Leading with Agility and Responsible Innovation in Response to COVID-19

MedTech industry

April 2020
COVID-19 is a global crisis, evolving at unprecedented speed and scale.

The MedTech industry is challenged as never before to re-imagine the design of mission critical devices and dramatically ramp-up production capacity.

Front-line manufacturers of ventilators, PPE, beds, and other essential equipment need to provide their products to clinicians and patients within days. Simultaneously, the regulatory environment is adapting at breakneck pace, foregoing traditional processes to achieve speed-to-patient.

Beyond COVID-19, patients and clinicians will likely have new expectations of how they interact with medical devices. As we emerge from this global crisis, a new era for how MedTech serves the needs of clinicians and people will begin.
MedTech companies should tackle the challenges presented by COVID-19 with a mindset of responsible innovation, which is one focused on agility, affordability, and outcomes.

Diagnostics are the frontline to stop COVID-19’s spread. Lack of early detection contributed to rampant spread. Achieving widespread testing, testing efficiency, and ongoing monitoring is essential to restart economies, safely.

COVID-19 is fueling unprecedented product innovation. Inventive engineers and clinicians are retrofitting or reimagining products in limited supply for new and expanded use. Centers for Medicare & Medicaid Services announced greater telehealth coverage\(^1\), leading to a scramble to connect products and patients.

Supply chain resilience continues to be severely tested as companies re-allocate and ramp-up manufacturing, and face supply shortages and government protectionism. MedTech should adapt their supply chains—and collaborate where there are gaps—to urgently address these issues.

Strained hospitals are seeking to minimize risk by barring non-essential personnel. MedTech companies can rise to the challenge and regain business continuity by digitizing interactions and preparing for the surge of demand when activities normalize.

Governments are removing regulatory barriers to get sufficient products to protect clinicians and treat patients.

This is a pivotal time when MedTech companies can innovate responsibly and transform how they operate now and in the future.

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Act now with agility and responsible innovation

MedTech plays a vital role in solving the COVID-19 crisis, requiring a responsible innovation mindset that is focused on agility, affordability, and outcomes to tackle today’s challenges and emerge stronger tomorrow.

Responsibly innovate NOW...

1. Advance diagnostics & monitoring
   Testing is an immediate challenge with the goal of reliable results, at speed, deployed at scale. Digital solutions, predictive models, data and analytics offer a more effective approach to achieving these goals. Remote digital monitoring will be an essential part of the solution.

2. Redefine the product
   Simplify, simplify, simplify. Design the product to the baseline needs—making it easier to manufacture, distribute, and access ventilators, beds, etc., and get them in the field. Beyond COVID-19, seek to move products from hospitals to alternative points of care (e.g., at-home), where possible. Consider how you can adapt your products for easy consumer use.

3. Assure supply & delivery
   Global supply chain and manufacturing disruption demands increased visibility and transparency. MedTech should collaborate across multiple industries to address projected shortages for life-sustaining supplies. Advanced digital capabilities should be considered to provide visibility, augment operations, and drive scenario modeling to build greater resilience and agility in supply chains and operations.

4. Virtualize & ensure business continuity
   Hospital lockdowns have removed most MedTech sales reps and made it more difficult for technicians to provide services. Look for ways to virtualize your own workforce and how you engage with clinicians and patients.

...to become a more agile, customer-responsive organization NEXT
Acting **now**, preparing for the **next**
Advance diagnostics & monitoring

Step-up diagnostics testing today with a focus on speed and location flexibility (e.g., virtual, at-home). Build an ecosystem and infrastructure with a focus on prevention to keep caregivers and patients healthy.

As of April 5th, 2020, the United States had 5 times more confirmed cases of COVID-19 per 1,000,000 residents than South Korea.¹

Despite the first national case occurring at roughly the same time, South Korea’s swift adoption of testing and social distancing measures can be attributed to this stark difference.

By mid-March, the United States had tested roughly 125 people per 1,000,000, as compared to South Korea, which had tested well over 5,000 per 1,000,000.²

Diagnostics are critical for detection, prevention, and tracing abilities now, and in the future. Integrating digital technology and analytics into a diagnostics ecosystem will enable coordinated mass testing and improved patient monitoring.

For example, Abbott recently launched a molecular point-of-care test using an existing, portable platform to detect COVID-19 in about 5 minutes. Abbott expects to ramp up manufacturing to deliver 50,000 tests per day.³

NOW: USE ANALYTICS TO DETERMINE WHERE TEST KITS ARE NEEDED MOST

- **Apply data and predictive analytics** to deliver test kits and reagents to critical need zones first. Introduce patient tracking to identify virus hot spots and enable geo-fencing to keep populations safe.
- **Accelerate diagnosis** to detect the impacted and immune population through at-home diagnostic tests. Rapidly introduce antibody testing to grant “immune passports.” Deploy self-reporting apps to support and educate potentially symptomatic patients.
- **Introduce innovation** to enable labs, hospitals and ecosystems through augmented reality to evaluate tests and use 3D printing for immediate medical supplies.

NEAR TERM: BUILD ECOSYSTEMS TO MANAGE WITH GREATER INTELLIGENCE

- **Do the foundational work** for advanced monitoring by building a digital platform to collect and reliably consolidate data from connected diagnostic labs. Foster use of global data and information exchange standards through MedTech industry associations.
- **Use location data, apps, and wearables** to continuously detect hotspots and forecast spread for better hospital capacity management. Launch blood antibody at-home testing to identify the immune population and manage resurgence.
- **Increase prevention** through patient risk segmentation by analyzing comorbidities, proximities and demographics.

NEXT: ESTABLISH A NEW DIAGNOSTIC STANDARD

- **Develop Operational Command Centers** which integrate patient monitoring, telehealth applications and virtual resources to adapt to permanently increased demand for remote health.
- **Create Virtual Lab and fully automated lab solutions** to perform R&D work from anywhere, reducing dependency on physical infrastructure and accelerating developments of the results.
- **Prepare for future crises** by strengthening diagnostics supply chain operations, identifying alternative raw materials suppliers, and establishing disaster recovery procedures.
- **Provide state of the art diagnostic solutions directly to consumers** in combination with high-end medical analytics to allow interventions at the earliest progression point of a disease.
Redefine the product

Build the products needed today while paying close attention to affordability. Seek better ways to connect products to patients and ultimately providers.

<table>
<thead>
<tr>
<th>Rank</th>
<th>Country</th>
<th>Bed per 1K</th>
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<tbody>
<tr>
<td>1</td>
<td>Japan</td>
<td>13.1</td>
</tr>
<tr>
<td>2</td>
<td>South Korea</td>
<td>12.3</td>
</tr>
<tr>
<td>31</td>
<td>United States</td>
<td>2.8</td>
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<td>33</td>
<td>United Kingdom</td>
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Japan and South Korea have the most beds per 1,000 people, while the United Kingdom and United States are on par. A bed shortage of 85,029 is projected by mid-April in the United Kingdom. In response to the growing global crisis, Stryker announced it will produce 10,000 emergency response beds per week. A low-cost product, the bed has been purposely designed with features to accommodate patients with respiratory distress.

In the United States, current projections indicate that 4.8 million patients will be hospitalized, of which 1.9 million will be admitted to the ICU, and 960,000 will require ventilatory support.

More medical equipment is urgently needed. Frontline clinicians can help you understand how to simplify your product and advise on what will work in the clinical workflow.

Connected health can help get the right information in the right place at the right time and indicate trends. For example, the connected thermometer company Kinsa publishes a Health Weather Map including daily temperature trends with historic and predictive detail at the state and county level.

Seek opportunities to digitize interactions to allow remote support. For example, the Centers for Medicare & Medicaid Services (CMS) broadened access to telehealth services so that beneficiaries can receive a wider range of services from their doctors without having to travel to a healthcare facility. While this policy change was enacted on an emergency and temporary basis, the door may be open for patients to demand connected products.
Redefine the product

NOW: SIMPLIFY

- **Rethink the product** to design for today’s needs. Examine usage of non-compliant but fit-for-purpose products (e.g., N95 vs. KN95 masks).
- **Shift R&D mindset** from deep domain experts to teams with cross-industry partners and start-ups, keeping in mind the affordability of solutions. For example, Medtronic ignited collaboration by publishing an open source, low-cost, portable ventilator design.\(^1\)
- **Virtualize interactions** to allow clinicians and patients to communicate. For example, use telehealth to support implantable follow-ups and rehabilitation at home.
- **Leverage consumer health tech** where applicable (e.g., fitness and wellness trackers) to safeguard hospital staff, keep ICUs running and manage/monitor patients.


NEAR TERM: GO WHERE THE PATIENT IS

- **Roadmap improvements** for medical devices that need remote capabilities to improve the patient experience / safety.
- **Adapt your product support** to the delivery method, mode and site of care that is most effective with the clinician and patient. Plan for new operations requirements.
- **Understand how advances in consumer health tech should change your business** (e.g., Kinsa Health’s thermometer map is touted as an indicator of hotspots).
- **Examine your R&D and quality approach in response** to rapidly evolving regulatory requirements and to determine what worked well versus what was a barrier. Challenge your model to build in more patient-centricity and successful consumer technology models.

NEXT: BUILD NEXT GENERATION PRODUCTS

- **Virtually scale clinical teams** by developing support for products and services that augment or are additive to in-clinic teams.
- ** Seamlessly blend your product** and any connected product capabilities into existing clinical workflows.
- **Consider changing quality and regulatory processes** by looking at sustainable changes to balance patient safety risk amongst manufacturers, users, and regulatory authorities.
- **Assemble targeted innovation networks** that center around the user—cut across your marketing, research and manufacturing function and reach out to start-ups and alliance partners.
Companies must innovate their production approach for critical COVID-19 products. Companies that can quickly pivot to decrease cycle times and maximize throughput will have an impact in saving patients and healthcare workers. Products must be manufactured faster by increasing visibility, managing priority allocation, and creating greater capacity through expanded supply networks.

Lifesaving MedTech products are in unprecedented demand—PPE, diagnostics, ventilators, and IV products, to name a few. Production volume and throughput is experiencing an exponential surge which requires a collective industry response seemingly overnight.

MedTech companies have responded by ramping up their production capacity. However, as the pandemic spreads and disrupts global supply chains, demand for these products is quickly outpacing supply.

How will demand be met during acute shortages? How can the industry manufacture faster and at greater volume while maintaining quality? How will companies continue to deliver needed products with logistics disruptions?

1. **U.S. Production Ventilator Growth**
   Ventilator production increased from 700 per week in 2019 to 2,000-3,000 per week during the COVID-19 crisis, eventually increasing to 7,000 per week. Currently, the U.S. is projected to have a gap of 75,000 ventilators.2

2. **Border and export restrictions** have fragmented the APAC, North American and European supply networks. Each region faces its own challenges; India relies on China for most of their finished goods while Europe is dependent on EU cross-border supply chains. Companies must pivot their supply chains to address these impacts. End-to-end transparency is needed to make informed, agile decisions. Companies must build greater resilience within their supply networks.

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2 Source: Global Data Review. “Ventilator Crisis During Coronavirus Outbreak as Over 880000 are Needed”. March 23, 2020.
**NOW: PIVOT TO ESSENTIAL PRODUCTS**

- **Maximize capacity** to produce essential medical devices for fighting COVID-19.
- **Create visibility** across the essential products supply chain by identifying at-risk areas and drive risk mitigation.
- **Establish business continuity** plans to address demand volatility (upwards, downwards and recovery spike) across product portfolios.
- **Evaluate low-tech** product options to quickly scale manufacturing capability and throughput – such as reverting to more utilitarian product features.
- **Develop partnerships** with cross industry manufacturers and suppliers to produce critical, in-demand products.
- **Share price impacts transparently** from supply chain constraints to avoid margin stacking.

**NEAR TERM: AMPLIFY AND AUGMENT CORE CAPABILITIES**

- **Embed scenario planning** to prepare for ongoing impacts to product demand, supply, production capacity and other potential issues.
- **Ramp-up and re-tool** manufacturing capabilities to meet increased demand of critical medical technology products.
- **Enhance and evolve workforce protection measures** by instituting more stringent policies and procedures. Leverage mobility and software tools to enable remote collaboration and monitoring.
- **Monitor and address ongoing risks** to operations, workforce, supply and the value chain to meet new regulatory reporting requirements.

**NEXT: OPERATE IN THE NEW NORMAL AND BUILD RESILIENCY**

- **Adjust to the new normal** as demand stabilizes, COVID-19 products saturate the market and regulatory impacts take effect.
- **Digitize processes** to increase agility of core capabilities and to create near real-time end-to-end value chain visibility.
- **Build structural resiliency** into supply chain and operations by evaluating the supply network, activating domestic supply base and enhancing operational procedures for worker safety.
- **Utilize advanced technologies** to optimize forecasting, logistics planning, capacity planning and simulation modeling in product development.
Virtualize & ensure business continuity

Connect your team and quickly connect to your customers. Track challenges and fixes reported by your sales force and rethink how it should change your approach.

In the United Kingdom, all non-urgent and elective surgeries have been delayed until at least June 15th, 2020. The ban may be extended if hospitals remain overwhelmed.¹

MedTech should consider what this means for their sales force and how they can help clinicians the most.

Companies need to adapt their structural and technical working conditions in the shortest possible time to ensure business continuity and empower the workforce. Sales force representatives are hardly able to visit their customers in the healthcare segment for an indefinite time. Critical service activities are on-hold due to travel and access restrictions, conferences have been cancelled, postponed or moved online.

Many known concepts from digital sales & marketing communications, remote service assistance to virtual education will experience change to tackle the current challenge and to prepare for mid- to long-term opportunities.


1. Respond with empathy, along with personal and corporate resilience, to provide your workforce with the support, structure, and innovative freedom to be productive in a new remote environment. Stay close to customers and support them with their urgent needs in this challenging time.

2. Rethink how your company and people can assist patients. For example, due to limitations in operating room or field service presence, companies are exploring remote proctoring solutions to aid in case management. Prepare for a surge once non-urgent and elective procedures return to the surgical board.
Virtualize & ensure business continuity

NOW: ORGANIZE, LISTEN, AND ENGAGE

• Create a Command Center across sales and service teams defining how to triage incoming requests and roll out pragmatic solutions and content.
• Determine remote tools for the workforce to leverage when engaging customers and utilize to quickly respond to customer requests (e.g. easy access product portal, lean purchase procedure and virtual assistance for surgeries).
• Audit and stop messages disjointed from the current situation. Focus messaging on supporting customers with emphasis on their immediate needs like ensuring business continuity of the provider, labs, and urgent care facilities.
• Empower sales teams to make critical decisions, reduce bottlenecks, align incentives and identify customer engagement prioritization.

NEAR TERM: RATIONALIZE PRIORITIES, LEAN ON VIRTUAL

• Rethink the product and service value proposition and quickly adapt to changed demands in terms of portfolio prioritization, delivery method and onsite vs. online interaction.
• Focus on better self-empowerment to manage supply and demand, reduce complex (often paper-based) process steps, introduce sustainable digital interaction media, and evaluate necessities for onsite presence vs. alternative remote channels.
• Leverage just-in-time and small bite size learning curriculums (e.g., short video series) to enable workforce in digital technologies without overwhelming or impacting customer serving capacity.
• Invest in virtual and consider new, improved or scaled platforms to communicate, train, educate and sell.

NEXT: RETHINK EXPERIENCE, ACCELERATE SCALE

• Re-evaluate your business considering the new reality: Technology, connectivity, advanced ways of interacting will drive the future business case. Fundamentally rethink how products and services can provide more flexibility and resilience to your customers’ operations.
• Re-think customer experience and value propositions. Onsite and online interactions, digital communication, sales assistance, automation, remote monitoring, remote updates, tech innovation, virtualization – these capabilities will become mandatory to ensure a leading customer experience.
• Preserve and push newly gained efficiencies back into the commercial organization based on leaner, more digitalized and customer-oriented activities—share with customers to contribute to a more robust and resilient future healthcare system.
Moving ahead: Continue to unleash a new mindset of responsible innovation

As the world emerges from this crisis, MedTech should incorporate learnings from the pandemic into a new way of thinking and working.

OUR PERSPECTIVE

Today the MedTech industry is responding to the crisis; there is no time to make systematic changes. However, you can adopt a new mindset of responsible innovation in your response, along with the need for agility, affordability, and outcomes. As we emerge from this crisis, preserve and embed newly developed capabilities back into your organization.

CONSIDER

1. How much of a mindset change is required in my organization?

2. What innovation can be sustained after the crisis?

3. And critically, how is your business preparing for the next crisis?
How can we help you? Here are just a few ways.

**Advance Diagnostics & Monitoring**
- Digital diagnostics apps for COVID-19 and beyond
- Scale-up telemedicine solutions
- Design and build diagnostic networks across care providers, MedTech and payers
- End-to-end lab digitalization and automation (Lab of the future)
- Cloud-based diagnostic data and insights integration platforms

**Redefine the Product**
- Agile coaching, design thinking, and speed to value methodology
- Product development and service blueprinting
- Virtualization of product design & engineering (digital twin / digital thread)
- Digital product companion or therapy management apps

**Assure Supply & Delivery**
- Supply chain disruption analyzer and scenario modelling
- Rapid response control tower
- MedTech / supplies marketplace for COVID-19

**Virtualize workforce & business continuity**
- Elastic digital workplace - collaboration, virtual engagement
- Workforce planning & scenario modeling
- Virtual training / proctoring

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**Our Industry Assets and Ecosystem Partnerships can support your response efforts:**

- **Accenture INTIENT Patient** – digital product suite that supports patients from pre-diagnosis through ongoing treatment
- **Accenture Ventures** – portfolio of 200,000+ start-ups, 50+ ecosystem partners, and Accenture HealthTech Challenge start-ups

**Our 100+ Global Delivery and Innovation Center Network sites and 20+ MedTech Centers of Excellence can support research, design and prototyping:**

**US**
- Altitude Boston
- Pillar Columbus
- Mindtribe San Francisco
- ?WhatIf! NewYork

**EU**
- Fjord Berlin
- designaffairs Munich
- ?WhatIf! London
- Mackevision

**APAC**
- Fjord Tokyo
- designaffairs Shanghai
To help our clients navigate both the human and business impact of COVID-19, we’ve created a hub of all of our latest thinking on a variety of topics.

Each topic highlights specific actions which can be taken now, and what to consider next as industries move towards a new normal.

From leadership essentials to ensuring productivity for your employees and customer service groups to building supply chain resilience and much more, our hub will be constantly updated. Check back regularly for more insights.

VISIT OUR HUB HERE
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