

The two-sided market perspective of e-health

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1. Business models matter

Business models reflect the way, how organizations conduct commercial transactions and thereby create and capture value [1]. These models are meaningful boundary objects for explaining the relation between strategy and IT [2]: the same technology commercialized in different ways may result in different economic outcomes and value perceptions [3]. In healthcare contexts a systems may be justified by social cost reduction, such as patient travelling time, fares, loss of remuneration etc., but these are not changed as cash receipts and so the system provider is out of pocket while society gains.

Therefore it is important to not only deliberate on better “technical design” but also spend some thoughts regarding the “business design” of e-health services. Evidence exists that e-health initiatives that “survived” the critical first years were typically those, which generated sustainable profits in combination with a well-defined value proposition to the patient [4]. Accordingly, the design of business models matters since success is not only reliant on superior technological design.

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2. E-health as example for a two-sided market

A complexity that is added when observing e-health from an economic lens is that it frequently takes the form as two-sided market. Two-sided markets refers to a situation where two distinct stakeholder groups interact with each other through a common platform and the value of joining the platform depends on expectations about the opposite network size [5]. An example of two-sided markets can be found in various industries such as credit cards (cardholders and merchants), real estate brokerage (renters and landlords), internet portals and search engines (sites, surfers); magazines (readers and writers); yellow page directories (readers and businesses); night clubs (men and women); shopping malls (shoppers and shops), publication software (authors, readers), videogame consoles (gamers and developers), as well as various types of intermediation services such as matching and employment agencies, auction houses, service vouchers networks, payment systems, some telecommunication systems, scientific journals, and eventually also healthcare!

Typically, these two distinct stakeholder groups cannot contract directly (as in the case of healthcare where the services are normally provided by an organization but paid by another). The transaction costs of the customers individually reaching enforceable agreements to internalize network effects are too high, and would result in free rider problems. In addition to this, usually, the vendor sells a system; an organization buys that system; but the user in the form of the practicing professional is both the beneficiary and the true client, delivering care in a better way because of the system. Value, price paid, and economic gain are different for the end user and the organization, and neither value set may relate to the cash cost and thus the supplier's income (against their cost base).

As a result a third-party usually creates a place or space—a platform—where the different groups of consumers/users can get together. In such situations, the need to get on board agents on all sides of the platform creates a so-called “chicken and egg” problem in that members of each group are willing to participate in the market only if they expect many members from the other side to participate. Yellow pages, portals and auction houses, to name a few undertake this crucial function—they build a platform to bridge two or more sides together and thus enable market mechanisms to unfold.

3. Goals and structure of the workshop

This workshop will introduce the components of an ecosystem in a two-side market. In particular, we will discuss and offer some food for thoughts regarding the “chicken and egg” and “two-homing” issues and business models.

The workshop is composed of two parts. In the first part of the workshop, the participants will learn about the components of the ecosystem of a two side market and its requisites to success. They will also be involved in the review of the components of the ecosystem.

During the second part the participants will be faced with the question as to which business models are possible to use in their particular e-health context. Participants will

work in small groups and discuss alternative business models that can be used for different e-health applications and health systems. We will further introduce some alternative examples to encourage a lively discussion.

The content of the discussion will be summarized and the speakers will seek the publication of an opinion paper with the conclusions of the panel in one of the official IMIA journals.

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