# Continuous Assurance and the Use of Technology for Business Compliance

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## INTRODUCTION

The concept of Continuous Assurance began to arouse much interest when in 1999 a joint committee of the AICPA (American Institute of Certified Public Accountants) and the CICA (Canadian Institute of Chartered Accountants) took up the issue of Continuous Assurance and defined it as a set of services and technologies which enables independent auditors to provide written assurance on a subject issued simultaneously with, or a short period of time after, the occurrence of events underlying the subject (Vasarhelyi, Alles & Williams, 2010). Nowadays, the concept of Continuous Assurance is still relevant due its contribution to the current organizational context, in which there is a fierce competitiveness and a constant need for more timely, relevant and reliable information to support the decision making and achieve the strategic and operational objectives.

In this context of constant change and increasing competitiveness, seeking productivity gains and improving management tools have been a core priority. Thus, Continuous Assurance has been asserting itself and assuming an increasingly important role within organizations, with the function of management support and, in general, to ensure the economic and efficient use of resources, areas where the effects of the impact of new risk factors caused by the constant change, fierce competition and widespread access to global information are more felt (Morais, 2008).

Continuous Assurance and Auditing are sometimes used interchangeably. However, assurance is a much broader concept than auditing because whilst auditing is a systematic process of obtaining and evaluating evidences on organizational data and transactions in order to verify their compliance to standards, policies, or rules, assurance additionally includes professional services that ensure quality of information or its context, for decision makers (Soltani, 2007).

This chapter provides the concept of Continuous Assurance, its objectives and components, and a model which allows both to evaluate information systems with Continuous Assurance services and to help design the requirements of new ones. Finally, some implementations are also presented providing a comprehensive understanding the state-of-the-art and the benefits of Continuous Assurance.

## BACKGROUND

Continuous Assurance is defined as the application of emerging information and communication technologies to the standard techniques of auditing, both mandatory periodic auditing and internal auditing. In that view, Continuous Assurance is a new step in the evolution of transactional auditing from manual techniques to automated methods. The term "continuous" does not mean real time, but to be effective considering, respecting and being consistent with the pulse and rhythm of each organizational transaction and process (Vasarhelyi *et al.*, 2010).

Furthermore, Continuous Assurance emerges as a set of services which aims to restore the credibility of auditing, simultaneously allowing organizations to meet the requirements of regulations. Hence, it can diagnose the company's

viability and allegations of fraud and illegal acts, assessing the economy, efficiency and effectiveness of organizations (Murcia, Souza & Borba, 2008; Vasarhelyi *et al.*, 2010).

In 2006, a survey (PricewaterhouseCoopers, 2006) concluded that Continuous Assurance triggered corporate sensitivity to its adoption because in 2005 only 35% had a continuous auditing or monitoring processes in place or were planning to develop one, and this value increased to 50% in 2006. It is interesting to observe that 56% of respondents said their continuous auditing processes include both manual and automated elements, 41% indicated their processes are entirely manual, and 3% reported having fully automated processes.

Another study by Institute of Internal Auditors and ACL (2006) also showed similar results: 36% of surveyed organizations confirmed they implemented a Continuous Assurance approach in all their business processes or simply in some selected areas, and 39% intended to implement in the near future. However, it also states that regardless of the reasons that organizations may have had to neglect the continuing auditing in the past, the recent regulations, the stimulus for real-time monitoring and reporting of financial information and the ability to automate the traditional audit methods have strongly encouraged its adoption.

The issues discussed regarding the motivations which are driving Continuous Assurance include: the growth of complexity and amount of data, the growth of electronic exchange of information and outsourcing, the integration of the value chain; reports available on the Web, and the users' desire for reliable information and disclosed more frequently, more timely and more detailed; and the need for disclosure of updated information imposed by the Sarbanes Oxley Act (section 409) (Brown, Wong & Baldwin, 2007).

Brown, Wong and Baldwin (2007) reviewed more than 60 articles on this topic and concluded that Continuous Assurance was still a concept for most organizations and a goal for the future. The implementation of systems with continuous assurance services was residual when comparing with continuous monitoring and continuous auditing systems. These latter systems presented high levels of maturation regarding their implementation in the inquired organizations.

According to the section "Implementations" of this chapter, we can see that the implementations designated as providers of Continuous Assurance services, in the period 2002-2015, were still few and with some limitations regarding the diversity of services that Continuous Assurance should be expected to offer. This shows that this area is still developing and maturing.

## CONCEPT

The concept of Continuous Assurance refers to the set of services which, by means of technology, uses the information immediately and produces audit results simultaneously with or within a short period of time after the occurrence of relevant events. Furthermore, it allows analytical monitoring of business processes. It is intended to be timely, more comprehensive, more accurate and more supportive to management than the traditional auditing (Alles, Kogan & Vasarhelyi, 2003, 2004; Vasarhelyi, Alles & Kogan, 2004).

Moreover, Continuous Assurance has provided a change in the auditing practice for the maximum possible degree of automation. Given the emphasis on the transformation of the entire auditing system, the development of Continuous Assurance requires a fundamental reassessment of all aspects of auditing, in particular on how data is made available to the auditor, how alerts are managed, what kind of reports are issued, and how often and to whom they are sent (Vasarhelyi *et al.*, 2010).

According to IFAC (2004), the subject matter, and subject matter information, of Continuous Assurance can take many forms, such as:

- Financial performance or conditions (for example, historical or prospective financial position, financial performance and cash

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