| **Quote Example(s)** | **Respondent** | **Initial Code** | **Pattern Code** | | **Theme** |
| --- | --- | --- | --- | --- | --- |
| **Sub-category** | **Category** |
| “Saya juga ketika bikin proyek DA, dan butuh dari [anonymized], itu juga luar biasa ininya. Ternyata it’s not that easy to have the data.”  *(When our team develop our [business] analytic project and need data from other units [data owners], apparently, it’s not easy to obtain the necessary data)* | R15 | Data owners’ reluctance to share data | Data Access Issues | Data Access Issues | Challenge |
| “Dalam kesepakatan kami dengan tim audit, kalau bisa itu penarikan data dilakukan di hari Sabtu, Minggu, atau tanggal merah”  *(Based on our discussion with audit teams, we only allow in the weekend for accessing data directly from the production system*) | R5 | Client only allows data access on non-working days |  |  |  |
| “Kalau kendala yang kegiatan TABK sebelumnya adalah terkait dengan mendapatkan trust dari auditee. Jadi agak sulit mendapatkan komitmen untuk auditee mengalirkan data ke kami.”  *(The main issue for expanding our CAAT practice [as a part of AA] was to obtain trust and commitment from the client [data owner] to provide the data [for the AA project])* | R8 | Client sometimes reluctant to provide data access (for AA project) |  |  |  |
| “Banyaknya hambatan terkait data yg ditemukan dlm pengawasan atau AA, dan ini sangat berpengaruh terhadap keberhasilan AA”  (*We encountered many data-related problems, which I think, significantly hinders our optimization of AA use*) | R11 | Data-related issues significantly hamper AA |  |  |  |
| “Karena memang data yang harus mereka siapkan atau dialirkan ke database pengujiannya itu emang cukup besar sih. Karena mencakup, terutama data kepesertaan karena data kepesertaan itu sizenya sangat besar seperti itu,”  (*One of the challenges for our client as data owner is that their data size is enormous, because it contains data from various parts of the business*) | R14 | Data size as one of the challenges for data access |  |  |  |
| “Akses data ya agak susah. Tapi kita belum mencoba dengan effort yang lain tapi akses data ini kita sudah kebayang bahwa sekarang kebutuhan data kami ini bukan hanya Kementerian Keuangan tapi data yang dari luar Kementerian Keuangan itu semakin banyak”  (*Data access has always been a challenge (for AA project); and with our ever-expanding audit areas [universe]* | R7 | Limited availability of external data for AA projects |  |  |  |
| “Saya pikir sih ada benarnya walaupun mungkin secara peraturan, mungkin mereka tidak seketat XX gitu ya. XX kan ada larangan Pasal XX gitu ya.”  (*Some units are bounded by tight regulation regarding data access, which hinders us as well*) | R10 | Regulatory concerns hindering data access |  |  |  |
| “Karena main ingredients dari AA adalah data, kalau tidak tersedia maka AA tidak bisa jalan”  ([Digital] data is the main ingredient for AA; otherwise, there will be no AA.) | R11 | Digital data as the main ingredients for AA |  |  |  |
| “Kalo untuk kendalanya sendiri sebenernya dari proses pengaliran datanya itu memang setiap triwulan diperlukan waktu yang cukup lama, jadi ketika kita meminta data di tanggal tertentu jadi data tersebut siap di environment butuh sekitar 3 minggu sampe 1 bulan, jadi memang cukup lama dari waktu ketika kita meminta datanya dari XX kesehatan untuk mereka mempersiapkan datanya ke environment database ini, jadi begitu.”  (*The data streaming process every quarter takes a long time. So, when we ask for data, the data is ready in the environment in about three weeks to one month)* | R14 | Significant time lag as one of data access issues |  |  |  |
| … |  |  |  |  |  |
| “Kemudian yang kedua adalah masalah tadi “ada nggak caranya kita terkait dengan akses data, supaya masalah kerahasiaan dst. Kalau menurut saya sih, pernah juga ditawarin saya oleh Pak [anonymized]”  (*Some clients always worry about their data security and confidentiality when we brought up data access issue*) | R10 | Clients' security concerns over their data | Data Security Concerns | Data Security Concerns |  |
| “Kalau terkait pertukaran data adalah dari sisi kerahasiaan datanya dulu nih karena kan memang ada beberapa elemen data yang dianggap rahasia tuh emang kita nggak bisa sharing”  (*it's about data confidentiality, because there are some data elements that are considered confidential, hence we can’t share them)* | R5 |  |  |  |  |
| … |  |  |  |  |  |
| “Karena isu menurutku itu bukan isu teknis lagi, isu-isu yang lain gitu kan.”  (*I don’t think this [AA implementation] is a technical issue, it is much more than that*) | R2 | AA implementation is more than a technical issue | Cultural Barrier | Cultural Barrier |  |
| “Nah ini kan kita transisi, mas. Jadi kita pengendali teknis kita umurnya juga sudah ya di atas 50-an gitu ya. Jadi mungkin sebagian masih menggunakan manajemen gaya konvensional, jadi masih pengaturan konvensional.”  (*We are currently still in transition. […] so, it’s still a conventional approach [in audit assignment]*) | R6 | AA implementation requires mindset transition |  |  |  |
| “Karena ini kan butuh ketelatenan, ketekunan, dan butuh kemauan gitu kan.”  (*this approach requires tenacity, perseverance, and a strong will [from the personnel]*) | R2 | AA requires dedication (from auditors) to embrace |  |  |  |
| “Yang lainnya itu ya komitmennya setengah, kadang malah cuek.”  *([I feel] other auditors are indifferent to this change [of digitalization and its implication])* | R3 | Auditors are reluctant to embrace AA for various reasons |  |  |  |
| Kalau saya melihatnya memang kenyamanan dengan model audit yang sudah dilakukan. Nyaman saja gitu ya, nggak ngomong efektif nggak efektif tapi nyaman melakukan itu.  (I think [auditors are] too comfortable with the traditional approach, despite of its (limited) effectiveness) | R16 | Auditors are too comfortable with the traditional method |  |  |  |
| “Keharusan kita sebagai reviewer untuk selalu update aplikasi sama update proses bisnis itu diharapkan sekali.”  (*that is why we as reviewers [auditors] have to update our knowledge [and apply it to the project]*) | R2 | Auditors must keep update with the changing business process (and the related IS) |  |  |  |
| “Cuma dengan temuan ini saya membayangkan kan nanti yang diundang auditor senior tuh, terus kita bilang awarenessnya senior auditor masih kurang tanggapannya gimana tuh nanti.”  (*I think our senior auditors' awareness [regarding digitalization and its implication] is really lacking*) | R16 | Auditors' lack of awareness of digitalization |  |  |  |
| “Basically pimpinan [klien pengawasan] terutama bicara mindset ya, itu begitu ada auditor, mau eksternal mau internal, ketika ada temuan, mindset di kepala kita, kita defense.”  (*Our bosses as audit clients always defensive when encountering auditors, regardless external or internal audits; I think it’s still our common mindset*) | R15 | Client's negative perception regarding internal auditor's tasks |  |  |  |
| “Pada waktu itu kesadaran auditi terkait DA belum ada, jadi memang itu sebuah effort tersendiri untuk meyakinkan mereka bahwa ini nanti berguna buat mereka. Jadi di sisi sana artinya memang perlu sosialisasi kepada mereka untuk mereka mengerti maksud dan tujuan kita apa dan mereka bisa membantu, gitu ya.” (*Admittedly, our clients’ understanding about the benefit of this AA approach are still limited; so, we still have to convince them that this will be beneficial for them, and the effort [for that] is considerably significant*) | R12 | Clients’ lack of awareness of the value/benefit of AA |  |  |  |
| “Nah ini bukan hal yang mudah sehingga salah satu caranya adalah mengubah cara pengawasan kita tidak bisa lagi dengan cara manual namun dengan menggunakan alat bantu”  (*This change in the audit approach has extraordinary magnitude because it changes mindsets, changes the way we work*) | R6 | Digitalization implies fundamental change in auditors' way of working |  |  |  |
| … |  |  |  |  |  |
| “Karena masing-masing organisasi itu kan punya tugas dan fungsi yang berbeda, di dalam PMK OTK kita juga berbeda gitu ya. Itjen mengawasi, [anonymized] menyusun laporan keuangan misalnya, terus [anonymized] membuat laporan keuangan itu bagus, [anonymized] itu lebih ke seluruh KL ya mengelola data.”  (*There is a conflicting interest, between our client, which is responsible for financial reporting who focuses on accurate results, and the system manager who concerns for a secure system*) | R2 | Different concerns among different stakeholders | Different Stakeholders’ Interests | Different Stakeholders’ Interests |  |
| “Yang saya dapat itu kayaknya susah ya setelahnya itu koordinasinya gitu lho karena mereka kan setelah penugasan reviu mereka ada kegiatan yang lain. Jadi hasil-hasil mereka itu seringkali ketika kita melakukan kompilasi itu kayak kurang dapat gitu lho karena mereka sudah sibuk dengan kegiatan yang lain”  (*In my experience, [review] teams are scattered after the fieldwork; hence, for instance, compiling the findings are a challenging task since other teams are already occupied with their target*]) | R1 | Unclear governance of roles hinders effective and efficient interaction among actors |  |  |  |
| … |  |  |  |  |  |
| “Nggak ada arahan dan tidak terlibat. Kalau kita bicara arahan kan sebenarnya saya minta advice lah, saya minta masukan terkait dengan flowchart ini misalnya gitu ya, apakah flow ini sudah benar atau nggak. Itu nggak dibalas, itu satu. Yang kedua itu adalah “oke, diperiksa saja” gitu. Artinya semuanya bergantung kepada di bawah.”  (*No direction and involvement [from the audit manager]. … I’m asking for advice or guidance on a flowchart [representing the business and data flow to be tested], for example, is this flow correct or not. That’s not answered, […] This means that everything depends on us [auditor at the technical level]*) | R9 | Lack of guidance (for AA project) by audit manager or above | (Lack of) AA managerial skills | (Lack of) AA Skills |  |
| “Saya punya [beberapa] dalnis, cuma [sebagian kecil] yang secara manajerial kami anggap mumpuni (untuk memimpin proyek DA), sedangkan untuk [sebagian besar] dalnis lainnya masih belum, artinya masih kurang dan kayaknya perlu dibekali untuk pendidikan khusus ya manajemen di bidang pengelolaan data yang berbasis IT ini, mas.”  (*I have numbers of audit managers, only a few I consider have the knowledge to manage an AA project, most of them, I think, still need a special training for audit manager for digitalized and IT-based internal audit project)* | R6 | Lack of managerial skills for AA project |  |  |  |
| “regenerasi SDM DA. Misalnya di XX akan berdampak bagi kelangsungan proyeknya jika tidak ada yang melanjutkan (misalnya karena personil yang ada pindah atau melanjutkan studi), terutama di level teknis (anggota tim).”  *(There should be a regeneration of AA personnel. For example, in [anonymized unit], it will have an impact on the continuity of the project if no one continues [for example, because existing personnel move/transferred out or continue their studies], especially at the technical level)* | R16 | Lack of auditors with sufficient technical AA skills | (Lack of) AA technical skills |  |  |
| “karena kemampuan kita masih ACL, kalau di tim Ir 7 kan udah advance tuh pakai SQL,”  *(Our skills are limited to ACL; although we can make use slightly more advanced technique like SQL)* | R2 | Lack of intermediate or advanced analytics skills among auditors |  |  |  |
| … |  |  |  |  |  |
| “Meskipun memang yang namanya auditor kan punya keinginan masing-masing, gitu-gitulah yang masih ada persoalan misalnya yang XX yang script-nya dikerjakan sama XX itu berhenti-berhenti. Itu memang harus dicarikan jalan keluar, tapi itu sudah nggak ada masalah, sudah no issue lah soal itu.”  (*Although we know auditors’ preferences are diverse, they [the IT unit] can help us with the solution or workaround*) | R16 | Auditors have their own preference in developing AA project | Dynamic in Audit Process | Dynamic in Audit Process |  |
| “Itu dia, mungkin karena PIC-nya juga jarang komunikasi dengan kami. Sebenernya mereka juga terlibat dalam tim ya, tapi karena mereka juga punya proyek lain sepertinya yang kemudian ditangani, juga concern waktu, kami juga belum update, update lewat XX aja sih untuk secara khusus kita mereka lagi, waktu itu kita mengupdatenya melalui laporan aja, kita sampein laporan waktu itu.”  (*They [the audit team] was also involved; but I assume they also have other priority projects so we rarely communicate further [after they deliver this project]*) | R15 | Challenge in inter-units’ communication for (join) AA projects |  |  |  |
| “Kayak XX saja saya merasa agak susah karena waktu itu pernah ingin bertanya sesuatu tentang data itu agak susah.”  *(I get no or delayed response from our counterpart [the audit team] when I asked something about our project*) | R13 | Collaboration barrier among audit teams |  |  |  |
| “Jadi kalau misalkan kita lagi kebetulan ngumpul, biasanya karena alasannya adalah ada kerjaan lain gitu, jadinya nggak bisa ngumpul, dulu sih gitu.”  (*So if, for example, we are having a get-together [informal discussion for the project], usually they [the review team personnel from anonymized] were unable to join, and the reason is that they have other work*) | R3 | Difficulty in coordination to perform the task (develop AA project) |  |  |  |
| “XX kan juga punya kegiatan prioritas lain yang tidak bisa langsung keinginan kita bisa langsung.”  *([We understand that] XX, there are definitely other tasks and priorities apart from developing eReviu-LK)* | R1 | Each unit has its own priorities |  |  |  |
| “Sehingga, menurut saya, pendekatan seperti kadang itu lebih ribet daripada bikin sendiri, tahapannya gak efektif, karena kita harus mengecek script buatan pihak lain.”  (*So, in my opinion, sometimes such an approach is more complicated than if we [the MOF-IG] develop it by ourselves*) | R17 | Technical difficulties in collaboration with the client (in developing AA projects) |  |  |  |
| … |  |  |  |  |  |
| “Kami ngobrol dengan XX sama juga dengan XX. Kami ngobrol terkait proses bisnisnya, kemudian, kami pelajari peraturan di PMK-78 itu, kami identifikasi apa-apa aja yang kemungkinan bisa salah dari proses penyaluran bantuan iuran tersebut, gitu  (*We talked about the business process, then we studied the regulations, and we identified anything that might go wrong in the process of distributing and paying the subsidy. Well, after that, after we compiled the RCM*) | R14 | AA requires business understanding as the basis for risk identification | Organizational and Business Complexities | Organizational and Business Complexities |  |
| “Ya, saya pikir contohnya begini, yang paling banyak memakan resource di tempat saya itu kan reviu laporan keuangan sama pendampingan. Sehingga kita bilang bisa nggak kita reviu keuangan kita bisa menggunakan itu, pakai e-reviu seperti yang LKKL misalnya gitu. Nah itu kan saya coba mendorong ke sana. Ternyata memang nggak mudah. Kenapa? Karena business processnya macam-macam, nggak satu macam. Kalau LKKL kan business processnya satu macam semua.”  (*I imagine that we can expand AA to other routine or mandatory tasks like state treasury review; however, I know it would not be easy since there are so many interconnections among business processes [for this review task])* | R10 | Business complexity due to intertwine among process and units |  |  |  |
| “Proses bisnis itu berjalan lancar kan kalau misalnya benar-benar si pihak pengembang ini update dengan peraturan yang terbaru. Nah masalahnya kan ini living terus, berjalan terus ya yang aplikasi ini.”  *([one of the] problems for our project is that we have to keep up with the changing regulation*) | R2 | Business complexity due to the keep changing regulation |  |  |  |
| “Kendalanya yang utama juga dari sisi proses pemahaman datanya. Jadi karena memang data XX ini cukup kompleks, strukturnya juga, ya gitu lumayan kompleks karena XX membagi datanya dalam 3 periode, periode past yang udah berlalu, kemudian periode present yang masih berlaku dan periode future yang masih belum berlaku, jadi memang agak jadi challenge tersendiri untuk memahami data dari XX”  (*the data is quite complex, the structure is also quite complex, because they divide the data into three periods, each with different validity status so it is challenging to understand the data structure, let alone make use of it for the AA project*) | R14 | Challenge in understanding the client's complex data structure |  |  |  |
| … |  |  |  |  |  |
| “Di beberapa tempat, projectnya jalan tp kualitas pengujian kurang, […] jadi ketika kami evaluasi, “koq Cuma segini yang dijui?” atau “koq pengujiannya Cuma seperti ini? Padahal ada beberapa risiko yang bisa didalami lagi”.”  (in some cases, the projects’ quality is lacking, […] so, when we evaluate [the project], we think some risks should be better elaborated) | R17 | Lack of quality of AA project | Limited AA Use-Case | Limited AA Use-Case |  |
| “Untuk prediktif, use-case nya masih belum firm banget. […] Tapi sampe sekarang use-casenya belum berani dikeluarkan, karena CA-nya belum terlalu efektif.”  (we already using computer-assisted audit techniques (CAAT), but for predictive analytics, the use case is still not very firm) | R17 | Unclear use-case for AA project |  |  |  |
| “Kalau nggak ada konsultan lah. Ya kan kita memang nggak bisa, XX nggak bisa, XX terlalu banyak kerjaan, pakai konsultan kan sekarang menurut saya itu juga nggak mahal sekarang, harusnya cepat.”  (*We may use [external] consultant to help the audit team developing an AA project [as we may use their experience in determining use case for internal audit task]*) |  | (The need for0 External aid for AA project development |  |  |  |
| … |  |  |  |  |  |
| “Hanya apakah hal itu bisa diterima sebagai pendekatan yang sesuai untuk kegiatan audit? Menurut saya ada risiko dalam pendekatan seperti itu. Pertama, apakah hal itu memenuhi professional skepticism auditor.”  (*But is it acceptable as an appropriate approach to auditing? I think there are risks in such an approach. First, does it meet the auditor’s professional scepticism?)* | R17 | Independence risk in collaboration with the client (for AA project) | Risk of Independence Impairment | Risk of Independence Impairment |  |
| “Nah ini mungkin bahasanya mungkin kalau kolaboratif itu susah diterima “masak pengawas sama klien pengawasan kolaborasi, kan jadinya ada nuansa fraudnya” gitulah kira-kira.”  (*if the term is collaborative, it is hard to accept, it is strange if the auditor and audit client collaborate, because this term is associated with fraud*) | R16 |  |  |  |  |
| … |  |  |  |  |  |
| “Kalau bisa dipastikan satu Itjen itu memang butuh RAM besar, insfrastruktur yang lebih kencang ya”  (*We need bigger infrastructure with faster processing speed*) | R9 | AA requires big (infrastructure for) processing capacity | Infrastructure Capacity Issues | Infrastructure Capacity Issues |  |
| “Di awal-awal reviu kami, kami sering terkendala kalo koneksi VPN-nya ini sering (terganggu)”  (*at the early phase of this project, we experienced many problems in using VPN to access the designated audit databases [provided by the client in their environment]*) | R14 | AA requires reliable (infrastructure for) data exchange/transfer |  |  |  |
| “Hambatan saat ini adalah hanya kurangnya performa data mart (kami), misalnya ada script yang error, atau ada script yang lama banget untuk eksekusinya. Jadi, tahun depan focus kami adalah untuk meningkatkan performa infrastruktur TI di kami. Misalnya XX mencontohkan query join beberapa tabel, namun sampai 8 jam belum selesai (proses querynya). Hal ini bikin demotivasi, karena proses teknis seperti ini membutuhkan waktu yang sangat lama.” (*currently, we still have some problems with our analytics infrastructure [namely, data-mart]; some scripts were error during the execution, and some processes consumed too much time, lagging the audit team; for example[anonymized] told me this issue [in his project]*) | R17 | AA requires reliable (infrastructure for) processing capacity |  |  |  |
| “Tapi persoalan di bawah tentang kapasitas, tentang bagaimana kalau datanya jadi terganggu misalnya dengan ada permintaan itu. Jadi, persoalan-persoalan itu harus dipetakan, dicarikan bagaimana mengatasinya, misalnya pengalirannya lewat pas hari Sabtu-Minggu misalnya.”  (*We encountered capacity issues [from our client], so, some of them concern for risk of business interruption; hence, I suppose we have to maps those issues, and discuss the possible option for each issue, in this regard, scheduling data exchange in non-interrupting time*) | R11 | Clients' concerns with system performance |  |  |  |
| “Iya, performanya juga kita jaga”  *(We must maintain the [system’s] performance indeed [related to data access for AA purposes]*) | R5 | IT team (from the client) concerns with system performance |  |  |  |
| “[…] masih banyak daerah yang sulit ditembus oleh jaringan internet. Jadi jangan kita bicara transfer data sementara kondisi fisiknya saja tidak memungkinkan […] Nah ini tantangan kita kalau mau menerapkan data analytic juga tidak segampang yang kita lakukan terhadap transfer ke daerah. Belum daerah yang tertinggal, terluar di wilayah Republik Indonesia.” (*In some parts of our country, especially in remote areas, internet is a luxury; this is another challenge for optimizing audit analytics*) | R6 | Some limitations of infrastructure capacities |  |  |  |
| … |  |  |  |  |  |
| “Kemauan dari pimpinan untuk bisa melihat sebenarnya dari dana-dana yang sudah disalurkan itu realisasinya itu apakah benar menjadi nyata atau bagaimana posisinya di sana sekarang. Karena ada kesan kalau zaman dulu itu, kan yang penyaluran itu yang in charge adalah XX; XX itu merasa hanya sebagai penyalur jadi ketika sudah disalurkan sudah selesai tanggung jawab mereka. Mereka hanya menghimpun dan menyalur porsi-porsi di setiap daerahnya. Nah pimpinan ini ingin melihat juga sebenarnya, bisa tidak kita melihat posisi sampai dengan ke laporan keuangan di daerah-daerah.”  (*We chose this project [areas] since, at that time, our client only focused on the transfer of the fund to the local governments and did not follow up with the output, let alone the outcome, assuming that it is under the full authority of the local governments. Our leader [Inspector] is concerned about the value realization of the transferred fund; hence, we set up this project to see, at least, the compliance on the reporting for the transferred fund.*) | R8 | Leaders’ direction and guidance as one of the triggers for AA project | Leadership | Viewing AA as a Comprehensive Enterprise Effort | Principle |
| “Kayak misalkan data ini, tidak bisa terselesaikan kecuali ada keinginan dari pimpinan gitu. Kalau ada keinginan dari pimpinan terselesaikan.”  (*In my opinion, any issues like this data-related issues, can be solved if there is strong stance from the leaders*) | R3 | Importance of leaders’ commitment for AA implementation |  |  |  |
| “Karena menurut saya batu penjurunya, bangunannya itu sudah ada, tinggal kita cari orang yang fit, cocok nih untuk ngerjain itu.”  *(In my opinion, the cornerstone, the building is already there; all we have to do is find people who are fit and suitable to do this.*) | R16 | Fundamentals elements of AA Implementation | Fundamentals elements of AA Implementation |  |  |
| “Kita didukung inisiatif strategis juga kan. Jadi inisiatif strategis itu juga yang maksa kita untuk implement ini kan, dalam artian menjaga untuk implement.”  (*This (AA implementation) even included as one of the strategic initiatives [to secure long-term funding] to ensure long-term continuity of this plan*.) | R4 | AA implementation as a part of the IAF strategic plan | AA Implementation Roadmap |  |  |
| “Pertama, ada roadmap DA 2019-2023 sebagai salah satu wujud nyata dari supporting pimpinan.”  (*We have AA implementation roadmap for 2019-2023 as a tangible support from our leaders.*) | R17 | AA Implementation Roadmap reflecting leader’s (and organizational) support |  |  |  |
| “Dengan merujuk ke Roadmap DA sebagai salah satu enabler. Kemudian dari situ dijabarkan dalam bentuk IKU, serta didukung penyelenggaraan pelatihan yang disupport Pusdiklat.” (*Using the roadmap as an enabler; it was then cascaded to other measures such as KPI or training plans*) | R17 | AA Implementation Roadmap as one of AA implementation enablers |  |  |  |
| “[Organisasi] memberikan kesempatan untuk belajar, training-training juga banyak sekarang. Apalagi kalau di Itjen kan ada programnya ya. Itu kan sudah bagus”  *([The organization] provides many opportunities to learn, various training formats are also available nowadays, and MOFIG particularly allocates resources for these programs. I think it’s good!)* | R13 | Organization support by providing auditors skill development program |  |  |  |
| “Bu Irjen nge-push semua Inspektorat menerapkan DA”  (*Our CAE pushes all units (Inspectorates) to use AA in their tasks*) | R17 | CAE uses the roadmap to push AA implementation in all audit teams |  |  |  |
| “Kalau dukungannya lumayan oke, mas dari sisi dana.”  *(The organization fully supports [AA implementation program] and provide the necessary funds*) | R4 | Strategic plan secures funding for AA implementation |  |  |  |
| “Mungkin juga mereka kalau mau kasih support infrastruktur juga mereka pasti dukung.”  (*They [the organization] fully support us in terms of infrastructure*) | R13 | Organization's support AA by improving the IT infrastructure |  |  |  |
| “Ya, saya kira yang sudah bagus dan berkembang kita itu udah ada langsung di ISRBTK-nya [inisiatif strategis] XX bahwa seluruh eselon I diminta mengembangkan data analytic.”  *(The fact that this initiative now is part of our organization strategic initiative is very positive, all units have to develop their own analytics project*) | R11 | Organization-wide DA strategic initiative aligns with AA implementation plan |  |  |  |
| The roadmap is broken down into three phases; each phase consists of action and responsible actor(s). | D2 | AA Implementation Roadmap elements (including milestones and actors) |  |  |  |
| “Dan yang juga membantu adalah karena kita diiket di satu tim pengembangan DA, sebagai salah satu pendorong komunikasi, meningkatkan kultur kolaborasi.”  *(And what also helps is that we are tied to one AA development task force as one of the drivers of communication and increasing the culture of collaboration.*) | R17 | Ad hoc Organization or IAF-wide AA task force facilitates collaboration and communication | Ad hoc Organization or IAF-wide AA task force facilitates collaboration and communication |  |  |
| “Menurut saya untuk beberapa hal mungkin penting ya IKU ini untuk tahap-tahap pengembangan awal supaya aware. Ya itu di-IKU-kan. Kalau sudah di IKU-kan kan berarti “wah kayaknya harus dicapai”.”  (*I agree that KPI is crucial, especially at the early stage; it creates the sense of urgency*) | R7 | KPI is effective to build awareness | KPI related to AA Implementation |  |  |
| “Saya berpikir bahwa IKU itu adalah sesuatu yang penting tapi terutama untuk memulai. Kenapa? Karena kita selalu, saya ya sangat yakin bahwa IKU itu memengaruhi perilaku.”  (*I am sure that KPI is something essential [for an initiative, like AA implementation] especially for a start; because I believe that KPI influences [employees’] behavior*) | R10 | KPI is the most effective measure to encourage/enforce AA |  |  |  |
| “Masing-masing inspektorat itu fokusnya di goalsnya mereka masing-masing, jadi terlihat kurang merata keinginan untuk mengembangkan data analytic ini di setiap inspektorat”  *(Each Inspectorate focuses on its own goal and does not really concern to improve AA use in our tasks; The dissimilarity of the agenda for each Inspectorate, their commitments to the development of data analytics vary*) | R2 | Different emphasis of KPI leads to different (lack of) effort (for AA implementation) | (The limitations of) KPI related to AA Implementation |  |  |
| “Bahwa IKU itu ada saya setuju, tapi perlu diperbaiki lagi di manualnya supaya saya lebih tertantang”  *(KPI may be important, but the substance of KPI is what I think needs to be improved [which is fairer and more able to encourage development]*) | R6 | KPI needs improvement (in its details) |  |  |  |
| “Walaupun ada IKU di inspektorat lain tapi IKU yang ada di inspektorat itu tidak sebesar, pengaruhnya tidak sebesar IKUnya di XX gitu lho, mas”  *(KPI target in Inspectorate [audit division] is not as influential as the KPI for the innovation unit*) | R2 | KPI (related to AA) has different emphasis in different unit |  |  |  |
| “Kalau peningkatan kompetensi dengan pelatihan itu sih menurut saya nggak efektif sih, mas. Untuk sekadar tahu itu efektif, mas. Maksudnya untuk sekadar tahu ternyata SQL bisa kayak gini, fungsi-fungsinya kayak gini, itu efektif, mas. Tapi kalau untuk buat kompeten perlu nyemplung sih, mas, pakai secara langsung.”  *(In my opinion, training, on itself, is not effective; it might be effective for knowledge acquisition, in a sense that, for example, knowing some SQL basic functions (syntax); but to be able to use that knowledge requires direct practice in a project*) | R4 | Complementary measures (addition to training) for auditors' AA-related skills improvement | Complementary measures (addition to training) for auditors' AA-related skills improvement |  |  |
| “Pesan dari talkshow tersebut cukup tersampaikan. Kemudian terkait lomba, alhamdulillahnya lomba rame, […] Jadi, efek dari strategi dan kegiatan-kegiatan tersebut terhadap awareness pemanfaatan data terasa; pesan itu tersampaikan.”  *([Talking about AA talkshow and competition] So, we kind of achieve the effect of those activities to build awareness on analytics*) | R17 | Multiple approaches to overcome mindset barriers of DA/AA implementation | Multiple approaches to overcome mindset barriers of DA/AA implementation |  |  |
| “Lomba data analytics di level perusahaan bisa dicoba juga di level unit audit intern, karena yang ngerti proyek auditnya auditor sendiri dan menurut saya ini sangat berguna untuk dapat *business insight* untuk pengembangan skill data analytics”  *(Data analytics competitions, both at the company and internal audit groups levels, including mentorship as a part of the program, massively improve employees’ (and organizations units’) awareness of the value of data analytics and auditors’ skills in audit analytic)* | E5 | DA competition facilitates auditors’ AA skills acquisition and improvement | DA Competition |  |  |
| Setelah adanya lomba, mulai muncul dan bahkan menjadi komunitas  *(The [data analytics] community emerged [in the organization] after the competition*) | R17 | DA competition facilitates the development of DA community |  |  |  |
| “Kemudian terkait lomba, alhamdulillahnya lomba rame, baik yang di Itjen dan Kemenkeu”  *(And for the competition, thankfully that it got very enthusiastic responses from the organization*) | R17 | DA competition to build awareness of benefits and requirements of DA/AA |  |  |  |
| “[Kompetisi menjadi] titik munculnya talent-talent DA di Kemenkeu yang selama ini mereka ngerasa sendirian.”  *(The competition facilitated interactions among [analytics] talents, so that they realize they're not alone, many other data enthusiasts in the organization*) | R17 | DA talent emerged from DA competition |  |  |  |
| “Dari talkshow, terasa awareness bahwa data itu penting, apalagi audit mau liat keandalan dari pelaksanaan tusi, dengan melihat data merupakan sesuatu yang penting, jadi pesan dari talkshow tersebut cukup tersampaikan.”  *(The talk show helped to build awareness on the importance of data utilization for our tasks*) | R17 | Talkshow to build awareness of benefits and requirements of DA/AA |  |  |  |
| “[Organisasi perlu memberikan] penghargaan eh bukan penghargaan sih ya, memberikan stimulus untuk orang-orang yang mau bekerja mengembangkan hal ini.”  *(hence, I think the organization needs to provide strong stimulus [for personnel to embrace this new approach]*) | R2 | Reward for personnel/auditors embracing AA to foster AA implementation | Reward for personnel/auditors embracing AA to foster AA implementation |  |  |
| … |  |  |  |  |  |
| AA Practical Guideline consists of the definition of relationships between IAF’s AA project and the client’s Business Analytics (BA) project as a safeguard. | D4 | Measures or Safeguards to maintain independence and objectivity for connected analytics (AA and BA) | Formal Measures of AA Implementation | Interrelation Among Roles for AA Implementation |  |
| “Bisa saja pendekatannya, penentuan risiko dan logika pengujiannya kami [auditor] yang menentukan [dan bukan klien pengawasan].”  (*I am sure we need to test the module provided by the client. Alternatively, it is possible that we [the IAF] will determine the approach, risk determination and testing logic.*) | R17 | Auditors in charge in identifying the risks and determining the risk testing |  |  |  |
| “Harapannya sih [tim audit] bisa memonitor, kalo begitu udah disampaikan ke unit teknis, ya kayak ginilah prosesnya Mas, kayak checklist ya, apa aja yang udah diimprove.”  *(I hope auditors monitor the project that has been delivered to the client, so that auditors can assess if any improvement has been made*) | R15 | Auditors' monitoring AA project that is continued by the client |  |  |  |
| AA Practical Guideline consists of responsibilities and authorities of each actor involved in an AA project. | D4 | Audit team roles in AA project (summarized) |  |  |  |
| “Dengan adanya NDA [Non-disclosure Agreement] itu kita bertanggung jawab untuk menjaga keutuhan datanya. Jadi, melalui mekanisme semacam itu pelan-pelan trustnya mulai jalan.”  *(The NDA [Non-disclosure Agreement] emphasizes our [internal audit team] responsibility regarding data security; this [formal] mechanism helps to gradually build trust among us*) | R11 | Formal arrangement may build trust |  |  |  |
| AA Practical Guideline consists of the definition of relationships between IAF’s AA project and the client’s Business Analytics (BA) project. | D4 | Relationships between AA and the client's business analytics (BA) |  |  |  |
| “Governance [tata kelola] yang bagus nih kan sebenarnya governance itu kan artinya clear roles, mandatnya jelas gitu kan siapa bertugas ini siapa bertugas ini gitu kan sebenarnya, clear peran dan tugasnya itu jelas gitu kan?”  *(One of the tenets of governance is the clarity of roles and mandates, so it is known who is doing what, right?*) | R2 | Importance of the governance of roles |  |  |  |
| “Panduan penerapan DA prediktif yang disusun oleh teman-teman di Inspektorat Jenderal sih memang sudah mirip CRISP-DM”  *(the guidelines for implementing predictive analytics in our [internal] guidelines are indeed similar to CRISP-DM*) | R14 | AA needs a practical guideline which refer to the best practice | Practical Guideline for AA Project |  |  |
| “Jadi harus dipikirkan nih bagaimana SOP yang terbaik. Dari sisi kita kan kita butuh, tapi kita tidak ingin dia [klien pengawasan] terganggu. Nah, dia merasa oke saya kasih, tapi jangan ganggu urusan saya.”  *(We must develop the most considerate procedure, so that our requirement can be provided without too much bothering our client [during the internal audit engagement/development of AA project]*) | R11 | AA needs practical guidelines that caters to all actors’ concerns |  |  |  |
| “Akses data kayaknya nggak terlalu sih, cuma lama aja, mas. Butuh birokrasi gitu lah. Tapi akhirnya dapat-dapat juga sih. Karena kebetulan datanya nggak terlalu banyak yang dibutuhkan di reviu LK ini.”  *(Data access is relatively easy, we know where to ask […] although it is true that we must adhere to certain bureaucratic processes, at the end of the day, we get what we need*) | R4 | Data access approval/provision requires bureaucratic process | Governance of Data-related matters |  |  |
| “Auditor perlu bisa meyakinkan data yang diakses sesuai dan memenuhi tujuan pengawasan dan hanya diakses auditor tersebut,”  *(Auditors need to be able to ensure that the data accessed is appropriate and fulfils the purpose of the audit and is only accessed by the auditors*) | R17 | Data confidentiality management as a part of data governance for AA (auditor must ensure it) |  |  |  |
| “karena secara desain di TK pengaliran data, semua data tersimpan di SLDK.”  *(by design in data governance (flow), all data is stored in our data warehouse [namely, SLDK])* | R17 | Data exchange management as a part of data governance for AA (facilitated by the infrastructure) |  |  |  |
| “Kami kasih jawaban seperti itu. Terus mereka baru menyadari, oiya kayaknya kita harus ngajak orang [anonymized] untuk menyadari bahwa mereka adalah pemilik datanya.”  *(Sometimes our counterparts do not aware about data ownership, we have to tell them to invite unit X as the data owner*) | R16 | Data ownership as a part of data governance (embedded in the dedicated platform) |  |  |  |
| “Bagaimana kami bisa akses data itu dibantu sama mereka [unit TI]. Bahkan mereka juga beberapa kali pada saat kami bangun, [anonymized] sih, ketemu masalah-masalah terkait security kalau di-hosting, […] ya lumayan membantu untuk penyelesaian e-reviu”  (*They [IT unit] were really helpful for our [AA] project, for instance, when we encountered technical problems in accessing or securing data, […] which is critical for our project*) | R13 | Data security management as a part of data governance for AA |  |  |  |
| “Orang [auditor] yang akan mengakses data itu harus menandatangani seperti affidavit-lah saya akan mengakses data ini, ini, ini dst dan saya tidak akan membocorkannya untuk pihak-pihak yang tidak berkepentingan.  *(The person [auditor] who is going to access the data has to sign something like an affidavit (non-disclosure agreement) [...] whereby those people who do access the data are then bound both morally and legally that they will not use it for any other purpose other than audit assignment*) | R10 | Formal arrangement to solve data access issues |  |  |  |
| “Kalo dari kebijakan udah jelas, itu harus masuk di kebijakan tata kelola di Kemenkeu (melalui SLDK)”  *(Data access is regulated as a part of data governance policy at the MOF (through the SLDK))* | R17 | Data governance as a part of relevant regulation (for AA) |  |  |  |
| “Hampir semua auditor yang muda ya level katim ke bawah itu sudah pernah diklat TABK, data analytic, itu sudah lah ya, dasar-dasar itu sudah.”  (*Almost all auditors, up to team leader level, have been trained in CAAT and data analytics, at least the basics*) | R7 | AA training for all auditors at technical level | Training as a mean to improve auditor's AA-related skills |  |  |
| “Kayaknya perlu dibekali untuk pendidikan khusus ya manajemen di bidang pengelolaan data yang berbasis IT ini, mas.”  *(I think audit managers need to be trained [related to their role in AA project]*) | R6 | AA needs managerial training for audit manager |  |  |  |
| “Ada pelatihan terkait pengolahan data ini tim DA wajib ikut dan kita waktu itu diberikan waktu khusus memang tidak diganggu dengan penugasan lain sehingga kita bisa fokus untuk mengembangkan diri ke situ.”  *([The organization] provided training about the use of analytics [for internal audit project] and we can focus to developing those skills)* | R8 | Training as a mean to improve auditor's AA-related skills |  |  |  |
| “Jadi kalau diklat konvensional gitu rasanya memang butuh waktu yang cukup lama [supaya mahir]”  *(In my experience, the traditiona training approach is ineffective since it takes too long to internalize the skills [using the traditional training approach]*) | R11 | Limitation of the traditional training approach to improve auditors' AA skills |  |  |  |
| “Itu sih saya lihat memang training itu tidak cukup sih. Karena dibandingkan training sebenarnya kita lebih efektif itu mengerjakan proyek,”  (*I think training alone will not be sufficient; it will be more effective if we can apply the skill in an actual AA project*) | R13 | Training's (on its own) ineffectiveness for improving AA-related skills |  |  |  |
| … |  |  |  |  |  |
| “Kalau ini kan pengembangan e-reviu ini kan dua inspektorat, Ir 7 sama Ir 6 harus sama-sama duduk bersama.”  *(The development of this application [an AA project] involved two inspectorates, XX and XX*) | R1 | AA project involves more than one actor | AA project involves more than one actor | Collaboration Among Actors Involved in AA Implementation |  |
| “Rekomendasi-rekomendasinya semakin ke sini semakin mudahlah untuk data. Ini bukan hanya data untuk data analytic gitu ya, kan kadang di kita banyak menerima disposisi-disposisi tiba-tiba harus nyiapin bahan rapat ini rapat itu nah itu jadi lebih enak ketika kita minta bahan rapatnya itu lebih mudah. Nah itu isu trust itu kalau menurut saya itu. Jadi hal-hal yang kadang tidak perlu resmi ND resmi tapi kalau sudah trust data itu bisa cepat kita dapatkan.”  *(Hence, more of our recommendations are easier to be accepted, and [we also] get [the required] data. This is not just data for analytics projects but for other tasks as wel*l) | R7 | Trust facilitates better collaboration, for AA and other IA tasks | Communication to facilitate better collaboration |  |  |
| “Ketika itu berhasil di-solve ketika kami bisa menyebutkan secara spesifik, bahwa data yang kita minta itu apa saja, lalu tujuannya itu untuk apa.”  *(Fortunately, it can be solved as long as we can clearly define and explain our requests in detail and the purpose of our assignment*) | R14 | Communicate clearly about the needed data and its purpose to convince the clients/data owners |  |  |  |
| “Yaitu masalahnya adalah bagaimana kita bisa meyakinkan mereka bahwa data yang diberikan ke kita itu akan terjaga kerahasiaannya. Jadi kita punya tata kelola data gitu dan rasanya sih saya belum lihat ada tata kelola yang bila ada data di Itjen itu akan dijaga oleh Itjen sehingga tidak bisa sembarangan keluar. Data itu hanya igunakan oleh orang Itjen yang bertugas melakukan tugas itu saja. Nah, menurut saya ini mungkin salah satunya yang bisa kita lakukan.”  (*The challenge is how to convince them [the client] that we ensure their data confidentiality; to inform and convince them that we have a procedure for governing data for AA project, so that the data will not go elsewhere.*) | R10 | Communicate clearly about the security measures in the utilized mechanisms for AA |  |  |  |
| “Kalo untuk kompleksitas data sih emang ga ada jalan lain selain kami terus komunikasi dengan pemilik datanya.”  *(In terms of data complexity, there really is no other way other than we continue to communicate intensively with the data owners.*) | R14 | Communicate intensively to address difficulty in understanding data and business complexity issues |  |  |  |
| “Karena saya tipikal orang yang anti ketika bilang “saya mau minta dong”, “data apa, Pak?”, “semuanya”. Nah itu saya paling anti itu. Saya biasanya kalau “saya mau minta data dong”, “data apa?”, “saya lagi butuh pengawasan terkait dengan XX” ya sudah saya mintanya terkait dengan XX saja gitu, nah saya fokuskan ke situ. Saya biasanya kayak gitu. Saya paling anti ya minta semua data itu paling anti lah. Kalau misalnya itu tidak berhasil, pertanyaan keduanya tadi, kalau memang tidak ada seperti apa. Nah ini yang menurut saya ya, menurut saya itu kitanya yang berubah, Itjennya yang berubah. Ketika kita ke sana kita harus bisa memberikan sesuatu yang membuat mereka tuh nyaman.”  (*I tried to communicate clearly to our client about the exact data that we need for our project; instead of, like commonly done by our auditors, asking all the data which will make them [the client] uncomfortable and create distrust [with us, auditor]. So, in a way, we [audit team] should also change and improve our way of communication and interaction with our client so they are comfortable with us*) | R9 | Communicate nicely to build trust with audit client (or stakeholder) |  |  |  |
| “Kita jelaskan ke dia, kita mau bikin modelling ini. Terkait pinjaman ini kita pengen tahu, apa sih hambatannya dan gimana kita bisa memprediksi ke depan, berdasarkan data yang kalian buat. Gitu nanti akan berguna juga, waktu kalian ketemu data ini nanti kalian bisa memperbaiki kebijakan, atau prosedur, atau apapun yang bisa dilakukan untuk memperbaiki kinerja dari pinjaman itu.”  *(We explain [to our client] the purpose of our project, i.e., to predict future risk occurence so that it will assist them [the client] in devising future policy*) | R12 | Communicate the value of AA project to the stakeholders (e.g., client/data owner) |  |  |  |
| “Artinya gini, kalau dia nggak dapat data yang dibutuhkan, asal dia bisa menampilkan keberhasilan dengan data yang ada itu akan mendorong pencapaian yang lebih terus tinggal nanti “oh kami belum dapat akses data ini, kalau kami dapat akses data ini akan lebih bag*us*” gitu misalnya.”  *(The alternative strategy is by showcasing the existing project, with an additional comment like, "if we get more diverse data, we can expand the analysis to be more useful for you [the client]"*) | R16 | Communicate the value of analytics project to the counterpart (e.g., data owner) |  |  |  |
| “Nah makanya untuk memitigasi itu ya sama tetap sih saya sih masih berpikir gitu. DA ini jangan hanya domain tim DA lho, ini semuanya harus [bisa]”  *(So that is why we try to mitigate it; I still think this analytics should not just be the domain of a certain team; all teams must be involved. So personnel fluent in analytics must be available in each team*) | R7 | AA-related skills dissemination to mitigate dependency on key personnel | AA-related skills dissemination to mitigate dependency on key personnel |  |  |
| “Tapi tetep perlu tahapan tambahan, yaitu kami perlu mengevaluasi modul yang disediakan, misalnya untuk memastikan kesesuaian sumber data, atau kriteria yang digunakan untuk penyiapan modul tersebut.”  *(It still needs additional stages, i.e. we have to evaluate the modules provided, for example, to ensure the suitability of the data source, or the criteria used to prepare the module.*) | R17 | Auditors are allowed to test the provided (testing) module (developed by the client) | Collaboration (for AA project) with the client is possible |  |  |
| “Jadi, nanti prosesnya bisa saling melengkapi, dari sisinya auditor, dari sisi risk management, dari sisi controlling, juga ilmu dari sisi kami, dari unit teknis yang memang mengetahui proses bisnis sehari-hari.”  *(We can complement each other, from the IAF’s side, from the risk management side, from the controlling side, as well as knowledge from our side, from the client that understands the day-to-day business processes*) | R15 | Benefit of join AA project |  |  |  |
| “Tim XX itu siap buatin menu teman-teman auditor.”  *(Actually, [our] team is ready to make [audit] menu for the IAF.*) | R5 | Business process owner team ready to provide audit menu (as AA) for IAF |  |  |  |
| “Menurut saya itu [kolaborasi antara klien dan tim audit dalam pengembangan DA] cukup realistis dan bisa dijalankan.”  *(I think it’s [collaboration between audit team and the client in an AA project] quite realistic and workable.*) | R17 | Collaboration (for AA project) with the client is possible |  |  |  |
| “Kami dapat inspirasi, terima kasih. Akhirnya kami mencoba untuk me-running ulang modelnya. Dan memang karena kemudian kami juga yang mengetahui proses bisnisnya, itu menjadi modal yang sangat baik untuk kami untuk kemudian menganalisis lebih lanjut, seperti itu.”  *(We were thankful for the insight. From there (the audit report), we tried to rerun the model. And indeed, because then we have a good understanding about the business process, it becomes a very good foundation for us to analyze further.*) | R15 | Client continuing auditors' AA project as a form of collaboration |  |  |  |
| “Ke depannya kita bisa join development bareng malah gitu.”  *(Anyway, in the future, we can join development together instead.*) | R5 | Client opens up for join AA project |  |  |  |
| “Karena teman di XX, pimpinan XX melihat hal itu juga perlu bahwa ada menu untuk melakukan reviu itu perlu dan itu menjadi bagian yang harus mereka siapkan. Entah ngomong sama kita apa nggak, itu sudah kepikir sama mereka bahwa ada nanti [anonymized] itu ada menu reviu laporan keuangan atau keperluan audit.”  (*Our colleagues in [unit XX, the audit client] and their leader have seen the menu as a necessity, considering that the review is mandatory [to be performed by the internal auditor], either way we have to prepare the menu/module for that task*) | R16 | IT Team (from the client) ready to develop audit menu (as AA) for IAF |  |  |  |
| Paling [anonymized] ya? Kita kan punya walaupun saya tidak aktif di situ, cuma merasa melihat orang yang punya minat yang sama kemudian mereka keren-keren, menurut saya [anonymized] juga menunjang ya, banyak kasih info cara belajar, minimal cara belajar DA itu mulai dari mana.  *(I am not actively involved in the community, but I think it's a cool community, and it helps to support and accelerate the development of the use of analytics in our organization*) | R13 | DA Community helps better collaboration | DA Community helps better collaboration |  |  |
| “Kami sebagai koordinator perhitungan IKU dan evaluasi pencapaian IKU.”  *(We also act as the coordinators of KPI and evaluation of the achievements.*) | R17 | R&D Team coordinates and monitors key performance indicator related to AA | R&D team’s coordinating role |  |  |
| “Tugas kami adalah untuk nyiapin strategi agar Itjen bisa nerapkan DA secara baik, dari strategi tersebut diturunkan jadi penyiapan kebijakan.”  *(Our task is to prepare a strategy so that the IAF can implement analytics in audit activities. This strategy is turned into policies, for example, guidelines for CA*) | R17 | R&D Team develops and proposes the strategies, policies, and procedures for AA implementation |  |  |  |
| “Kami juga berperan mengkomunikasikan (hasil) dari tim DA tiap Inspektorat (proyek DA apa aja yang sedang dikerjakan, termasuk kegiatan terkait pengembangan DA Itjen) ke Pak Irjen melalui laporan rutin kami sebagai coordinator DA Itjen.”  *(We also play a role in communicating (results) from the analytics team of each audit unit to the CAE*) | R17 | R&D team bridges communication from technical units to senior echelon (e.g., CAE, Inspectors) | R&D team's roles in connecting actors for AA implementation |  |  |
| “[Berdasarkan koordinasi dengan unit XX] kami mensupport Itjen secara keseluruhan untuk supaya SDM data analytic ini bisa tersedia sesuai dengan apa yang diharapkan.”  *(We support the IAF in general, including for AA implementation program, so auditors’ AA skills can be improved)* | R18 | HR Unit collaborates with R&D Team for skills development program |  |  |  |
| “Kami komunikasikan dan berikan saran ke SIP mengenai konfigurasi yang pas.”  *(We [R&D unit] also communicated to the IT Division and gave our view for a suitable configuration [for a particular AA project]*) | R17 | R&D team advises IT unit for IT configuraiton to support AA |  |  |  |
| “Unit XX [R&D] saya rasakan bagus sekali. Kita tuh open bahkan untuk pertemuan-pertemuan informal pun “eh tolong dong gabung di link ini”, kami kan punya link informal untuk chat terbuka, itu diinfokan saja ke [anonymized] atau apa, dia langsung gabung respons.” (*The R&D unit is very supportive, even for an informal session to assist our project, they are always open for consultation*) | R13 | R&D Team assist in developing AA projects |  |  |  |
| “Nah jadi bahasa coding ACL itu diinterpretasikan ke SQL. Oleh teman-teman mereka [R&D] yang bikin reviu itu lebih portable bisa dilakukan di manapun dengan aplikasi SQL itu.”  (*They [R&D unit] helps to interpret our ACL command toward an SQL command-based project which improve the versatility of the project, since they are more advanced in utilizing SQL tool to develop query-based application [for financial review]*) | R2 | R&D Team collaborates and support audit team in AA project development |  |  |  |
| “[Unit R&D] sama [Unit TI] itu sudah tektokannya enak”  (We [R&D Unit] have a good relationship with IT Division, so it makes our task easier) | R16 | R&D Team collaborates with IT Division for data access mechanism |  |  |  |
| “Kita nyiapin pelatihan-perlatihannya termasuk desain pelatihannya, misalnya apa saja materi untuk TABK, bahkan beberapa diklat kami juga sebagai pengajar”  *(We contribute on the training designs, for example for TABK (CAAT); personnel in my team also even teach in some of the training.*) | R17 | R&D Team contributes to the (AA) skills development program and execution |  |  |  |
| “Kami dibantu oleh [R&D] termasuk juga menyiapkan tempat penyimpanannya [data dan project-nya] nanti, di mana dan bagaimana cara menarik datanya seperti itu. Kalau di luar itu lagi eksternal waktu itu tidak ada ya selain klien [pemilik data], [unit TI], dan [R&D]”  (*We are assisted by the innovation unit [R7D], including to prepare the platform for the project and storage for the data or the results or how to access the data; we also connected with the data owner, IT unit, and helped by the R&D unit*) | R8 | R&D team facilitates collaboration between audit team and IT division for IT-related support |  |  |  |
| “[Unit TI] mendukung misalnya proses pengambilan data ke [anonymized] itu dirasakan banget lah dukungan dari unit TI”  *(We got full support from IT Division, for instance regarding data exchange with one of our major clients*) | R13 | IT Division facilitates data exchange procedure | Supporting actors in AA implementation |  |  |
| “Kalau dalam rangka pengembangan data analytic di IAF, tugas saya sebenarnya adalah mensupport pengembangan SDM data analytic yang ada di IAF gitu ya”  *(In terms of AA implementation program, my [unit's] task is to support skill improvement for auditors and the IAF’s employees*) | R18 | HR Unit facilitates and executes (AA) skills development program |  |  |  |
| “Jadi karena datanya nggak langsung real time masuk karena kendala di storage ya, web-based itu kendala di storagenya sehingga kalau dimasukkan terus setiap waktu nanti storagenya penuh. Akhirnya ketika butuh didownloadin sama [Unit TI] nanti ditransfer ke web-based itu untuk bisa dianalisa, gitu. Jadi proses info ke [Unit TI] dulu karena kalau dimasukkin terus nanti kepenuhan gitu.”  (*We had storage issues for our web-based* application […], *so we asked the IT unit to find a workaround to address that [issue]*) | R2 | IT Division provides (and maintains) infrastructure for data exchange |  |  |  |
| … |  |  |  |  |  |
| “Kita sharing di [platform name] kan udah ada nih data-data. Nah, kalau yang seperti itu tinggal minta saja.”  (As far as we transfer or exchange the data through the internal path (intranet) like [platform name], it should be okay) | R5 | Client agreement to use the (dedicated) platform for data sharing | Dedicated platform facilitates secure and reliable data exchange | Infrastructure to Support AA |  |
| “Yang kedua dari sisi security-nya gitu ya. Kalau dari internal sih aman sih kalo [platform name] sih aman karena kan intranet.”  *(From a security perspective, data exchange [for AA purposes] should be fine since we use [platform name] operated through our internal network.*) | R5 | Dedicated platform facilitates secure and reliable data exchange |  |  |  |
| “Namun saat ini belum seluruh data organisasi diperoleh aksesnya oleh IAF via [platform name]”  *(currently, there are some data that still unavailable for us in the [platform name]*) | R17 | Some limitations in the current/existing data access platform |  |  |  |
| “Kan sebenarnya ada teknologi bahwa kita bisa “me-masking”. Datanya di-masking sehingga tidak kelihatan nih, rahasianya bisa ditutupi dst. Atau yang kita lihat kan bukan individualnya.”  *(Technological solutions are available for this concern, for example, we can mask the data so that protect the privacy and confidentiality issues.*) | R10 | Technological solution for security concerns (as a part of data security management) | Technological solution for security concerns (as a part of data security management) |  |  |