



INNOVATION RESEARCH  
INTERCHANGE

*Accelerating Value Creation*

# NAVIGATING FUTURE GLOBAL CRISES: THE ROLE OF R&D

Recent crises have had a crippling impact on many sectors at the national and international level. These events include health, economic, and natural disasters such as the covid-19 pandemic, Ever Given blockage of the Suez Canal, Fukushima earthquake in Japan, and the sudden cold snap in Texas. As a result, investors and corporate leaders are urgently looking for ways to reduce risk and improve future responses.

This study builds on a discussion from the IRI 2021 Annual Conference on the new normal. The study team included twelve IRI member companies who compiled and shared lessons learned from these recent disruptions to improve R&D preparedness and response at scale in future crises at both the executive and operational levels.

The study team broke into three groups to examine what they deemed to be the most critical issues: leadership, return to the office, and supply chain. Following the executive summary are reports from each of those teams and a case study of one of the companies that participated in the project.

# EXECUTIVE SUMMARY

Innovative R&D responses can help organizations to deal with future crises such as those seen in 2020 - 21. Global food supply is under stress from the Russia-Ukraine war, as these two countries cultivate 12% of global calorie supply.<sup>1</sup> Climate change, as noted at COP26, poses a threat due to greenhouse gas emissions and rising temperatures. Not only that, a *Nature* article in April 2022 notes climate change increases the likelihood of new pandemics from zoonotic transmission of viruses to humans at spillover hotspots.<sup>2</sup> In these and other cases, R&D can inform and sharpen organizations' response.

Twelve organizations with affiliations with IRI agreed to use lessons learned from recent crises to create a playbook for managing future potential challenges. Using case studies from CPG, automotive, energy, and infrastructure sectors, this study team illustrated how companies can create superior value and improved outcomes for companies, sectors, and economies in the areas of leadership, back to office, and supply chain.

**Section 1: Leadership.** The team reviewed case studies across different companies and sectors. What was critical for leadership to understand? What did management focus on during the covid-19 pandemic? What common themes emerged that were cross-functional and also relevant for multiple sectors?

The key leadership takeaways are on four main themes: greater, consistent communication, team flexibility, cash preservation, and goal prioritization. Communication at all levels has to be frequent, open, honest, and reassuring. Leaders have to be flexible and prepared to guide their teams in pivoting between different ways of working and responsive to new processes. Increasing working cash by preserving cash from non-critical areas, and how to manage it, is critical. Overall, leaders' ability to quickly prioritize between processes, goals, and key products is crucial for maintaining productivity during a time of crisis.

**Section 2: Return to office.** Key challenges for return to office were in communications, staff support and training, and overall coordination and planning. Organizations are now institutionalizing procedures created during the covid-19 pandemic to facilitate returning to in-person work and enabling the R&D workplace to better accommodate future crises with minimum impact on productivity and work quality.

In terms of recommendations for long term return to office strategy, effective communication skills are of paramount importance. Messaging needs to convey that management directives and workplace conditions may change, but certain core principles are maintained, including commitment to employee safety; commitment to customer service; and compliance with local and federal directives. Investment in robust infrastructure for online/hybrid collaboration enables virtual interaction when in-person collaboration is not possible and is helpful for distributed teams. The role of a virtual meeting facilitator was emphasized. The establishment of clearly defined conditions and procedures for shutdowns is crucial, including measures to safely return workers onsite. The creation of flexible workplaces, using tracking tools to indicate what employees and teams are onsite and when, is very beneficial in adhering to social distancing requirements and maintaining employee safety.

<sup>1</sup>Aizenman, N. (2022, March 6) Russia's war on Ukraine is dire for world hunger. But there are solutions. NPR. <https://www.npr.org/sections/goatsandsoda/2022/03/06/1083769798/russias-war-on-ukraine-is-dire-for-world-hunger-but-there-are-solutions>

<sup>2</sup>Zhang, L., Rohr, J., Cui, R. et al. Biological invasions facilitate zoonotic disease emergences. *Nat Commun* 13, 1762 (2022). <https://doi.org/10.1038/s41467-022-29378-2>

**Section 3: Supply chain.** The team examined the broader global challenges and then delved into specific instances, such as the Ever Given blockage in the Suez, flooding in Louisiana, and electricity outages in Texas. It became clear that the lean ‘just-in-time’ approach to supply chain needs to be replaced by an emphasis on reducing risk and improving resilience.

The key takeaway for **supply chain** is building resiliency into the supply chain system, “designing in” redundancy to enable material substitution and multiple supply partner options. R&D can lead the charge by identifying material substitutions and incorporating alternatives into the NPD process.

# 1. LEADERSHIP LESSONS

## SUMMARY

Several case studies were reviewed across different companies and sectors to identify common themes of what leaders have done to maintain productivity, culture, and morale during recent tumultuous times.

## KEY TAKEAWAYS AND LESSONS LEARNED

- ▶ **Communication:** Communication at all levels has to be frequent, open, honest, and reassuring. A combination of town halls, newsletters, manager check-ins, and focus groups has proven effective.
- ▶ **Flexibility:** Leaders need to adopt a flexible mindset to guide their teams in pivoting between different ways of working and be responsive to new processes.
- ▶ **Cash preservation:** Increasing working cash flow by preserving cash from non-critical areas, and how to manage it, is critical during uncertain times. Teams need to be prepared for potential delays in non-critical spending with cuts in, for example, travel, CapEx, and non-essential improvements.
- ▶ **Prioritization:** Leaders’ ability to prioritize processes, goals, and key products is crucial for adaptation during a time of crisis. They also need to communicate those priorities down through the organization.

## OPPORTUNITIES FOR LEADERSHIP IMPACT

- ▶ **EMBRACE FLEXIBILITY.**  
Some combination of onsite and remote work is necessary to recruit and retain quality workers.
- ▶ **ACCEPT THE CHANGE.**  
Adapt company practices (e.g., meetings) to accommodate a mixture of onsite and remote work.
- ▶ **COMMUNICATE.**  
Maintain timely and honest communication with all workers, on site and remote.

## LEADERSHIP PERSPECTIVE

The period beginning in early 2020 brought many new and unprecedented challenges for organizations to tackle, ranging from employee well-being to maintaining customer confidence. Day-to-day business issues became exacerbated as global supply chain issues caused disruption to production lines and quality. Furthermore, innovation and R&D management were impacted as the pandemic continued and uncertainty reined. Maintaining company culture, while still driving growth, became even more challenging – and important – during this period.

## COMMUNICATION

During tumultuous and ambiguous times, leadership must adapt in terms of communication strategies. Communication must be broad, tailored to the needs of employees, direct, honest, regular, and reassuring.

Specifically, leadership needs to be trained upfront on how to handle and communicate during difficult situations, while keeping workflows running. Crisis training should be offered deeper into the organization, particularly for all those with teams. The communications element of the training should feature elements on clear messaging while also conveying empathy.

The covid-19 pandemic forced managers to learn how to manage employees remotely, account for health and safety, and provide access to resources, while serving as a support network to help employees manage personal challenges and stress. Managers should be given resources that they can share with their teams, but also support for themselves in the form of managers' networks and resources. All employees should be given access to mental health services.

Crucially, during difficult times it is critical to be positive, giving hope for a better future, and seeing the "glass half full".

## FLEXIBILITY

During the covid-19 pandemic, flexibility in employee working situations became paramount. This applied equally to employees who needed to be on site and those who were working remotely – all had different circumstances that impacted their ability to work. Also, different geographies had very different guidelines and both employees and employers alike had to adjust to the local specifications.

Going forward, leaders would do well to recognize and balance the benefits of both in person and remote work. Leaders interviewed by the study team found the benefits of in-person work included increased interaction and spontaneous conversations and easier coaching. Concurrently, the benefits of working remotely that they identified included increased productivity, flexibility, no commute time and a levelling of the playing field for distributed teams.

Increasingly, to be competitive, organizations have to offer flexible working options, particularly hybrid schedules. Organizations are just learning how to do this. Key tips identified so far are:

- ▶ Build in-person 'collaboration days' into the work schedule;
- ▶ Clearly identify who will be in the office and when so that team members can schedule interactions or just meet for lunch; and
- ▶ Determine the sentiments around office space in the organization. Do teams want assigned spaces or will hot desking work? Can you create 'neighborhoods' for teams so that teammates can be guaranteed to sit together?



**“COMMUNICATION MUST  
BE BROAD, TAILORED  
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REASSURING.”**

Additionally, leadership must ensure that employees continue to achieve their career goals, grow in their position, and work at their full potential. The concept of “out of ‘site’ out of mind” should be avoided; professional development and goal setting must continue.

“TO IMPROVE PREPAREDNESS FOR FUTURE CRISES, COMPANIES SHOULD EXAMINE WHAT WORKED FOR THEM TO INCREASE CASH FLOW AND BE PREPARED TO IMPLEMENT A RIGOROUS SYSTEM FOR APPROVAL OF NON-CRITICAL CASH SPEND.”

#### CASH PRESERVATION

“Cash is king” is an age-old saying and as many times before, cash preservation became critical for companies during the various crises beginning in 2020. With an uncertain future, yearly/monthly plans started to look hazier and there was no clear picture about future sales/recovery and how the pandemic and other crises would evolve. Companies began preserving cash for emergencies. Some companies not only preserved cash for themselves but also provided support to their customers. Their pandemic responses included supporting customers with cash and foot falls. Increasing working cash flow and providing cash incentives were critical for many smaller dealers/customers to stay in business.

Several of the manufacturing companies that were studied preserved cash from non-critical areas so that critical operations could continue to run smoothly. Many companies completely stopped or delayed non-emergency spending, for example non-critical travel, capital expenditure, and process improvements. New projects that were not essential to the near future were put on hold until the situation became clearer. In some cases, bonuses were put on hold and some companies had to implement temporary salary cuts. New hiring was stalled in favor of critical cash preservation. Further changes, such as working shorter hours/weeks in return for salary cuts were implemented. Some of these decisions were not popular and quite painful but had to be undertaken from an operational and leadership perspective.

The role of upper management in preserving cash and making day-to-day decisions while communicating these decisions to employees became critical. In many cases, the approval of upper management in spending cash was required. For example, at several companies, approval was required for large expenditures from upper management. Different methods of cash preservation were explored outside of various cuts geared towards personnel.

To improve preparedness for future crises, companies should examine what worked for them to increase cash flow and be prepared to implement a rigorous system for approval of non-critical cash spend.

#### PRIORITIZATION

The ability to drive prioritization becomes even more critical in times of crisis. During the covid-19 pandemic, companies, businesses, and leaders had to quickly develop new metrics for how projects were prioritized and de-prioritized and for resource allocations. Keeping the balance between innovation and business maintenance, and global versus local initiatives were also of importance.

One specific example of the importance of balanced prioritization was the ability of many industry sectors, including fast-moving consumer goods companies, to prioritize qualification of new sources of raw materials to mitigate spikes in the cost of commodities. In this case, R&D, procurement, and supply chain leaders, among others, had to make tough decisions in terms of shifting resources from new product development/innovation projects to identification and validation of alternative sources of raw materials for products already in market to offset impact on margin. On the innovation front, emerging consumer needs due to the pandemic changed the innovation grids for many companies, so more prioritization was needed here as well.

Additional prioritization for leaders of global companies was necessary for the on-going shifting of workloads from one geographic location to another, based on the given status of the pandemic in each region of the globe. As any manufacturing plant, laboratory, or other type of facility requiring physical presence of employees to get work done was closed, or had restricted presence due to covid-19 mandates, plans had to be made by leadership to address the situation and keep work going. Contingency plans were key - in essence the ability to shift the workload to another site, outsource, etc.

## SUMMARY

The table below summarizes the four focus areas of communication, flexibility, cash preservation, and prioritization, stating the main problem and identified approaches. Whenever a crisis emerges, the leadership team needs a playbook to turn to. These are the tasks that should be part of standard operating procedures for leadership teams. The study team observed that while R&D and sales and operations planning often function separately, the closer they can operate as a cohesive unit, the greater the benefit for the company.

Table 1

CHALLENGE	PROBLEM	APPROACH
<b>Communication</b>	Lack of communication can lead to rumors, uncertainty, and loss of confidence	Frequent and open communication from all levels to all levels
		Reassurance of control and ability to succeed
		Clear, consistent, and fact-based messaging
<b>Flexibility</b>	Maintaining productivity and collaboration in virtual and in-person interactions	Recognize individual employee needs and work together to find the best solutions
	Pivoting between in-person and virtual work	Ensure strategies are in place to foster professional growth and keep people motivated and working at full potential
		Invest in collaboration tools (and training on them)
<b>Cash Preservation</b>	Increasing cash flow and preserving it for emergencies	Implementation of rigorous system for approval of non-critical cash spend
		Cuts in CapEx, process improvements
<b>Prioritization</b>	Decisions on what programs and activities to put on hold and what to resource	Balance focused innovation and emerging critical operational needs
		Create a contingency plan to shift work between geographies and/or work with reduced workforce

# 2. RETURN TO THE OFFICE

## SUMMARY

The R&D workplace has to accommodate future crises with minimum impact on productivity and work quality. Throughout the covid-19 pandemic, corporate research locations remained open to some extent as critical R&D personnel require access to laboratory resources on key projects. Hybrid in-person/virtual meetings are becoming the new normal as companies adapt to both safety precautions and the demands of the workforce.

## KEY TAKEAWAYS AND LESSONS LEARNED

- ▶ The ability to pivot quickly between in person and remote work (and do both well) is critical for organizations' preparedness for the future.
- ▶ Both in person and remote work have advantages. Organizations that are able to strike a balance between the two will thrive.
- ▶ Messaging around work situations must be clear and maintain the company culture.
- ▶ Remote staff should be made to feel that they are still a valuable part of the team and should not be forgotten.

## RECOMMENDATIONS

- ▶ Effective communication is paramount. Messaging must convey that management directives and workplace conditions may change, but core principles remain intact, including employee safety, customer service, and legal compliance.
- ▶ Establish robust infrastructure for online/hybrid collaboration spaces and meetings.
- ▶ Create flexible workspaces and labs. Track which teams need to be onsite and when.
- ▶ Clearly define conditions and procedures for shutdowns and safe return to facilities.

## CHALLENGES

The study team described four core challenges, relating to communications, infrastructure, staff support, and appropriate planning. Alongside those challenges are the study team's recommendations for addressing them.

## 1. COMMUNICATION

### Challenges:

- ▶ Communicating critical requirements (i.e., masking, cleaning, closings) in a rapidly changing landscape.
- ▶ Shifting guidance and directives lead to "compliance lag" across functions.

### Recommendations:

- ▶ Effective communications should express:
  - Commitment to employee safety;
  - Commitment to customer service; and
  - Compliance with local and federal directives.
- ▶ Communications should be as clear and as detailed as possible regarding on site configurations and tools available for working off site.

## 2. INFRASTRUCTURE

### Challenges:

- ▶ Configuring lab and office spaces to enable distancing.
- ▶ Building and maintaining the infrastructure for virtual and hybrid work.

### Recommendations:

- ▶ Invest in robust infrastructure to support online/hybrid collaboration spaces and meetings. Almost as a habit, this will make it easy to switch to regular virtual interaction when in-person collaboration is not possible. In addition to being essential for crisis situations, it also enables smarter interactions between distributed teams.
- ▶ Create flexible workspaces (including labs) that can facilitate social distancing, if needed. Establish the on-site needs for all teams and create transparent plans to meet those needs. The investment will not be insignificant, but incrementally future-proofing facilities is likely to pay off in productivity in the long term.

## 3. STAFF SUPPORT AND TRAINING

### Challenges:

- ▶ Getting all staff up to speed on new tools and IT infrastructure without a disruption in productivity.
- ▶ Supporting managers as they contend with unprecedented challenges with their team members.

### Recommendations:

- ▶ Establish champions on each team to shepherd in new tools and model their integration into work practices.
- ▶ Provide networks and a robust library of resources for managers. Partner with HR to establish these resources and offer all staff mental health support.

## 4. PLANNING

### Challenges:

- ▶ Coordinating efficient and effective shutdowns of facilities when necessary.
- ▶ Anticipating new challenges and other curveballs.
- ▶ Accounting for variability in regional conditions and restrictions in all decisions.

### Recommendations:

- ▶ Clearly define conditions and procedures for shutdowns, including measures and parameters to safely return workers on-site and resuming business travel.
- ▶ Prioritize return to R&D facilities for workers on mission critical projects.
- ▶ Define required onsite tasks and those that can be performed remotely. Show flexibility in allowing employees to work in their preferred environment as much as possible. Continue to review onsite/virtual guidelines with employees to facilitate engagement and buy in.
- ▶ For travel, focus on mission critical projects and willing travelers. Research conditions and restrictions at the destination – define a process for green-lighting travel and for briefing travelers.

## VIRTUAL/HYBRID MEETING FACILITATOR

A virtual/hybrid meeting facilitator is a new critical need – this could be a new, valued job description as the talent to emcee remotely influences the success of virtual and hybrid meetings.



# 3. SUPPLY CHAIN RESILIENCE

## SUMMARY

The term supply chain, once limited to business discussion, has become a household topic as companies across the globe struggle to distribute goods to consumers, keep store shelves stocked, and car lots full. Organizations that have invested in supply chain design that is capable, but lean, have found vulnerability and must take a new look at building resiliency into their supply chain system. This may include investment into reversing some of the lean design principles leveraged over the past decades, or at the very least, advancing efforts to “design in” redundancy into the new product launch process to enable material substitution or multiple supply partner options.

Questions to ask as you consider your supply chain structure:

- ▶ Would investing in a more robust inventory model offset future potential lost sales and profit given the more frequent and intense supply chain disruptions experienced?
- ▶ Should the new product line design process include a more robust supply model with increased supply partner or material substitutions available to leverage?
- ▶ Is it time to invest in developing second and third tier supply chain risk management plans with supply chain partners?
- ▶ When will technology be capable of anticipating future supply chain disruptions such that the ROI justifies the investment?

## CHALLENGES FOR SUPPLY CHAIN

**Preventing out of stock:** Shifts in consumer behavior and orders can lead to product out-of-stocks. Such lost sales can greatly impact customer confidence and lead to loss of loyalty. To reduce out of stock, more accurate demand forecasts localized by trade zone, consumer segments, and frequent shopper profiles are needed. This can recapture lost sales and improve customer retention. Artificial intelligence tools are beginning to be able to forecast needs based on a wide variety of scenarios.

**Increasing Competitive Advantage:** For quick, agile response, the entire team should be coordinated and informed (particularly on changes) – from sourcing, manufacturing, merchandising, and marketing to end customers. This will bridge the silos and speed up response to customer and competitor challenges.

**Reducing Global Risk:** Lean supply chain can be inflexible and lead to unanticipated costs and breakages in product availability. R&D, technology, manufacturing, and logistics need to work in alignment, with the goal of increasing supply chain resilience and reducing risk.

## RECOMMENDATIONS:

- ▶ Better understand the second and third tier levels of the supply chain.
- ▶ Design in material substitution options in the new product line phase.
- ▶ Decades of lean supply chain design and the resulting total cost of ownership analysis may need a fresh look at investment.
- ▶ Anticipate change and create robust contingency plans through scenario planning.
- ▶ Optimize value of transactions with inventory, insurance, and near-shore alternatives.

## IMPROVING SUPPLY CHAIN RESILIENCE – A DATA -DRIVEN APPROACH

It is entirely possible to improve supply chain resilience using a data-driven approach. The complete supply chain links source material to the customer. The five main areas within this are sourcing, manufacturing, corporate issues of inventory/capital/ planning, sales channels, and clients. These are described in Table 2.

One company that was studied used a data-driven analysis to obtain detailed market-by-market projections of supply and demand using advanced artificial intelligence and machine learning methods. They used this to accurately forecast optimal inventory and safety stock levels for each and every local market – sometimes ranging into thousands of markets. This helped

with risk management. Supply plans and inventories need to have sufficient buffer stock to meet unanticipated market demand in times of volatility. However, the company soon learned that it did not have enough resiliency. They needed to pressure test their demand and supply assumptions further in future.

Table 2

## Improving Supply Chain with Data



MANAGING RISK, RESILIENCE AND COMPANY VALUE: OOS, WORKFLOW/SILOS, GLOBAL SUPPLY CHAIN RISK



### CASE STUDY: WINTER STORM URI, FUKUSHIMA EARTHQUAKE, AND SUEZ CANAL

On February 13th 2021, Winter Storm Uri moved into the southern gulf region of the U.S. and resulted in an unplanned power outage for the numerous petrochemical plants in the region. This caused severe damage to many resin producing plants, as well as their feedstock sources, requiring weeks of repair to bring the plants back on line. Two other events occurred within days of the winter storm: an earthquake struck Fukushima Japan, which disrupted polymer production equipment, and the container ship, Ever Given, became disabled in the Suez Canal, essentially shutting a major shipping lane. While there were countless events and challenges that occurred throughout 2021, these events had a common thread that proved the risk management plan for one global packaging producer failed to anticipate global supply chain dependencies that existed with their key suppliers.

Table 3

CHALLENGE	WHERE CONSUMED?	BASE RISK MANAGEMENT PLAN	BASE RISK MANAGEMENT FLAW
Resin	N. America, Europe, Asia, LATAM	Multiple sources qualified, regional sourcing and qualified options	All sources were basic to ethylene, propylene, acetic acid, other feedstocks  Multi-continent supply didn't mean alternative feedstock source
Adhesives and primary adhesive materials	N. America, Europe, Asia, LATAM	Multiple sources qualified, regional sourcing and qualified options	All sources basic to ethylene, acetic acid, VAM  Regional constraints = global supply instability  Decades of supply without formal contract = no supply

From a resin perspective, the corporate team had prepared a supply risk plan that involved a multi-plant, multi-region approach, with a secondary plant located in another region of the world qualified to supply in any event of disruptions in the U.S. When Uri shut down all production in the Gulf of Mexico, their team quickly began discussions with their supply partner to begin plans to source from the alternative region plant.

While this plan was being put into motion, they learned that the plant relied upon base raw materials from Japan that had only days earlier experienced a significant earthquake, temporarily shuttering numerous manufacturing plants in the region,

including a key supplier to their secondary production facility. The lack of basic raw material created a serious problem. Then, as this Japanese supply source began to start up production again, yet another challenge entered the story: the Ever Given. On the container ships' journey through the canal, it ran aground, stopping all traffic through this vital shipping lane for days. This brought the supply chain for the company to a halt while the ship was moved.

When reflecting on this and a host of other challenges presented throughout 2021, it is clear that a lack of supply chain resiliency can impact all functions of a manufacturing organization, from finance to operations to R&D. When asked how the pandemic impacted R&D leaders, the company team's primary response was that they were forced to prioritize supporting supply chain solution projects and to shelve new product design projects, which set back new product launch schedules.

#### SUMMARY: OBJECTIVE FOR SUPPLY CHAIN

Company leadership can improve supply chain in several ways, and they need to guide with a new focus. One important adjustment is away from lean, just-in-time delivery to a resilient supply chain with alternate material, manufacturing processes, suppliers, supply lanes, and flexibility in final deliverables. In times of shortages, this helps to meet the needs of clients.

*Tugboats trying to free the jammed ship,  
as viewed from the International Space  
Station, 27 March 2021*



*Following discussions with the White House, FedEx, UPS, and Walmart began working 24/7 to alleviate supply chain problems in the United States.*

“NEVER AGAIN SHOULD OUR COUNTRY AND OUR ECONOMY BE UNABLE TO MAKE CRITICAL PRODUCTS WE NEED BECAUSE WE DON’T HAVE ACCESS TO MATERIALS TO MAKE THAT PRODUCT. NEVER AGAIN SHOULD WE HAVE TO RELY TOO HEAVILY ON ONE COMPANY OR ONE COUNTRY OR ONE PERSON IN THE WORLD, PARTICULARLY WHEN COUNTRIES DON’T SHARE OUR VALUES WHEN IT COMES TO LABOR AND ENVIRONMENTAL STANDARDS.”

- PRESIDENT BIDEN, OCTOBER 13, 2021

## KEY TAKEAWAYS

Three areas with outsized opportunities for improving supply chain are:

- ▶ Improve resilience and reduce risk with fuller transparency throughout the ecosystem.
- ▶ Identify all touchpoints and constantly monitor weaknesses.
- ▶ Establish a supportive ecosystem of supplier partners, internal teams, and customers.



# LESSONS LEARNED IN CRISIS RESPONSE

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A global manufacturer of automotive products offers a case study in maximizing cash flow and profitability and maintaining momentum in ongoing digital, IT, and engineering efforts, while maintaining worker safety and offering support and flexibility to employees in uncertain times.

From an employee standpoint, the company was able to develop a plan and system to offer a series of support activities. Vaccination drives were organized in office locations, and dedicated vaccination slots were provided to others who were working remotely from their home locations. All vaccination support was offered to employees and their dependents. Telemedicine support and advice for suspected covid-19 cases were also provided to employees and dependents. During the peak in 2021, when hospital bed availability hit 0% in many cities, a volunteer group was set up to monitor and update information on the latest bed and medication availability. Additionally, a series of financial and medical leave supports were also offered.

From a business standpoint, in order to facilitate ongoing business initiatives in the new pandemic environment, customers were given extra support in terms of increased cashflow, sustained profitability, and measures for generating more footfalls during the tough lockdown period. The company supported the customer community through earlier release of incentives, allowing for lower levels of inventory than stipulated, and early introduction of sanitization services, which ensured a basic level of revenue for the customers.

From a digitalization standpoint, there was a balanced impact from the pandemic. While some wish list and research initiatives got deprioritized, it was clear that virtual interactions would require strengthening the digital infrastructure and prioritizing initiatives that could take advantage of the digital mandate. Given the lack of travel opportunities, data became a key asset to drive business decisions and interactions with various stakeholders. There was a push to culturally accept remote working, which ensured faster decision making despite the inability to meet face to face.

Over the course of the pandemic, the company was able to leverage its considerable resources and position to offer employees and their families the required support to continue to be healthy and productive. That support and flexibility allowed the company to advance in an environment where most were struggling to merely maintain business.

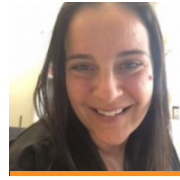
# PROJECT PARTICIPANTS



**Marita Alegre,**  
Senior Director  
Research &  
Development, Church  
& Dwight UK, Ltd



**Lee Green,**  
Assistant Vice  
President, Strategic  
Communities, IRI,  
a division of the  
National Association  
of Manufacturers



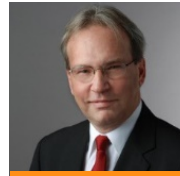
**Paloma Pimenta,**  
Associate Director,  
Colgate Oral  
Pharmaceuticals,  
Colgate-Palmolive



**Vijay Balakrishnan,**  
Global Chief Data  
Officer, Michelin



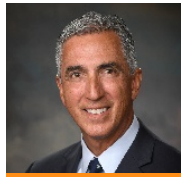
**Shah Karim,**  
Chief Executive  
Officer, SafeRock



**Terry Rosenstiel,**  
Freelance Innovation  
Paladin



**Ashtosh Ganjoo,**  
R&D Lead, New  
Technology  
Initiatives, Vitro



**Greg Munoz,**  
Vice President, Global  
Supply Management  
and Logistics, Sonoco  
Products Company



**Guy Rosenthal,**  
Group Leader, USG  
Corporation

## SPECIAL THANKS TO:

**Dan Abramowicz,** Executive Vice President Technology & Regulatory Affairs, Crown Holdings

**Rick Michelman,** President and CEO, Michelman

**Tim Swales,** Senior Vice President and Chief Technology Officer, Johns Manville

**Adam Polcyn,** Vice President, R&D, Vitro