

A Functional Architecture for the Elicitation, Design and Specification of Business Decisions and Business Logic



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Introduction

- A sector that depends highly on business intelligence and analytics technology is the accountancy sector.
- Accountants rather use the term Computer Assisted Audit Techniques (CAATs) [5]
- Accountants have formulated three different methods of real-time business intelligence namely:
 - 1) continuous monitoring
 - 2) continuous auditing
 - 3) continuous assurance

Introduction

- Despite the accumulation of literature, there is a surprisingly scarce amount of research that examines the manner in which the technology is applied, and in addition, whether accountants think that continuous monitoring, continuous auditing and continuous assurance are practically feasible.
- We aim to answer the following RQ:

“What are the usage scenarios of continuous monitoring, continuous auditing and continuous assurance according to accountants?”

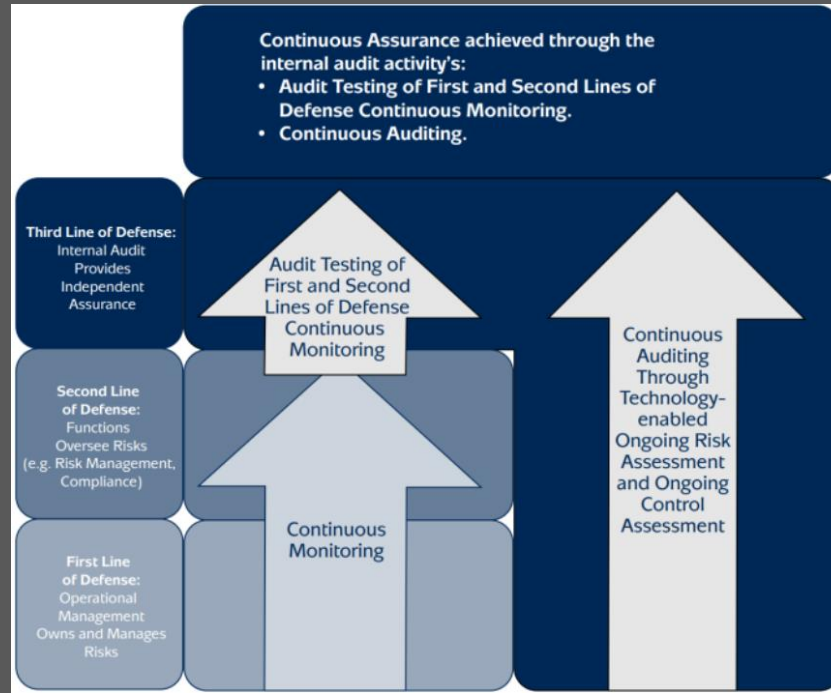
Background and Related Work



- Continuous Monitoring (CM) is a method that monitors, on an ongoing basis, whether internal controls are operating effectively [13].
- Continuous Auditing (CA) is a method that combines technology-enabled ongoing risk assessment and ongoing control assessments.
- Continuous Assurance (CAS) is performed by internal or external audit and is a combination of CA and testing of first and second lines of defense CM. It does so, using technology, by processing information immediately to produce audit results simultaneously or within a short period after the occurrence of relevant events [12].

Background and Related Work

- CM, CA and CAS processes are visualized in the following figure:



Research Method



- Quantitative research
- The goal of this study is twofold: firstly, to identify the perceived use of different methods by accountants and to study if accountants are able to make a distinction between different methods.
- Sample: members of the Dutch national accountant's association, spread over several accountancy agencies in the Netherlands
- Two types of accountants included: 1) accounting consultants/auditors (AA in Dutch) and 2) chartered auditor (RA in Dutch)

Research Method



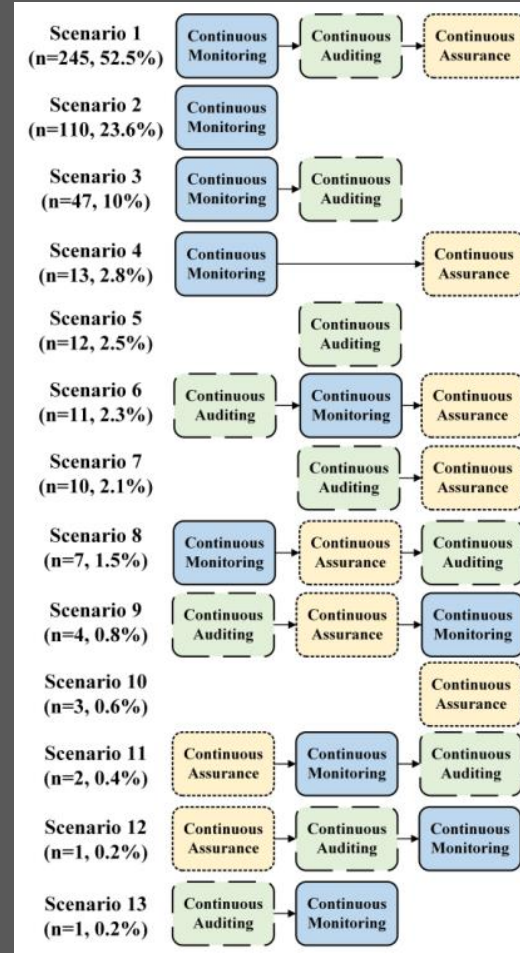
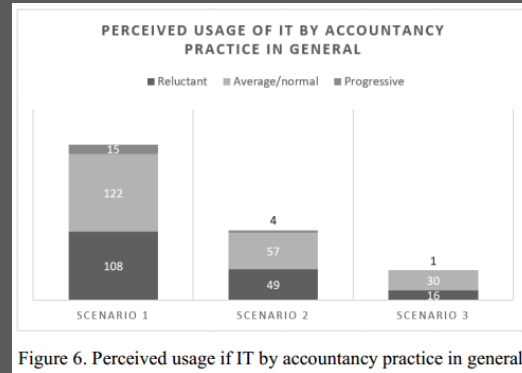
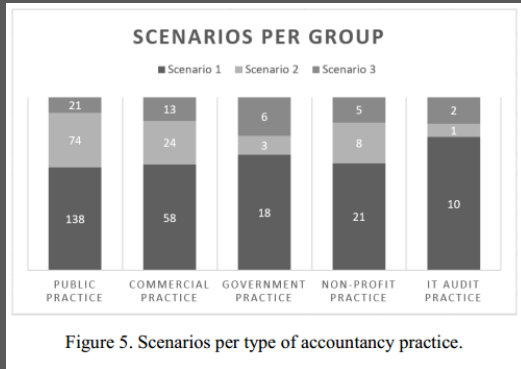
- The goal of this study is twofold: firstly, to identify the perceived use of different methods by accountants and to study if accountants are able to make a distinction between different methods.
 - The survey was distributed to a sample of 8,393 respondents in total, 727 responded, which is a response rate of 8.66%
 - The respondents could return the survey starting from July 11, 2019, until October 16, 2019

Data Analysis



- To establish the narrative scenarios from the data collected, a process mining algorithm is applied in Microsoft Power BI
- Three input variables were used:
 - 1) the case ID, represented by the respondent ID (e.g., 004, 452)
 - 2) the activity ID, represented by the application of the method (CA, CM, CAS)
 - 3) the timestamp, represented by the timeframe the respondent thinks the method will be applied, e.g., currently applying the method and one to five years

Results



Conclusions

- From a literature point of view, the scenario of 1) continuous monitoring, 2) continuous auditing, and 3) continuous assurance is the most fundamentally researched and proven approach, e.g., see [13][24][25]
- The same holds for the practical application of IT in accountancy, where it is, from a technical point-of-view, impossible to first establish continuous assurance before continuous monitoring is implemented

Conclusions

- There are, however, accountants that aim to utilize alternative approaches in utilizing CA, CM, and CAS.
- An explanation for combinations that seem impossible to implement in practice could lie in the fact that respondents believe that only part of the methods of 1) continuous monitoring, 2) continuous auditing, and 3) continuous assurance lies within their responsibility



Discussion and Future Research



- Limited response rate impacts the generalizability of this study
 - Only Dutch accountants, which is partly influenced and dependent on national practices and education system
 - Larger sample sizes to increase generalizability
- Focus on empirical experience, opinions and perception by accountants. Future research should focus on actual usage (hard figures) of CM, CA and CAS technology.

References



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Any questions?



- If you have any questions or feedback on this presentation or the paper underlying this presentation, please contact Koen Smit: koen.smit@hu.nl