

**Ten considerations for conducting Root Cause Analysis in auditing**

**–Practice Note–**

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## **Executive summary**

Root cause analysis is an established process in a number of industries and is a developing area in the audit profession. This practice note speaks to the question of what constitutes root cause analysis specific to the auditing profession (as varying root cause analysis methods may potentially be more or less effective within the auditing context). For audit firms (large and small) wanting to apply root cause analyses as part of their quality assurance systems, the following ten considerations are discussed that are relevant for effectively and efficiently producing root cause findings and recommendations concerning the improvement of audit quality:

1. Root cause analysis, when done properly, can be a powerful tool for collective team-based learning, designed to avoid blame and strengthen continuous improvement.
2. Root cause analysis is about understanding human behavior and judgement and decision making: things that go wrong, often happen in the same way as things that go right.
3. There is not one single root cause to “fix” in the complex organizational context of auditing: incidents may happen that are reasonably beyond management control.
4. Root cause analysis findings and recommendations are not always interventions: it is up to management to weigh recommendations and decide on their “organizational fit”
5. Root cause analyses should be rigorous enough to allow for “evidence-based-change” only: formulating effective actions is more difficult than finding problems.
6. Strong recommendations rely less on a change in human behavior, but are practical, sensible, achievable, and actually measurable as far as what can be implemented.

7. Root cause analysis is a collaborative and dialogic process requiring time, human behavior expertise, and communication skills across professional and social boundaries.
8. Interviewing audit staff that depend on personal performance and professional accountability in their career development is a specifically daunting task.
9. Next to audit deficiencies as 'triggering events", good quality analyses and analyzing 'near misses' result in richer and stronger root cause analyses.
10. Next to engagement level root cause analysis, more holistic thematic and audit firm level analyses most likely deliver deeper insight and better results.

**Key words: root cause analysis, quality assurance, organizational learning, audit quality**

## **Introduction**

Root cause analysis is a term to indicate a collection of methods or tools used to find root causes, and causal interdependencies, that can explain a specific adverse outcome (e.g., Doggett 2005; Besnard & Hollnagel 2014). It is about underlying causes, not just the apparent causes. Identifying root causes is the key to preventing similar recurrences (e.g., Handley 2000; Yuniarto 2012).

There is an increase in the use of root cause analysis in the financial auditing profession, as part of audit firms' internal quality assurance systems to enhance audit quality (e.g., PCAOB 2013; ACCA 2016; FRC 2016; ICAEW 2016; IFIAR 2016, 2018; AFM 2017; NBA 2019). The FRC notes, for example, that "Root cause analysis is an established process in a number of industries and is a developing area in the audit profession, where it typically relates to understanding why deficiencies have occurred in audits" (FRC 2016, 5). This is in line with a call for such analyses by public policy makers (e.g., PCAOB-SAG 2010, 2014; PCAOB 2012, 2017; IAASB 2015; IFIAR 2016; AFM 2017; CEAOB 2018) and fits well in the "plan-do-check-act" cycle described, for example, by the Dutch Authority for the Financial Markets in its 2017 inspection report on the auditing profession (AFM 2017). The PCAOB started to study the use of root cause analysis by audit firms during their inspection process (PCAOB-SAG 2014, 4) and report that "firms are in varying stages of development of their root cause analyses" (PCAOB 2017, 8). At the same time they note: "In response to successive inspections that have continued to identify audit failures, the PCAOB has pressed firms to engage in more rigorous root cause analysis and to take more significant steps to address what may be deeply rooted management and cultural impediments to audit quality" (PCAOB-SAG 2010, 5).

However, there are several types of root cause analysis, which probably differ in effectiveness in the context of auditing. To a large extent it is still unclear how root

cause analysis methods are best to be applied in auditing practice. Therefore, this practice note focuses on specific considerations regarding the use of root cause analyses in the auditing profession.<sup>1</sup> This note first touches upon root cause analysis in general, before focusing on ten considerations.

### **Root cause analysis**

*"Typically, an incident report will provide an organization with (...) the emphasis on developing a description of the consequences rather than causes of the incident, explaining what happened, but not why it happened. (...) It is only by adopting investigation techniques which explicitly identify root causes, i.e. the reasons why an incident occurred, that organizations may learn from past failures and avoid similar incidents in the future"* (Livingstone et al. 2001, 1).

The basic principles of root cause analyses are based on the assumptions that "the propensity of humans to make errors cannot be eliminated" (Taitz et al. 2010, 1). But rather than blaming an individual for making an error, it may be wiser to look for a root cause or a set of root causes that can be formulated reflecting underlying system vulnerabilities which allow human error to cause adverse events (e.g., Wald and Shojania 2001). Root cause analysis therefore seeks to isolate the "true cause" of an event (Iedema et al. 2006b, 1613) and to make organizations "error wise" (Taitz et al. 2010). Root cause analysis comprises three basic questions: (1) what happened?; (2) why did it happen (by going stepwise backwards from an effect to the causes)?; and (3) what can be done to prevent it from happening again?; and (4) has the risk of recurrence actually been reduced? (e.g., Livingstone et al. 2001, 1; Wu et al. 2008;

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<sup>1</sup> Based on literature review results as per March 2019.

Besnard and Hollnagel 2014, 6). It “repeatedly digs deeper by asking ‘why?’ questions until no additional logical answer can be found” (Rogers et al. 2006, 135).

Root cause analyses were originally developed in psychology and systems engineering to identify the basic and causal factor(s) that underlie variations in performance (e.g., Wu et al. 2008, 685). Its origin lies in the sequence diagrams developed by Benner and colleagues (Benner 1975), Buys and Clark’s (1978) “events and causal factors charting” and Toyota. Root cause analysis has been applied in fields like manufacturing, healthcare, aviation and other transportation, safety, defense, or offshore industry.<sup>2</sup> Such methods and experiences might have great promise to help understand root causes in the audit profession because it “enables the identification of appropriate remedial actions to drive continual improvement” (PCAOB-SAG 2014, 8). The ICAEW adds that root cause analyses “can be used by firms of all sizes [while at the same time] a nuanced approach and tailoring to firm’s circumstances (...) is a key component of effective root cause analysis” (2016, 1).

As an organizational learning method (e.g., Heget et al. 2002) and systems analysis device (e.g., Rogers et al. 2006, 135) root cause analyses are designed to identify the critical events (or “triggers” to start a root cause analysis) for “systematically investigating the management and organizational factors that allowed the active failures to occur” (Livingstone et al. 2001, 46). With that, root cause analysis is meant to avoid blame (e.g., Naquin and Kurtzberg, 2004) but rather “displaces attention away from individuals’ actions to focus instead on systemic and recurrent practices” (Iedema et al. 2008, 572-3). It is geared towards analyzing adverse events and find the underlying basic cause over which management has “control to fix” (Paradies and Busch 1988). Control to fix means that a cause is a root cause only when it is “specific enough to allow those in charge to rectify the situation”

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<sup>2</sup> For example, Bagian et al. (2002) and Neily et al. (2003) were amongst the first to study the RCA methods applied in healthcare.

(Livingstone et al. 2001, 1), i.e., it should be a “knob” one could turn, a fixable problem. However, given the complexities in organizational life in general it is important to acknowledge that there will be instances where incidents happen that are reasonably beyond management control (e.g., Livingstone et al. 2001, 2).

Several root cause analysis tools are being used to find various causal factors that can explain a specific adverse event.<sup>3</sup> Hibbert and colleagues note (2018, 125): “Root cause analysis represents a ‘toolbox’ of approaches rather than a single method (...) However, all versions use a structured process of creating chronological maps that track the time and sequence of relevant events, undertaking interviews and analysis of other data sources, and developing cause and effect diagrams and recommendations”. The question is, however, how these methods can effectively be applied in the context of auditing.

### **Root cause analysis in the context of the auditing profession**

What are the specific characteristics of the auditing profession that would call for an auditing-specific root cause analysis method (as compared to the general methods)? Examples of institutional characteristics of the auditing profession are ambiguity in professional judgment and decision making in the audit of financial statements; team and client interactions and interdependencies; psychological safety versus personal and professional accountability; career development closely related to high performance; and accountability towards a diverse and dispersed group of third parties. Therefore, when implementing root cause analysis in the auditing profession, the following ten considerations are relevant for effectively and efficiently producing

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<sup>3</sup> See for overviews, for example, Livingstone et al. 2001, Besnard and Hollnagel 2014, FRC 2016, ICAEW 2016.

root cause findings and recommendations concerning the improvement of audit quality:

1. Root cause analysis, when done properly, can be a powerful tool for collective team-based learning, designed to avoid blame and strengthen continuous improvement.
2. Root cause analysis is about understanding human behavior and judgement and decision making: things that go wrong, often happen in the same way as things that go right.
3. There is not one single root cause to “fix” in the complex organizational context of auditing: incidents may happen that are reasonably beyond management control.
4. Root cause analysis findings and recommendations are not always interventions: it is up to management to weigh recommendations and decide on their “organizational fit”
5. Root cause analyses should be rigorous enough to allow for “evidence-based-change” only: formulating effective actions is more difficult than finding problems.
6. Strong recommendations rely less on a change in human behavior, but are practical, sensible, achievable, and actually measurable as far as what can be implemented.
7. Root cause analysis is a collaborative and dialogic process requiring time, human behavior expertise, and communication skills across professional and social boundaries.
8. Interviewing audit staff that depend on personal performance and professional accountability in their career development is a specifically daunting task.
9. Next to audit deficiencies as ‘triggering events”, good quality analyses and analyzing ‘near misses’ result in richer and stronger root cause analyses.
10. Next to engagement level root cause analysis, more holistic thematic and audit firm level analyses most likely deliver deeper insight and better results.

Each of these ten considerations is covered in more detail below.

**1. *Root cause analysis is a method for organizational and team-based learning***

Primarily, root cause analysis is an organizational learning method. While learning from error climate is particularly relevant to auditing (e.g., Gold et al. 2014), “team-based incident analysis enables frontline staff to investigate infrequent but nonetheless significant errors that are peculiar to their organization and practices” (Wald and Shojania, 2001). With that, root cause analysis contributes to “bringing organizational un-decidability to the fore by requiring frontline staff and senior managers to negotiate about reconciling conflicting goals, rather than retreat into the apparent securities offered by professional autonomy and hierarchical control” (Iedema et al. 2008, 582). In other words: root cause analyses, when done properly, can be a powerful tool for collective organizational learning. Such team-based learning is intended to avoid auditors being drawn away from their primary audit work by administrative performance evaluations and quality reviews.

The FRC notes in that regard that “a key objective of root cause analysis is to improve audit quality by having a better understanding of how audits can improve. It is part of a continuous improvement cycle of inspecting audits, investigating the root causes for inspection results and improving the firms’ ability to act on them through implementing effective actions” (FRC 2016, 6). Such methods are designed to avoid blame. Rather, root cause analysis methods focus on how audit staff could investigate each other’s errors and formulate organizational improvement recommendations based on that.

## **2. *Root cause analysis in auditing is about human behavior***

Auditing is a professional service provided by professionals and they sometimes make errors, like all humans (e.g., Taitz et al. 2010, 1). Concurrently, the flexibility and adaptability of human performance and professional judgment is central to high audit quality (cf. Reason 2009). This specifically relates to the high levels of auditors' professional judgment and decision making involved in auditing (e.g., Bonner 1999; Nelson and Tan 2005) and the effects of contextual or environmental features thereon (e.g., Libby and Luft 1993; Trotman et al. 2011). Therefore, audit quality cannot be exhaustively proceduralized, because auditors need to respond quickly to unfolding complexities during an audit.

Yet, many of the effectiveness issues of root cause analyses circle around failing to consider human factors (e.g., Hibbert et al. 2018, 126) and failing to see that things that go wrong, often happen in the same way as things that go right (e.g., Besnard and Hollnagel 2014, 6). Things go right and wrong for the same reasons and under the same organizational settings. It is probably for this reason that ACCA points out that "it is important that analysis of causal factors adopts a 'human factors' approach that seeks to understand why people behaved the way they did" (ACCA 2016, 15-16).

## **3. *There is not one single root cause in the complex organizational context of auditing***

Audit firms' governance policies and systems of quality control are not the only factors that drive and control auditor behavior. Rather, it is the most mundane of everyday activities and occurrences that have normative behavioral meaning. People behave the way they do, primarily based on the meaning they attach to everyday events within their social context (Smircich and Morgan 1982). It is the overall pattern of signals sent by the complex web of formal (but also often tacit and informal)

practices, rules, and policies across the audit firm that result in socially shared meanings in the minds of the organization's members (e.g., Schein 2010). The increasing complexity in audit firms result in a configurational "malaise" of organizational conditions that inform professional behavior (e.g., Schneider 1975; Zohar and Hofmann 2012) at different levels: within the audit team, within the audit firm, and within the auditor-auditee interaction. This challenges the way root cause analyses leads to effective in resolving adverse events and enhancing audit quality.

Firstly, although incidents typically have more than one causal factor (e.g., Livingstone et al. 2001, 47), many root cause analyses overly focus on identifying the single "most fundamental reason" for error (e.g., Wu et al. 2008, 686). However, the root causes of adverse events rather lay in chains of events and decisions. Or as the PCAOB illustrates this: "Common misconceptions of root cause analysis are that only one factor is the cause of an issue or that there is a single solution. That may not be the case, at least not in complex environments, such as audits. There may be multiple contributing causes that converge to cause a negative quality or positive quality event" (PCAOB-SAG 2014, 9).

Secondly, root cause analysis assumes a more or less linear relation between causes and effects. This is why many of the root cause analysis methods are based on the idea that cause-effect links are followed in reverse order to discover where the problem started. However, this view is already problematic for fairly straightforward technical processes (Manion 2007), let alone for complex socio-technical systems like auditing (Besnard and Hollnagel 2014, 6-7). This means that there are many cases where root cause analysis methods, such as the 'five-whys technique', cannot—and should not—be used because they appear to be too linear and limited for complex

systems (e.g., Besnard and Hollnagel 2014, 7; PCAOB-SAG 2014, 9).<sup>4</sup> Such root cause analysis methods “do not show the many intricate interrelationships between each cause and effect” (PCAOB-SAG 2014, 9).<sup>5</sup>

Thirdly, ledema and colleagues (2006a) note that root cause analysts should have the freedom to consider solutions to errors that rely not just on expanding procedures and rules.<sup>6</sup> The complexity of auditing goes beyond what can be formalized (e.g., Taylor 1993). For root cause analyses to be effective in enhancing audit quality this requires “solutions different from those provided by the bureaucratic-scientific paradigm” and “error-wisdom: wisdom in terms of successfully compensating for the errors that are part and parcel of their daily practice” (ledema et al. 2006a, 1210-11). Therefore, Paradies and Busch (1988) point to root cause analysis being geared towards analyzing adverse events and find “the most basic cause that can be reasonably identified and that management has control to fix” (see earlier).

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<sup>4</sup> “Each problem being analyzed needs a thorough root cause analysis. Selecting from a list of potential causes, opting for prepopulated fields, or even using the “five-whys technique” appears to be too linear and limiting for complex problems” (PCAOB-SAG 2014, 9).

<sup>5</sup> Fortunately, there are several alternatives that are more appropriate. Besnard and Hollnagel (2014) provide a number of alternative methods: “One is the well-established MTO approach that considers human, technical and organizational factors either alone or in combination. This approach has been used by both nuclear and offshore industries for more than 20 years. Another is the Swiss cheese model (Reason 1990), which offers a high-level view of how latent conditions can combine with active failures and thereby lead to unexpected and unwanted outcomes. A more recent proposal is STAMP (systems-theoretic accident model and processes; Leveson 2004). STAMP is a causal analysis method based on a systems theory model that makes a number of assumptions about how the general system is structured. On a different tack, the functional resonance analysis method (FRAM) replaces the cause-effect relation by the concept of functional resonance (Hollnagel 2004; Woltjer and Hollnagel 2007). This approach provides a way to describe unexpected events as emerging from the low-amplitude variability of everyday performance” (Besnard and Hollnagel 2014, 7).

<sup>6</sup> “We suggested that members were struggling with reconciling their formal brief as RCA investigators and their intuitive sense that increased proceduralization was not necessarily a good solution. Their dilemma emerged from not having the option or the resources to articulate recommendations that do not rely on explicit, tightly coupled procedures” (ledema et al. 2006a, 1210).

#### **4. Root cause analysis findings and recommendations are not always interventions**

From the complex web or configuration of practices, rules, and policies across the audit firm that “drives” professional behavior and audit quality, it follows that a root cause analysis findings and recommendations do not – and should not – by definition also result in an actual intervention. It is up to management to weigh recommendations and decide on their effectiveness and “fit” with the overall organizational design. Iedema et al. illustrate that considering root cause analysis findings and recommendations “does not just concern judging their quality, but also their appropriateness and feasibility” (2008, 577). They continue: “Even if you get a good set of recommendations, they may or may not be what the organization needs right at this point in time”. In other words: root cause analysis findings and recommendations require a fair amount of vetting by, and consultation with senior management of the audit firm. This is where the PCAOB notes that “firms that have responded to recurring audit deficiencies with meaningful, carefully considered actions to address underlying issues and causes are beginning to see improved results” (PCAOB 2017, 8). For this reason, it is likely that the ACCA earlier posited that “it would be beneficial for best practices to be allowed to develop rather than seeking to impose standards on firms” (ACCA 2016, 15-16).

#### **5. Evidence-based findings and recommendations**

*“To trace something unfamiliar back to something familiar is at once a relief, a comfort and a satisfaction, while it also produces a feeling of power. The unfamiliar involves danger, anxiety and care – the fundamental instinct is to get rid of these painful circumstances. First principle – any explanation is better than none at all”*  
 (Nietzsche 2007; org. 1895, p. 33 – quoted in Besnard and Hollnagel 2014, p. 6-7).

The main output of a root cause analysis is a set of recommendations that audit firm management can consider to implement to enhance audit quality and to reduce the likelihood of adverse events from happening again. However, despite the wide spread adoption of root cause analyses, doubts remain about the effectiveness of root cause analyses for improving organizational performance.<sup>7</sup> For example, ledema et al. (2008) refer to root cause analyses “goal conflicts” in that it assumes that “thoroughness and independence can co-exist alongside fairness and efficiency” (p. 572). They refer to the level of interpersonal skills and pre-existing organizational knowledge on the one hand (thoroughness), and independence on the part of the investigator needed on the other.<sup>8</sup>

Apart from the variable quality of recommendations, there is a considerable management effort needed for vetting root cause analysis recommendations. That is, “the ‘variable’ quality of root cause analysis recommendations creates work for senior management in that it requires some kind of action from them: accepting or rejecting the recommendations made, revising them, or putting more appropriate ones in place altogether. This process is cumbersome in itself, because it actually creates yet another level of “argy-bargy” (ledema et al. 2008, 576). Hence, root cause analysis reports are not to be taken at face value. In a similar vein, Hibbert et al. (2018, 125) point to a known practice wherein the root cause analysis process supports changes that management had tried to previously promote without success. This is what they call “change-based evidence”, whereby “evidence” about root causes is used to support existing agendas. This all underlines the importance of root cause analysis

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<sup>7</sup> For example in health care, where “despite the effort and investment in RCA for over 15 years, similar serious adverse events continue to occur” (Hibbert et al. 2018, 125).

<sup>8</sup> Based on their analysis of the value of RCA recommendation for practice improvement purposes, ledema et al. are rather skeptical about the improvement potential of RCAs and conclude that RCA is “subject to too many constraints to be able to produce valuable recommendations [and] requires much time and negotiation, [while] recommendations produced may not live up to the philosophy of (...) practice improvement’s expectations” (2008, 569).

enabling 'evidence-based change'. However, "formulating corrective actions is more difficult than finding problems" (Wu et al. 2008).

Given the level of effort an organization and its management put into root cause analyses, one would hope the root cause analysis outcomes make the exercise and investment worthwhile. This is also acknowledged by the Standing Advisory Group of the PCAOB in relation to root cause analyses: "The development, implementation, and execution of effective remedial actions by firms are a challenge because, while certain remedial actions may address a particular deficiency or defect, they may not address the underlying causes of the audit and quality control deficiencies. Further, since many findings recur year after year in the same or similar types of inspections, it is important for audit firms to take steps to gain a clearer understanding of the causes that underlie these deficiencies and then take appropriate remedial actions" (PCAOB-SAG 2014, 3).

### **6. Effectiveness of root cause analysis recommendations**

Effectively enhancing audit quality calls for good quality reporting of root cause analysis recommendations. Hibbert et al. (2018) and Taitz et al. (2010) reviewed root cause analysis effectiveness in healthcare and classified recommendations as "strong" (more likely to be effective and sustainable), "medium" (possibly effective and sustainable), or "weak" (less likely to be effective and sustainable), following Bagian et al. (2011). They concluded that almost 50% of root cause analysis recommendations are weak and only less than 10% are strong. Underlining this issue, ledema et al. (2008, 575) state: "There's nothing I've really come across that I don't think we wouldn't have found by other means" and "the root cause analysis system enables us to come up time after time with the same set of [. . .] statements, blah blah blah" (ledema et al. 2008, 575).

Hibbert and colleagues (2018) discuss the main reasons for the generally disappointing low effectiveness of root cause analysis recommendations. According to them, the most frequent recommendation types were no more specific than reviewing or enhancing a policy/guideline/documentation, and training and education (which is supported by the ICAEW<sup>9</sup>). They elaborate: “Strong recommendations are those that, once implemented, rely less on people’s actions, and memories, and are more likely to be effective and sustainable. (...) Weak recommendations are often necessary to establish proficiency, but rely on a change in human behavior, and when used alone are unlikely to be sufficient to provide sustained improvements in [performance]” (Hibbert 2018, 125).<sup>10</sup> Indeed, as the FRC notes, root cause analysis “is based on the idea that effective management requires

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<sup>9</sup> The ICAEW note in that regard: “In the audit arena, addressing compliance failings through additional training might be a common knee-jerk reaction to a range of review findings. But without first exploring the root cause, there is a danger that the time and effort spent on developing additional training will be wasted, and the real underlying problem left unresolved. Training on technical matters may be the right answer, but there could be a range of other behavioural or organisational factors worth considering. For example, were the right staff allocated to the job? Was there a difficult or complex issue that should have been foreseen? Was the team under time pressure, or pressure from client management? Or did someone simply have a bad day? These questions could all lead down differing avenues to different root causes and, as a result, different actions to address them” (ICAEW 2016, 1).

<sup>10</sup> Hibbert et al. (2018, 129) report a number of potential problems when developing RCA recommendations:

- Analyses may end when the most convenient root cause is found, or one that fits the investigator’s biases;
- The accuracy of the cause is dependent on the quality of the information gathered, which is often flawed;
- RCA teams are not obliged to use evidence to justify their recommendations [i.e., evidence based reporting];
- Recommendations are not clearly linked to one or more causative factors;
- Systematic methods for generating risk control recommendations are not widely used;
- Reports are often circulated to the participants for repeated comment and feedback, with the aim of ‘getting everybody on board’ and maintaining consensus, resulting in few containing highly consequential findings or recommendations;
- Producing a ‘nice’ report at times becomes the main goal of the investigation and displaces the original objective of influencing learning and promoting change.

more than putting our fires for problems that develop, but finding a way to prevent them" (FRC 2016, 5).

However, the stronger, more worthwhile and effective recommendations "tend to come at a greater cost and effort, which tends to discourage their use" (Hibbert et al. 2018, 128). The "main discriminating criteria are that recommendations have to be practical, sensible, achievable, and understandable. (...) Instead, they create a significant layer of "editorial" and communicative work" (Iedema et al. 2008, 578). They conclude that formulating strong root cause analysis recommendations can be learned and requires clear communication or well targeted and calibrated recommendations that are actually measurable as far as what can be implemented.

**7. Root cause analysis is a collaborative and dialogic process requiring time and skills**

*"Because of RCA team members' altered positionings, "what happened" gets relayed in ways that are not insensitive to who is on the RCA team, who is being investigated, what the seriousness of the adverse event itself is, and who is in charge of managing and implementing the recommendations produced by the investigation"*

(Iedema et al. 2008, 582).

Root cause analysis is "a collaborative, relational and dialogic process (...) that challenges staff to confront the underlying principles of an incident" (Iedema et al. 2008, 572-3, 580). It is needless to say that root cause analyses require fair amounts of time, resources, and special skills. Most methods ask for three to six people working group to investigate events, undertake interviews, collect and analyze data, and develop recommendations (e.g., Iedema et al. 2008, 572; Hibbert et al. 2018, 125).

Furthermore, "given that people with professional skills are needed on root cause analyses, and that such people are limited in number, the burden on these people may become acute" (Iedema et al. 2008, 574-6). Therefore, an important

consideration is the choice of professionals involved: internal or external to the audit firm. While it has its merits to have external people conduct the root cause analyses in terms of independence and objectivity, "they may be viewed as 'invasive' by the affected [organization]" (Hibbert et al. 2018, 129). Using colleagues to conduct root cause analyses, on the other hand, may add to the effectiveness and specific relevance of root cause analysis recommendation, however, is not without risk because it puts analysts in a position that requires "complex new behaviors, central among which is communicating across professional and social boundaries" (Degeling et al., 2003). Hibbert et al. (2018, 129) try to suggest the middle ground by suggesting that "a less confrontational approach would be to ensure that each working group is a diverse mix of in- and outside members and members with human behavior expertise. Lastly, ledema and colleagues underline that "the constitution of the root cause analysis team can also negatively affect the perceived value of the recommendations" (2008, 574-6).

### ***8. Personal and professional accountability makes interviews a daunting task***

Conducting interviews with the colleagues involved in the case under analysis is a much applied technique in root cause analysis. It requires that team members conduct interviews with personnel involved in or witness to the incident targeting not individuals' faults but systems and practice design (e.g., ledema et al. 2006b, 1606). Interviews do, however, have limitations. Most importantly, Hibbert and colleagues point to "recollection bias" in conducting interviews: "During interviews, staff members may recite what they thought was the right answer or what they think 'must have happened' rather than what actually happened" (Hibbert et al. 2018, 129).

The risk of acquiring socially desirable answers from interviewees especially is a risk in the auditing setting where career development may be perceived by audit staff

to depend on personal performance and professional accountability. Especially because root cause analysis is focused on scrutinizing each other's errors conducting interviews may be a specifically daunting task in an audit firm setting. This means that root cause analysis teams may need to carefully consider and "manage" interpersonal relationships. This means that "team members are concerned about how to break the news to colleagues that this root cause analysis is under way; how to make sure questions are asked in ways that do not upset people; who to appoint to the task of contacting particular interviewees and asking the 'hard' questions, and how to rescue relationships with the interviewees in case the latter become defensive or anxious" (Iedema et al. 2006b, 1608).

Furthermore, there is some discussion about the use of predetermined lists of potential root causes to guide the interviews and analysis. The ICAEW notes in that regard (2016, 4): "The strongest root cause analysis exercise may be one with no predetermined categories, however, embarking on an exercise with a blank sheet of paper may be a daunting task. It may be helpful to provide some framework, for example suggestions of potential usual suspect root causes, even if the people conducting the exercise are free to go off-piste should they need to".

### **9. Triggering events for doing root cause analysis**

Although audit firms are at varying stages of "maturity" of doing root cause analyses, generally three "triggering events" for starting a root cause analysis are distinguished: audit deficiencies (or negative quality review outcomes), positive quality events "to understand whether there are innovations that can be replicated on other audits" (ACCA 2016, 15-16), and 'near misses'<sup>11</sup>. The latter is considered valuable as it may

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<sup>11</sup> "A further factor in fostering a culture conducive to effective root cause analyses is the identification and investigation of 'near misses': in other words, situations that did not lead to a failure to follow ISAs but which might have done. (...) Similarly, we understand some firms perform a root cause analysis on good audits to understand whether there are innovations that can be replicated on other audits" (ACCA 2016, 15-16).

allow for a relatively less problematic and emotional analysis. Nevertheless, the ACCA perceives in this regard “that currently audit regulation may sometimes hinder rather than foster such candor towards ‘near misses’” (2016, 15-16).

Analyzing positive quality events (for example, audits with no inspection findings and the audit was perceived as being higher quality, also called good quality analysis, “may enable firms to articulate what is needed to again achieve those positive events” (PCAOB-SAG 2014, 7). Or as the ICAEW notes: “Most attention on root cause analysis to date has been in connection with negative review findings (...) but root cause analyses can also be useful as a means to identify and nurture positive outcomes and aspects identified in individual audit engagements, or across types of audit engagement” (ICAEW 2016, 1).

However, most commonly, adverse events trigger root cause analyses, “focusing on those audit deficiencies that led to the wrong audit judgement being taken on a material misstatement” (ACCA 2016, 15-16). Such root cause analyses are “important to understand why audit deficiencies have not been detected prior to the issuance of an audit report and thus they merit continued focus by audit firms” (PCAOB 2017, 8).

### ***10. Levels of root cause analyses***

A next level of root cause analyses are the “thematic” and “organization level” root cause analyses. In the auditing context, thematic reviews could be directed towards, for example, auditors’ judgments in relation to impairment testing, internal controls assessments, or journal entry testing. As Wu and colleagues note: “Organizations tend to approach each root cause analysis independently, rather than drawing

lessons across investigations” (2010, 686).<sup>12</sup> Hibbert et al. (2018) agree by noting that “time spent in repeatedly investigating similar incidents may be better spent aggregating and thematically analyzing existing sources of information about [quality]”. This means, according to Wu et al. (2008) that root causes that are common across organizations require a design of remedial action at a profession’s level. They underline that “without a collaborative effort of stakeholders, including [organizations] to correct the problem, as well as a higher oversight body that could enforce such an effort, [organizations] often can only address the problem within their institution, using weaker interventions” (Wu et al. 2008, 686). The ACCA notes in this regard that “a holistic approach to root cause analysis, that takes account of the role every stakeholder must play in encouraging and fostering audit quality, is most likely to deliver the best results” (2016, 15-16).

### **Concluding remarks**

Root cause analysis is an organizational learning method concerned with analyzing adverse events and find the underlying basic cause (not just the apparent causes) over which management has “control to fix”. It is geared towards making firms “error wise” and can be used by firms of all sizes. This practice note covered ten considerations that are relevant for effectively and efficiently producing root cause findings and recommendations in the auditing profession. These are relevant for audit firms – both large and small – wanting to apply root cause analyses as part of their quality assurance systems to enhance audit quality.

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<sup>12</sup> It is the Standing Advisory Group of the PCAOB that notes that a “comprehensive analysis may enable firms to develop and articulate measures or indicators of what constitutes audit quality, both at the audit engagement level and the firm’s system of quality control level” (PCAOB-SAG 2014, 9).



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