White Paper

Proximity and digitalization

How partnerships and data change Italian Healthcare

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Faced with the challenges that digitalization is bringing to the world of Healthcare, players in the sector are responding by raising their ambitions. However, the degree of digital maturity of hospitals, Healthcare, pharmaceutical, Medtech and insurance companies is not yet sufficient to support these strategies in the short term. The new BCG-DAI (Digital Acceleration Index) research analyses the Italian situation with a novel perspective across industrial sectors, it offers a realistic outlook on the most proximate digitalization goals, opening up new scenarios on collaboration models, data integration and the development of telemedicine as steps on a path to developing the health ecosystem, to the benefit of the patient and the Healthcare system itself.

Looking beyond the contingency of the pandemic emergency, digitalization emerges as the large-scale phenomenon that is most profoundly changing the Healthcare ecosystem at every level. The impact of new technologies, combined with the socio-demographic context, acts on the players in the sector, whether they are hospitals, Healthcare companies, insurance companies, pharmaceutical or biomedical companies, as an accelerator of different and concurrent trends. These include new patient needs, an increasingly urgent focus on cost-effectiveness, the shift to new business models and access to care, including remote access, as well as the development of new and potentially disruptive technologies and treatments.

For the actors in the sector, facing up to these challenges therefore becomes an unavoidable growth step. Patients want it, the market expects it, budgets demand it, and new demands for sustainability predict it. This is a non-superficial transformation, which must be applied to every aspect of the business, which precisely because of the increasing pervasiveness of new technologies, will be able to offer health systems the solutions they require on a number of levels, from the increase in costs (which are growing faster than the gross domestic product) to the general decline in customer/patient confidence, from the wear and tear on the human resources working in the sector, to the underestimation that is still reserved for research rather than production.

In this scenario, the Italian Healthcare sector is lagging behind the global average in terms of digitalization, although it can boast some exemplary achievements. It is therefore necessary to ask what initiatives should be immediately favored by all the different players involved in order to grow, not so much as individuals but as an ecosystem. Two of the possible answers that emerge from the research concern collaboration models as well as the possibilities offered by telemedicine.

The study

This BCG-DAI (Digital Acceleration Index) research was born out of the desire to examine the current and forthcoming impact of digitalization on the Italian Healthcare sector. The study, conducted between June and September 2021, involved 42 players in the Italian Healthcare sector, representing in equal measure pharmaceutical companies, MedTech, Providers (hospitals, research laboratories, diagnostic centers, etc.) and Payers (i.e., Health Insurers, Local Health Authorities, Brokers and Corporate Welfare Companies).

The Digital Acceleration Index (DAI), BCG's proprietary diagnostic tool, was used for the analysis. Drawing on a database of more than 5,000 companies, the DAI helps companies and organisations to assess their digital maturity and compare it with the performance of competitors and the industry average.

There are, however, in this research, some new elements of particular interest, linked first of all to the widening of the survey to different systems that gravitate towards the Healthcare sector, from public to private Healthcare, from Pharma to MedTech, from Insurance to Corporate Welfare companies. In addition, the digital dimension of the survey has been enriched with two sets of additional questions covering extremely topical issues for Italy:

DAI (Digital Acceleration Index)

The current and desired digital maturity of the companies involved is obtained through the compilation of a survey of over 90 questions that addresses four fundamental chapters of the digitalization process in a given organisation: the definition of a digital strategy; the technological equipment (e.g., Data, Artificial Intelligence, ...); the changes made to the organisation in terms of skills and work models (Agile, governance, leadership and learning models, ...), the actual digitalization of production processes and - downstream - of the products/services offered ("Operation — e.g. digital supply chain - products /digital services, incubation of start-ups/prototypes, customer experience and customer engagement models).

Exhibit 1 - DAI is used to measure digital maturity of the HC players in the study, and compare it across Countries and industries leveraging a 5k+ proprietary BCG database

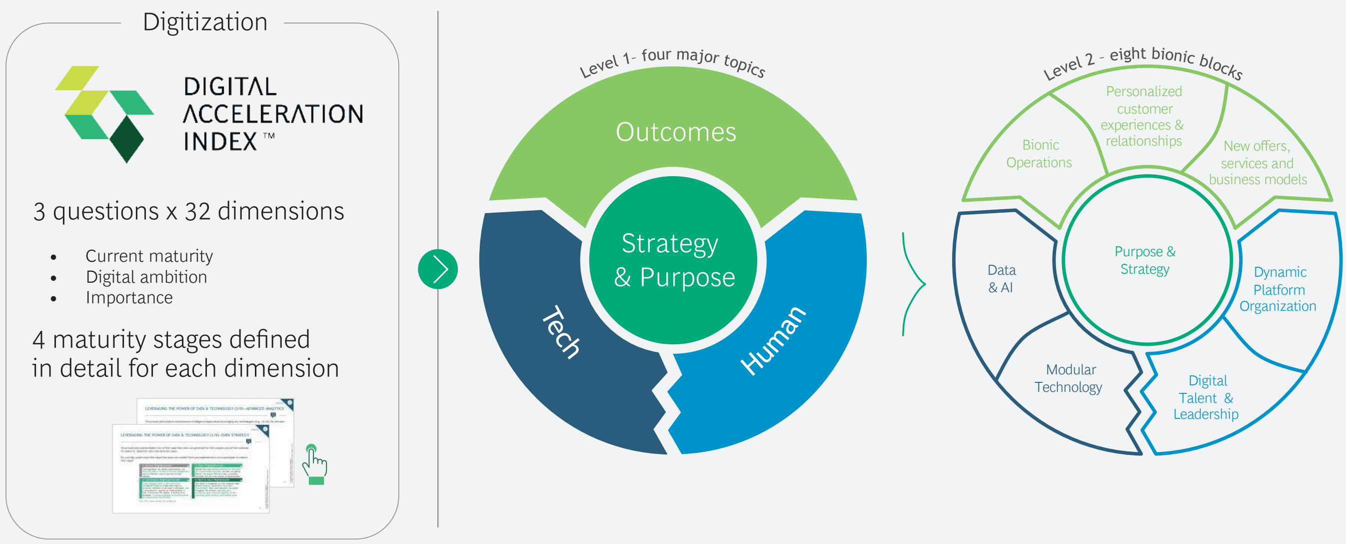
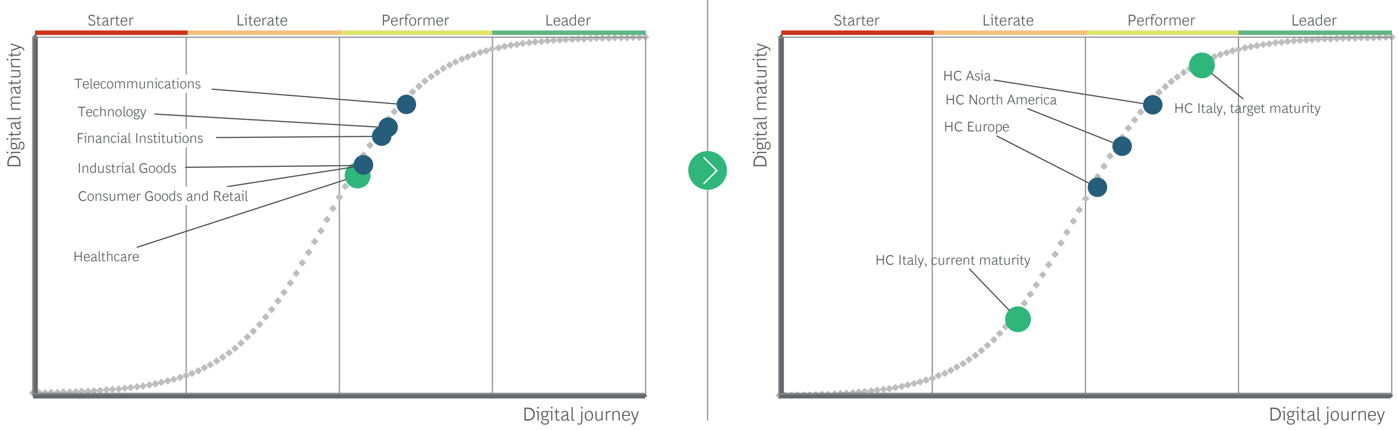


Exhibit 2 - Italian HC below global benchmark, but with very high ambition

HC globally catching up with other industries

HC in Italy lags behind HC in other regions, but with high ambitions



Source: BCG Digital Acceleration Index, HC Italy market study (n=42). BCG analysis.

- **Collaboration models:** the opportunity and the need to encourage collaboration between companies in the health system. A systemic perspective that is entirely in line with the objectives of the "National Recovery and Resilience Plan" (PNRR, which, not surprisingly, points to the convergence of public-private collaboration and intentions, but not only as a reward for accessing funding) and the need for patients/clients to be followed along the entire health pathway. In order to explore this dimension, specific questions were introduced to assess the interest of the individual company in collaborating and with whom they would collaborate (companies in the same sector, in contiguous Healthcare sectors or outside of Healthcare completely), along which dimensions (e.g., Data, R&D, Customer journey...) and what obstacles they would encounter in implementing collaboration models (e.g. incentives, inter-operability of data and systems, regulations...)

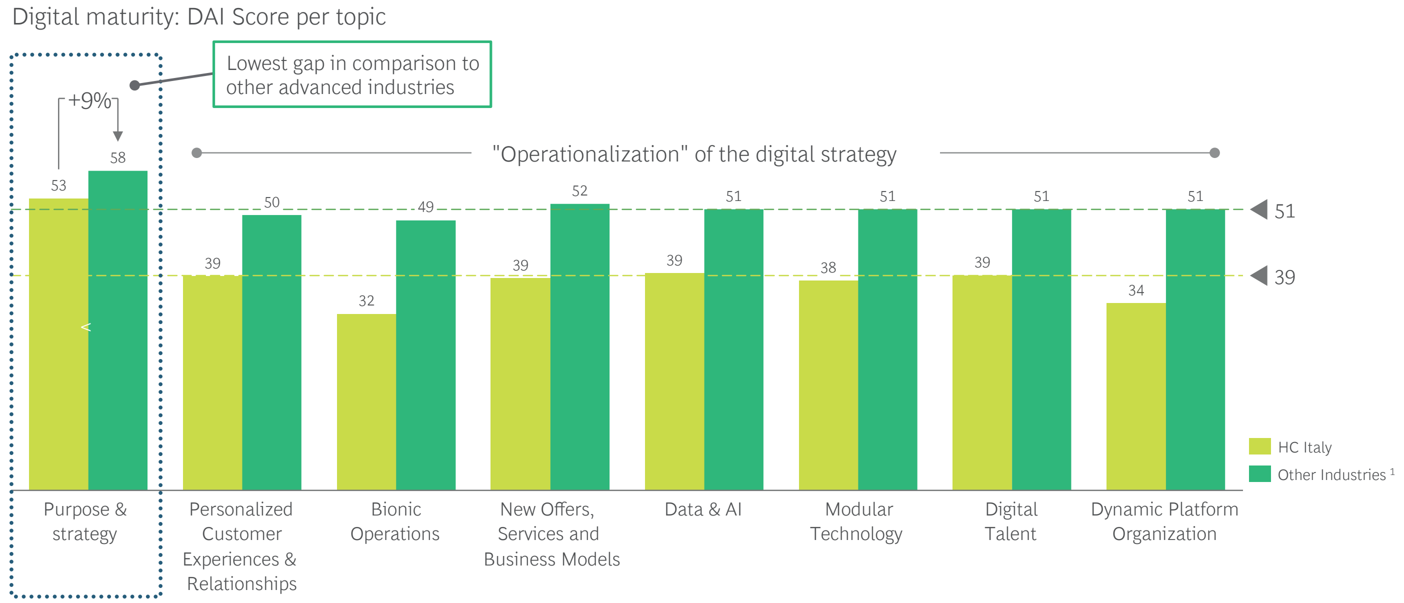
- **Proximity medicine and the role of telemedicine** as a tool to converge the digitalization path towards greater benefits for the patient. In particular, the participating companies were asked to indicate the role and expected benefits of Telemedicine along the patient pathway, and which areas of use could have a greater impact on access to care, an aspect that is more urgent than ever for the Italian health system, and in the context of the current rethinking/strengthening of community medicine induced by the PNRR (e.g., the creation of Community Homes and Hospitals, the role of Territorial Operations Centres, investments in Telemedicine and remote care).

High ambitions, yet still insufficient maturity

Although the global scenario suggests a general consensus on the need for digitalization, a closer look at the trends in the Healthcare sector reveals that not all players seem to put digital at the heart of their development strategies. It is no coincidence that Healthcare is lagging behind in many aspects of digitalization compared to sectors such as Consumer, TelCo, Finance or Technology and, as we have seen, it is even more so in the Italian case compared to its counterparts in other countries. Italian Healthcare is in fact among the Digital Literates, far behind other sectors (e.g., energy) and US and European Healthcare benchmarks.

In this context, however, Italian Healthcare companies and operators show an above-average awareness in terms of objectives, providing in their declarations of intent and long-term development plans a very ambitious vision on digital, pushing growth forecasts to a level that is higher than that expected in more mature sectors, and well above the average for the global Healthcare sector. This distortion between ambitions and the level of digital maturity encountered makes it all the more obvious that we need to find a way to get this readiness on the ground, to make the strategy operational. In short, moving from words to deeds (Exhibit 2).

Exhibit 3 - Healthcare companies have made progress in determining their digital strategy; however, they lag behind in operationalizing it



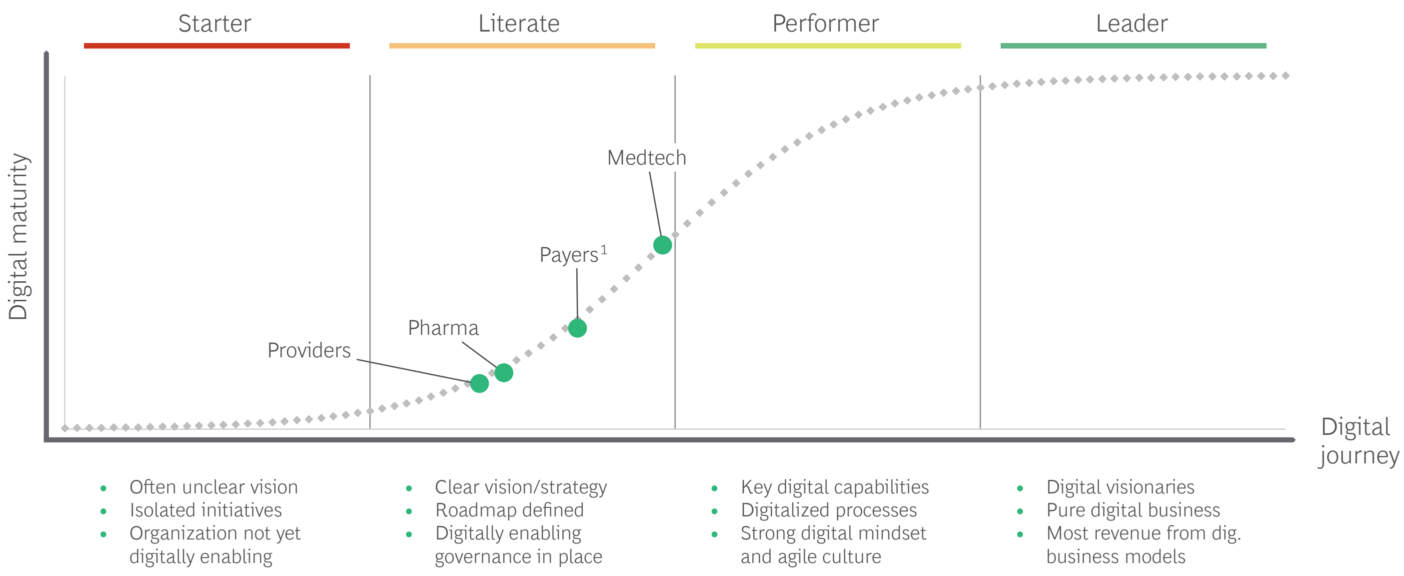
1. Includes INS, FI, EN, TMT, IG.
Source: BCG Digital Acceleration Index, HC Italy market study (n=42). BCG analysis.

Evaluating the DAI score by topic, the difference between the digital maturity of the Italian health system and the other more advanced sectors reaches its lowest point in the field of Objectives and Strategies, while it widens on topics such as Organisation (34 vs. 51) and the Operational Model (32 vs. 49). Healthcare companies, in short, have made progress in determining their digital strategy, but are still lagging behind in making these principles operational. (Exhibit 3).

Going down to sub-sector level, however, the first differences can be observed, with Medtech demonstrating a degree of digitalization well above average, and already close to the “digital performer” threshold (average DAI score 50 compared to the average of 39), followed by the Payer, Pharma and finally the Provider. (Exhibit 4).

The research analysed the differences between sub-sectors for each of the pillars of digitalization, i.e., objectives, outcomes, the human element and the technological element. It emerged that on some issues, such as the Operational Model or talent, there is little difference between the sub-sectors, since these are common challenges on which they are all struggling, while on other issues, such as the use of data and artificial intelligence, the gap widens and the greater maturity of MedTech emerges. Companies in this sector, being more exposed to the speed of innovation-related competition, already rely on digital tools to improve their products (for example, OEM Imaging).

Exhibit 4 - Italian healthcare digital maturity within the Digital Literate range, with MedTech leading the pack



1. Payers include also aggregators (brokers and corp. welfare) and public payers
Source: BCG Digital Acceleration Index, HC Italy market study (n=42). BCG analysis.

Payers, on the other hand, are the ones who signal the greatest urgency in digitalization because they are involved in a more turbulent market and stressed by many changes and challenges (pressure on prices due to demographic factors, new and expensive treatments, and system inefficiencies; a low level of adoption in Italy, with more than 90% of private spending on health paid for out of the pockets of its citizens; competitors from the Big Tech world such as Google, Amazon and Microsoft; new expectations from customers who demand personalized and digital proposals). As a result, they redoubled their efforts on new offers, services and business models and started investing in trained resources.

Despite the delay in the sector, looking at the individual realities, cases of excellence also emerge. In particular, two of the companies surveyed (one MedTech company and one Payer company) show a DAI score as digital leaders, establishing themselves as a mark of European best practices.

Collaboration: a requirement only achievable within a fluid ecosystem

The second element explored by the research is that of collaboration, understood as a fundamental element of the path towards an increasingly integrated health ecosystem (Exhibit 5).

The companies surveyed aim to collaborate mainly with other companies within their own sector, partly driven by economies of scale in the initial stages of developing a new business, by the joint effort to raise awareness among customers and regulators of new products/service models, or by the possible complementarity of the offer necessary to provide an all-round service/coverage (e.g. hospitals/clinics with different specialisations; insurance companies operating at different levels or branches of risk).

Exhibit 5 - Providers are the preferred collaboration partner; however, the desire for collaboration is often one-sided, harnessing ability to build effective ecosystems

Q: Where does your organization have the highest interest for collaboration?

Potential collaboration partners		Providers	MedTech	Payers	Pharma	Σ
Within HC	Providers	68	72	60	61	261
	Medtech companies	59	56	39	50	204
	Payers	56	53	66	50	225
	Pharma companies	44	34	40	48	166
Beyond HC	Consumer companies	28	24	52	45	149
	eCommerce companies	41	31	55	42	169
	Startups	59	47	52	57	215
	Tech companies	55	46	42	54	197
	Other	41	23	38	39	141

Low (0-20) | Rather Low (20-40) | Medium (40-60) | High (60-80) | Very High (80-100)

Providers – most lucrative collab. partners, as closest to the patient, in the center of operations

Source: BCG Digital Acceleration Index, HC Italy market study (n=42). BCG analysis.

The exception in this framework of intra-sectoral collaboration is the pharmaceutical sector, which, on the other hand, tends to protect itself mainly from direct competition (e.g., on technologies), also due to the absence of product/service complementarities with its direct competitors, limiting collaborations to the world of Healthcare.

All the companies surveyed in the various sub-sectors show an interest in forming partnerships with providers, which are considered the most interesting interlocutors since they are closest to patients.

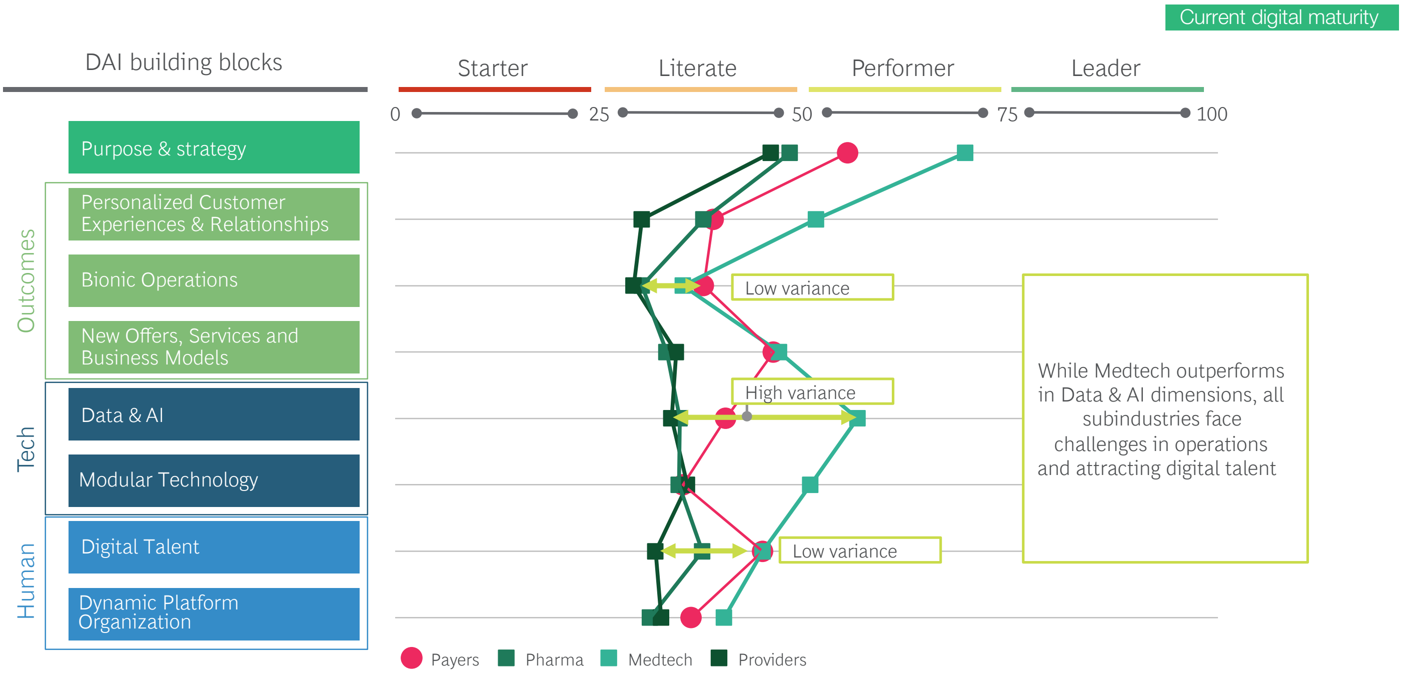
The great common ground, on which the future of HC can be built, is the interest that everyone has in streamlining the patient/client pathway. The desire is to join forces to build a streamlined patient pathway from prevention to diagnosis, therapy and subsequent monitoring/follow-up. Those pushing for possible benefits from the definition of a new customer journey are above all the pharmaceutical companies, which for the most part have no control or direct contact with the patient.

In second position among the most interesting objectives of the collaboration are the synergies on Data&Analytics, which are indispensable for an overview of a clinical history which is otherwise still fragmented and without a clear ultimate process manager. The acceleration in the adoption of the Electronic Health Record provided by the PNRR could be a clear enabler in this sense, within the limits of regulatory constraints on the use of data. (Exhibit 6).

On the contrary, procurement is the topic that least stimulates partnership initiatives.

In spite of the obvious interest in collaboration on various fronts, to date no fertile ground seems to have been created for the development of real ecosystems of health services (digital and non-digital), with a general fragmentation and lack of coordination between the actors in the system. But what are the obstacles to the spread of collaborative initiatives between different players in the Healthcare sector? On this issue, companies indicate that working on system interoperability and data availability is a priority, as

Exhibit 6 - Key differences in digital maturity within Italian HC players



1. Self-assessed importance level based on a scale of 1(low) to 4 (high)
Source: BCG Digital Acceleration Index, HC Italy market study (n=42). BCG analysis.

these are considered to be the two main building blocks of robust digital collaboration. Alongside the "infrastructural": issues, however, there is a deeper issue linked to mis-aligned incentives (e.g., between Payer and Provider) and the fear of losing control over the patient pathway, as each player aims to become the "conductor" of the ecosystem.

Therefore, in order to collaborate effectively, it is necessary not only to remove the regulatory/institutional obstacles to data sharing and inter-operability of the system, but also and above all to initiate a cultural and organisational evolution that will allow us to embrace a more fluid ecosystem model, in which each player is willing to be an orchestrator of perhaps a single segment of the value chain.

The Telemedicine route to shorten (and improve) the Patient Journey

Increasing the proximity of care to the end patient is the main objective that drives players towards collaboration. This process would also have the advantage of facilitating dialogue between regulators and businesses. When asked about the areas in which collaboration can have the greatest impact on improving access to, and effectiveness of treatments, about half of the respondents mentioned these three issues: disease identification (51%), support for treatment decisions (51%), and management of the chronically ill (49%) (Exhibit 7).

It is in this context, therefore, that telemedicine is affirmed as a direction of development that can respond to many of these needs and as a great opportunity to expand the customer base. The pharmaceutical sector and providers have the greatest interest in this, interpreting telemedicine as an additional channel to gain a competitive advantage in reaching patients at the expense of more cautious and conservative competitors.

Telemedicine is seen as useful mainly for (i) providing remote care for the chronically ill (95%), where greater collaboration between different actors is needed and the use of digital technology can ensure better access to care; (ii) improving wellbeing and prevention (63%); (iii) reducing the need for face-to-face check-ups (43%), thus saving time and costs for both the patient (and possible caregiver) as well as for the facilities. On the other hand, it is not considered to be of benefit for diagnosis, as it cannot fully replace a face-to-face examination by a doctor. (Exhibit 8).

Q: Please comment on why your organization is interested in collaboration:

“To improve customer experience”

“Achieving 360° service for patients”

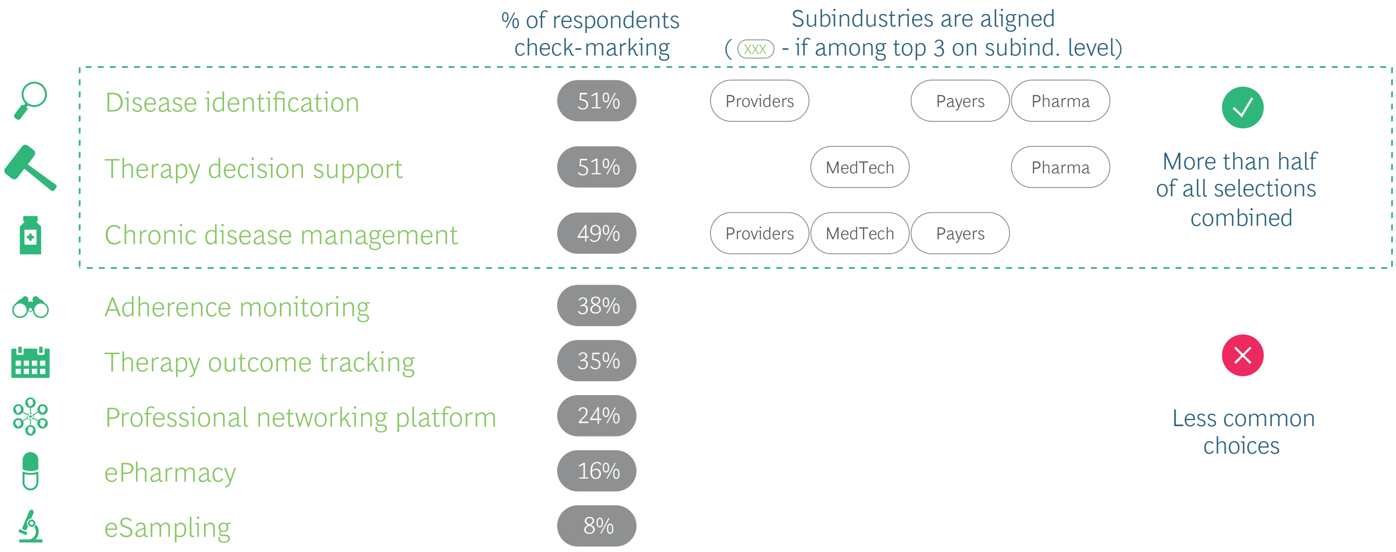
“Create a distinctive value proposition”

“Improve customer journey

“To explore potential partnerships”

Exhibit 7 - Players united on the priority areas to increase proximity of care, good starting point for industry collaboration and the dialog between regulator and business

Q: In which areas collaboration among players can have the highest impact on proximity of medicine and on better access to care?



Source: BCG Digital Acceleration Index, HC Italy market study (n=42). BCG analysis.

In general, Telemedicine is recognized as playing an important complementary and interdisciplinary collaborative role (never as a substitute, 0%), which is fundamental in a context of a shortage of Healthcare personnel, which in Italy fell by 46,000 between 2009 and 2017 (including 8,000 doctors and 13,000 nurses) with only 87 family doctors for every 100,000 inhabitants (half of whom will retire in the next 10 years). In this context, the strengthening of territorial care services, provided for by the PNRR, to guarantee homogeneously the effective application of Essential Levels of Care (LEA) throughout the territory must take into account the integration of digital services, which are useful both for the recruitment and management of patient pathways (through risk stratification models, early diagnosis, assignment of care plans), and for home care (remote-visiting/monitoring), as well as for the support of the professional network (data sharing, remote-consultation and coordination between health professionals, optimisation of productivity and reduction of travel).

Telemedicine could also be a powerful add-on to PSPs *(Patient Support Programmes)* as it would leverage Pharma/Provider collaboration to ensure better adherence to treatment, improve patient management and achieve overall better clinical outcomes.

1. Fonte: Indagine di mercato di BCG.

Exhibit 8 - Telemedicine | Participants show strong consensus re. telemedicine as an opportunity to enrich patient journeys at lower costs

Enriched patient journeys

50% of respondents
"telemedicine is a complimentary service"

Key areas for telemedicine adoption
95% - Assist. in chronic disease mngmt.
63% - Wellness and prevention
43% - Replacing follow up visit

+

Lower costs

90% of respondents
"telemedicine associated with cost or time saving"

Key telemedicine benefits
45% - Cost saving
45% - Time saving
10% - Higher quality

+

Simplicity of HC provider switch

Weakening lock-in effect of geographic proximity

Patient mobility in Italian HC market
Higher patient mobility within Italian market and beyond, attrition to globally recognized HC centers, inflow from states with undeveloped HC systems

- For fast adopters: lucrative opportunity to attract patients with better services
- For conservative providers: serious threat of decreasing customer base since the lock-in effect of geographic proximity becomes less important

Source: BCG Digital Acceleration Index, HC Italy market study (n=42). BCG analysis.

Covid-19, in this sense, has already been a powerful accelerating factor in the uptake of telemedicine practices, which grew by about 21-25% during the pandemic period, with a further 19-23% of patients indicating an intention to increase its use post-pandemic[1].

An obligatory path

In order to boost the transformation of the Italian Healthcare system, all players involved must move towards more fluid collaboration models, and collectively engage with regulators to overcome the most relevant obstacles (system interoperability and data availability), while remaining internally competitive in order to accelerate down the path of digitalization and reach a higher level of maturity. From this perspective, the PNRR can be a driver for change at national level, to ensure uniformity across the country in terms of both funding and use.

In conclusion, we therefore suggest **three key aspects of** digital maturity that HEALTHCARE players should implement as soon as possible:

- Push the digital transition in operational terms (and not only as ambitions) as a necessary imperative to ensure the sustainability of the entire Italian health ecosystem (even more so in the light of the PNRR) and foster the competitiveness of individual enterprises.
- Remove the barriers to systemic collaborations, making every effort to move towards more fluid ecosystems, where the patient journey is not directed by a single orchestrator, but each player can apply to preside over a single section.
- Leverage telemedicine as a necessary tool to build new models of proximity and facilitate access to care.

Three steps to change not only the fate of a company but of an entire country.

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