



HAL
open science

Potential Business Models for Innovative ICT Platform of eHealth Services

Pierre Mabile, Angele Martin, Gabriele Breda, Fateh Belaid, Robert Picard, Myriam Le Goff-Pronost

► **To cite this version:**

Pierre Mabile, Angele Martin, Gabriele Breda, Fateh Belaid, Robert Picard, et al.. Potential Business Models for Innovative ICT Platform of eHealth Services. Med-e-Tel 2014: the international ehealth, telemedicine and health ICT forum for education, networking and business, Apr 2014, Luxembourg, Luxembourg. hal-01007563

HAL Id: hal-01007563

<https://hal.science/hal-01007563>

Submitted on 29 May 2023

HAL is a multi-disciplinary open access archive for the deposit and dissemination of scientific research documents, whether they are published or not. The documents may come from teaching and research institutions in France or abroad, or from public or private research centers.

L'archive ouverte pluridisciplinaire **HAL**, est destinée au dépôt et à la diffusion de documents scientifiques de niveau recherche, publiés ou non, émanant des établissements d'enseignement et de recherche français ou étrangers, des laboratoires publics ou privés.

Potential Business Models for Innovative ICT Platform of eHealth Services

P. Mabilles¹, A. Martin², G. Breda², F. Belaid³, R. Picard⁴, M. Le Goff-Pronost⁵

¹Ecole d'Economie de Paris, Paris, France pierre.mabilles@ens.fr

²Altran Research, Vélizy-Villacoublay, France
angela.martin@altran.com, gabriele.breda@altran.com

³Centre Scientifique et Technique du Bâtiment, Département Economie et Sciences Humaines, Marne-la-Vallée, France
fateh.belaid@cstb.fr

⁴CGEiet- Ministère de l'Economie, de l'Industrie et de l'Emploi, Paris, France robert.picard@finances.gouv.fr

⁵Télécom Bretagne, Plouzané, France myriam.legoff@telecom-bretagne.eu

Abstract: The recent widespread of innovative ICT eHealth services platform at the international and transnational levels confirms their market booster position in structuring the emerging eHealth sector. Indeed, such platforms can provide different types of both medical and social services packaged in a “bouquet”. The integration of ICT platforms in the medico-social sector brings interesting opportunities in terms of economic and social benefits (medical cost reduction, better health care, enhanced coordination and data sharing amongst stakeholders etc.), but also risks, causing economic, human and ethical barriers. While many studies have identified key success factors for these projects, this paper proposes to move forward and study what are the possible sustainable business models for Innovative ICT Platform of eHealth Services. In the light of digital economy and through microeconomics theory, this paper offers potential solutions to deal with various types of contracts and pricing models, related to revenue structure models. However, the potential models discussed may be difficult to transpose to the ICT eHealth sector since its specific nature (confidence, ethics) needs to be taken into account.

Introduction

After the widespread development of ICT in organizations and in everyday life, their recent introduction into the medico-social sector is leading to an emerging sector (ICT & Health). In France, this market trend is emphasized by the ageing of the population and the related increasing public health expenses. In order to overcome geographical remoteness and medical desertification, ICTs are able to transform health systems by reducing costs and improving health care through enhanced coordination and data sharing amongst stakeholders [1]. On the downside, the development of French ICT medico-social sector faces human and ethical barriers but also organizational, change management and return on investment questions. Problems related to the definition of new eHealth Business Models are addressed: value proposition as well as financial, coordination, interoperability, legislation, data security, pricing or reimbursement issues [2]. While many studies have identified key success factors for eHealth projects, this paper proposes to move forward and study the possible sustainable business models for the frequent case of Innovative ICT Platform of eHealth Services and offers potential solutions to deal with various types of contracts and pricing models, related to revenue structure models.

Methods

From a theoretical point of view, the business model of the platform has a generic value. From an economical point of view, an analytical decomposition of the platform is possible. Firstly, we consider the platform and its partners as a single block, connected to the environment by financial flows. Secondly, we analyze the type of links connecting the platform to each partner. As a result, the platform business model can lead to: a vertical integration of economical partners on the upstream and the downstream of the platform value chain or the constitution of an integrated sector with agreements similar to subcontracts or the emergence of a meta-

mediation and an oligopolistic market control. In the light of digital economy and through microeconomics theory, this paper discusses potential ICT platform pricing models and contracts, related to revenue structure models.

Discussion

The platform added value consists in service mediation, integration and coordination by platform partners. Free access to the platform or “entry fees” may be applied to platform beneficiaries. They can subscribe to a set of services packaged in a “bouquet” and so, a group pricing is applied, following the “triple play” offer of telecom network providers. This pricing model is even more suitable in the case of eHealth services based on the use of telecom networks since their marginal cost is close to zero. If the entry fees are limited or inexistent, the use of medico-social services is billed to their beneficiaries as “user fees”. The two pricing models presented above may be adapted if third party financers’ subsidies are granted to depended individuals, service providers or to the platform. In addition, if the needs and resources of the beneficiaries are taken into account then third degree price discrimination is applied.

The structure of an integrated medical and social ICT market may be considered as a two-sided market [3], the platform matches the demand and the supply. The optimal price couple formed is determined by the cross-over network positive externalities of the two sides i.e. the participation of one side increases the participation of the other side depending on the billing of entry and user fees conditions. The platform users (depended individuals and their caregivers) are on the *subsidy side* because their number is the main value source for the *money side* (service suppliers).

Concerning the revenue structure models of ICT platforms, several models are proposed; all share the fact that

services are free for the final user. Different financial bases of business models are transposable to the medical and social sector only if its specific nature is taken into account. Therefore, confidence is a key element of the health sector and ethics becomes a more sensible and demanding element when dealing with fragile or ill individuals.

The subscription model is frequently used in the medical and social sector for the platform entry and use fees. The advantages of a “triple play” offer as a particular form of subscription models are: it is already largely used for digital services; it is suitable for medical and social services because of their medium and long term delivery (e.g. remote monitoring); it may be associated to other financial sources. However, the disadvantage of this subscription model is the consumer’s long lasting imprisonment feeling together with the irreversibility of ageing, illness and disability, more stigmatizing than short term pricing.

Conclusions

Today, ICT platforms of eHealth services represent an integrating model that tends to emerge. Based on digital economy and through microeconomics theory, this paper proposes structuring solutions in terms of pricing models, contracts and structure revenues adequate to the specificities of the ICT medico-social service sector.

References

- [1] European Commission, “Overview of the European Strategy of Ageing Well” October 2010.
- [2] T. Spil, and B. Kijl, “E-Health Business Models: from Pilot Project to Successful Deployment”, in *IBIMA Business Revue*, vol. 1, 2009.
- [3] J. C. Rochet, and J. Tirole, "Two-sided markets: a progress report," *RAND Journal of Economics*, RAND Corporation, vol. 37(3), pp. 645-667, 09, 2006.