**Appendix 2 - Summary of FGD Session**

Notes:

1. The FGD was performed in Indonesian language; and
2. The complete transcript cannot be published as required by the Human Research Ethics Committee.

**Audit Unit**

| **No** | **Challenge** | **Relationship** | **Challenge** | **Summary of Consensus** |
| --- | --- | --- | --- | --- |
| 1 | Inaccessible data (for AA purposes) | Influenced (by) | Concern for Data Security | We have experienced that the policy for data security hinders data access, including limiting data access for continuous auditing (CA) or at least makes the administrative process more complicated.  (note: in the context of this research, CA is a subset of AA) |
| 2 | Inaccessible data (for AA purposes) | Influenced (by) | Possibility of Uncaptured Data | The data owner cannot provide the digital data if the business application does not require/capture that data. |
| 3 | Inaccessible data (for AA purposes) | Influenced (by) | Lack of Cultural Readiness | Unsuitable culture will increase the data access challenge, such as a strong ‘silo’ culture. The lack of a ‘data-driven culture’ will at least adds administrative efforts for data sharing. |
| 4 | Inaccessible data (for AA purposes) | Not related (to) | Possible Different Stakeholder’s Interests | Auditors are entitled to their professional judgement, not necessarily depending on the stakeholders’ (in a broad sense) expectations. |
| 5 | Inaccessible data (for AA purposes) | Influencing each other | Limited Auditor’s AA-related Skills | The limited skills increase the challenge of data access (such as the need to ‘know-how’ of the technical process to access the data), and vice versa, the limited data access limits the opportunity (to improve the skills). |
| 6. | Inaccessible data (for AA purposes) | Influenced (by) | Dynamics in Audit Process | Dynamics during audit assignments affect communication between auditors and the client, which may eventually lead to the challenge of data access. |
| 7. | Inaccessible data (for AA purposes) | Not related (to) | Organization and Business Complexity | Auditors may still get the data access, regardless of the complexity of the audit/assurance area. |
| 8. | Inaccessible data (for AA purposes) | Influence each other | Limited Use-Case | Our experience suggests that the limited data access restrains the development of the AA use-case, and the unclear use-case may result in the reluctance of the data owner to provide access. |
| 9. | Inaccessible data (for AA purposes) | Influenced (by) | Inadequate (Internal) Audit Standard/ Guideline | The lack of clear regulation implicates the difficulty of obtaining data access. |
| 10. | Concern for Data Security | Not related (to) | Possibility of Uncaptured Data | These two are independent to each other. Our experience suggested that concern for security will impede data access. |
| 11. | Concern for Data Security | Influenced (by) | Lack of Cultural Readiness | Concern for data security may result in the lack of a ‘data-driven’ culture (e.g., unwillingness for data exchange). |
| 12. | Concern for Data Security | Influencing | Possible Different Stakeholder’s Interests | The concern for data security will be reflected in the clients’ interests and policies (including regarding data access provision). |
| 13. | Concern for Data Security | Not related (to) | Limited Auditor’s AA-related Skills | No relationships between these two challenges. |
| 14. | Concern for Data Security | Influencing | Dynamics in Audit Process | The more confidential the data, the more convoluted the data access provision process. |
| 15. | Concern for Data Security | Not related (to) | Organization and Business Complexity | No relationships between these two challenges. |
| 16. | Concern for Data Security | Not related (to) | Limited Use-Case | No relationships between these two challenges. |
| 17. | Concern for Data Security | Not related (to) | Inadequate (Internal) Audit Standard/ Guideline | No relationships between these two challenges. |
| 18. | Possibility of Uncaptured Data | Influenced (by) | Lack of Cultural Readiness | The lack of a ‘data-driven culture’ impedes the initiative to digitalize the business process. |
| 19. | Possibility of Uncaptured Data | Not related (to) | Possible Different Stakeholder’s Interests | No relationships between these two challenges. |
| 20. | Possibility of Uncaptured Data | Not related (to) | Limited Auditor’s AA-related Skills | No relationships between these two challenges. |
| 21. | Possibility of Uncaptured Data | Influencing | Dynamics in Audit Process | The less digitalized the data, the more intricate the effort to use AA in an audit engagement. |
| 22. | Possibility of Uncaptured Data | Not related (to) | Organization and Business Complexity | No relationships between these two challenges. |
| 23. | Possibility of Uncaptured Data | Influencing | Limited Use-Case | The less digitalized the data, the more intricate the effort to use AA in an audit engagement. |
| 24. | Possibility of Uncaptured Data | Influencing | Inadequate (Internal) Audit Standard/ Guideline | The absence of digital data implies the lack of need for additional standard (regarding data for audit purposes), and vice versa. |
| 25. | Lack of Cultural Readiness | Influencing | Possible Different Stakeholder’s Interests | The more ‘data-driven culture’ the organization is the fewer variances in stakeholders’ attitudes toward data-related issues. |
| 26. | Lack of Cultural Readiness | Influencing | Limited Auditor’s AA-related Skills | An organization with strong ‘data-driven culture’ tends to invest in its employees’ data-related skills. |
| 27. | Lack of Cultural Readiness | Not related (to) | Dynamics in Audit Process | No relationships between these two challenges. |
| 28. | Lack of Cultural Readiness | Influencing | Organization and Business Complexity | An organization with a strong ‘data-driven culture’ tends to digitalize its business process, increasing its complexity. |
| 29. | Lack of Cultural Readiness | Influencing | Limited Use-Case | High data literacy reduces the limitation in developing a proper AA use-case and vice versa. |
| 30. | Lack of Cultural Readiness | Influencing | Inadequate (Internal) Audit Standard/ Guideline | The lack of a ‘data-driven culture’ implies more Guideline is needed to support the data utilization, especially for AA purposes. |
| 31. | Possible Different Stakeholder’s Interests | Not related (to) | Limited Auditor’s AA-related Skills | Auditors are entitled to their professional judgement, not necessarily depending on the stakeholders' (in a broad sense) expectations. The communication problem or audit dynamics intermediates the relationship between the auditor's skills and its influence on stakeholders' expectations. |
| 32. | Possible Different Stakeholder’s Interests | Influencing | Dynamics in Audit Process | The more varieties in stakeholders’ interests, the more convoluted the audit process. |
| 33. | Possible Different Stakeholder’s Interests | Not related (to) | Organization and Business Complexity | No relationships between these two challenges. |
| 34. | Possible Different Stakeholder’s Interests | Not related (to) | Limited Use-Case | There is no direct relationship between these two challenges. The data access issues intermediate the connection between the stakeholders' interests and the limited AA use-case. |
| 35. | Possible Different Stakeholder’s Interests | Not related (to) | Inadequate (Internal) Audit Standard/ Guideline | No relationships between these two challenges. |
| 36. | Limited Auditor’s AA-related Skills | Influencing | Dynamics in Audit Process | Skilled auditors will experience fewer problems from dynamics in the audit process. |
| 37. | Limited Auditor’s AA-related Skills | Influence each other | Organization and Business Complexity | A complex audit area requires highly skilled auditors—conversely, the more skilled the auditors, the less problem from the complexities of the audit area. |
| 38. | Limited Auditor’s AA-related Skills | Influencing | Limited Use-Case | Sufficient skills increase the (auditors’) ability to develop a proper AA use-case. |
| 39. | Limited Auditor’s AA-related Skills | Influenced (by) | Inadequate (Internal) Audit Standard/ Guideline | The more significant problems due to the limited Guideline for AA-related activities indicate the lack of the auditors’ AA-related skills. |
| 40. | Dynamics in Audit Process | Influenced (by) | Organization and Business Complexity | The more complex the audit area is, the more difficult the audit process will be. |
| 41. | Dynamics in Audit Process | Influenced (by) | Limited Use-Case | The limitation in developing a proper AA use-case will increase the dynamics of the audit process. |
| 42. | Dynamics in Audit Process | Influenced (by) | Inadequate (Internal) Audit Standard/ Guideline | The limited adequate (AA-related) Guideline will increase the dynamics of the audit process. |
| 43. | Organization and Business Complexity | Not related (to) | Limited Use-Case | There is no relationship between these two challenges. Use-case can and should be developed based on the audit objective. |
| 44. | Organization and Business Complexity | Not related (to) | Inadequate (Internal) Audit Standard/ Guideline | There is no relationship between these two challenges. |
| 45. | Limited Use-Case | Influenced (by) | Inadequate (Internal) Audit Standard/ Guideline | One of the possible reasons for the proper AA-use case is the limited Guideline or standard for AA. |

**Innovation/Coordinating Unit**

| **No** | **Challenge** | **Relationship** | **Challenge** | **Summary of Consensus** |
| --- | --- | --- | --- | --- |
| 1 | Inaccessible data (for AA purposes) | Influenced (by) | Concern for Data Security | We have seen how policy regarding security inhibits the development of CA in an audit team (that we assisted).  (note: in the context of this research, CA is a subset of AA) |
| 2 | Inaccessible data (for AA purposes) | Not related (to) | Possibility of Uncaptured Data | Limited digital data does not necessarily imply difficult access; our experience (assisting an audit team) suggests that the difficulty occurred not because data access is not obtained but due to the data format (manual/physical data), which hinders analytics effort. |
| 3 | Inaccessible data (for AA purposes) | Not related (to) | Lack of Cultural Readiness | The culture influences the data access issue indirectly. For instance, the lack of a ‘data-driven’ culture slows down digitalization, which, in a way, impedes data access provision. |
| 4 | Inaccessible data (for AA purposes) | Influenced (by) | Possible Different Stakeholder’s Interests | Stakeholders’ interests affect data access provision. If, for example, the data owner does not experience the benefit from auditors’ work (through AA), it will be reflected in their interests in AA implementation and the need for data access for that implementation. |
| 5 | Inaccessible data (for AA purposes) | Influencing each other | Limited Auditor’s AA-related Skills | The limited data access limits the opportunity (to improve the skills). Moreover, based on the experience in coordinating AA development, the limited skills limit the auditors’ initiative in obtaining data access, including the technical process to do so. |
| 6. | Inaccessible data (for AA purposes) | Influenced (by) | Dynamics in Audit Process | Dynamics during audit assignments increase the data access issues. |
| 7. | Inaccessible data (for AA purposes) | Not related (to) | Organization and Business Complexity | Auditors may still get the data access, regardless of the complexity of the audit/assurance area. |
| 8. | Inaccessible data (for AA purposes) | Influencing | Limited Use-Case | Our experience (assisting audit teams) suggests auditors can still ask for the data, even without a clear AA use-case. Nevertheless, the limited availability of the (digital) data limits the option for AA development for auditors. |
| 9. | Inaccessible data (for AA purposes) | Influenced (by) | Inadequate (Internal) Audit Standard/ Guideline | The existence of clear regulation, including regarding data access, does not necessarily result in easy access for auditors, let alone the absence of it. |
| 10. | Concern for Data Security | Influencing | Possibility of Uncaptured Data | Concern for security risk may result in the limited digitalization of business data. |
| 11. | Concern for Data Security | Influenced (by) | Lack of Cultural Readiness | ‘Traditional’ organization tends to overvalue the secrecy of their data. |
| 12. | Concern for Data Security | Influencing | Possible Different Stakeholder’s Interests | The concern for data security influences the variety of interests among stakeholders, e.g., data owner focuses on security while governing body expects continuous audit results. |
| 13. | Concern for Data Security | Not related (to) | Limited Auditor’s AA-related Skills | No relationships between these two challenges. |
| 14. | Concern for Data Security | Influencing | Dynamics in Audit Process | The more confidential the data, the more bureaucratic the data access provision, such as more parties' approval required. |
| 15. | Concern for Data Security | Not related (to) | Organization and Business Complexity | Concern for data security does not influence the complexity of the audit area. Instead, it affects the auditors. |
| 16. | Concern for Data Security | Not related (to) | Limited Use-Case | The relationship between the two challenges is indirect, intermediated by data access issues. |
| 17. | Concern for Data Security | Not related (to) | Inadequate (Internal) Audit Standard/ Guideline | No relationships between these two challenges. |
| 18. | Possibility of Uncaptured Data | Influenced (by) | Lack of Cultural Readiness | The lack of a ‘data-driven culture’ impedes the initiative to digitalize the business process. |
| 19. | Possibility of Uncaptured Data | Not related (to) | Possible Different Stakeholder’s Interests | No relationships between these two challenges. |
| 20. | Possibility of Uncaptured Data | Not related (to) | Limited Auditor’s AA-related Skills | No relationships between these two challenges. |
| 21. | Possibility of Uncaptured Data | Influencing | Dynamics in Audit Process | A less digitalized environment requires more steps in implementing AA. |
| 22. | Possibility of Uncaptured Data | Not related (to) | Organization and Business Complexity | No relationships between these two challenges. |
| 23. | Possibility of Uncaptured Data | Influencing | Limited Use-Case | The less digitalized the data, the more intricate the effort to use AA in an audit engagement. |
| 24. | Possibility of Uncaptured Data | Not related (to) | Inadequate (Internal) Audit Standard/ Guideline | Internal audit standard should apply generally; it does not specifically relate to the unavailability of digital data. |
| 25. | Lack of Cultural Readiness | Influence each other | Possible Different Stakeholder’s Interests | The cultural readiness will reflect in the alignment of the stakeholders’ interests in digitalization and vice versa. |
| 26. | Lack of Cultural Readiness | Influencing | Limited Auditor’s AA-related Skills | An organization with strong ‘data-driven culture’ tends to invest in its employees’ data-related skills. |
| 27. | Lack of Cultural Readiness | Not related (to) | Dynamics in Audit Process | An organization with a ‘data-driven’ culture will be more ready to involve in data-related activities, including in their interaction with internal audit activities. |
| 28. | Lack of Cultural Readiness | Influencing | Organization and Business Complexity | An organization with a strong ‘data-driven culture’ tends to digitalize its business process, increasing its complexity. |
| 29. | Lack of Cultural Readiness | Influencing | Limited Use-Case | The less cultural barrier (regarding data analytics), the less challenge in developing a proper AA use-case. |
| 30. | Lack of Cultural Readiness | Influencing | Inadequate (Internal) Audit Standard/ Guideline | The lack of a ‘data-driven culture’ implies more Guideline is needed to support the data utilization, especially for AA purposes. |
| 31. | Possible Different Stakeholder’s Interests | Influencing | Limited Auditor’s AA-related Skills | The variety of stakeholders’ interests may result in different skillsets required by internal auditors, which increases the AA-related skills issues. |
| 32. | Possible Different Stakeholder’s Interests | Influencing | Dynamics in Audit Process | The more varieties in stakeholders’ interests, the more convoluted the audit process. |
| 33. | Possible Different Stakeholder’s Interests | Not related (to) | Organization and Business Complexity | The complexity is inherently related to the nature of the business process and does not depend on the relationship between auditors and the client or among different stakeholders. |
| 34. | Possible Different Stakeholder’s Interests | Influence each other | Limited Use-Case | Complex and possibly conflicting interests among stakeholders limit the proper option for AA use-case. Conversely, the limited AA use-case may complicate the audit process as it might not meet the client or governing body’s expectation. |
| 35. | Possible Different Stakeholder’s Interests | Not related (to) | Inadequate (Internal) Audit Standard/ Guideline | No relationships between these two challenges. |
| 36. | Limited Auditor’s AA-related Skills | Influencing | Dynamics in Audit Process | Skilled auditors will experience fewer problems from dynamics in the audit process. |
| 37. | Limited Auditor’s AA-related Skills | Influenced (by) | Organization and Business Complexity | A complex audit area requires highly skilled auditors. However, it does not apply in reverse; in this regard, the more or less skilled auditors do not affect the complexity of the audit area. |
| 38. | Limited Auditor’s AA-related Skills | Influencing | Limited Use-Case | Sufficient skills increase the (auditors’) ability to develop a proper AA use-case. |
| 39. | Limited Auditor’s AA-related Skills | Influenced (by) | Inadequate (Internal) Audit Standard/ Guideline | The lack of AA-related skills, in our view, is induced, among others, by the lack of clear Guideline. |
| 40. | Dynamics in Audit Process | Influenced (by) | Organization and Business Complexity | (explaining with an example)  If an audit area involves, let’s say, three business units, it will increase the complexity, which will also increase the dynamics during the audit activities. |
| 41. | Dynamics in Audit Process | Influencing | Limited Use-Case | The increased dynamics in the audit process increase the interaction and communication barrier between the auditors and the client. This will impede the effort to develop a proper AA use-case. |
| 42. | Dynamics in Audit Process | Influenced (by) | Inadequate (Internal) Audit Standard/ Guideline | The less problem related to AA Guideline, the less problem in audit activities. |
| 43. | Organization and Business Complexity | Not related (to) | Limited Use-Case | There is no direct relationship between these two challenges. Other challenges intermediate the relationship between these two challenges; for instance, business complexity leads to uncaptured digital data, which in turn impedes the development of a proper AA use-case. |
| 44. | Organization and Business Complexity | Not related (to) | Inadequate (Internal) Audit Standard/ Guideline | There is no relationship between these two challenges. These two challenges affect different actors, i.e., the need for standard comes from the auditor side, and business complexity comes from the client side. |
| 45. | Limited Use-Case | Influenced (by) | Inadequate (Internal) Audit Standard/ Guideline | One of the possible reasons for the proper AA-use case is the limited Guideline or standard for AA. |