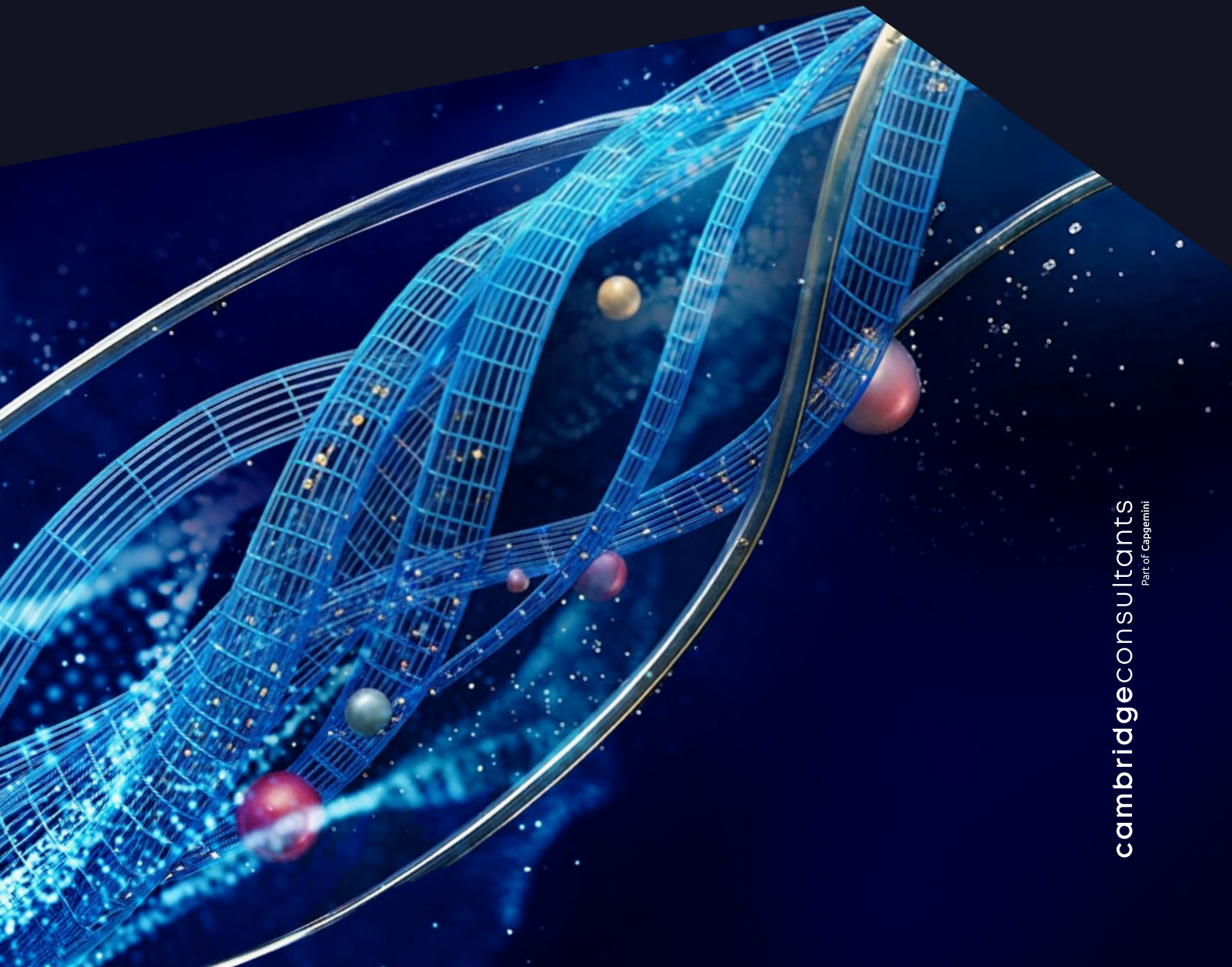




Insights from our Drug Delivery Innovation Summit

What pharmaceutical device leaders can learn from medtech, consumer innovation and the modern patient journey



cambridgeconsultants
Part of Capgemini

Contents

Introduction	02
Executive summary	03
Why we brought the industry together	04
The minds behind the conversations	05
Soundbites from the day	06
A call to action for device developers	07
Three lenses on innovation	08
1 New innovation models	09
2 Fresh innovation mindsets	11
3 Redefining value	13
Advisory board	16

Introduction

In summer 2026, 25 leaders from global pharmaceutical, biotechnology and drug delivery organizations gathered at Cambridge Consultants' North American headquarters in the Boston Seaport District. Operating under the Chatham House Rule, they explored ways to accelerate drug delivery device innovation for patients.

This report crystallizes the discussions, differences and common ground that emerged. Its purpose is to help drug delivery device leaders move from isolated product innovation to integrated therapies, connected support and partnerships that improve the entire patient experience.



Executive summary

The future of drug delivery device innovation will be defined by a fundamental shift. The greatest commercial opportunity lies not in designing a better device but in designing better therapies, with the device a critical element. This is the way to seize the market by delivering greater value for patients and payers.

Despite the best intentions of device engineering teams, innovation in drug delivery devices is often constrained. Progress tends to be incremental and does not fully leverage the transformational opportunities that technologies such as AI, connectivity and mechatronics can deliver. With this in mind, our guests confronted the challenges and the blockers, while also exploring the unprecedented opportunities being created by radical deep tech innovation.

The promise of this kind of bold innovation resonates strongly at Cambridge Consultants. We believe that embracing the excitement and uncertainty of transformative technological change does not necessarily mean accepting outsized risk. Indeed, we have developed a proven approach to derisking break-through technologies, bridging the uncertainty gap between technical, human and market readiness through proactive engineering and a holistic innovation framework rooted in the principles of DVF design thinking. This means considering Desirability (what the market needs), Viability (whether the business case stacks up) and Feasibility (whether it can be done).

The participants embraced a discussion that moved beyond device performance to encompass the wider combination of medicine, device, data, service and support that determines whether a therapy is understood, adopted and sustained in the real world.

Three parallel sessions provided lenses on device innovation. The first examined how medical device companies have evolved from standalone products to intelligent platforms and connected ecosystems. The second used the mindset and experience of a global consumer brand to provoke more ambitious thinking about deep technology and the future of treatment. The third explored the patient journey beyond device use alone, with particular emphasis on personalized information, continuous support and predictive care.

Five implications emerged

- First movers that deliver a genuinely differentiated experience could reset market expectations
- The greatest opportunity lies in the drug, device and support all being designed as one integrated system from the outset
- Data and AI can make education, monitoring and clinical decisions more personal and continuous
- Barriers caused by organizational structure may constrain innovation as much as technical and commercial feasibility.
- Patient expectations are advancing faster than many established drug delivery device models

CORE TAKEAWAY

The sector has the technical capability to reimagine drug delivery. The harder challenge is creating the conditions for leaders to act, including the mindsets, operating models, partnerships and commercial confidence needed to move before disruption makes action unavoidable.

Why we brought the industry together

Moving the needle on innovation in drug delivery

In a world where the blockbuster drug is king, investment in drug delivery device innovation can seem like an unnecessary risk. The prevailing assumption is that the drug generates the value, while the device's role is simply to deliver it safely.

There could be several reasons for this, but two main ones emerged from the summit:

1. **The absence of a 'burning platform' feeling among some pharma leaders.** A lack of an urgent need to innovate the delivery device because the company can rely on the blockbuster drug.
2. **Organizational structure is not conducive to innovation in drug delivery.** Even if device teams do want to innovate, they may not have a voice on the global product team where the investment decisions about therapeutics are made.

The healthcare environment around therapies is changing quickly. Patients increasingly encounter intelligent, personalized and seamless experiences in other areas of life, including the closely associated area of wellness. When healthcare systems are increasingly being asked to deliver more care outside traditional settings, it is essential to leverage emerging opportunities. Digital tools are transforming how people access information, while connected devices such as wearables and health trackers are providing new ways to understand treatment and patient outcomes in real time.

Patients are beginning to expect this level of connectedness. Against this backdrop, the classic incremental improvements of delivery devices, and reliance on the drug to differentiate the product and drive use, may no longer be sufficient, especially considering the pressure of bold innovators both from emerging markets and from outside the traditional pharma space. The summit was convened to create space for senior device innovation leaders to step outside established development pathways, compare drug delivery with adjacent industries and consider what a more ambitious model of innovation could look like.



The minds behind the conversations

The discussion brought together perspectives from established pharmaceutical companies, biotechnology innovators and specialist drug delivery organizations

AstraZeneca PLC

Biogen Inc.

Daré Bioscience, Inc.

GSK plc

Eli Lilly and Company

Novo Nordisk A/S

Pfizer Inc.

Takeda Pharmaceutical Company
Limited

Vaxxas Pty Ltd

The value of the summit came not from a single viewpoint, but from the openness of the attendees. As they compared approaches to shared challenges, participants tested assumptions about what patients will expect, where innovation may come from and why promising ideas can struggle to progress inside established systems.

“What I found most valuable was the candid peer exchange – hearing directly from senior device leaders at GSK, Pfizer, AstraZeneca, Biogen, and Novo Nordisk confirmed that the challenges we face at Lilly are universal, and that the urgency to innovate faster for patients is an industry-wide imperative, not just our own. I walked away with concrete frameworks – from medtech cross-industry acceleration to hospital-at-home simulation – that translate directly into how we think about combination product development at Lilly, reinforcing that we are moving in the right direction but must continue raising the bar.”

Lisa Ray,

Executive Director, Diabetes and Obesity Device
Development – Program Management, Eli Lilly and Company

Soundbites from the day

The day's discussions produced several memorable soundbites:

"The best advice will be from you five years in the future."

A vision for predictive, personalized support.

"We need to think about the 'therapy', rather than just about the drug. If a CEO said, 'We are a therapy company', we could change this tomorrow!"

A call to action for pharma and biotech leaders.

"In pharma, [with devices] no one wants to be the precedent."

A description of the industry's preference to follow proven innovation rather than lead it.

"Pharma will have to outsource innovation."

An observation on the level of in-house innovation.

"We should hire physicists."

An observation from an attendee on what changes we can make to facilitate true innovation.

Before delving into the workshop findings, let's begin with one of the clearest messages to emerge from the summit.

A call to action for device developers

You are uniquely placed to connect scientific ambition with the reality of treatment

The role of drug delivery device developers can extend beyond executing a defined brief. By engaging upstream, device teams can influence therapeutic choices, expose patient and system constraints earlier, and help shape the evidence needed for adoption.

Build the adoption case early

Define the clinical, economic and operational evidence that decision-makers will need before development choices become fixed.

Reframe the brief

Translate 'design a device' into 'design the treatment experience', with clear patient and ecosystem outcomes.

Get upstream

Bring delivery expertise into target product profile, formulation and early development conversations.

Make burden measurable

Quantify pain, training needs, error risk, confidence and time so that experience factors can influence decisions.

Explore the ecosystem

Test service, information, connectivity and workflow concepts alongside the physical delivery solution.

Partner beyond the usual network

Engage AI, data, consumer, materials, physics, behavioral science and healthcare delivery expertise where it improves the outcome.

Create a responsible path to first

Use staged experiments, partnerships and evidence gates to make leadership manageable rather than waiting for certainty.



The opportunity is not simply to deliver medicines differently. It is to make treatment easier to understand, easier to start and easier to sustain, while creating better information for the people and systems responsible for care.

Three lenses on innovation

Three parallel workshop sessions approached the challenge from different directions

1

New innovation models

Lessons from medical devices

How medtech leaders have moved from products to platforms, ecosystems and outcome-focused services

2

Fresh innovation mindsets

Lessons from a leading global consumer brand

How a visionary deep-tech mindset can break familiar constraints and reveal radically different treatment futures

3

Redefining value

The modern patient and HCP journey towards hospital-at-home

How trusted information, AI and connected support could make care more personal, continuous and effective



Although the sessions started in different places, they converged on a shared conclusion. The next step-change will come from treating the drug delivery device as a key enabler of a wider system of value, rather than as a component added after the medicine has been defined.

1 New innovation models

Lessons from medical devices: From standalone products to intelligent platforms and connected ecosystems

In this workshop delegates discovered more about innovations in the closely aligned medical devices field and were challenged to think about how some of the lessons learned could be applied to their work in drug delivery devices.

Over the past decade, medtech has increasingly shifted from developing standalone products and single interventions towards building intelligent platforms that combine device hardware, software, connectivity, machine and deep learning and procedure insights. The reasons for doing this and the benefits realized have been several-fold:

- **Enabling more continuous care.** Aging populations and chronic diseases require ongoing monitoring and intervention, not just isolated procedures. Connected devices allow data to follow the patient between the hospital, clinic and home
- **Improved clinical value.** Sensors, software and analytics can turn device data into decision support, personalized recommendations and earlier warnings
- **Pressure to improve outcomes and efficiency.** Hospitals want solutions that reduce complications, shorten workflows, support remote care and make better use of clinical staff. A platform can connect equipment, patient information and clinical workflows rather than creating another isolated data source
- **Digital technologies made integration practical.** Cloud infrastructure, mobile applications, connectivity, cybersecurity and AI have matured sufficiently to support regulated, clinically useful services at scale
- **Platforms create a stronger commercial model.** A one-off equipment sale produces intermittent revenue. Software subscriptions, servicing, consumables, analytics and per-procedure products generate recurring revenue throughout the installed life of the system. They also create higher switching costs because customers invest in training, workflows, integrations and data

The lesson was not simply to add digital features. Product performance remains essential, but differentiation increasingly comes from understanding and serving a complex stakeholder network, including patients, clinicians, hospitals, payers and digital infrastructure providers. Convenience, quality of life, personal control and a seamless experience are becoming part of the definition of value.

The upside of these innovations is reflected in the growth of the medtech market from **\$446B in 2021 to \$600B in 2025, with a projected value of \$800B+ in 2030**. In accordance with this trend, the number of FDA 510(k) clearances for medical devices utilizing artificial intelligence/machine learning (AI/ML) rose to 10% of all medical devices in 2025, with a projection that 50% of all FDA 510(k)-cleared medical devices will utilize AI/ML by 2030.



What medtech's journey suggests

- **Design for the full stakeholder ecosystem, not only the primary user.** Map the complete therapy and stakeholder journey before fixing the device architecture. Identify where decisions are made, where value is created, and where friction or risk could prevent adoption
- **Build connectivity and data around clear clinical or experiential value.** Connectivity should solve a meaningful problem rather than simply make a device 'smart'
- **Invite external partners and talent to challenge category assumptions.** Treat external expertise as a source of strategic challenge, not simply outsourced execution. Bring partners into the early framing of the opportunity, when the team is still deciding what problem to solve and what type of solution might be possible
- **When innovation is slow, competition can come from unexpected places.** In medtech, customers that could have been valuable collaborators became competitors because incumbent players were too slow to meet emerging needs

Voices from the floor

- **Pharma mindset is too slow.** "It needs new perspectives and to accelerate its speed of thinking." "Most of the innovation in pharma happens through acquisition of startups." "There is too much conservatism in ways of thinking"
- **Medicine needs to be more personalized.** "We need to enable patients with personalized medicine and innovation"
- **There is a hesitancy to adopt AI.** "People are afraid or uncertain how to embrace AI and new innovation. We're too reactive and not proactive"
- **A need to think differently.** "We should think of the outcome we want and work backwards." "I would like to see quality and regulatory teams actively help us get products to market, not just be there to police their development – this could enable a clearer path from conception through to market approval"
- **A device that patients love is not enough.** "We need to consider the whole ecosystem, such as payers, pharmacists, healthcare systems and so on"

Conclusion

Faced with increasingly complex clinical, operational and economic challenges, medtech leaders evolved beyond standalone products towards platforms, ecosystems and integrated experiences that create value for patients, clinicians and healthcare systems alike. The central lesson is that delivering better care starts with changing the approach to innovation – the innovative technologies will follow.

2 Fresh innovation mindsets

Lessons from a leading global consumer innovator: Using imagination to move beyond incremental innovation

A workshop inspired by our collaboration with a visionary global toy manufacturer asked participants to imagine how deep tech could revolutionize drug delivery. The similarities in challenges faced by this global consumer brand and those faced by the pharma industry in terms of imaginative innovation were striking.

Participants learned how the brand innovated through a bold and imaginative approach to innovation, going as far as pushing the boundaries of the current understanding of physics, to elevate the end-user experience through the application of first-to-the-world technology. The commitment to human-centered innovation ensured that the complexity of the technology remained invisible to users, who experienced only the immersive fun it made possible.

As market leaders, they were facing competition from both like-for-like toy manufacturers and new entertainment formats that were drawing their audience away. Their leadership recognized the value of bold innovation to secure their position for years to come. A leap that would take more than just a 'next-step' iteration.

The participants heard how there were certain non-negotiables to the project that meant that the innovation remained on brand and stayed true to the core values of the company, its product and its customers. This is similar to innovation in pharma, where safety, quality, efficacy, regulatory compliance, affordability and market access remain non-negotiable.

From play to therapeutics, how do we elevate the user experience?

The discussion deliberately moved away from what is immediately possible with drug delivery devices and challenged participants to think of a future shaped by bold, uncompromising vision. They envisioned a future of drug administration that could be error-free, training-free, pain-free and largely invisible to patients.

Pain reduction was not initially front of mind for many participants. This prompted reflection on how familiar industry stakeholders can become with burdens that remain highly visible to patients.

Ideas explored included:

- Self-correcting and adaptive delivery devices
- Neurostimulation approaches to reduce pain and anxiety
- Drug administration during sleep
- Predictive wearables that personalize therapy in real time
- 'Once-and-done' implantable solutions
- Universal delivery devices
- Pharmacy-at-home solutions
- The human microbiome as a platform for therapeutic production

Voices from the floor

- **Consumer behavior is already shaping expectations.** “Patients experience intelligent, personalized and digitally enabled services every day. Those experiences will influence what they expect from treatments, even if the route into healthcare is different”
- **Digital adoption may be underestimated.** “AI-assisted coaching and digital health tools are already familiar in consumer contexts. Parts of the industry may be underestimating patients’ willingness to engage and the speed at which supported digital experiences can become normal”
- **Leadership and vision are critical.** “Technology will not transform the sector on its own. Leaders must articulate a compelling destination, align functions and treat the therapy as an integrated system”
- **First-mover advantage could be substantial.** “Many pharmaceutical organizations prefer to be ‘the first to be second’ when it comes to device innovation. Yet the first company to deliver a genuinely differentiated drug delivery experience could reset expectations and establish a meaningful advantage”
- **The burning platform may already be emerging.** “Strong blockbuster models can reduce the apparent urgency for innovation in device technology. However, shifting patient expectations, advances in technology and bolder competitors from emerging markets may be creating a less visible source of disruption”
- **External disruption is credible.** “The next breakthrough may come from outside the traditional pharmaceutical ecosystem, or from organizations and geographies able to adopt new technologies more quickly”
- **Structural barriers matter.** “Operating models, incentives, governance and development processes may constrain progress as much as technical barriers. Transformation therefore requires strengthening the competency to build a business case for innovation, alongside technical invention”

A PIVOTAL DESIGN SHIFT

Move from designing the molecule first and the delivery system second to designing the integrated therapy from the outset. Device expertise should shape early therapeutic decisions, not simply support a molecule after the fact.

Conclusion

Radical thinking does not mean abandoning the fundamentals. Safety, quality, efficacy, regulatory compliance, affordability and market access remain key. But this does not mean we need to lessen our ambition.

The most valuable lesson was that real innovation comes from a bold vision and uncompromising values. The workshop demonstrated that many of the barriers to transformative innovation in drug delivery are not technical. Participants repeatedly identified organizational habits, risk aversion and a tendency towards incremental improvement as factors that can limit ambition.

In contrast, the most compelling future concepts emerged when participants explored outcomes first and technologies second. Fresh innovation mindsets are about creating the confidence to explore uncertainty, challenge convention and design for what patients may need tomorrow rather than what systems support today. For organizations seeking the next generation of drug delivery innovation, that mindset may prove just as important as any technological breakthrough.



3 Redefining value

Exploring the patient journey: From fragmented information to trusted, continuous support

Traditionally, value in drug delivery has been measured through metrics such as device reliability, dose accuracy and adherence. While these remain important, the workshop participants identified a broader set of factors that influence whether a therapy succeeds in the real world.

By examining the patient journey from diagnosis through ongoing treatment, it became clear that patients experience therapies as a complete service rather than a collection of products. The objective of this session was to explore the patient experience across the entire treatment journey, rather than focusing solely on the point of drug administration. Through a series of role-play scenarios and collaborative workshop activities, participants examined the challenges, emotions and decision-making processes faced by both patients and healthcare professionals as responsibility for treatment increasingly shifts from hospitals into the home.

The sessions sought to identify key pain points, uncover opportunities for innovation, and highlight how technology, services and system-level changes could improve patient confidence, adherence and outcomes.

Key insights

Despite focusing on different stages of the journey, several common themes emerged across this and the other workshops.

Value is in patient confidence, not information

Participants consistently highlighted that patients are often overwhelmed by the volume of information available from different sources, while simultaneously lacking centralized, practical and personalized guidance. Delegates felt the biggest unmet need was not access to more information, but support that helps patients understand what information is relevant to them at the right time. Future drug delivery solutions should provide reassurance, guidance and confidence throughout the treatment journey.

Value is continuous support, not episodic intervention

Current care models often rely on infrequent interactions with healthcare professionals. Patients spend most of their treatment journey managing by themselves. Many proposed solutions centered around AI, connected devices, digital companions and wearables. However, delegates were clear that technology's role is not simply to automate processes, but to provide timely, personalized support that bridges gaps between healthcare interactions and helps patients manage treatment within the context of everyday life.

Value is from informed decisions based on relevant data

Across all sessions, participants identified significant data gaps for both patients and healthcare professionals. Connected therapies, adherence tracking, wearable technologies and integrated patient records were seen as opportunities to improve decision-making, personalize care and demonstrate treatment value. This is particularly true if the data can be used to provide an outlook for the patient based on decisions they make now.

Value comes from collaboration across the ecosystem

The solutions discussed extended beyond device manufacturers and pharmaceutical companies alone. Delivering meaningful improvements will require collaboration between healthcare providers, patient advocacy groups, payers, technology companies, regulators and industry partners to create a more connected and patient-centered experience focusing on therapeutic care rather than treatment.

Conclusion

As healthcare continues to shift from hospital to home, success will depend on more than simply enabling self-administration. Organizations must design solutions around the entire patient experience, recognizing that treatment decisions, training, ongoing support and monitoring are interconnected parts of a single journey.

Adoption will depend on more than technical feasibility. Healthcare professionals need reliable and current information. Pharmaceutical companies need credible business cases that demonstrate patient benefit, economic value and return on investment. The tendency to wait for others to prove a model makes evidence generation and early partnership especially important.

As healthcare continues to move beyond traditional clinical settings, organizations must increasingly think beyond delivering therapies and focus on enabling successful therapy experiences. The future of drug delivery will be defined not only by what treatments are delivered, but by how patients experience them.

THE CLEAR INDUSTRY OPPORTUNITY

To move beyond treating a disease to supporting the patient throughout their journey. By combining human-centered design, connected technologies and ecosystem collaboration, it's possible to create home-based treatment experiences that build confidence, improve outcomes and empower patients to take control of their health journey.

THE STRATEGIC CHOICE

Drug delivery organizations can wait for a proven model and compete as followers, or help define the new standard for the therapy experience. The summit suggested that with the pressure of bolder innovators outside the traditional pharma space, and evolving patient expectations, the window for making that choice is narrowing.



Why don't we come to *you* next time?

The conversations in Boston were too valuable to stay in one room. If you'd like to explore these themes with a broader group of colleagues, partners or stakeholders, The Cambridge Consultants team can bring a tailored version of the summit to your organization. Together, we'll examine how drug delivery devices can evolve into integrated therapies, identify the barriers holding progress back, and define the opportunities that matter most to your business.

Talk to us about hosting a summit at your site.
philip.canner@cambridgeconsultants.com



Advisory board

Thank you to the following leaders for helping to shape the Drug Delivery Innovation Summit:

- **Junwei Li**, Senior Innovation Manager, Novo Nordisk
- **Duncan Paterson**, Senior Director, Device Development, AstraZeneca
- **Lisa Ray**, Executive Director, Diabetes and Obesity Device Development – Program Management, Eli Lilly
- **Lisa Shafer**, Vice President, Product Delivery Solutions, Biogen
- **Weiyan Nie**, Head of Device New Technology and Innovation, GSK
- **David Vasquez**, Senior Director, Medical Devices, Combination Products and Packaging Engineering Lead, Global Hospital & Biosimilars, Pfizer



About Cambridge Consultants

Cambridge Consultants (CC) is the deep tech powerhouse of Capgemini. Deep tech is a mindset, a bold strategy that harnesses radical science and engineering to achieve things no-one else can. It delivers transformative business value and growth for our clients, who gain defendable commercial and operational advantage from new-to-the-world products, services and processes that they own. We overcome the ultimate business challenge: turning something that doesn't yet exist into a reality. Our advice is built on practice, with over 750 scientists, engineers, designers and consultants working globally across more than 20,000 sq. m of state-of-the-art R&D facilities. As part of Capgemini, CC is backed by 410,000+ Capgemini team members in more than 50 countries.

Continue the conversation

The summit is the starting point. The next step is to turn ambition into focused experiments, partnerships and evidence...



Charlie Dean

Head of Sustainable Medical Technology
charlie.dean@cambridgeconsultants.com



Adam Tozer

Drug Delivery Client Partnerships Lead
adam.tozer@cambridgeconsultants.com



Philip Canner

Head of Drug Delivery
philip.canner@cambridgeconsultants.com



UK — USA — SINGAPORE — JAPAN

www.cambridgeconsultants.com

Cambridge Consultants is part of the Capgemini Group.
www.capgemini.com

**THE
DEEPTech
POWER
HOUSE of
CAPGEMINI**