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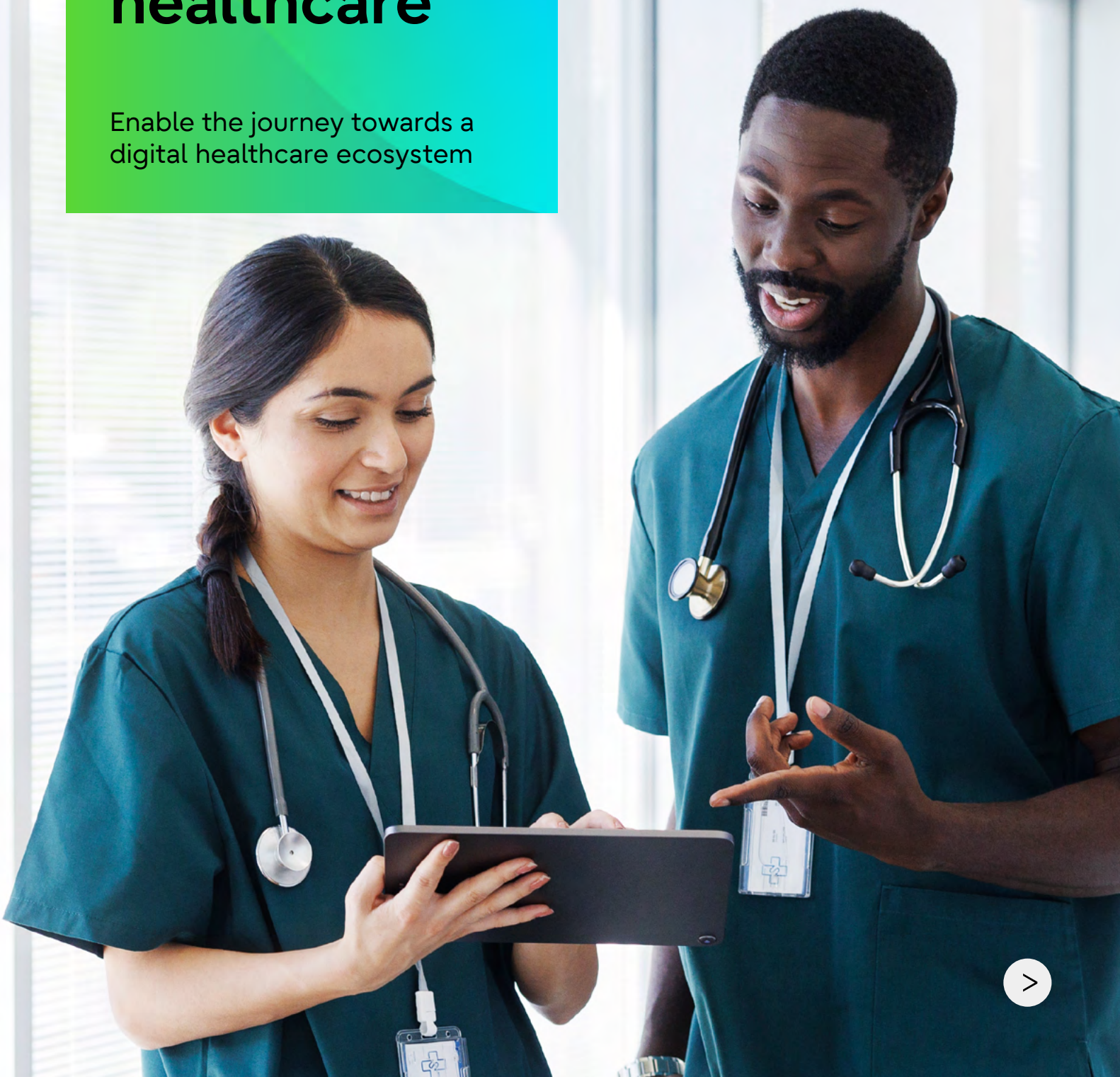
Building better-connected healthcare

Enable the journey towards a digital healthcare ecosystem



Evolving global healthcare for changing societies

The true measure of any system is how it copes under periods of stress. For organizations delivering healthcare and related services, the pandemic provided the ultimate test. The heroic efforts of many in these fields has rightfully been celebrated, yet the global experience has also highlighted some crucial areas for improvement if healthcare systems are to be resilient in the face of future pressures.

As a backdrop to the present challenges, we live in a markedly different society today than that of pre-COVID-19. Work, commerce and social interactions are just some of the areas that have been changed forever. The digital nature of today's society has brought new expectations and behaviors that filter through different parts of our lives, influencing how individuals interact with businesses and service providers.

On top of that, we're already seeing some of the impact of major demographic change as societies get older and people live longer. **By 2050**, one in six people in the world will be 65 years or older. Without a strategy to deal with this change and offer care through the most appropriate setting, health services will be put under enormous pressure.

Creating digital ecosystems

The challenge for healthcare leaders now is how to harness the power of data and technology to make well-being a reality for all. This involves reimagining healthcare, designing and delivering health-related services that support the modern customer to take control of their health, put prevention over treatment and choose where, when and how to receive the health services they need.

Digital health solutions help provide better patient care, firstly by digitizing and collating patient data, and then by enabling this data to be shared amongst parties who need it. By adopting a people-focused approach, health service providers can lead the way in developing new and easy-to-use digital services, optimized workflows and preventative care strategies. These advances, ultimately, will allow for more targeted and efficient patient care in the future.

How digital-centric healthcare can help tackle global challenges

The paradox of a good health system is that the better the services, the less reliant individuals are on the system. High quality healthcare starts a flywheel effect where the individual feels inspired and empowered to take proactive steps to improve their own health, such as pursuing more active living and healthier eating habits, as well as gaining the motivation to address emerging heath issues earlier in their development.

While modern health systems aspire to a proactive model, there have been evident challenges repeated across countries and systems that act as barriers, both for the individual and for the provider.

These include:

- **Fragmented patient journey and data silos**
- **Reactive treatments**
- **Service frictions**
- **Time-intensive processes**
- **Generic treatments**
- **Too much risk of treatment lapsing**
- **Funding and labor shortages**
- **Patchy IT systems.**

Fragmented patient journey and data silos

The end-to-end experience of using a health service can often diverge from the most effective path, such as in cases where the individual moves between health authorities or switches between different service providers. In these instances, out-of-date records, restrictions on data sharing and even human error can mean important information is lost or misplaced.

The potential of new technologies, such as AI, AR and 5G, to resolve these issues can be harnessed only if they are seamlessly integrated into new ways of working. The challenge is to connect different stakeholders to drive the process innovation needed to enable efficient administration and automation of repetitive tasks.

Reactive treatments

The prevailing attitude towards health provision has often been for the individual to seek treatment once a specific health issue has become apparent. By this time the health complaint may already have manifested in more serious issues, meaning the efforts required to address the issue have grown significantly.

Service frictions

The reliance on phone-based booking, paper forms and surgery or office times can disadvantage those with inflexible working schedules or childcare issues, bringing an inability for the patient to access services on-demand or at their convenience.
The requirement to repeat processes, such as providing relevant details, at every touchpoint can often put individuals off from addressing routine or minor concerns.

Time-intensive processes

Existing process often involve excessive requirements for face-to-face interactions, such as at clinics, health centers or retail locations. This can create bottlenecks where issues could have been better resolved in a low-touch setting.

Generic treatments

The reliance on blockbuster medications, such as over-the-counter drugs, is often not suited to the individual's needs or conditions. In some cases, the combination of medicines an individual takes can produce unwanted side effects or even lead to new health concerns.

Too much risk of treatment lapsing

Medication schedules place a burden on the individual to be regular and consistent in their consumption habits and routines. Medication non-adherence is a recognized global problem costing **hundreds of billions of dollars** as no treatment can have its intended effect if applied inconsistently.

Funding and labor shortages

Healthcare systems around the world are dealing with depleting resources at a time when demand for healthcare is rapidly rising. These challenges impact various levels of care provision – for example, it's estimated that doctors spend on average **8.7 hours per week** on administrative tasks. To meet patient needs effectively and efficiently, healthcare models must migrate from traditional staffing models to more agile and scalable models that leverage technology to reduce the human resource burden.

Patchy IT systems

Challenges and delays in upgrading legacy IT systems can often mean that data is not used efficiently to provide a high quality of healthcare throughout the customer and patient journey. Hence, time is lost, resources are wasted and costs are increasing.

Digital trends in healthcare service provision

To deal with conventional challenges and set the path towards more effective health plans and treatments, health organizations are seeking to create personalized, streamlined, informed healthy living services, delivered at a faster pace. Technology is seen as the clear way forward as an enabler of healthy living across healthcare verticals.

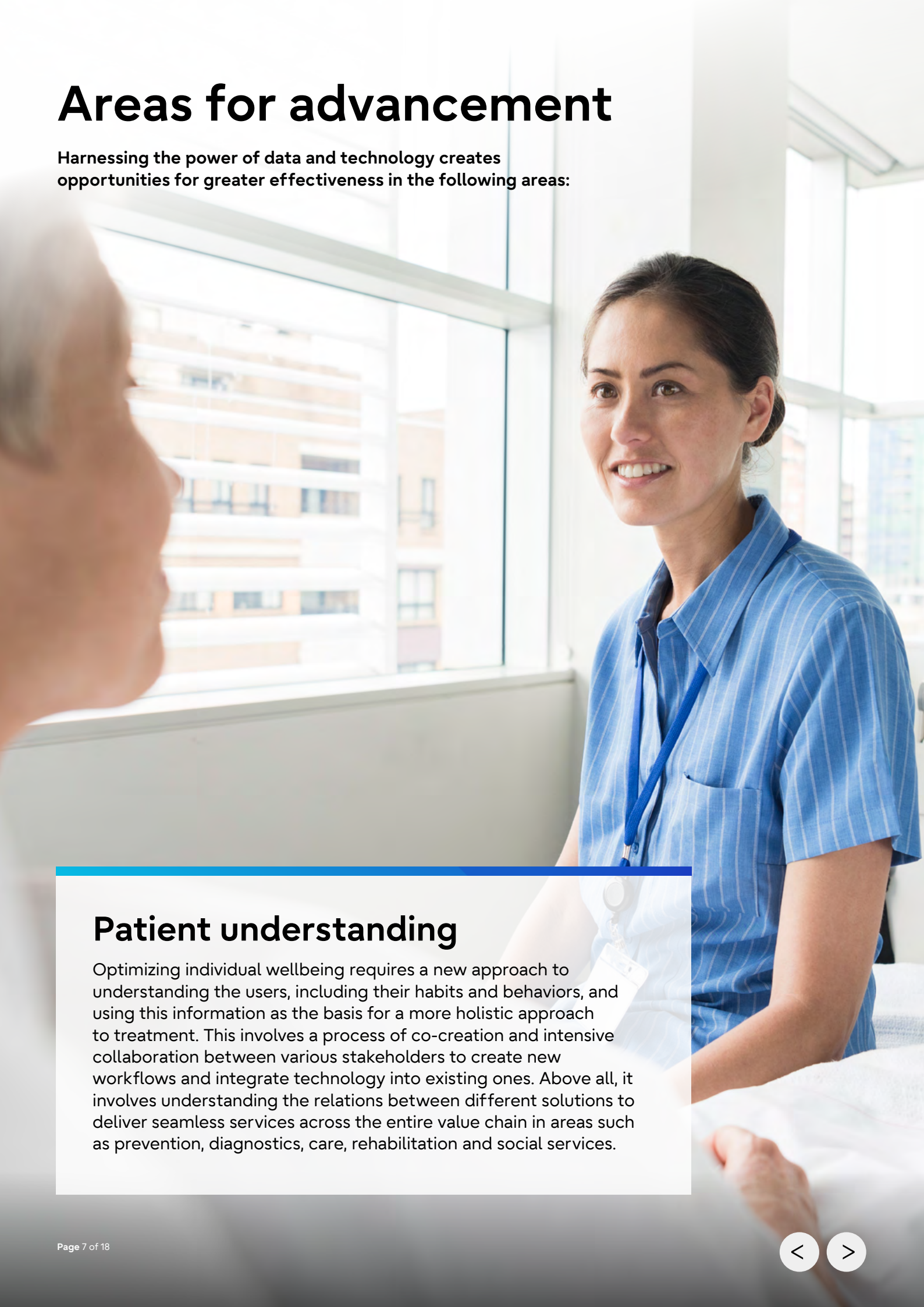
Integrating digital solutions with existing care and treatment can help to address many of the issues embedded across health systems and help reorient services and treatments towards the patient's best interests.

Delivering scalable digital solutions

The integration of digital technologies into health services has the potential to solve deeply ingrained problems and provide sustainable healthcare for all patients. The solutions need to be secure and trusted and able to combine medical and personal health data with secondary data sources like genome data. Digital solutions that use and integrate existing health records, enable sharing personal health data through wearables and behavioral data with medical records and genome information have the most potential.

Areas for advancement

Harnessing the power of data and technology creates opportunities for greater effectiveness in the following areas:



Patient understanding

Optimizing individual wellbeing requires a new approach to understanding the users, including their habits and behaviors, and using this information as the basis for a more holistic approach to treatment. This involves a process of co-creation and intensive collaboration between various stakeholders to create new workflows and integrate technology into existing ones. Above all, it involves understanding the relations between different solutions to deliver seamless services across the entire value chain in areas such as prevention, diagnostics, care, rehabilitation and social services.

Personalized services

Using data analytics and visualization tools, service providers can streamline the creation of actionable, data-informed insights to support at every step and touchpoint from research through to care delivery. This allows the service provider to create well-personalized recommendations and treatment pathways and enables more ways for the patient to understand the options available and take informed decisions.

Furthermore, personalization in medicine— driven by data-powered insights—can help to effectively match patients with customized drugs, or design therapies. Biopharma companies are pioneering in this area, combining genetic data with artificial intelligence to create customized disease management programs and single-use medical treatments.

Automation and self-service

Just as individuals expect digital solutions in areas such as travel, leisure and commerce, it's important that health services keep pace with the digital customer. This is pushing health providers to enable frictionless navigation of available treatments and services. The use of UX-driven web and mobile apps can help in offering 24/7 access to information and services, along with interoperability across related health service apps. The provider can also balance human and digital services through set interventions to provide customized service where needed and preferred.

The service provider can also make significant improvements in back and middle office processes to enhance customer experience. This may involve streamlining processes and repetitive routine tasks through automation and reducing the burden of reporting on staff through improved access to data.

Integration across services

Enabling more integrated health systems where data is shared easily, efficiently and securely can support clinical decision-making and help practitioners to better understand the individual's journey. This approach supports a more general shift away from fragmented care to integrated models where organizations, communities and social care providers coordinate their services, with patients as active partners in their health across the process.

Not only does this approach produce a more convenient approach and better outcomes for the individual, but it also supports staff wellbeing and job satisfaction by reducing conventional frictions and frustrations.

Innovation through cross-sector partnerships

Introducing new services and solutions can help healthcare providers add value to the individual's experience and differentiate from competing services. An effective means of doing this is to link to different areas of the individual's life by partnering with new market participants from industries such as retail, telecommunications, technology, wellness and fitness to share data for the express benefit of the individual. These partnerships, such as connecting gym membership with insurance premiums, are helping to incentivize and reward healthy behaviors, and open new revenue streams for the organizations involved.

Data management

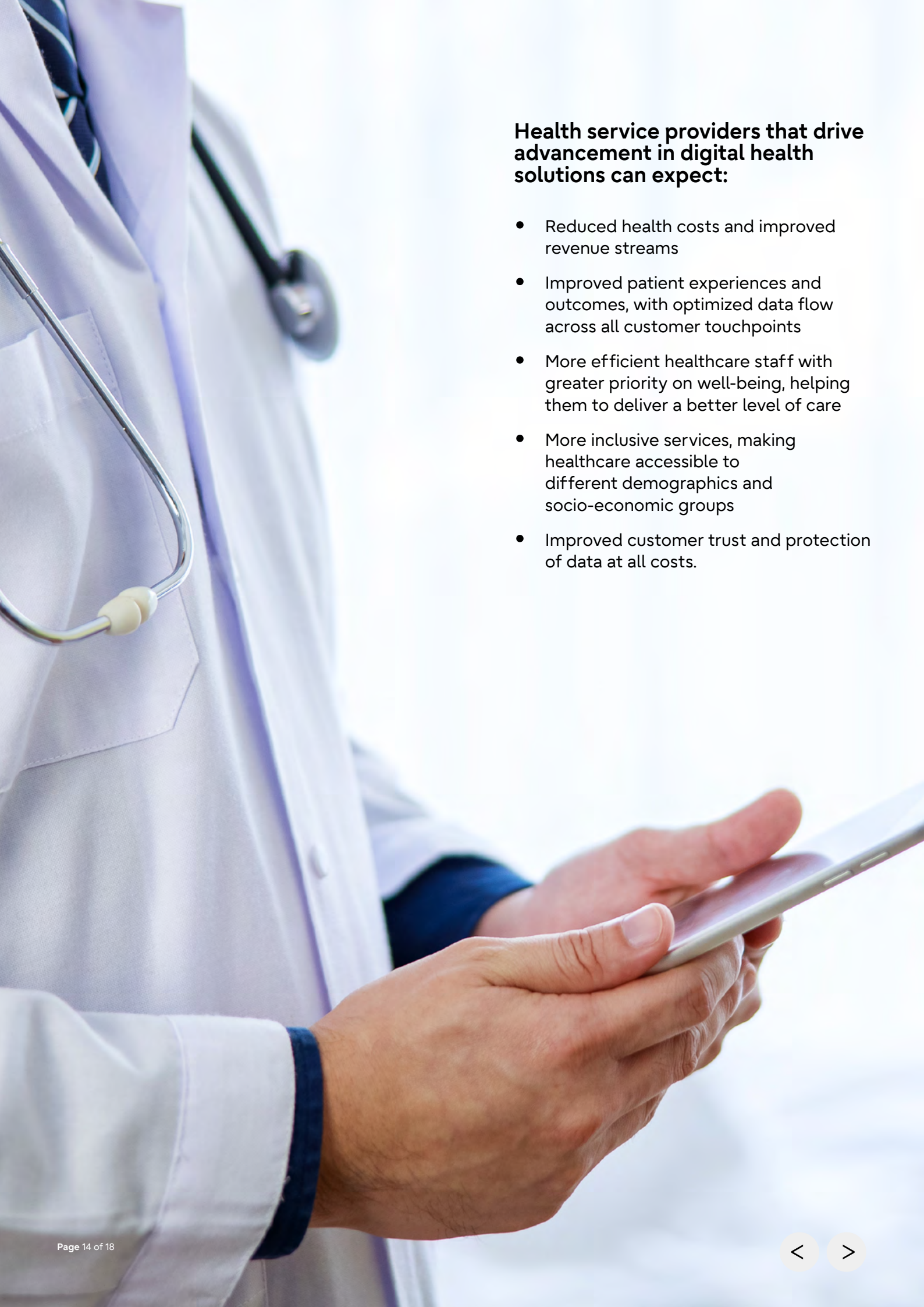
Given many high-profile incidents of data loss or theft, individuals are naturally becoming more sensitive to the information they share with organizations. Health data is particularly sensitive and requires the highest level of care and operational diligence. Health companies are therefore under greater pressure to guard against risks to data security and patient privacy by investing in cyber security solutions that modernize infrastructure, safeguard data and networks, privatize cloud-based access management, and ensure security for all medical devices and IoT enablers.

Support better individual outcomes through digital ecosystems

Projecting today's trends over the coming years and decades, it's easy to comprehend some of the strains that will be placed on healthcare providers. Imagine the pandemic of the past years without widely accessible information on the risks and best practices, without the high-capacity hospital care to support those dealing with the symptoms and without the rapid vaccine discovery and inoculation programs.

Future societies – older, with digital services more deeply embedded across their lifestyles and facing a range of different and potentially unforeseeable health challenges – will have unique needs and expectations that can only be met with flexible and easy-to-access health solutions.

Digital health solutions create a platform for companies that provide services for consumers to meet tomorrow's challenges today, giving them the power to acquire, link, analyze and action health data for better individual outcomes. These solutions are supporting by instant, seamless professional services to enable efficient onboarding and speedy scaling up of the user base.



Health service providers that drive advancement in digital health solutions can expect:

- Reduced health costs and improved revenue streams
- Improved patient experiences and outcomes, with optimized data flow across all customer touchpoints
- More efficient healthcare staff with greater priority on well-being, helping them to deliver a better level of care
- More inclusive services, making healthcare accessible to different demographics and socio-economic groups
- Improved customer trust and protection of data at all costs.

Fujitsu's capabilities in healthy living:

Fujitsu is the partner to move healthcare from treatment to prevention. We support our healthcare customers with the development of personalized medicine and improvement of individual health by connecting various data sources that are currently located separately.

We support innovation by creating mechanisms for organizations across different sectors to exchange medical and health data in a trusted way.

Case studies

Fujitsu worked with **Apotti Oy** to create the first electronic client and patient record and ERP system in the world combining social care and health care. By unifying the customer and patient record system, the solution enables enhanced co-operation between different operators, allowing for better development of operations and services.

We helped the **Human Genome Center, Institute of Medical Science (IMSUT), The University of Tokyo** accelerate research for cancer treatment plans, using AI to reduce the time needed to find insight in research documentation across different sources. This process halved the time to review each gene variation and transformed the accuracy of patient-specific cancer plans.

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If you'd like more advice on the topic of digital healthcare solutions, then please get in touch with our team at **askfujitsu@uk.fujitsu.com** or visit **Healthy Living – Fujitsu Uvance: Fujitsu Global**

If you found this paper interesting, you may also like our paper on *Humanizing healthcare: Deliver patient-centric healthcare using digital solutions*, which explores the trend of individual empowerment and makes recommendations on how health service providers can enable the choice, flexibility and seamless experience that customers expect.

Download the white paper

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