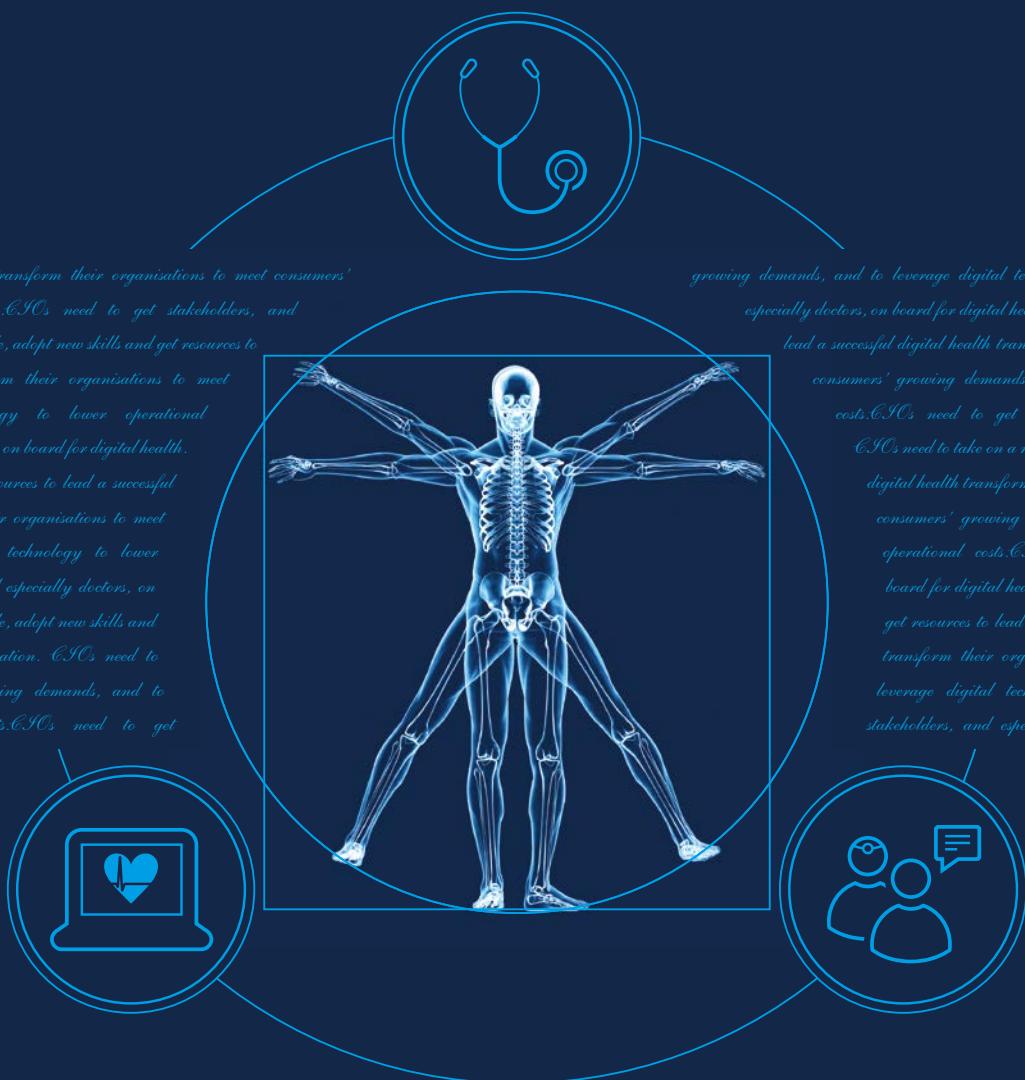


CIO perspectives on digital healthcare

Executive summary

CIOs need to transform their organisations to meet consumers' operational costs. CIOs need to get stakeholders, and take on a new role, adopt new skills and get resources to need to transform their organisations to meet digital technology to lower operational especially doctors, on board for digital health. skills and get resources to lead a successful transformation. CIOs need to transform their organisations to meet leverage digital technology to lower stakeholders, and especially doctors, on take on a new role, adopt new skills and health transformation. CIOs need to consumers' growing demands, and to operational costs. CIOs need to get

growing demands, and to leverage digital technology to lower especially doctors, on board for digital health. CIOs need to lead a successful digital health transformation. CIOs need consumers' growing demands, and to leverage costs. CIOs need to get stakeholders, and CIOs need to take on a new role, adopt new digital health transformation. CIOs need consumers' growing demands, and to operational costs. CIOs need to get board for digital health. CIOs need to get resources to lead a successful digital transform their organisations to meet leverage digital technology to lower stakeholders, and especially doctors, on



EXECUTIVE SUMMARY

Testing three hypotheses

The Accenture & Oxford Analytica CIO Survey is a multi-country assessment of the digital health transformation landscape across the healthcare ecosystem. The survey as a whole covers seven countries across three continents, and highlights the perspective of the individuals at the forefront of the transformation: the Chief Information Officers.ⁱⁱⁱ

The survey is based on an analysis of three hypotheses:

Hypothesis 1: CIOs need to transform their organisations to meet consumers' growing demands, and to leverage digital technology to lower operational costs;

Hypothesis 2: CIOs need to get stakeholders, and especially doctors, on board for digital health; and

Hypothesis 3: CIOs need to take on a new role, adopt new skills and get resources to lead a successful digital health transformation.

We have also ranked our focus regions on six individual metrics of digital engagement:

1. **Consumer focus:** the extent to which the CIO function is focused on consumers, as opposed to doctors or other stakeholders;
2. **Efficiency orientation:** the priority given to efficiency-focused objectives, whether within the organisation or within a regional ecosystem;
3. **Stakeholder engagement:** the extent to which the CIO function seeks feedback from key stakeholders on products and services;
4. **Clinical skills:** the extent to which the CIO function is expected to include direct clinical experience;
5. **Digital health orientation:** the extent to which organisations as a whole are prioritising digital solutions;
6. **Resource capacity:** the extent to which organisations have the necessary amount of time and capacity to implement digital health solutions.

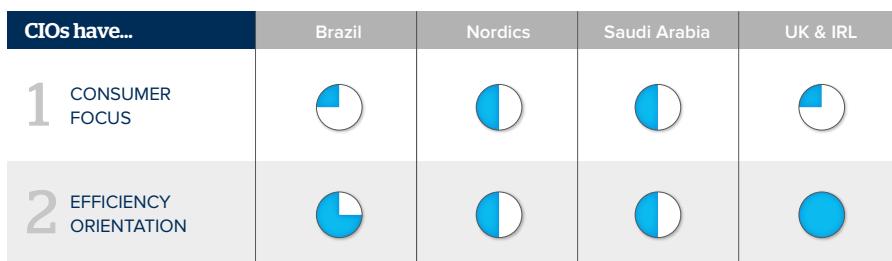
ⁱ and related executives performing in similar roles (Chief Technology Officers, Chief Digital Officers, IT Directors).

ⁱⁱ The survey comprised the following countries: Brazil, Finland, Ireland, Norway, Saudi Arabia, Sweden and the UK. 30 CIOs were interviewed between October 2016 and June 2017. Interview method was face to face and telephone comprising both closed and open-ended questions. Interviews were conducted by Oxford Analytica and Accenture executives

Finding 1: CIOs focus on their organisations more than on consumers

The first half of our first hypothesis was largely proven wrong by our set of surveys: CIOs' primary focus is on improving the functioning of their own healthcare institutions. While the digital health transformation was seen as an imperative to all CIOs we interviewed, the consumer stakeholder group is not the main driver of CIO activity.

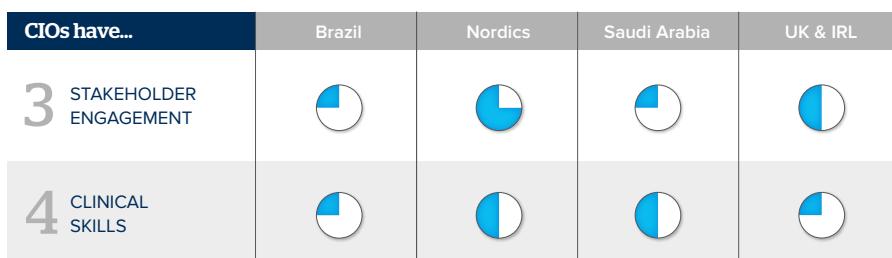
In Brazil, for example, efficiency-oriented objectives were seen as high priorities, with other goals not being seen as 'mission critical' in quite the same way. In Saudi Arabia, the CIOs we surveyed have primarily been responsible for driving efficiency improvements by automating support functions. In the UK, regional initiatives have struggled to get off the ground, due to a perceived lack of operational resources; instead, individual trusts see their own functions and services as higher priorities. The Nordic region also saw a conflict between local and national-level systems; disagreements over how to incorporate national-level services into local ecosystems have led to delays in implementation.



Finding 2: Some CIOs have a clinical focus; others do not

Hypothesis 2 was proven correct. We found that CIOs do indeed understand that they can only succeed in the digital health journey if they have supporters within their organisation. CIOs who do not have a clinical profile will generally find it beneficial to hire Chief Clinical Information Officers (CCIO). This is a model frequently applied in the UK, where the CCIO position was found to be a big help in easing communication between areas of different technical expertise. IT is not generally a part of the training of many doctors, which makes it difficult for them to take an active role in product development. The CCIO role may be particularly essential in places where CIOs are often recruited from outside healthcare altogether, such as Brazil.

Despite lacking a direct CCIO function, Saudi Arabia is an example of an environment in which many doctors are both engaged and demanding with respect to their IT needs. As such, they interact extensively with the CIO function, and intuitively understand the benefits of digital health initiatives. Our European respondents did not always report the same level of engagement, making the CCIO function crucial.



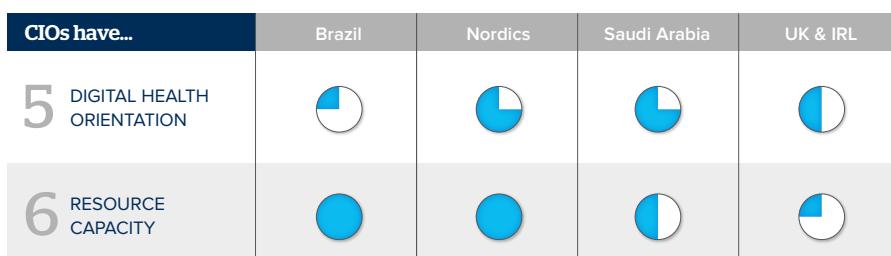
Finding 3: CIOs can be classified as either 'Operational' or 'Executive' CIOs

Hypothesis 3 was proven partially correct. A good number of CIOs interviewed do recognise the need for their own role to change, and the need to enhance and complement the capabilities of their team. Operational CIOs are responsible for managing large teams of people and keeping the organisation's IT infrastructure working. They are often recruited from outside healthcare altogether, from sectors that are seen as more digitally advanced. Their background is IT and informatics, rather than healthcare or clinical practice.

Executive CIOs are the drivers of change within the organisation. With a clear understanding of clinical practice, and the needs of both doctors and patients, such CIOs are acutely aware of the need to transform their organisation's practice and culture.

Our research found that a balance between the two roles was essential, and that any gaps in the CIO's skillset can perhaps be filled elsewhere. On one hand, where CIOs are of an operational nature, it could be helpful for the institution to hire a board member who plays the role of the 'digital visionary' instead. On the other hand, where CIOs are of an executive nature, it may be beneficial for the institution to hire a Chief Operating Officer to complement the CIO's vision with operational prowess.

In sum, we found that our initial hypotheses were proven partially correct. There are notable differences in the countries surveyed concerning CIOs digital health orientation, skills, resource capacity and stakeholder support. At the same time it became clear that there is no one single profile necessary for a CIO to allow digital health to flourish. Our aim was to identify some patterns and characteristics that stand out. We refer to the country specific reports for any reader who would like to learn more.





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