

AI and Robotics Roadmap

Hamish Clark, PwC Middle East Partner, Middle East Health Industries, talks to Forbes Middle East about AI and its successful implementation



With any transformation, the first step is realization and acceptance of the need to change, the next and more complex step is to successfully implement. The adoption of the technological opportunities offered by Artificial Intelligence (AI) in healthcare is no different.

In our 2017 healthcare report, ['What Doctor?'](#), we explored the perceptions and public attitudes toward AI and Robotics, and what would be required for people to engage with these technologies within the healthcare sector. Our survey findings showed that in the Middle East, over 65% of our survey respondents were open to the use of AI and Robotics to cater to many of their healthcare needs. This sends a clear and positive message that the public is ready to embrace the advancements in technology that are here now in order to obtain better and more personalised care.

The public's readiness raises new questions to a different audience: healthcare business leaders. If the readiness to embrace AI and Robotics in healthcare exists, and the landscape for doing so is favorable, what are healthcare leaders doing to embrace and positively lead this disruption? And how can they ensure changes to their organisations will be implemented smoothly, safely, successfully, and in a way that retains public faith in something that will radically change the face of health provision forever?

These are questions that must be addressed quickly, because the world will not stand still on the adoption of AI and robotics and it is making headway.

Research by CBI Insights found that some of the world's top 100 AI startups - *the AI 100* - had already raised a combined \$11.7B in equity funding last year alone. In healthcare specifically, investors had poured over \$1.79B in acquisitions and funding for 106 AI startups in healthcare in the first quarter of 2017. We are in the process of collecting responses to a survey that aims to understand the business readiness of healthcare leaders in the region. Preliminary results show us that while over 60% of respondents think AI and Robotics will have a major impact on their business in 10 years, less than 20% are actually doing something about it.

Powered with the knowledge that the public is ready, and with a young, digitally-connected and adept population, our region is in a unique position to capitalise on AI and Robotics in healthcare, and is given a new hope to tackle some of the biggest obstacles facing the health sector including the struggle to attract and retain a sustainable clinical workforce. The pace and agility of healthcare leaders' response to the opportunities presented before them will determine whether they will be paving the way for others, or end up playing catch up.

The need for 'now' has led us to build on our thought leadership from last year. Through new research we have identified seven key areas that healthcare businesses need to consider if they are to successfully implement AI and Robotics.

These allow us to actualize the impact of these technological advancements making what we once considered virtual, our new reality:

Leadership and Culture: Transformation requires the shedding of legacy thinking. To truly embrace AI, healthcare leaders have to understand technology and be capable of utilizing it. They have to look forward and see what is possible, not over their shoulder at what was done before. They must embrace big data and be decisive in decision making. They must never lose sight of the need for compassion and emotional intelligence to remain immovable pillars of true healthcare.

And even if they have all these qualities, they have to create a culture that is supportive of it.

Workforce Transformation:

Physical environments will change. New ways of working will have to be embraced. Workers will have to be prepared to learn new skills, and recognize which tasks cannot be replicated by machines. Crucially, this transformation has to embed the message that AI has the potential to be a job-creator, not a job-taker, and open the door to increased efficiency, greater focus on pure patient care, and skills development.

Clinical Effectiveness: Healthcare providers must target their AI and robotics investments into areas which bring the greatest patient benefit, not just through analyzing successful examples of implementation, but assessing their transferability, and capitalizing on the opportunity that Big Data offers to increase patients' involvement in determining their own care pathways.

Commercial Investment: AI has the potential to add trillions of dollars to the global economy through increasing productivity and catalyzing shifts in consumer demand and behavior. But companies can only translate AI into financial gain if they define how to use it to drive growth, provide new services, and improve the overall customer experience. In investment terms, they must know where to start, and what their endgame is.

Public Readiness: As our research has shown, the Middle East public is willing to see AI integrated into healthcare. But healthcare providers have to understand the drivers of this attitude, the specific areas in which people hope or expect AI to benefit them, the desire not to lose healthcare's 'human touch', and the imperative of retaining trust in transformation.

Regulation: Even if healthcare businesses can match AI's pace, regulation can be left lagging. As providers recognize how to protect themselves in the interim, Middle East governments have a chance to set a global benchmark for the promotion of

Would You Invest In a Digital Doctor?

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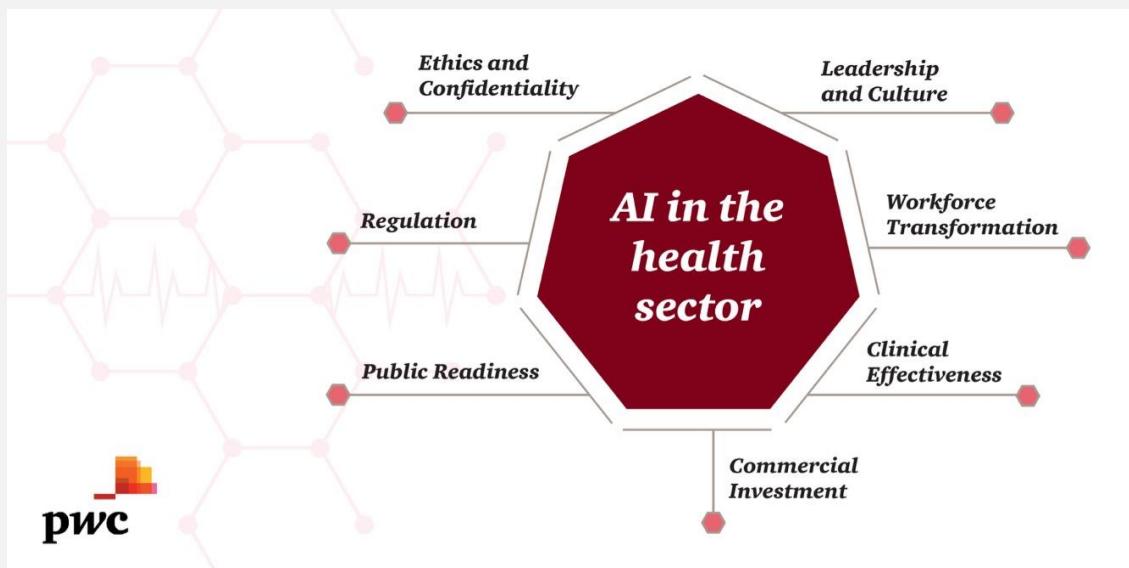
patient safety and the encouragement of innovation. A balance between dynamism and good governance has to be struck.

Ethics and Confidentiality: While healthcare providers need to be agile in the integration of AI, they cannot afford to lose sight of the need to avoid bias, protect social equality, build trust through transparency, and consider the consent clauses they will build into their systems in order to fully utilize future AI technologies.

AI comes with a lot of hype but none of it unsubstantiated - in fact, it [represents a USD\\$320 billion opportunity for the region, as the findings of our latest report on the economic impact confirmed.](#)

It represents not only one of the most potentially radical drivers of change that the region has ever experienced, but also one of the most exciting. But behind this excitement is the reality – the reality of integration, implementation, checks and balances, data analysis, strategy definition, investment focus, workforce management. If AI and robotics are the gleaming bodywork, the seven themes outlined here are the engine that gives it direction and purpose.

Public willingness to embrace AI and robotics as a central strand of the future of healthcare is clear across the Middle East. If the region's healthcare businesses are to ensure this is a lasting perspective, rather than an ephemeral one, they will have to recognize, understand, and be tested by the machinery of unprecedented transformation.



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