

# The Future of B2B Customer Solutions in a Post-COVID-19 Economy

## Managerial Issues and an Agenda for Academic Inquiry

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3 **The Future of B2B Customer Solutions in a Post-COVID-19 Economy:**  
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7 **ABSTRACT**

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9 Customer solutions have been touted as the next service growth engine. Yet, pursuing a  
10 solutions strategy can seriously backfire in times of severe crises. The massive economic shock  
11 wave brought on by the recent COVID-19 pandemic challenges some of the presumed  
12 advantages of B2B customer solutions and reveals downsides of these complex offerings to  
13 which academics and managers alike may have given insufficient attention. This editorial  
14 focuses on goods-centered companies' recent foray into the solution business and the pressing  
15 managerial questions regarding the evolution of solutions as the world begins to emerge from  
16 the COVID-19 pandemic. Based on key characteristics of solution offerings, we identify seven  
17 potential downsides of customer solutions that are revealed by the current global crisis and  
18 develop promising research avenues mirroring these challenges. In each area, we propose three  
19 illustrative sets of research questions that may guide scholars and provide insights to  
20 practitioners for positioning solution businesses in the post-COVID-19 "next normal" world.  
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26 **Key Words:** COVID-19 Pandemic; Customer Solutions; Performance-Based Contracting;  
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## INTRODUCTION

The unprecedented crisis triggered by the coronavirus pandemic has left companies around the globe struggling to protect employees, maintain operations, prevent supply chain break-downs, safeguard cash flows, and serve customers. Travel restrictions and social distancing measures have created serious hurdles for solution providers who deliver customized and integrated combinations of good and services to customers. The difficulties are especially acute for firms that enter into contracts guaranteeing customers certain end-results or outcomes. For example, IT solution providers—who customize and integrate hardware, operating systems, application software, and ongoing service/support—often guarantee customers certain capacities, uptimes, and service response times. While outcome-based contracting and performance-based solutions have been touted as the next service growth engine, such strategies can seriously backfire in times of crises when customer operations stand idle. Solutions that should have locked in predictable recurring revenues and profits may instead overburden providers with unforeseen risks, high fixed costs, and sharply lower revenues. Similarly, customers who rely on service-intensive solutions sourced from providers may find themselves stranded because of supply-chain disruptions experienced by providers.

As customer investments grind to a halt, solution projects are postponed, and budgets are dramatically reduced, solution providers must rethink service-growth strategies designed in a pre-COVID-19 world. The massive shock and subsequent economic crisis brought on by the pandemic challenge some of the presumed advantages of B2B customer solutions. They reveal downsides of these complex offerings to which academics and managers alike may have given insufficient attention. While solutions can take different forms, we focus on those that reflect a combination of goods and services provided by, for example, firms that strategically transform their traditional goods-centric business model into one that is service-centric—i.e., servitization (Raddats et al. 2019).

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3 We first delineate key characteristics of solution offerings based on recent definitions.  
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5 Next, we identify important potential downsides of customer solutions that have been revealed  
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7 by the COVID-19 crisis. Finally, we identify research directions to guide scholars and provide  
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9 insights to managers for positioning solution businesses in the post-COVID-19 world.  
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## 12 **CUSTOMER SOLUTIONS: A RICH RESEARCH DOMAIN**

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14 Much has been written about B2B companies' service-growth strategies as solution offerings  
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16 have mushroomed in a broad cross-section of industries such as automotive manufacturing,  
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18 aviation, healthcare, and telecommunications. Concomitantly, research on *B2B customer*  
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20 *solutions* has emerged as an attractive sub-area in both academic and practitioner journals (e.g.,  
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22 Eggert et al. 2014; Tuli et al. 2007; for important recent advances, see Colm et al. 2020,  
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24 Macdonald et al. 2016, Raja et al. 2020, Ulaga and Kohli 2018, and Worm et al. 2017).  
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29 In general, there is widespread belief that manufacturers of many products can achieve  
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31 growth and profitability by servitizing their products into end-to-end solutions. Much of the  
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33 managerial and scholarly attention is predicated on this belief. Certainly, some point to slow  
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35 adoption of solutions by customers, while others investigate barriers to profiting from solutions  
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37 and boundary conditions for successful implementation (e.g., Worm et al. 2017). Nonetheless,  
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39 the COVID-19 crisis suggests that the downsides of solutions may have been underestimated.  
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## 42 **CRISIS-TRIGGERED CHALLENGES FOR SOLUTIONS**

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44 Solution contracts typically allow customers to rapidly adjust purchases as their sales decline—  
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46 and this is often a key selling argument used by providers; yet such terms put providers under  
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48 enormous pressure during a crisis. For example, when commercial jets were largely grounded  
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50 because of COVID-19 concerns, *power-by-the-hour* arrangements left manufacturers of jet  
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52 engines without revenues. Likewise, when public transport omnibuses operated at a fraction of  
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54 their normal capacity, *pay-per-mile* contracts left tire manufacturers struggling. Such contracts  
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56 work when the economy is humming, but may pose severe financial challenges during a crisis.  
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3 Table 1 provides an overview of downsides of customer solutions that surfaced during the  
4 early shockwaves of the COVID-19 pandemic and promising research directions suggested by  
5 these challenges (see columns 2 and 3). We discuss these downsides and research opportunities  
6 in relation to seven characteristics of B2B customer solutions (see column 1 of Table 1). We  
7 draw these characteristics from seminal papers that define B2B solutions (e.g., Colm et al.  
8 2020; Macdonald et al. 2016; Tuli et al. 2007; Ulaga and Reinartz 2011) and use them to  
9 structure our subsequent discussion.  
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### 19 **POTENTIAL DOWNSIDES OF SOLUTIONS IN A COVID-19 WORLD**

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21 Disruptions due to COVID-19 revealed several downsides of customer solutions. Many of  
22 these were previously underappreciated. We discuss seven downsides summarized in Table 1  
23 (column 2).  
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28 First, as complex solutions offerings comprise integrated tangible and intangible  
29 components, the interdependence among solution components greatly magnified supply chain  
30 disruptions as the COVID-19 pandemic evolved. Second, as solution offerings are typically  
31 tailored to customer-specific problems, customers were unable to quickly acquire solutions  
32 from alternative sources, and providers were unable to swiftly redeploy offerings tailored to  
33 individual customers in one area to customers in other areas. Therefore, the COVID-19 crisis  
34 simultaneously shut down solution deployment everywhere, leaving suppliers and customers  
35 with no alternatives. Third, given that solution contracts generally involve the transfer of some  
36 or all outcome risk from customers to providers, the COVID-19 crisis often left suppliers with  
37 excessive risks, costs (e.g., idle equipment), and sharply lower revenues (or none at all).  
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51 Fourth, providers and customers often contractually agree upon unique and customized  
52 performance metrics (KPIs), and gain-sharing mechanisms linked to jointly defined outcomes.  
53 While such metrics and mechanisms naturally attempt to anticipate future changes and allow  
54 for adjustments, the COVID-19 crisis clearly revealed that customer needs evolved faster than  
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3 many solution providers and customers had anticipated. This dynamism generated new  
4 customer expectations that providers found hard to satisfy. Solution agreements lacked the  
5 flexibility and responsiveness needed in a crisis. Fifth, customer solutions require an alignment  
6 of goals and interests among providers and customers. Yet, during the COVID-19 crisis, it  
7 became apparent that providers and customers at times lost sight of their mutual goals and  
8 objectives. More often than not, they relapsed into a self-interest focus, and resorted to an “us-  
9 versus-them” game.

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12 Sixth, providers and customers engage in a process to co-create solutions that resonate  
13 with customers’ needs. This requires providers and customers to integrate many of their  
14 resources and processes, and calls for close interaction with each other throughout the solution  
15 design, deployment, and post-deployment process. The COVID-19 pandemic, however, led to  
16 travel restrictions which limited in-person interactions between providers and customers, and  
17 reduced providers’ access to customer sites. These hurdles hurt provider-customer co-  
18 ordination and co-creation of solutions.

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21 Finally, the need for coordination requires that providers and customers put in place  
22 coordination structures, processes and people to enable swift responses to unforeseen crises.  
23 The COVID-19 pandemic, however, dramatically exposed the negative consequences of  
24 nonexistent or inadequate solution governance structures, processes, and people. New  
25 coordination activities emerged, and existing ones had to evolve.

### 26 27 28 **PROMISING DIRECTIONS FOR RESEARCH ON SOLUTIONS**

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31 We identify seven promising research directions corresponding to the seven downsides noted  
32 above (Table 1; column 3). These are not exhaustive, but rather open up opportunities for  
33 scholarly insights in light of the “lessons” of the COVID-19 pandemic. We illustrate each  
34 direction with sample research questions, and provide a more complete listing in Table 1.

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3 The first overarching research direction refers to the very design of a solution. The current  
4 crisis clearly demonstrates that providers and customers must build greater agility and  
5 flexibility into solution offerings. This imperative leads to many interesting research questions,  
6 such as revisiting the nature of modular designs, leveraging platform architectures for  
7 solutions, and exploring new relational processes that ensure greater adaptability of designs.  
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12 The second research direction relates to balancing the benefits of customization against  
13 the costs of non-retrievable investments. Here, scholars might explore the specific trade-offs  
14 between customization and standardization of solution offerings and investigate the conditions  
15 under which such trade-offs favor one or the other. Furthermore, researchers could shed light  
16 on how remote interaction technologies could help firms cut across organizational “silos” and  
17 reduce “silo thinking” within as well as between provider and customer firms.  
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22 Third, how might providers and customers better mitigate risk in the aftermath of an  
23 unforeseeable widespread shock? Which safeguarding mechanisms are more effective for risk  
24 mitigation during a pandemic than others? B2B companies can potentially learn from  
25 experience and knowledge accumulated by pure service players. Likewise, one may think of  
26 approaches used elsewhere, such as reducing financial risk through third-party syndication of  
27 loans, including escalator/de-escalator clauses that share risk when usage/throughput rises or  
28 falls dramatically (e.g., requiring additional payments as a crisis evolves), and anticipating  
29 arrangements that pay for an outcome but still specify minimum levels of throughput/usage,  
30 among others. These mechanisms might help reduce risks emanating from general shutdowns  
31 and make it easier for solution providers to redeploy assets across different solutions.  
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36 Fourth, the crisis reveals a need for envisioning next-generation performance metrics,  
37 evaluation processes, and gain-sharing mechanisms. Current metrics and measures appear  
38 unable to help involved parties adapt to rapidly changing customer requirements in a timely  
39 manner. Here, researchers might explore new metrics and processes that enable early  
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3 identification of a need for change so that proactive adjustments can be made. Can the parties  
4 involved use “loss-sharing metrics” that mirror more-traditional gain-sharing agreements?  
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8 A fifth research direction is to develop a better understanding of how customers’ (and  
9 providers’) goals evolve during a crisis. During the COVID-19 crisis, these changes occurred  
10 in a very short time window, dramatically highlighting the need to explore how parties can  
11 work together to swiftly re-assess and realign goals and objectives. Relatedly, researchers may  
12 explore whether and when new modes of interactions, such as frequent remote exchanges, are  
13 more effective in generating goal alignment than traditional modes, such as in-person  
14 coordination. There is also a need to better understand the determinants of discrepancies  
15 between individual and organizational goals. More knowledge is needed on how exactly a crisis  
16 affects the magnitude of these discrepancies.  
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29 Sixth, there is a pressing need to investigate how the deployment of remote technology in  
30 the solution process—from identifying new solution sales opportunities to automated  
31 identification of deviations from targets and post-deployment support processes—can restore  
32 and redirect co-creation processes. For example, researchers could explore which parts of the  
33 solution process (or tasks) can be performed effectively using remote technologies, and under  
34 what conditions (e.g., provider, customer, industry characteristics) the use of remote  
35 technologies leads to greater customer value creation. There is also an opportunity to  
36 investigate the long-term effects of using remote technologies on provider-customer  
37 relationships and the nature and scope of the solution business. It is possible that remote  
38 technologies will deepen customers’ involvement in value-creating processes in the future,  
39 calling for providers to assist customers in developing such new capabilities for value creation  
40 (see, for example, Elgeti, Danatzis and Kleinaltenkamp 2020).  
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56 A seventh research direction relates to governance structures, processes, and people. Both  
57 practitioners and researchers need a better understanding of how to foster coordination among  
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3 providers and customers in order to gain greater flexibility and responsiveness in case of  
4 unforeseeable widespread shocks. Therefore, researchers may explore how a crisis affects the  
5 nature and intensity of coordination activities between solution providers and customers.  
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7 Which alternative activities must be initiated, and which current actions and behaviors must be  
8 increased, reduced, or discontinued altogether during a crisis? It is also important to understand  
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10 which governance structures and processes are effective during a pandemic, and what new  
11 mechanisms might be developed to ensure greater flexibility and responsiveness. Finally, one  
12 may explore how crises redefine the composition, roles and responsibilities of involved entities  
13 such as providers' sales teams, customers' buying and usage centers, and/or other solution-  
14 coordination units. New individuals might step in, and the roles and relative influence of  
15 existing individuals might also evolve as a crisis unfolds.  
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## 28 CONCLUSION

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30 The aforementioned downsides and research directions suggests three long-term implications  
31 for solutions businesses in the post-COVID-19 world. *First, solution businesses will not go*  
32 *away; rather, they will adapt and thrive.* The design and implementation of solutions may look  
33 very different in the future. A crisis accelerates ongoing trends and forces experimentation; a  
34 pandemic is no exception. The general move towards "Everything-as-a-Service" (EaaS) will  
35 continue to fuel growth in many industries. Attempts by solution providers and customers to  
36 survive and thrive in the wake of COVID-19 will accelerate adoption of digital tools, novel  
37 risk management mechanisms, customer capability development, and resource redeployment  
38 that will shape the future of solutions. Approaches that are maladaptive will fade and yield to  
39 more fit and resilient ones.  
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53 *Second, the boundaries between various forms of service offerings and solutions will*  
54 *continue to blur.* Firms' adaptations in the wake of crises will lead to more resilient solutions  
55 and other offerings that do not fit neatly into existing typologies. For example, digital  
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3 transformation, cloud-based solutions and remote coaching of customer capabilities will  
4 require new definitions of what constitutes a solution. New approaches to reducing costs or  
5 managing the financial risks associated with those costs may yield more complicated solutions  
6 arrangements that challenge current models.  
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12 *Third, new organizational functions will take on important roles and responsibilities in*  
13 *solution design and deployment.* For example, Customer Success Management (CSM) has  
14 emerged as a new corporate function and managerial practice to ensure that customers derive  
15 the value promised by vendors (Eggert, Ulaga and Gehring 2020; Hochstein et al. 2020). While  
16 CSM launched in the North American Software-as-a-Service (SaaS) world, the phenomenon  
17 is gaining traction globally across industries. For example, solution providers from Philips  
18 (digital health) to Grundfos (Pumps-as-a-Service) are ramping up CSM capabilities in business  
19 markets. Solution customers increasingly expect providers to ensure that value promised in  
20 contracts is realized in practice. In turn, solution providers insist that risk, reward, and control  
21 be intertwined. As a result, CSM may take on new meaning as providers and customers seek  
22 the most effective combination of resources, capabilities, and governance to complete the jobs  
23 that solutions are designed to perform. Such activities include identifying and reporting value-  
24 in-use realized by customers, as well as opportunities for value-in-use enhancements on which  
25 solution-contract renewals may be based (Prohl and Kleinaltenkamp 2020).  
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44 In conclusion, the COVID-19 pandemic has put solution customers and providers under  
45 heavy strain, surfacing a host of unanswered questions. We hope our editorial encourages  
46 academics and practitioners alike to further explore, understand, and manage solution offerings  
47 in the post-COVID-19 “next normal” world.  
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**TABLE 1**  
**B2B Customer Solutions in a Post-COVID-19 Economy: Potential Downsides and Emerging Research Opportunities**

Customer Solution Characteristics	Downsides Illustrated During the COVID-19 Crisis	Emerging Research Opportunities
<p><b>(1) Integration of Tangible and Intangible Components</b></p> <p><i>Solutions represent complex offerings composed of tangible components (goods), intangible components (e.g. services, intellectual property rights), or combinations thereof that are integrated to form holistic market offerings.</i></p>	<p>During the COVID-19 crisis, the interdependence of solution components magnified consequences of supply chain disruptions—the supply failure of a single solution component disrupted the delivery of an entire solution.</p>	<p><b>Overarching Issue:</b> Enhancing flexibility of solution designs.</p> <p><b>Specific Research Questions:</b></p> <ul style="list-style-type: none"> <li>• To what extent can modular designs help reduce the impact of interdependencies among solution components on solution delivery failures?</li> <li>• To what extent can solution providers use platform architectures to reduce solution delivery failures?</li> <li>• How can solution providers and customers jointly build greater agility, flexibility, and responsiveness into their relational processes to manage the complex interdependencies among all involved parties?</li> </ul>
<p><b>(2) Customization of Solution Offerings</b></p> <p><i>Solutions address customer-specific problems. They are designed for individual customers or groups of customers. The degree of customization varies across industries, segments, and individual customers.</i></p>	<p>The COVID-19 crisis simultaneously shut down solution deployment everywhere, leaving providers and customers with no alternatives. Customers were unable to quickly source alternatives to these customized offerings. Providers were unable to swiftly redeploy offerings tailored for individual customers in one area to customers in other areas.</p>	<p><b>Overarching Issue:</b> Balancing the benefit of customization with the cost of non-retrievable investments by involved parties.</p> <p><b>Specific Research Questions:</b></p> <ul style="list-style-type: none"> <li>• What are the specific trade-offs between customization and uniformity/standardization?</li> <li>• Under what conditions do the trade-offs favour greater customization versus greater uniformity/standardization?</li> <li>• What impacts do remote interaction technologies have on “silos” among a provider’s internal units and external partners during customization efforts?</li> </ul>
<p><b>(3) Risk Transfer</b></p> <p><i>Solution contracts involve transfer of</i></p>	<p>The COVID-19 crisis often left providers with excessive costs (e.g., idle equipment), sharply reduced revenues, or</p>	<p><b>Overarching Issue:</b> Mitigating risk of unforeseeable widespread shocks for providers and customers.</p>

<p><i>some or all outcome risk from customers to providers.</i></p>	<p>no revenues at all (due to lockdowns in customers' countries).</p>	<p><b>Specific Research Questions:</b></p> <ul style="list-style-type: none"> <li>• What safeguarding mechanisms are more effective for risk mitigation during a pandemic? To what extent can best practices in one industry be transferred to other industries? What new mechanisms may be developed to reduce risks emanating from general shutdowns?</li> <li>• To what extent can more rigorous standardization of solution components and interfaces reduce risk by making it easier to redeploy components or underlying assets across different solutions?</li> <li>• To what extent does third-party syndication help manage financial risk effectively?</li> </ul>
<p><b>(4) Performance Evaluation &amp; Gain Sharing</b></p> <p><i>Solution customers and providers contractually agree to customized key performance metrics, and to gain-sharing mechanisms linked to jointly defined outcomes.</i></p>	<p>During the COVID-19 crisis, customer needs evolved rapidly, leading to new expectations (e.g., cash preservation) that affected the nature and composition of new solutions they wanted (e.g., inclusion of new productivity offerings). Solutions agreements were often not designed to accommodate rapid changes in customer requirements. In the crisis, gain sharing became obsolete and key performance metrics had to be revisited or renegotiated.</p>	<p><b>Overarching Issue:</b> Envisioning next-generation performance metrics, evaluation processes and gain-(loss-) sharing mechanisms to enhance adaptability of solution offerings to rapid changes in customer requirements.</p> <p><b>Specific Research Questions:</b></p> <ul style="list-style-type: none"> <li>• What type of solution performance metrics can accommodate a change in solution design called for by changing customer needs during a crisis?</li> <li>• How can providers and customers develop processes that enable rapid adaptation to fast-changing customer requirements in a crisis? What are some early signals of the need to engage in such adaptation?</li> <li>• Mirroring gain sharing, is it feasible to incorporate “loss sharing” in solution contracts? If yes, what types of goals, metrics and processes lend themselves to such “loss sharing” agreements?</li> </ul>
<p><b>(5) Goal Alignment</b></p> <p><i>Solutions require an alignment of goals and interests among all involved parties. Results are judged in terms of individual- and organizational stakeholders' value-in-use perceptions.</i></p>	<p>During the COVID-19 crisis, individuals and organizations at times lost sight of joint goals and objectives. As organizational goals rapidly evolved, the need for swiftly realigning objectives increased dramatically. The magnitude of the external shock caught many parties unprepared. Some relapsed into a self-interest mode, and adopted an “us-versus-them” stance.</p>	<p><b>Overarching Issue:</b> Achieving long-term alignment among involved parties, and navigating potential changes in goals brought about by crises.</p> <p><b>Specific Research Questions:</b></p> <ul style="list-style-type: none"> <li>• Are frequent remote (versus less-frequent in-person) interactions more effective in generating goal alignment? Under what circumstances?</li> <li>• What are the determinants of goal changes and discrepancies between individual and organizational goals? What effect does a crisis have on the magnitude of these discrepancies?</li> </ul>

		<ul style="list-style-type: none"> <li>• How do (should) providers and customers negotiate changes in individual and organizational goals of various parties to revise the composition, goals, and performance metrics of a solution under development?</li> </ul>
<p><b>(6) Co-Creation</b></p> <p><i>Solutions are co-created through the joint integration of resources and processes of customers and providers. This process requires ongoing interaction by all involved parties.</i></p>	<p>The COVID-19 pandemic prevented in-person meetings and interactions (because of restricted travel and limited access to customer sites), which hindered co-creation by providers and customers.</p>	<p><b>Overarching Issue:</b> Deploying remote technology in solutions—from identifying new sales opportunities to automated detection of deviation from targets and post-deployment support.</p> <p><b>Specific Research Questions:</b></p> <ul style="list-style-type: none"> <li>• Which parts of the solution process (tasks) can be performed effectively using remote technologies? Under what conditions can remote technologies lead to greater customer value creation?</li> <li>• What are the long-term effects of using remote technologies on provider-customer relationships, and the nature and scope of solution business?</li> <li>• To what extent can remote technologies contribute to greater customer involvement in solution development and deployment? How can such customer involvement help overcome challenges engendered by crises? How can providers proactively help customers develop new capabilities for such involvement?</li> </ul>
<p><b>(7) Governance Structures, Processes, and People</b></p> <p><i>Solutions require close coordination between providers and customers for monitoring and managing design and implementation throughout all critical stages. Establishing jointly agreed upon coordination structures, processes, and people enables taking corrective actions in response to unforeseen developments.</i></p>	<p>The COVID-19 crisis dramatically exposed the negative consequences of missing or insufficient solution governance structures, processes and people. During the crisis, parties realized a heightened need for managing relationships in a closer, more flexible, and more proactive manner than in normal times. Providers and customers needed to intensify existing coordination efforts, put selected activities on hold, and/or initiate new ones. For example, when solution selling activities stopped due to lack of demand, consulting with customers on problem solving took on greater importance.</p>	<p><b>Overarching Issue:</b> Fostering coordination among solution providers and customers for better responsiveness to unforeseeable widespread shocks.</p> <p><b>Specific Research Questions:</b></p> <ul style="list-style-type: none"> <li>• To what extent does an external shock affect the nature and intensity of coordination activities between solution providers and customers? Which activities must be increased, reduced, or discontinued altogether? Which new activities must be initiated?</li> <li>• What governance structures and processes are more effective during a pandemic? What new mechanisms may be developed to ensure greater responsiveness?</li> <li>• How does a crisis influence the composition of providers' sales teams, customers' buying centers, and/or other solution coordination units (emergence of new actors, shifts in relative influence of existing versus new players, etc.)?</li> </ul>

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