available today to focus on immediate opportunities to reduce emissions, scale renewables and build a clean energy economy – while looking forward and anticipating future innovations and technologies – aligning the data in its systems for consistency will play a significant role.

To aid that effort, Williams is currently using Oracle Cloud Innovation Management to evaluate business opportunities, entering new ideas and projects into the system, and evaluating current projects and new opportunities. Leveraging the same solution for both prospective and current projects ensures there is a standard, integrated innovation process across the entire business and creates a single source of truth.

Cherie Humphries, Vice President, Enterprise Resource Planning Implementation at Williams, remarked, “We are challenging ourselves to continue to improve and think outside the box. And that could be in very different areas. It can be in our safety programs and how we're working to automate data on near misses so that we can analyze that data quicker. Or to utilize data in our financial systems to identify customer opportunities, improve negotiations with supplier, locate critical inventory, and ensure the accuracy of materials ordered. Doing these things well will allow Williams to innovate around new opportunities in natural gas, renewables and clean energy.”

The demand for rehabilitation robotics is growing and technology innovations do not matter until they are applied to solve problems. To this end, **DIH** brings the most advanced, comprehensive rehabilitation technology and solutions and innovations to severely impaired patients. Innovation is in DIH's DNA. DIH combines the power that a physiotherapist needs and puts that in robotics. Therefore the robots do the work and treat the patients in a more detailed scale. And the physiotherapist, instead of manually moving patients, observes the patterns in order to bring the patient to a new stage and accelerates the overall rehabilitation process of the patient. DIH's mindset in developing the products and technology is to completely treat the patients despite their



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-Cherie Humphries, Williams ”

medical challenges. For example, many patients that were declared to be wheelchair-bound for their entire life get the opportunity to move and walk again, after using rehabilitation robotics from DIH.

DIH was founded as an innovative and disruptive company in the market. Its robotics and machines were already packed with thousands of sensors before anyone else came up with IoT or Industry 4.0. In addition, DIH likes to combine things. For instance, the company came up with games that motivate patients. It's with this gamification that patients with their physiotherapists can compete against each other to help them overcome their limitations and physical challenges quicker.

“DIH's day-to-day thinking pattern is to never stand still”, said, Dominique Hanzi, Head of IT and Business Applications, DIH Technology. And staying true to that thinking pattern, DIH is now working on the next generation of innovation by connecting all devices globally, where a patient in Japan can compete against a patient in Hawaii.

“Innovative companies think about how to disrupt their own businesses too, including using technologies like sensory data and machine learning to predict failures of machines, change decision-making, or planning, or the process itself.”

- Jeff Stiles, Oracle

## Challenges to Getting the Right Innovations to Market, on Time, Every Time

**Alcar Ruote faced two challenges. One was in the supply chain that involved having a real time connection between customers and the external trading partner, and another challenge was in ensuring the efficiency of its manufacturing lines, and saving costs (an important condition for Alcar Ruote to survive). Alcar Ruote successfully addressed these challenges using Oracle Cloud Supply Chain and Manufacturing and Oracle Cloud IoT Intelligent Applications.**

Oracle Cloud solutions enabled Alcar Ruote, by using REST API technology, to connect their entire complex supply chain—this includes Alcar, their suppliers and their customers. Representatives from planning, sourcing, inventory and manufacturing can get the status (ie status of warehouses, work orders, availability of products, and when the products are scheduled in manufacturing lines) and gain visibility in real-time.

Frost & Sullivan research indicates that inadequate preventive maintenance can result in major unbudgeted expenditures to repair or replace failing equipment—leading to poor customer satisfaction. Oracle Cloud Maintenance and IoT Intelligent Applications with its built-in predictive algorithms enables Alcar Ruote to anticipate any failure of machinery and equipment and keep the overall equipment efficiency of its machines high and save costs. The Maintenance and



Data governance is about getting data in a better place, so people trust the data.

IoT applications alert Alcar Ruote to start the maintenance work and keep the overall equipment efficiencies (OEE) of its machines at 100%. This is important for Alcar Ruote as it can reduce any unexpected downtime that can disrupt production runs, avoid late deliveries for its customers and aim for 100% customer satisfaction.

Talking about challenges to getting the right innovations to market, Dominique Hanzi emphasized that “Collaborative development is a really crucial part of delivering and provisioning a service. The relationship of supplier and customer towards partnership should be transparent, collaborative and [function] as a key for innovation and trust.”

Data governance is about getting data in a better place, so people trust the data. At Williams, individual business units had their own way of doing things and data governance was not present. Without a single system in place, it is hard to trust and govern data, let alone run analytics on it. But traditional, on-premises business systems often leave data hidden and incorrect in departmental silos.

For Williams, the challenge was getting to one nomenclature, a standard language, and consistent data governance for customer data and finding one efficient process that worked for everyone and met all of the global regulatory requirements. To address this, Williams decommissioned 17 different systems and moved to Oracle Cloud, where it now houses its Master Data (product information, customer and supplier data) and benefits from a unified view of data across processes. Frost & Sullivan also finds that many companies are now moving away from departmental silos to a unified view of data across processes to innovate faster and increase market share. This is because finding the right data at the right time is critical to drive innovation.

Oracle Cloud helped Williams’ individual business units collaborate rather than work in silos, eliminate manual tasks, save money, and actualize the value of leveraging transparent, standardized and governed data. Cherie remarked that, “We can see the energy from users when they know they can trust the data and can do analytics.”

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– Dominique Hanzi,  
DIH Technology

## The Implications for Key Executives and their Teams to Continuously Innovate

Innovation often wins within the walls of the company based on who has the loudest voice. But if the right structure is in place (such as innovation management) then such politics can be eliminated and the best innovations can be found from the voice of the customer, the voice of the product, or even the voice of the employee. It is a balance of, for example, managing the current projects on time and on budget, but also allowing employees to try something totally different. And the implications for executives is that they have to empower employees to try new things and make sure their employees feel the 'freedom' to really try different things. Innovation is no longer about "design for supply chain" or "design for manufacturing" rather it is about "design WITH supply chain" or "design WITH manufacturing" and executives therefore should make the entire innovation process collaborative and give teams the ability to work together. **Frost & Sullivan finds that collaboration in innovation is helping to speed and improve the quality of product and service innovations.**

But not all of the new ideas are going to be successful. Therefore, another key implication for executives is to not only motivate the employees and teams to continuously innovate, but to understand that it is okay to try and fail (when things do not work out) and if they do fail then move on fast without spending a lot of time, money and resources on such failing projects. Instead, shift the priorities to those that will reward the business and yet keep that door to innovation open.

Williams, for example, is getting its employees to think differently, by allowing them to use different technologies, such as the use of drones in its unmanned aerial systems program, after seeing a need to gather images and data to map and mitigate potential landslides. Williams now is using drones for surveying and mapping, monitoring construction and inspecting facilities for maintenance and repair.

Another implication for executives is in changing the mindset (i.e. rethinking things with a new mindset) and the culture within the company. As much as accountability and ownership are important while creating something new; "creating a culture" of innovation by getting 'everyone' involved, motivating people to use all the right technology (for example, reporting tools) and systems in a controlled way (and not just randomly to avoid a dead end or going in the wrong direction) and making it 'fun' is equally important. For example, a member of DIH's board presented some KPIs of OTBI (Oracle Transactional Business Intelligence) report that he built himself (after a quick training) to identify a new potential growth market to sell in to. Since the report did not deliver the KPIs DIH was looking for, they moved on (although DIH was happy that the board member tried his best especially in an area that was not his competence).

The role of IT is changing as their role is no longer just to maintain systems. They are now facilitators of innovation and work together across different lines of business to drive change. They are facilitators of people change too – as they get their employees to embrace new technology that can help them do things efficiently and faster. This means changing the entire

culture of the company; preparing the whole organization for change management as a continuous and fluid process.

Getting everyone on the same platform can free up resources, talent and time, and innovation can happen faster. For instance, Williams is driving transformation and will work with the business side to take advantage of Oracle Cloud (quarterly) updates.

**“Executives across areas of the business are definitely changing. IT specifically, has a bigger responsibility to innovate. And the whole organization needs to be prepared for the change management in a world where people are consuming cloud applications as it becomes more or less a constant thing. Moving to cloud-based applications isn't just having your applications run in the cloud, it's moving away from an environment with mounting technical debt and eliminating customizations and technical debt to fund innovation.” – Jeff Stiles**

Frost & Sullivan believes that cloud capabilities can power the organization to manage processes in a different way, such as managing things or maintaining products and people differently based on Artificial Intelligence (AI). For instance, AI can evaluate and then define the action to be implemented based on an algorithm that can create the work order to initiate the maintenance. To this end, Stefano said, “When there is a deviation in production or when there is non-conformity where there is an incident to be managed, the organization can choose if these issues should be managed using artificial intelligence.”

## The Need to Innovate New Types of Business Models to Capture Recurring Revenue Streams

Innovative companies change business models, and create new products or services to be resilient and adaptable. For instance, Oracle saw that customers were looking for software that was delivered as a service (SaaS), so they pivoted their own business model to capture this market demand and ultimately delivered what their customers wanted: shifting from delivering hardware to becoming a multi-billion dollar service provider.

Data from customers, products, etc. across all lines of business can quickly streamline processes and provide insights into new types of opportunities. For instance, consolidating data from operational systems and commercial systems into one place for analytics and mining data helped Williams drive more value for their customers, by optimizing their products (from a commercial standpoint) based on real-time data from customers.

Similarly, Alcar Ruote uses Oracle Cloud Supply Chain Planning to capture real time demand data, and uses those insights to know what their customers want and then innovate around that. Stefano added that, “So another key point is the understanding of the knowledge of these new technologies to be ready to provide [a] solution, not with expensive projects that takes months and months, but with very light, efficient projects that are ready to support a

new business in terms of weeks and not in months. And with technology, it's possible.”

DIH is also seeing the need to innovate and optimize their products to deliver the best customer experiences. While end of life cycle products are usually decommissioned, DIH (at the end of the life of a product) creates new versions and new innovations of such products. This is a “closed loop innovation,” as DIH keeps iterating on the products and making them better with innovation and strengthening their go-to-market portfolio.

## Vision for the Future of Innovation

In today’s competitive markets, companies cannot be slow in their response to adapting to emerging trends or to any disruptions. Frost & Sullivan believes that with the right enterprise software platform companies can be more responsive and resilient; they can capture the market and be adaptable all the time. Therefore, the role of enterprise software has shifted from merely being focused on control and cost savings and process cycle times to being a platform for continuous innovation that promotes faster, more responsive change. The concept of “putting something in a black box” then “passing the box to someone else” will not work anymore in many industries.

For instance, DIH is committed to having an endless innovation cycle in place and Oracle enables this endless innovation cycle by removing any silos, providing consistent view of the enterprise product record and helping DIH and many other companies to always think about that “next step” in innovation.

Frost & Sullivan finds that cloud solutions and digitalization also helped many companies overcome challenges posed by COVID-19, especially when people could not go into the offices to connect and exchange ideas. For example, DIH implemented Oracle in China without being at the manufacturing site, or at the sales units in China. DIH is now live, on, and productive in China.

Without digitization, it would have been very difficult to drive innovation. Collaborative development is also a crucial part of delivering and provisioning a service. To this end, DIH’s product development teams partnered with their service department to create what they call a “HERO solution,” an innovative robotic solution that enables healthcare systems to maintain high quality services even under difficult conditions such as during the COVID-19 pandemic. Mobility problems can arise for patients struck with long-term immobilization, for example due

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– Stefano Mariani,  
Alcar Ruote SA



to COVID-19 infections. The DIH HERO solution, for complete functional movement rehabilitation, is designed for faster recovery of such patients. DIH brought this solution into the market within 6 months. And this was really only possible with the Oracle technology stack in place that enabled interconnectivity.

In an effort to drive down back-office costs and be more efficient, Williams is leveraging all the advanced technology that Oracle is offering. Williams' vision for the future of innovation is to take out or remove all the manual tasks, whether in their supply chain or in their finance operations, and let the systems do those tasks. Williams aims to use analytics to share information and actionable insights with its field teams to make them safer, more focused, and more efficient and effective.

As Jeff Stiles concluded, "Use IT, not as a black box, but as an agent of change with executives."

## Conclusion

The innovation gap continues to grow even for the most innovative companies. Frost & Sullivan has seen many organizations struggle with traditional, on-premises business systems that were not designed to manage the complexities of launching and scaling global products and services, or support today's fast-evolving business models. Therefore, top innovators that outpace the market do not use traditional legacy systems. In fact, the best innovators use a unified platform for all of their manufacturing and supply chain operations to develop, plan, make and serve. They unify data and entire new product launch processes on a single cloud platform. Information flows from idea capture to design and development, from planning to manufacturing to service. By having closed-loop processes—from design, planning, procurement, inventory, manufacturing, maintenance and service—integrated with IoT data, predictive analytics, and machine learning capabilities, assets can be proactively monitored and tracked to ensure their reliability. Demand can be forecasted early in the product design phase, continuous product improvements can be delivered, quality can be ensured, maintenance can be predicted, excess and obsolete inventory can be minimized, and delays in supply chain execution can be eliminated.

Frost & Sullivan concludes that to navigate the new economy and thrive even when disruption hits, a focus on continuous innovation should be a top priority for organizations of all sizes and types, and a unified platform to develop, plan, make and serve can create a strong, scalable foundation for continuous successful innovation.

F R O S T  S U L L I V A N

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