

## **A New Paradigm Applied: The Health Sector**

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We are facing a new paradigm driven by a discontinuity induced by technology change, i.e. the separation of information from physical goods driven by information technology diffusion.

To recap, the new paradigm has the following factors:

1. enables a massive growth in wealth
2. reduces transaction costs
3. requires trusted custodians of information
4. enables new forms of organisations
5. changes the boundaries between organisations and the market
6. creates the self-interest for people to own information defining their person
7. requires maximum storage of data to realise maximum returns

So, what does this mean for the health sector? To answer this question, let's define the health sector as that sector of the economy that is concerned with a person's well-being.<sup>1</sup>

The first point is that a massive growth in wealth in society should provide greater resources available for health, leading to an expansion of the products and services available to the Consumer. The separation of information from physical goods implies a deflation of physical goods prices in real terms, as so we can expect the real costs of drugs, medical equipment and buildings to decline in real terms. The emphasis should shift to collection of data to better measure people's health and enable earlier intervention, and the creation of new technologies to meet more niched needs.

The second point is that the cost of accessing health information will significantly drop in real terms. This can be enabled by automated diagnosis, remote service and customer-driven service models. Health sector suppliers, whether funded directly by the Consumer of the health product or service or indirectly through a funding agency, can be expected to remove people from the service delivery, and to enable international services in order to compete for the customer. Furthermore, a major reduction of transaction costs encourages independent or small-scale Suppliers, as their costs of service delivery can compete with large-scale Suppliers, while small-scale Suppliers can provide more personal service and improved innovation.

The third point is that health information will be held by trusted custodians. The Suppliers will relinquish control of the information in order to gain the dramatic reductions of costs available from using the trusted custodians, as the information is able to be reused to a greater extent and maximise the level of increasing returns available. The Consumer will increasingly realise the value of their personal and to a lessening extent trust the Supplier with personal information, thus reinforcing the trend. The trusted custodian will supply the information only when authorised by the Consumer to meet service requirements.

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<sup>1</sup> For the purposes of this paper, the health sector jargon of Practitioner, Provider and Recipient have been replaced by the generic Worker, Supplier and Consumer to enable better comparison with other economic sectors. The term Customer refers to the person or entity paying for the product or service.

The fourth point is that the separation of information from physical goods will enable new organisational forms. In the health sector as elsewhere, the dominant organisational form is a consequence of the relativity between the costs of operating a market and the co-ordination costs of managing employment contracts. A realignment of costs driven by reduced transaction costs as a result of online information services enables an online market for services and products. The most likely outcome is that health sector Workers will become self-employed practices sub-contracting services on a Consumer-by-Consumer basis. This change is an extrapolation of the current situation with the most highly skilled niche (and expensive) Workers, across the less skilled general sector (and cheaper) workforce. We can expect these new practices will contain higher skill levels in both the medical and general organisation areas in order to supply effective services in a more highly automated sector, where low-skill labour in the service delivery model has been substantially displaced by information-driven systems.

The fifth point is a change of the boundary between the organisation and the market. What is considered the organisation is blurred by the use of third-party practices rather than employment contracts to provide the workforce for services. The use of customer-driven service delivery will further blur the boundary between the organisation and the Consumers. Another blurring will occur between the boundaries of industries, as the health sector increasingly integrates with other economic sectors with the same Customers, including the physical fitness, beauty and recreation sectors.

The sixth point is the realisation by the Consumer that control of their personal information prevents abuse of information about their personal circumstances, prevents information being used in ways that are detrimental to themselves without their permission or knowledge, and shifts the balance of power to force Suppliers to provide improved service quality. The likelihood is that the Customer relationship will become more closely aligned with the Consumer rather than a funding agency, reducing the influence of third parties and their vested interests.

The seventh point is that to maximise the benefits to the Consumer, as much data as possible should be collected about their physical status and performance. We can expect monitoring of bodily functions to increase dramatically, as currently collected for high performance athletes. Similarly, monitoring of the mental processes can be collected through measuring brain activity and the reactions of people to their immediate environment. New technologies enabling non-evasive data collection can provide a wealth of information to allow more accurate diagnosis, automated warnings of pending issues and more automated service delivery.

These changes can all be predicted by applying a new paradigm of an Information economy. The consequence of these changes is a substantial improvement in the well-being of people, though at the cost of industry-wide change to realise these benefits. It can be expected that the vested interests will resist change until it becomes no longer viable, and then implode as their resources are stripped away by Suppliers focussed on the new paradigm. The ease of the transition depends on the skills and dedication of people in the sector to the consumer of their services.