Dear Sirs

Assurance on <IR>: An Introduction to the Discussion

We appreciate the opportunity to comment on the International Integrated Reporting Council’s (IIRC) Paper entitled “Assurance on <IR>: An Introduction to the Discussion” (the “Paper”). We have consulted with, and this letter represents the views of, the KPMG network.

We agree that the corporate reporting model needs to evolve beyond a sole focus on historical records of financial performance. We believe that better corporate reporting would provide greater insight into the ability of an enterprise to create value to better support capital allocation decisions and provide owners with better insights into the stewardship of business value. The Integrated Reporting (‘<IR>’) Framework is an important development offering a market-led solution to achieve this. It supports a principles-based approach to provide a holistic view of how value is created over time by providing greater insights into business strategies, value drivers and risks, and performance and prospects, over a longer-term period. We believe that independent assurance has a key role to play in enhancing investor confidence in the wider information set that <IR> aspires to provide. Whilst the appropriate cost-benefit balance with regard to assurance will be determined between entities and their shareholders, we believe it is important that the assurance profession take the lead in developing a range of assurance solutions to facilitate that determination.

The consultation paper provides a good basis to support discussion regarding the further development of assurance of <IR>. We highlight four aspects of our detailed response that we believe, in particular, should inform that discussion:

1) The approach adopted for assurance should align with Integrated Reporting principles

It is important that the assurance process aligns with <IR> principles and the holistic approach to reporting adopted in the <IR> Framework. Carving assurance into specialist silos such as financial, sustainability, and operational matters risks creating a multitude of disconnected assurance exercises, and embedding in the reporting process the very issues that Integrated Reporting was designed to address. Our recommendations in (2) and (3) below, regarding
how assurance may be structured, are aimed at avoiding this. It is also important to emphasise that anyone providing assurance over an Integrated Report will need an extensive understanding of the organisation’s business model as a foundation for assuring the other content elements.

2) A range of assurance approaches will be required depending on the maturity of the report being assured

Assurance in respect of <IR> will be driven by market demand, and we expect assurance solutions to evolve and align with market needs as reporting practice in this area matures. Assurance solutions may take the forms described in the paper, or it may be appropriate for “modular assurance” over individual report content elements (e.g. the description of risks and opportunities, as opposed to discrete subject matter areas) to be provided (see (3) below). We also believe that practitioners may initially be involved in non-assurance activities such as readiness reviews, and that such involvement may ultimately lead to publically available assurance opinions over entire Integrated Reports. A number of challenges need to be addressed as this progresses, and it is critical to explore market needs more fully to develop an expectation of the ultimate goal of assurance in order to respond appropriately.

3) Assurance would be better built around the IR content elements rather than the subject matter being assured

As practice develops and the demand for assurance increases, we envisage demand for a modular assurance approach. An essential feature of <IR> is that information that is most relevant for inclusion is determined by considering each content element (e.g. risks and opportunities) in relation to an entity’s business model. Without this underpinning structure, assurance practitioners will not be able to assess whether the most relevant information has been included in the Integrated Report. Therefore, in the context of an Integrated Report, assurance provided over individual content elements provides a better stepping stone to full assurance than, for example, assurance over all the environmental disclosures. We also believe that it would be more appropriate for an assurance provider to structure their work in this way rather than as a series of discrete specialist assurance projects.

4) The basis from which assurance could be provided is already substantially in place

- The existing concept of assurance set out in IAASB materials, including specific standards, in particular, ISAE 3000 (Revised), already provides a strong base to enable an independent assurance practitioner to provide assurance. These standards emphasise the critical attributes of assurance including: independence and ethical behaviour; the requirement for practitioners to be members of firms that are subject to ISQC 1, Quality Control for Firms that Perform Audit and Review of Financial Statements, and Other Assurance and Related Services Engagements, or other equivalent requirements, as well as the need to comply with relevant parts of the Code of Ethics for Professional Accountants. We believe that independence and ethical behaviour are fundamental to assurance engagements, and accordingly emphasise the importance of application of these standards, with their focus on quality control and ethics.
• We agree that it is helpful to explore how common criteria could be further developed for assuring an Integrated Report, but we consider that the <IR> Framework, when applied by an entity to its specific business model, already provides suitable criteria for performing an assurance engagement. In particular, we are aware that some believe additional guidance on materiality is required in order to support an <IR> assurance exercise. We believe that the <IR> Framework already provides a good basis to determine whether a particular matter is material and whether a piece of information related to that specific matter is material by reference to the intrinsic value of the business. However, we would welcome further clarification provided through the IIRC’s ongoing materiality project, as this should support more consistent interpretation by report preparers who are approaching <IR> from a variety of different perspectives.

5) The assurance report model needs to change to meet market needs

It is increasingly apparent that the current binary pass/fail assurance report model when applied to audits of financial statements no longer responds fully to market needs, and the investor response to the expanded auditor’s report, especially in the UK, demonstrates the value of the practitioner’s insights.

We expect this will be particularly relevant in the context of <IR> assurance as this draws significantly on the professional experience and expertise of the assurance practitioner, and their exercise of professional judgement is of paramount importance to report users. Accordingly, it is critical that considerations in respect of assurance involve exploration of changes to the nature of the assurance report to enable practitioners to convey not only a clear conclusion, but also to communicate, in a “long-form” style, decision-useful information about matters that shaped that conclusion.

We highlight that many of the considerations regarding assurance over an Integrated Report form part of the overarching debate about the future of reporting and assurance more generally. Accordingly, we recommend that the IIRC works closely with the IAASB to explore assurance solutions, including initiatives to consider enhancing the quality, relevance and value of the assurance report, as practice develops.

Please contact Sylvia Smith on +44 (0)20 7694 8871 if you wish to discuss the above further.

Yours faithfully

KPMG IFRG Limited
The nature of assurance

**Q1 What priority should be placed on assurance in the context of driving credibility and trust in <IR>?**

In the expectation that <IR> will be successful in providing relevant information to potential users, e.g. to assess stewardship and to make capital allocation decisions, we believe that there will be demand for independent assurance as a key mechanism for adding credibility to the information included in an Integrated Report. It is important therefore for the adoption of <IR> that potential users of Integrated Reports can have confidence that the reports as a whole, and not only their individual elements, will ultimately be capable of being assured, once reporting practice is sufficiently evolved.

We highlight elsewhere in our response that we expect assurance solutions to evolve and align with market needs as reporting practice in this area matures. Accordingly, we believe it is essential to involve all those in the reporting supply chain, in particular, shareholders and investors as users of <IR>, in the exploration of assurance, so that assurance solutions are appropriate to their needs.

We recommend that in considering potential assurance models, assurance practitioners and others embrace the need for change in corporate reporting and the development of innovative solutions in terms of the assurance model. This will help ensure that assurance solutions are aligned with investor needs, and support the development of <IR> itself.

**Q2 What are the key features of assurance that will best suit the needs of users of Integrated Reports in years to come?**

The concept of assurance is already well developed in the marketplace. It conveys a clear conclusion from an independent practitioner, subject to regulation, who is appropriately qualified, and possesses sufficient expertise in the subject matter of the assurance engagement to enable the formation of the assurance conclusion.

Assurance is premised on the IAASB Framework for Assurance Engagements, which provides a sound frame of reference for assurance practitioners. The principles underpinning this Framework have been subject to rigorous due process, involving a wide range of stakeholders, which has enabled the development of high quality and widely used assurance standards, which already address a wide variety of subject matters. These standards emphasise the critical attributes of independence and ethical behaviour, in particular, because they require practitioners to be members of firms that are subject to ISQC 1, Quality Control for Firms that Perform Audit and Review of Financial Statements, and Other Assurance and Related Services Engagements, or other equivalent requirements as well as relevant parts of the Code of Ethics for Professional Accountants. Practitioners may also be required to adhere to International Accounting Education Standards or other educational standards as defined by relevant professional bodies in their particular jurisdictions.

The concept of assurance as set out in the IAASB Framework and further developed in the ISAE 3000 (Revised) suite of assurance standards is sufficiently broad to enable <IR> assurance engagements to evolve over time. For example, a practitioner may be engaged to provide
reasonable assurance, limited assurance or a hybrid of both, over the Integrated Report as a whole, or over specific content elements.

Notwithstanding our previous comments regarding the need for improvements to our communications with stakeholders about the matters that shape our assurance conclusion, we therefore consider that the current concept of assurance and the related standards are fit for purpose and, accordingly, the foundations for providing <IR> assurance are already in place. We believe that Integrated Report users’ needs would be best served if <IR> assurance builds on this established base and therefore it is neither necessary nor helpful to return to the drawing board to re-define the assurance concept, or to try to devise an alternative notion of assurance.

**Competent practitioners**

**Q3 Is the availability of suitably skilled and experienced practitioners a problem in your jurisdiction, and if so, what needs to be done, and by whom, to remedy the situation?**

The core skills in the audit and assurance profession are essential for an Integrated Report assurance engagement. These core skills include experience in performing assurance engagements in accordance with standards that emphasise independence and ethical behaviour; following a risk-based approach, based on understanding the business and its environment, to obtain sufficient appropriate evidence in order to form a conclusion; requiring the exercise of professional scepticism and professional judgment in evaluating evidence and forming our conclusion, and involving specialists and experts in certain elements of the subject matter, as necessary.

The expanded role of the assurance practitioner in respect of the holistic approach to assurance over an Integrated Report will require a greater depth of understanding to plan and execute an assurance engagement than that required for a traditional audit. As companies build up their corporate reporting capability, assurance practitioners will need to draw on the wealth of specialist skills and expertise in their multi-disciplinary firms to provide the meaningful assurance and insights that the marketplace demands.

**Q4 What needs to be done, and by whom, to ensure the quality of assurance on <IR> is maintained at a high level, including practitioners’ adherence to suitable educational, ethical (including independence), quality control and performance standards?**

- <IR> assurance development should build on ISAE 3000 (Revised) and related standards.

We consider that the independent professional opinion of a qualified assurance professional, subject to regulation, is the most appropriate assurance solution to meet market needs and ISAE 3000 (Revised) (and related standards) to be the appropriate standard(s) for the performance of an assurance engagement over an Integrated Report. These standards emphasise independence and ethical behaviour, which are fundamental to assurance engagements. Practitioners may also be required to adhere to International Accounting Education Standards or other educational standards as defined by relevant professional bodies in their particular jurisdictions.
• Assurance reports will need to be developed to explain the judgements being applied.

A key aspect in respect of ensuring quality of assurance over <IR> is the need for preparers and assurance practitioners to exercise significant professional judgment in their application of the principles-based Integrated Reporting Framework to determine that the most relevant information has been included in the Integrated Report. This judgement will need to balance considerations of reliability, comparability, conciseness, and overall relevance.

As we describe elsewhere in this letter, we recommend the establishment of a Working Group of stakeholders with an interest in assurance matters to discuss specific challenges, share experiences and explore evolving practice, in order to support the development of a consistent approach.

We have noted in our response to Q2 that the level of judgement exercised in assuring an Integrated Report will be increased. It is important for the credibility of the assurance opinion that these judgements are explained. Therefore, we also recommend that IIRC reaches out to IAASB to explore options to enhance the quality, relevance and value of the assurance report, which will be especially important in the context of <IR>, given the significant degree of professional judgement involved and therefore the value users will place on practitioner insights.

**Robust internal systems**

**Q5 Is the robustness of internal systems a problem, and if so what needs to be done, and by whom, to remedy the situation?**

We acknowledge that, in general, the internal systems supporting the preparation of an Integrated Report are in the early stages of development at most organisations. Preparers will need to increase their capabilities, understand what information is needed and expand their reporting systems and controls to support the development of this information. However, we do not believe this creates a barrier to providing assurance or assurance-related services. Instead we expect assurance solutions to evolve as practice in this area matures.

Initially, non-assurance activities may be of most benefit, for example, “readiness reviews”, to challenge management’s design and implementation of systems to determine whether an entity is sufficiently prepared for assurance, focused on providing recommendations for further development to management. We note the significant role that Internal Audit functions will play in developing appropriate systems within entities and in ensuring that they prepare for assurance over <IR>.

As the demand for assurance increases, we envisage a “modular assurance” approach over elements of an Integrated Report, such as the descriptions of business model or business risks. We believe this provides the best stepping-stone to full assurance over an entire Integrated Report as it would permit assurance to be provided over different elements of an Integrated Report as internal systems develop.

In developing their capabilities, we believe it is important that companies strive to achieve the aims of <IR> and to be as transparent as possible in terms of the information they provide and the
degree to which this is assured. It may therefore be helpful for entities to provide users with a “roadmap” for their assurance journey, and report on the progress of this over time, which itself may also be information that is subject to assurance.

The cost of assurance

Q6 Is assurance likely to be a cost effective mechanism to ensure credibility and trust over (a) the short/medium term; (b) the long term?

For assurance to be “cost effective” the benefit derived by users of assurance reports must outweigh the cost. Accordingly, it is critical that preparers and users are closely involved in the development of assurance solutions to ensure that their needs are clearly understood and addressed.

In the short-term, as entities get ready for <IR>, other alternatives e.g. readiness reviews might be better.

The concept of assurance is broad in scope, which facilitates the development of solutions that are appropriate as corporate reporting practice evolves. We believe this will allow assurance solutions to evolve in line with the scope and quality of <IR> and therefore provide a cost-effective mechanism to add credibility to <IR> in both the short, medium and long-term.

Q7 If so, what needs to be done, and by whom, to maximise the net benefits of assurance?

We recommend that the IIRC works closely with users, to engage them fully in the debate and understand their needs as corporate reporting practice evolves, including considerations in respect of the provision of modular assurance, in particular, to better understand the elements of an Integrated Report that users believe would most benefit from being assured.

As we describe elsewhere, an important aspect of this is to address the nature of the assurance report itself, so that assurance practitioners are able to communicate decision-useful information to users, including insights built on the foundation of their understanding of the risk environment and communicating in more detail about the assurance process, significant issues and how these were addressed, since a key element of the benefit of assurance is the professional judgement and expertise brought to bear by the assurance practitioner. We therefore recommend that IIRC engage with the IAASB to explore the merits of an enhanced, “long-form” style of assurance report to improve the dialogue with stakeholders.

Technical challenges

Methodology issues

Q8 Should assurance standard setters develop either or both (a) a new assurance standard; (b) guidance, to ensure consistency of approach to such issues?

We do not believe that a new assurance standard needs to be developed from scratch. Assurance practitioners are already able to provide an assurance conclusion over a wide variety of business information, in various forms, using the existing IAASB Framework for Assurance Engageme
ISAE 3000 (Revised), Assurance Engagements Other Than Audits of Reviews of Historical Financial Information “umbrella” standard, and the complementary suite of subject-matter specific standards. Such assurance engagements may be performed over both data and narrative information, provided that the preconditions for an assurance engagement are met. This extends to providing assurance as to whether all or part of a report has been prepared in accordance with the principles set out in the <IR> Framework when applied to an entity’s specific business model.

In performing these broader assurance engagements, some practitioners already have considerable experience in addressing many of the challenging areas outlined in the paper. However, as practice evolves and issues coalesce around particular themes, it would be helpful to develop related guidance, to complement the current Framework and ISAE 3000 (Revised) suite of standards. Over time it may be helpful to develop a specific standard, again under the ISAE 3000 (Revised) suite.

One challenge sometimes identified is non-standard criteria, since the <IR> Framework does not prescribe specific disclosures. We do not believe this is a barrier to providing assurance as the Framework provides sufficient guidance to enable an entity’s management to develop an Integrated Report based on the organisation’s business model by applying the connectivity principle to each of the report content elements.

In developing standards or guidance on more detailed matters, including those set out in the next question, it may be helpful to establish a Working Group of stakeholders with an interest in assurance matters to discuss specific challenges, share experiences and explore evolving practice, in order to support the development of a consistent approach.

Q9 Should any such standard/guidance be specific to <IR> or should it cover topics that are also relevant to other forms of reporting and assurance, e.g., should a standard/guidance on assuring narrative information, either in an Integrated Report or elsewhere, be developed?

At this point, we do not believe that a standard specific to <IR> should be developed as:

a) It is premature for standard-setters to attempt to develop a standard or guidance that is specific to <IR> as reporting practice is still in the early stages of evolution; and

b) Some jurisdictions may develop their reporting requirements along Integrated Reporting lines without formally adopting <IR>. The UK’s strategic report is one prominent example of this.

Instead, we consider that in the short-medium term it would be helpful for standard-setters to develop guidance to address challenges that have broader applicability, for example:

- Obtaining assurance from evidence derived from systems other than an entity’s general ledger;
- Providing assurance over a process to prepare a report.

As <IR> develops and issues coalesce around common themes, best practices will emerge, which could form the basis for more specific guidance or the development of an <IR>-specific standard within the boundary of the Framework, and the ISAE 3000 (Revised) suite of standards.
Q10 What are the (a) key challenges and (b) proposed approaches that assurance standard setters should consider with respect to:

We agree that the areas identified below are those that present the key challenges to assurance practitioners, and as we state earlier, we recommend that a Working Group is established, comprising stakeholders with an interest in assurance matters to discuss specific challenges and evolving practice, in order to support the development of guidance or eventually an <IR> specific standard.

- **Consistency**
  
  As described in our response to question 11, assurance practitioners will need to make judgements over the most relevant information to be included in respect of a particular matter. This will include balancing considerations of consistency (with historical and industry practice), because <IR> does not and cannot provide a prescriptive list of information to be included in the Integrated Report.

  These judgments will be inherently more subjective, and the choice of information and measurement basis may need to be explained.

- **Materiality**
  
  The application of the traditional concept of materiality to broader assurance engagements already presents challenges in practice, and we have previously recommended to the IASB and the IAASB that they explore this area further.

  In the context of <IR>, we believe that in paragraphs 3.17, 1.7 and 2.5 the Framework already provides a good basis to determine whether (i) a matter is material; and (ii) a piece of information (quantitative or qualitative) relating to that specific matter is material by reference to its relevance to the intrinsic value of the business. However, we would welcome further clarification provided through the IIRC’s ongoing materiality project, as this should support more consistent interpretation by report preparers who are approaching <IR> from a variety of different perspectives.

- **The reporting boundary**
  
  We recognise that an assurance practitioner will need to apply professional judgement to determine whether or not a matter is material to the assessment of business value, and therefore whether it should be included within the boundary of the Integrated Report. We believe that the <IR> Framework, when applied to an entity’s business model, already provides an good basis to support assurance practitioners in application of judgement.

- **Connectivity**
  
  We believe that connectivity between content elements provides the basis from which the completeness of an Integrated Report can be assessed – if a material matter is raised in one part of the report, the assurer will need to determine whether that matter has been appropriately addressed in other parts – or content elements – of the report.
• Completeness

As noted above, we believe that the connectivity principle provides a basis for determining the completeness of an Integrated Report in its entirety. However, where modular assurance is being provided over a single content element(s), the assurer will only be able to apply this approach if they have also addressed the other elements on which that content element depends. For example, integrated assurance over risks and opportunities would implicitly rely on the assurer having addressed the organisation’s business model and strategy.

• Narrative reporting and future-oriented information?

Although we recognise the challenges associated with providing assurance over future-oriented information, we note that Integrated Reporting does not require the provision of forward-looking information such as forecasts or projections. Rather it provides objective information that enables a user to form their own views as to future business prospects, e.g. sensitivity analysis or visibility over part of a business that is subject to different growth drivers.

In respect of narrative information, we highlight that standard-setters are currently exploring this area as it has broader applicability beyond <IR>. Therefore, we do not believe that it is necessary for the IIRC to consider questions relating to these matters at this time. However, assurers will need to make judgements over which information is most relevant to an assessment of future prospects. We address the question of relevance in our response to question 11.

Q11 What other technical issues, if any, specific to <IR> should be addressed by assurance standard setters?

• Relevance of information

We have noted in our response to Q10 that assurers will need to make judgements of the most relevant information that should be disclosed in respect of a particular matter. In some instances, the assurer may conclude that alternative information may be more relevant than that provided in the report but that the report is still materially complete on the basis of the information that has been provided. We believe the key challenge is the application of the Guiding Principle of reliability and completeness, i.e. ensuring that information is balanced, and that negative information is included to an appropriate extent such that an Integrated Report is free from bias, and application of the Guiding Principle of consistency and comparability, i.e. ensuring that KPIs are used consistently over time or if they are changed there is transparency as to the reasons why.

We believe that narrative form assurance reports would be helpful in allowing the assurer to explain these judgements.
• Form of the assurance report

As we state earlier, we consider that in exploring assurance over an Integrated Report it would be beneficial for assurance standard setters to consider the implications for the form and content of the assurance report.

Issues such as the description of “inherent limitations” (as described in ISAE 3000 (Revised), involved in <IR>, in particular, the subjective nature of the reporting process; the broader and less clearly defined information included, compared to, for example, financial statements, and the increased focus on providing information relevant to the future of the business would be helpful to explore. A lack of understanding of these inherent limitations may give rise to a significant “expectation gap” by Integrated Report users, creating credibility and reputational risks.

It would also be helpful for standard setters to consider the nature of the assurance report itself over an Integrated Report as we describe earlier. As a result of the degree of subjectivity involved in <IR>, the assurance engagement necessarily draws on the professional experience and expertise of the assurance practitioner, and the exercise of their professional judgement (already a key feature of any assurance engagement) is of paramount importance to investors. Accordingly, we believe the current binary pass/fail assurance conclusion model would not be adequate to meet market needs.

There are already calls to improve this in the context of financial statement audits, and therefore we recommend the development of a “long-form” style of report which would enable practitioners to convey not only a clear conclusion, but also more detailed decision-useful information. This would also involve re-visiting the clarity of language and terminology used, and the consideration of the professional caveats included.

Q12 What are the (a) key challenges and (b) proposed approaches that assurance standard setters should consider with respect to:

• Reasonable assurance?
• Limited assurance?
• Hybrid engagements?
• Agreed-upon procedures engagements?
• Other approaches?

We consider that challenges will be associated with all assurance engagements over <IR>, whether these are reasonable or limited assurance engagements, a hybrid of these, and/or involve a modular approach as we outlined earlier, because <IR> is an emerging area, and entities are in the process of exploring this. Accordingly, assurance solutions need to recognise these challenges, and allow for a range of engagements to effectively meet user needs and enable entities to build credibility in their Integrated Report over time.
Notwithstanding this, assurance practitioners need to take care to ensure that an assurance engagement has a rational purpose and that the nature of assurance to be provided is meaningful. For example, it would not be appropriate to agree to perform a limited assurance engagement or an agreed-upon procedures engagement with the primary purpose being to obtain a “clean” opinion.

Similarly, we are concerned about the application of the hybrid approach in the context of providing reasonable assurance over data and limited assurance over qualitative information and therefore a consistently lower level of assurance over narrative descriptions. Whilst this approach may be appropriate in the short-term, such prioritisation of hard data over other information is unlikely to be helpful to users in the longer-term. Furthermore, the elevation of certain information over other information would not be in line with the principles of <IR> as the objective of entities is to be similarly transparent about all information with the same level of credibility.

There is also a risk of confusion or misunderstanding as to what information is subject to assurance and to what level when taking a hybrid approach, especially if there is an incremental increase in the scope of the assurance engagement year on year. The assurance report would need to be very clear as to the scope and nature of the engagement.

We refer also to our comments above regarding communicating more clearly with users of the report.

Other approaches

We recommend that IIRC explores assurance over the process to compile an Integrated Report, as this may be a useful assurance solution as entities develop their capabilities and internal systems become more robust.

Using existing assurance

Q13 What are the (a) key challenges and (b) proposed approaches that should be considered, and by whom, to ensure assurance on <IR> pays due regard to other assurance processes?

The ultimate aim of <IR> may be a publically available, single assurance opinion over an entire Integrated Report, which eventually may become the primary report prepared by an entity. However, assurance solutions will be market-led, and the evolution in corporate reporting practice will not necessarily be a linear process. As a result, it is important that assurance in respect of <IR> is aligned with evolving reporting practice, pays due regard to other assurance processes, and develops in tandem with assurance solutions in respect of wider elements of annual reports, including narrative content, for which there is already growing demand.

Accordingly, a range of assurance solutions may need to be developed, at least in the earlier stages, to meet the needs of different users. These will need to complement each other, whilst acknowledging the different contexts in which they are prepared. Therefore there are a number of challenges to be addressed as this area matures and the demand for assurance increases.
We do not believe that assurance over discrete sections of an Integrated Report, such as on sustainability information or financial reporting information only can be considered to be integrated assurance. This would not be in line with the intention of <IR>, which requires a fully integrated approach to provide a different form of reporting focused on investor value, rather than a simple combination of existing information, which may risk embedding into the reporting and assurance process the very same issues that <IR> was designed to address.

Neither do we consider it appropriate that a practitioner would assure information by verifying that it is accurately extracted from other information already subject to an assurance process. Such an approach would not take account of the different purposes of each set of information as a whole.