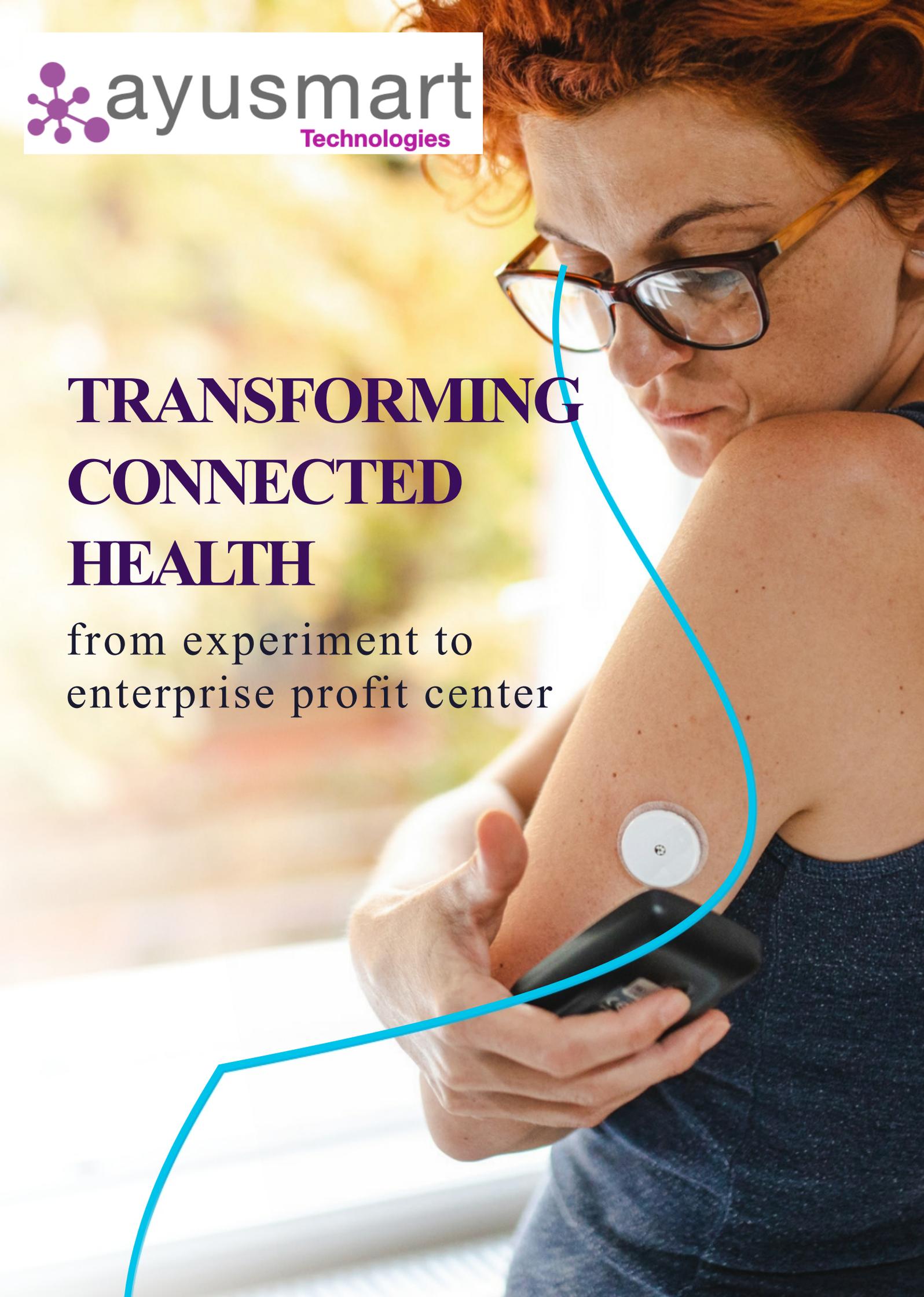




TRANSFORMING CONNECTED HEALTH

from experiment to
enterprise profit center





HOW LIFE SCIENCES ORGANIZATIONS CAN DRIVE DIGITAL MATURITY TO BUILD A PROFITABLE, STRATEGIC CONNECTED HEALTH PORTFOLIO

The connected health industry is in the midst of a fifteen-year transformation – evolving from early pilots and test-and-learn efforts towards the goal of being a fully functioning profit center.

Several years into this process, many life sciences connected health programs have plateaued or are at risk of becoming stalled. Developed in silos, burdened with cumbersome legacy drug development processes, or abandoned altogether, many programs have struggled to define value and recognize quantifiable results. Current programs also fail to share processes, learnings, and costs across projects, which leads to redundancies and inefficiencies and

significantly hampers the organization's ability to scale. This often prompts leadership to seek more visibility into spend and return.

In this paper, we explore the five fundamental challenges life sciences organizations are facing as they advance their connected health strategy and offer practical ways in which companies can mature, integrate, and scale their efforts for a more profitable and resilient future.

WHAT DOES IT MEAN, WHEN WE SAY CONNECTED HEALTH?

Connected health, at the intersection of digital and care, is where the introduction of software and technology can improve or establish measurable health progress or outcomes.

Connected Health			
Consumer Digital	Value Based Digital Health	Outcomes Based Digital Health	
Digital Wellness	Digital Companions	Digital Therapeutics	Combination Digital Therapeutics
Technologies, platforms and systems that engage consumers for lifestyle, wellness and health-related purposes, including administrative.	Low Risk, evidence-based software and/or hardware products that work in conjunction with traditional products and measure and/or intervene in the service of human health.	Clinically validated, and regulated software (SaMD) that delivers evidence-based therapeutic interventions and measurable health outcomes for the prevention, management, or treatment of a medical condition.	Clinically validated, and regulated combination of software, drug and/or device, that delivers evidence-based therapeutic interventions and measurable health outcomes for the prevention, mgmt, or treatment of a medical condition.

\$35B

INVESTED
QUARTERLY IN
DIGITAL HEALTH

1 IN 2

PHYSICIANS HAVE
DISCUSSED DIGITAL
THERAPIES WITH
PATIENTS

\$14.5B

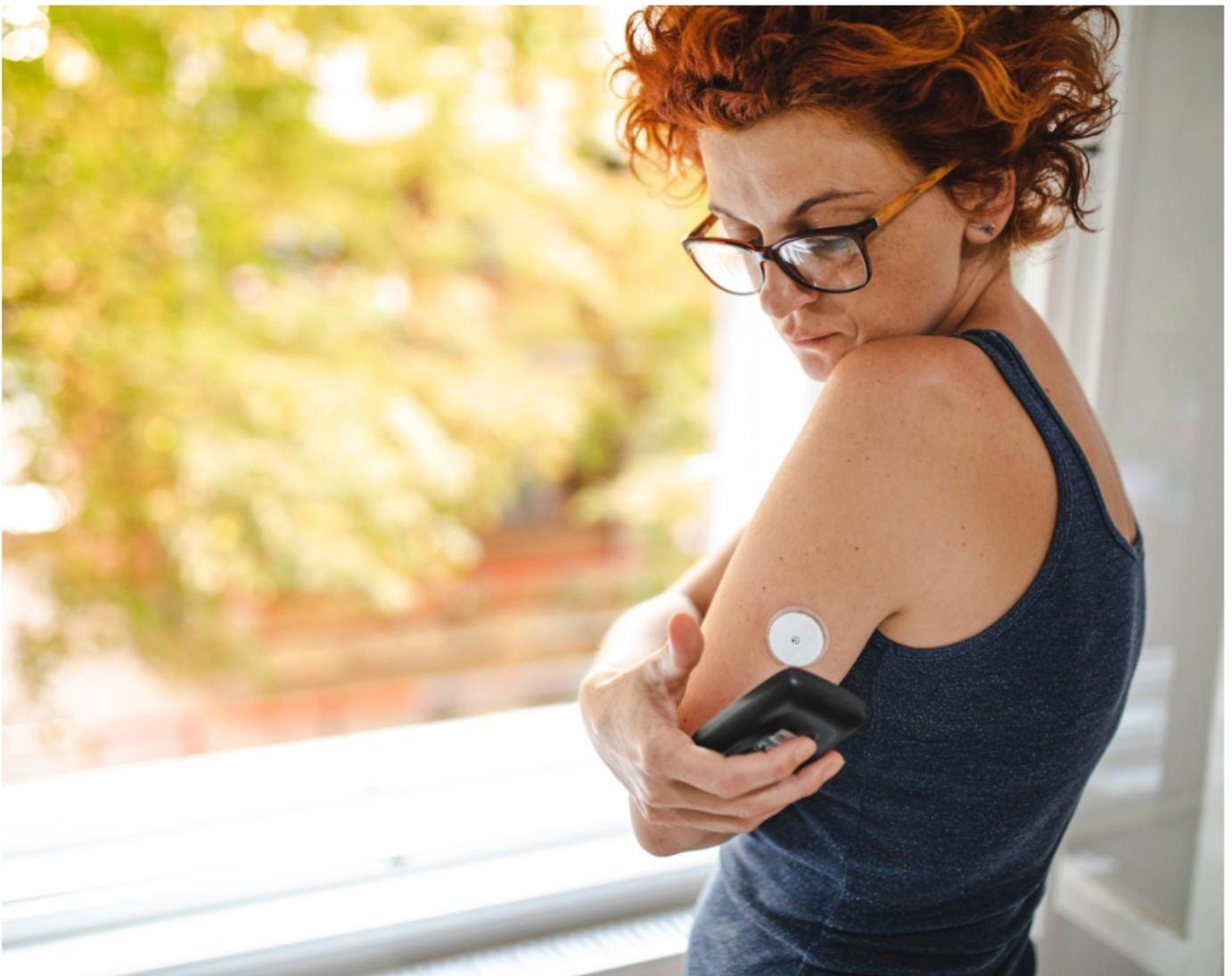
EXPECTED
GLOBAL DIGITAL
THERAPEUTICS
MARKET BY 2027

PART 1:

UNDERSTANDING THE CHALLENGES ORGANIZATIONS MUST ADDRESS TO ADVANCE THEIR CONNECTED HEALTH BUSINESS

In working with hundreds of life sciences organizations on digital health transformation efforts, we have identified five consistent challenges that stymie the organizational maturity needed to develop and scale efficient and profitable connected health efforts:

1. Portfolio
2. Operations
3. Value
4. Development
5. Scalability



WE HAVE IDENTIFIED FIVE CRITICAL CHALLENGES IN CONNECTED HEALTH

PORTFOLIO	OPERATIONS	VALUE	DEVELOPMENT	SCALABILITY
Legacy drug enterprises struggle at delivering commercial connected health products that are strategically aligned to an established portfolio strategy	Connected health teams often do not realize the need for integrating operating capabilities and core business functions into the development and management of connected health products	Connected health products are frequently not designed to drive definable and measurable value or health outcomes	Building, delivering and managing compliant digital products and the data collected or managed by them requires an additional level of infrastructure that is challenging to implement in legacy drug enterprises	Seeing capability gaps as strategic, then identifying and integrating new technologies, tools, vendors and partners into the ecosystem is not a core function and can significantly limit growth

Challenge 1: PORTFOLIO

Enterprises struggle to deliver commercial connected health products that are strategically aligned to an established portfolio strategy.

Virtually every life sciences organization has a connected health discipline. In fact, many organizations have dozens of individual connected health offerings in development at this very moment. Unfortunately, these efforts are often conducted in isolation, which makes it difficult for organizations to share knowledge and resources, as well as costs, across teams, business units, and functions.

To optimize, organizations need to realize that their connected health discipline is no longer about developing individual products but creating a strategic portfolio that is united by an overarching strategy.

Can we use connected health solutions to bridge long pipeline delays, can we augment our presence in our current therapy areas, can we blunt competitive presence in a category with connected health solutions? Asking these questions provides purpose and structure to efforts that often times drift without purpose, and provide the ability to think through clear organizational strategies to support your efforts.

Challenge 2: OPERATIONS

Connected health teams often do not realize the need for integrating operating capabilities and core business functions into the development and management of connected health products.

As in any product lifecycle, development is but one piece of a much larger and more complex process. In the connected health market, we see that some organizations, such as those in the health tech startup space, excel in agile development, minimum viable product (MVP) concepting, and behavioral design but stumble when it comes to other critical business operations, like regulatory and compliance.

Companies that are accustomed to moving quickly but lack the maturity and awareness of other critically important functions and capabilities will find that success in the connected health arena requires much more than the product itself. Rather they will need to integrate connected health efforts within broader operations and core business functions to ensure products have a smooth path to launch – and the ability to scale.

Challenge 3: VALUE

Connected health products are often not designed to drive definable and measurable value or health outcomes.

Our experience reveals that the development and launch of a single connected health product can reach \$20 to \$40 million per product. Consider these costs across the entire R&D portfolio and an organization with a dozen siloed efforts can easily spend more than half a billion dollars over the course of just two or three years.

Equally concerning is that many organizations do not have a revenue forecast in place that outlines how and when the business can expect to recoup those costs and draw a return on their investment. This is unsustainable for any business over the long term.

A connected health program is only an asset to the organization if it draws value. And without cost optimization or clear revenue forecasts, it becomes impossible for the connected health discipline to be anything more than a cost center.

Challenge 4: DEVELOPMENT

Building, delivering, and managing compliant digital products and associated data requires an additional level of infrastructure that is challenging to implement.

Although connected health is a fundamentally different business model with unique challenges and a dramatically shorter timeline, many organizations continue to approach development of new digital products and services the same way they would a traditional product.

For example, an established pharma or biotech company has traditionally built all teams, systems, processes, and infrastructure to deliver a drug to market within a ten-year timeframe. In this model, it's not uncommon to spend billions over the course of a decade to bring a drug to market. However, in the connected health market, the total budget is perhaps just 1% of that of a traditional drug. Meanwhile, the timeline generally just spans two years.

Some established companies may make the mistake of focusing on the similarities between these two development and delivery models but fail to recognize that they must make significant changes across people, processes, and technologies to develop a successful and profitable Connected Health product.

Most companies understand the need for change and are adopting new processes, tools, and partnerships to support the transformation. But in many cases, we find that these are still targeted, point solutions as opposed to an end-to-end, interconnected transformation strategy that considers all aspects of the go-to-market strategy, including compliance, supply chain, and product management.

Challenge 5: SCALABILITY

Seeing capability gaps as strategic – and identifying and integrating new technologies, tools, vendors, and partners into the ecosystem to be a core function that fuels growth.

One of the primary challenges that life sciences organizations face in scaling a connected health program is integration – both internally and externally.

By internal integration, we mean gathering ideas, processes, talent, and partners throughout the company and successfully integrating them into the culture and DNA of the organization. On the other hand, external integration refers to fusing the company's portfolio within the bigger healthcare ecosystem, which has more players and is far more intricate.

In order to scale, companies need to identify gaps within their current capabilities, operations, and partner network and craft a comprehensive strategy that addresses the diverse, complex, and fragmented nature of the connected health ecosystem.

For many organizations, the way forward will involve the help of a trusted connected health partner. When evaluating and selecting a partner, it is essential to find one that understands the challenges related to scalability and can function as a system integrator for internal and external processes, offerings, technologies, and strategies.

While these challenges manifest in each organization in a unique way, our experience reveals that most organizations must make critical investments across these areas to intelligently and exponentially scale its connected health business.

The question is: How well is your organization identifying these challenges and where are you in the effort to building a successful, profitable, scalable connected health program?

LOOKING AT MATURITY WITHIN THESE PARAMETERS, PROVIDES A BETTER VIEW OF THE CHALLENGES FACED

<p>PORTFOLIO</p>	<ul style="list-style-type: none"> • Is there a clear portfolio strategy that provides clear rationale and approach for product commercialization? • Does the current capability mix support this strategy? 	<p>Less More</p>
<p>OPERATIONS</p>	<ul style="list-style-type: none"> • Are all identified functional capabilities involved and delivering in support of an established operating model and portfolio plan? 	
<p>PRODUCT</p>	<ul style="list-style-type: none"> • Do products solve customer challenges that are aligned to a portfolio strategy? • Is there a clear value model and forecast for existing and planned products? 	
<p>DEVELOPMENT</p>	<ul style="list-style-type: none"> • Are we efficiently and cost-effectively building, launching and managing compliant digital products? • Can we update and enhance digital products on a defined lifecycle roadmap? 	
<p>SCALABILITY</p>	<ul style="list-style-type: none"> • Do partners, vendors and new technologies have a way to easily fit the ecosystem and accelerate efforts 	

Example assessment

PART 2:

THE FUTURE OF HEALTH IS CONNECTED

Introducing Connected Health by Ayusmart Technologies

Ayusmart Technologies is the enterprise growth partner for Connected Health in the Life Sciences industry. We help clients establish and scale integrated operations to develop and launch successful digital products that drive clear health outcomes and measurable business impact.

Our Connected Health offer focuses on five distinct areas to help organizations:

1. Connect the enterprise to define and articulate a vision and strategy that will break through organizational silos and connect functions in the enterprise and the market;

2. Integrate operations to establish efficient product operations that function with global scale;

3. Establish product value design for digital product offerings that delight customers and have clear and measurable impact to the business;

4. Provide digital delivery consulting and services to establish and optimize efficient digital product operations based on sound manufacturing processes and digital lifecycle best practices;

5. Accelerate scale of your efforts by engaging with the partners, alliances, and early stage innovators that will fill capability gaps and allow your business to scale as needed.



WHAT CONNECTED HEALTH FROM SYUSMART DELIVERS

CONNECTED ENTERPRISE

DEFINE AND ARTICULATE YOUR VISION FOR CONNECTED HEALTH IN THE ENTERPRISE AND THE MARKET FOR



Clear portfolio and organizational transformation strategy and execution

INTEGRATED OPERATIONS

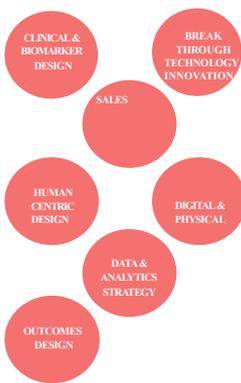
ESTABLISH EFFICIENT DIGITAL PRODUCT OPERATIONS THAT ARE ENTERPRISE INTEGRATED AND FUNCTION WITH GLOBAL SCALE



Clarity into functions, capabilities and skills required to operate an integrated digital product business

PRODUCT VALUE

DESIGN DIGITAL PRODUCT OFFERINGS THAT DELIGHT CUSTOMERS AND HAVE CLEAR AND MEASURABLE IMPACT TO THE BUSINESS



Transparency into Connected Health product investment, design and revenue potential for informed decision making and forecasting

DIGITAL DELIVERY

OPTIMIZE DEVELOPMENT EFFORTS BASED ON SOUND MANUFACTURING PROCESS AND DIGITAL ENGINEERING BEST PRACTICES



Compliant delivery of digital products and management from launch through lifecycle

ACCELERATED SCALE

ENGAGE WITH THE PARTNERS, ALLIANCES AND EARLY-STAGE INNOVATORS THAT WILL FILL CAPABILITY GAPS AND ALLOW YOUR BUSINESS TO SCALE AS NEEDED



Identification of the right partners and technologies to best fill capability and offering gaps

Conclusion

Within the next three years, 652 million consumers around the world will be using a digital therapeutic. Their interest, coupled with better health outcomes and improved quality of care, are driving a growth rate of up to 30% in the connected health market.

To seize this market opportunity, organizations must now take steps to build their maturity and address the five common challenges that are standing in the way of success.



About Ayusmart Technologies

Ayusmart Technologies is a global leader in partnering with companies to transform healthcare sector by harnessing the power of technology. We are guided everyday by its purpose to enhance USER's Health, ENTERPRISE's efficiency, productivity and business outcomes, by making it easy for everyone to adopt technology.

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