Middle East

Point of View

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Game-changer

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A word from the editorial team

The game-changer mindset is one that pushes the envelope, dares to break boundaries, and dives into unmarked territory. A game-changer will transform entire markets… and dare to be unique. It's all about being a leader willing to think out-of-the-box for the sake of all good. As the world continues to spin, and our way of life and doing business continues to evolve, the future appears to be a sensational one. There is no other choice but to keep up with the innovative flow that continues to surround us. This is where the magic happens.

Innovation is everywhere… even in the streets. ***Tech in the city: Using spatial insights*** by Manika Dhama offers a glimpse into the future of our growing cities. In her article she discusses how "The application of technology in real estate presents unique opportunities for infrastructure, transportation, and resource planning." It becomes clear that data analytics combined with real estate market information can provide ideal decision making support through a cohesive view of city planning and project development.

Taking a detour to yet another relevant global trend that will prove to be promising… In an interview by Basel El Malki entitled ***Leading the implementation of IPSAS in Saudi Arabia***, with Abdullah Al-Mehthil, President of the Accrual Accounting Center at the Ministry of Finance & Assistant Undersecretary, Deputyship of Finance & Accounts, Ministry of Finance, IPSAS Board Member, Saudi Arabia, we look at the latest International Public Sector Accounting Standards implementation journey in the Kingdom, which will enable the government to have a vibrant view of its financial position.

From IPSAS implementation to sustainability in family businesses, Damian Regan looks at "how family businesses that adapt their internal processes with an eye on the development of legacy and succession, while demonstrating strong sustainable leadership, are more likely to withstand future challenges and identify future opportunities," in ***Family firm focus: How family businesses are demonstrating sustainable leadership.***

While the topic of sustainability remains to be a top priority in the Middle East, Dr. Ahmed Hezzah and Joerg Meiser ask the question "Does the world really need sustainable fashion?" in their article ***A walk down 'Green' Fashion Avenue: Gearing towards sustainable fashion and responsible consumption.*** One thing we can say for sure is that sustainability remains to be "in style."

And in his article ***Forging ahead: Leaping sustainable reporting,*** Damian Regan reflects on how "2022 is turning out to be an exciting year for the development of sustainability reporting." He explains that "The new International Sustainability Standards Board (ISSB) (….) is currently developing IFRS Sustainability Disclosure Standards, and this heralds a significant step forward to creating a baseline of consistent, comparable information needed by capital markets."

Technology also features prominently in this issue of the the Middle East Point of View. In ***Blurred lines: Incorporating mobile devices in corporate investigations,*** Cezar Serhal, Natalie Forester, and Faiz Ali Khan explain how data extracted from mobile devices can be crucial in corporate investigations. They go on to say that: "… corporates are urged to have proper controls and mechanisms in place to be able to reap the benefits of this critical information, while still ensuring employee privacy and legal compliance."

In the article ***Smart security for smart grid: The challenges and risks with implementing effective security and controls for smart grid***, Ali Khan and Tamer Charife explain how "In order to realize the economic value of a fully deployed smart grid, select power companies are taking the necessary steps to implement smart grid networks, taking the leading edge within their industry."

We have collectively learned that you can never be too prepared in protecting yourself both personally and professionally. In their article ***Data defense: Protecting your brand***, Muzzi Ebrahim, Sridip Ganguli, Collin Keeney, and Wael Tahtah ask the question: "Why is analytics important to ensure FCPA compliance?" And they skillfully explore the various ways in which data analytics can be utilized.

And finally, in the article ***Adapting capital program delivery with organizational agility***, authors Paul Hirst, Matthew Hanson, and Ishaq Jarallah explain how "… with the growing scale and volume of projects and complex programs initiated in the past five years, the effectiveness of the PMCM/outsource delivery model has been impacted and may have run its course."

All in all, the future is looking brighter… and definitely "greener." As the Middle East continues to play a significant role at the forefront of global trends, such as the latest in sustainability practices and technological advances, it will be exciting to see how the future unfolds in the region. 2022 could very well be a game-changing year.

ME POV editorial team

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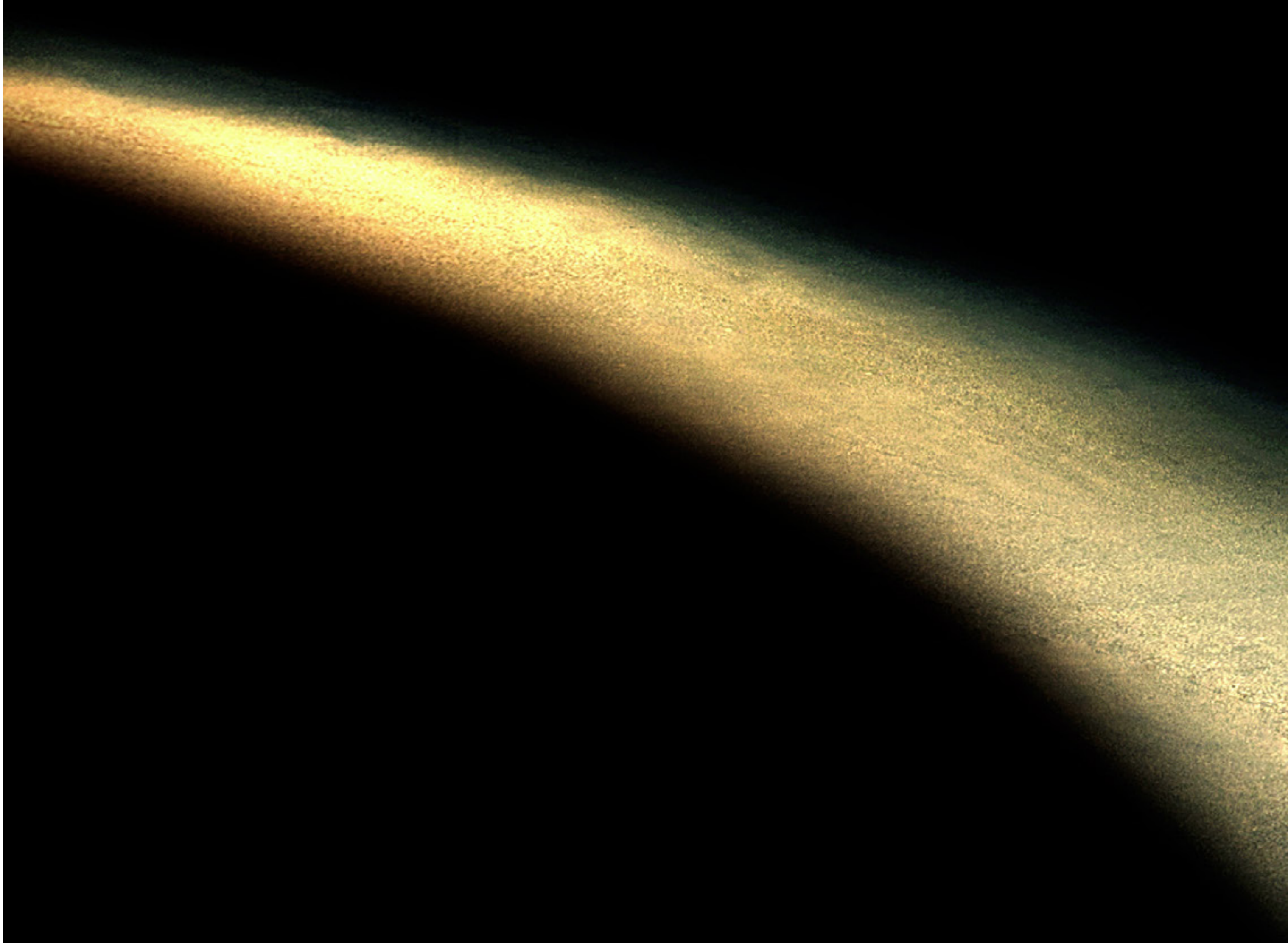


Forging ahead

Leaping sustainable reporting

> The new International Sustainability Standards Board (ISSB), as announced during the most recent COP261, is currently developing IFRS Sustainability Disclosure Standards, and this heralds a significant step forward to creating a baseline of consistent, comparable information needed by capital markets

Sustainability reporting has, for a number of years, been defined by a fascinating kaleidoscope of multiple principles, standards, and guidance. In an attempt to capture ESG (environmental, social, and governance) information and present it in a format understandable to a wider range of users, some of these reporting initiatives have focused on guiding companies to prepare standalone sustainability reports, others have incorporated climate-related financial disclosures in the financial accounts, and yet more have sought to provide frameworks in which to integrate a variety of financial and non-financial information.

The new International Sustainability Standards Board (ISSB), as announced during the most recent COP26[1], is currently developing IFRS Sustainability Disclosure Standards, and this heralds a significant step forward to creating a baseline of consistent, comparable information needed by capital markets.

Here in the Middle East, regulators and stock exchanges across the region are watching developments carefully as they review and update their reporting guidance. To assist in the debate, Deloitte Middle East hosted a webinar earlier this year on the new International Sustainability Standards Board (ISSB) and the impact the standards will have on companies and stakeholders. Since that webinar, a number of key announcements have moved the whole agenda forward, and 2022 is turning out to be an exciting year for the development of sustainability reporting.

Our webinar, which involved a number of leading CFOs, Heads of Sustainability, and Deloitte practitioners from the Middle East, India, Singapore, UK, and USA, discussed a number of related topics as outlined:

1. Sustainability disclosures are increasing in importance

ESG considerations already apply to existing financial reporting requirements, particularly where an entity is required to consider ESG matters when they have a material effect on the financial statements. This is especially true where judgement and estimates are required; for example, in assessing impairment of long-life assets.

However, climate change is an urgent existential issue that is relevant to companies in all sectors and across all jurisdictions. Furthermore, much of the value of a business today is non-financial, represented by technology, intellectual capital, human capital, and the social license to operate.[2]

As Kristen Sullivan, Deloitte Global Audit & Assurance Climate Services Leader notes, "As we look at where the investment marketplace is moving, we've seen over the years that many of the large global institutional investors are putting a real clear emphasis on the importance of sustainability disclosures."

Investors and others need insight into all these factors in order to understand how climate and sustainability risks and opportunities affect enterprise value and financial performance. The demand for sustainability-related disclosures is increasing as a result.

2. A consolidation of sustainability reporting standards is welcomed

A consolidation of standards relevant to ESG disclosures in the financial filings would hopefully help to rationalize the confusion of having so many sustainability reporting alternatives in the market: the current 'alphabet soup' of standards, known by their acronyms.

Whilst not intending to replace all sustainability reporting standards, the proposed IFRS Sustainability Disclosure Standards would provide a baseline for consistent and comparable approaches to mandatory sustainability-related disclosures across jurisdictions.

This is of great importance given a number of jurisdictions are already moving towards such reporting, such as those in Europe, which is developing its proposal for a Corporate Sustainability Reporting Directive (CSRD[3]), a new EU sustainability

However, climate change is an urgent existential issue that is relevant to companies in all sectors and across all jurisdictions

reporting standard by 2023, and the US where the SEC has recently issued proposals for registrants to disclose climate-related disclosures and metrics.[4]

When consolidation is finalized and the IFRS Sustainability Disclosure Standards are released, adoption is widely anticipated by regulators, stock exchanges, and companies. As Charlotte Drain, Deloitte UK Audit & Assurance Director notes, "In the UK, we have increasingly seen a trend - from standalone sustainability reports to integration of non-financial information into the annual report. However, I think we are going to see that pace of change really accelerate, particularly once jurisdictions implement the ISSB's standard which set out consistency requirements for the mainstream disclosure of material sustainability and climate-related information."

3. Robustness would be brought to reporting

A comprehensive set of sustainability reporting standards driven by an international accounting organization would bring a level of robustness to the reporting process, clarity to the professionals creating and assuring them, and responsibilities for the company governance overseeing their development and presentation.

Whilst many of the large global institutional investors are putting a clear emphasis on the importance of sustainability disclosures, many other users, from regulators to rating agencies, shareholders to suppliers, and consumers to civil society, are all looking at companies' published data and expecting the same level of quality that they see in audited financial numbers.

Although 90% of S&P companies were reporting ESG metrics by the end of 2019, according to a 2020 BlackRock survey of clients, 53% of global respondents cited "poor quality or availability of ESG data and analytics" and another 33% cited "poor quality of sustainability investment reporting" as the two biggest barriers to adopting sustainable investing.[5]

4. Internal coordination would be highly likely

In order to comply with the standards, significant coordination would most likely be needed between a company's Sustainability team and the Financial Reporting team. Given the increasing technical nature of the collation calculation, and reporting of sustainability information and its presentation alongside the financial statements, firms will increasingly look to utilize the professional skills of the financial department to oversee the collation of such data, as they do already with financial information.

It has an important role to not just understand ESG but to establish the key aspects in driving transparent reporting that supports countries to drive sustainable models

"The role of the Financial Reporting team is extremely important when it comes to ESG and disclosures or even when it comes to assurance on the published reports,' notes Pratiq Shah, Deloitte India Audit & Assurance Partner, 'It has an important role to not just understand ESG but to establish the key aspects in driving transparent reporting that supports countries to drive sustainable models."

Some firms are already moving the Sustainability team from its existing position under the reporting lines of Strategy, Investor Relations, Communications, or HR to now sit under the finance function in recognition of this move.

5. The GRI would most likely continue as a distinct reporting standard

One of the current sustainability reporting standards, the Global Reporting Initiative (GRI), is likely to continue to exist given the wide accessibility of its reporting format. Currently the world's most widely used sustainability reporting standard, popular across the Middle East and mandatory for listed firms in the UAE, it covers the breadth of ESG in a standalone report that focuses on the impact companies have on the economy, environment, and people. This differs to the climate-related financial disclosures approach which focuses more on the material impacts on enterprise value and financial performance, as proposed by the IFRS, and which will be presented in the financial statements.

Recent announcements

Since the Deloitte Middle East webinar, a number of important announcements were made during March 2022.

Firstly, the International Sustainability Standards Board (ISSB) launched a consultation on its first two proposed standards:[6]

1) IFRS S1 General Requirements for Disclosure of Sustainability-related Financial Information

- The proposed IFRS S1 sets out overall requirements with the objective of disclosing sustainability-related financial information that is useful to the primary users of the entity's general purpose financial reporting when they assess the entity's enterprise value and decide whether to provide resources to it.

2) IFRS S2 Climate-related Disclosures

- The proposed IFRS S2 sets out the requirements for identifying, measuring, and disclosing climate-related risks and opportunities.

Secondly, the IFRS Foundation and Global Reporting Initiative (GRI) announced a collaboration agreement under which their respective standard-setting boards, the International Sustainability Standards Board (ISSB) and the Global Sustainability Standards Board (GSSB), will seek to coordinate their work programmes and standard-setting activities.

'By working together, the IFRS Foundation and GRI provide two 'pillars' of international sustainability reporting—a first pillar representing investor-focused capital market standards of IFRS Sustainability Disclosure Standards developed by the ISSB, and a second pillar of GRI sustainability reporting requirements set by the GSSB, compatible with the first, designed to meet multi-stakeholder needs." IFRS & GRI Announcement, March 2022[7]

Whilst there will be no single international sustainability reporting standard in the future, the new IFRS Sustainability Disclosure Standards will be a significant contribution to achieving a baseline of consistent, comparable information needed by capital markets, demonstrating climate and sustainability-related impacts on the companies and their financial statements. Through alignment with the continued jurisdiction-led developments in local sustainability reporting, it will help to ensure comparability. The continuation of GRI, which itself focuses more on the outward impact by the company, will provide accessible reporting to multi-stakeholders.

Collectively, these initiatives demonstrate that the future of sustainability reporting appears to be leaping forward to providing more consistent, robust, and relevant reporting for a more sustainable future.

By **Damian Regan**, Sustainability Reporting & Assurance Leader, Deloitte Middle East

Endnotes

1. The Conference of Parties held in the UK 2021 (COP26), an annual summit bringing together parties to accelerate action towards the goals of the Paris Agreement and the UN Framework Convention on Climate Change
2. Globally Consistent ESG Reporting | Deloitte global
3. EFRAG publishes due process procedures for its SRB (iasplus.com)
4. SEC proposes climate-related disclosure requirements (iasplus.com)
5. BlackRock, Sustainability goes mainstream: 2020 Global Sustainable Investing Survey
6. Deloitte iGAAP in Focus — Sustainability reporting — ISSB proposes global baseline of sustainability disclosure standards for capital markets (iasplus.com)
7. IFRS Press Release, 24 March 2022 IFRS - IFRS Foundation and GRI to align capital market and multi-stakeholder standards to create an interconnected approach for sustainability disclosures

The continuation of GRI, which itself focuses more on the outward impact by the company, will provide accessible reporting to multi-stakeholders

Data defense

Protecting your brand

One of the most interesting themes in this year's annual American Conference Institute's event on the US Foreign Corrupt Practices Act (FCPA), held in Washington DC in November 2021, was the recurring emphasis on the use of data analytics in Anti-Bribery and Corruption (ABAC) compliance. The US regulators that aggressively oversee FCPA compliance, the US Department of Justice (DOJ), and the Securities and Exchange Commission and the monitors that are called upon to oversee enforcement of settlements and deferred/non-prosecution agreements, all reiterated an expectation that companies master the data in their organizations to enhance the use of data analytics in their FCPA compliance regimes.

For every company that has been in the position of making an FCPA-related disclosure to the US authorities, one of the critical pieces of their disclosure would have been around the nature, scope, and effectiveness of their ABAC compliance program. This is scrutinized by the authorities because the ability to demonstrate the comprehensiveness and effectiveness of a program factors directly into the calculation of any penalties, should the matter lead to enforcement action. Increasingly, the topic of data has been woven into that calculation because it is data that is critical to:

1) A company's ability to effectively demonstrate the quality of its compliance program, and

2) The compliance team in their ability to monitor high risk activity and protect the company from unethical business activity in real time.

We explore below some insights into how data analytics and dashboarding can be used to harness the various streams of information that make up a compliance program, enhance the real-time functioning of ABAC risk monitoring, and drive efficiencies that mitigate the business impact of compliance prerogatives.

Why is analytics important to ensure FCPA compliance?

The best protection against an FCPA violation is an effective compliance program that goes beyond policies. Relying purely on compliance policies is not sufficient any longer, as organizations must now demonstrate to the authorities that they are leveraging data and analytics to gain insights and navigate risks. A technology-led strategy using data analytics and dashboarding is key in ensuring an effective and efficient FCPA compliance program. Companies need to actively monitor transactions to ensure compliance with policies. By identifying risk factors early and flagging anomalies, analytics and dashboarding can assist your compliance program with early detection, proactive alerting, and prevention. The trend now is to obtain a continuous view of FCPA risks rather than relying solely on a snapshot view. Analyzing data for trends and red flags keeps you in touch with the business and alerts you to changing risks.

Examples of how data analytics can be used:

A data analytics strategy can help assure compliance by looking for and identifying red flags, alerting on thresholds, setting parameters, and supporting the development of early warning systems. As the analytics matures, a company can look at powering a continuous monitoring system regarding key accounting controls as well.

A real-world example is in the field of business-to-business commerce. As organizations rely more heavily on channel partners to reach new markets and clients, indirect sales models are becoming more common. Furthermore, various levels of employees have the authority to approve higher pricing discounts and other non-pricing concessions to win new business, which raises operational and compliance risks significantly. For example, there are scenarios in which a partner sells at a deep discount to a reseller, who then uses the large margin on that sale to pay a bribe to the end customer. Looking at discounting outliers from partner sales transactions may indicate a higher level of corruption that should be investigated in this case. Transaction size, region, typical discounting patterns, and other risk factors may reveal corruption red flags.

Data analytics can also be a very useful tool for companies to ensure that they are abiding by local laws, even in the case of rapid changes in guidelines. A salient example from the healthcare industry is summarized in Table 1.

> Data analytics can also be a very useful tool for companies to ensure that they are abiding by local laws

As countries such as the United Arab Emirates and the Kingdom of Saudi Arabia continue to witness major legal reforms, the Saudi Food and Drug Authority (SFDA) imposed new guidelines on pharmaceutical and medical companies to improve transparency of financial relationships among medical companies, healthcare providers (HCPs), and healthcare institutions (HCI). Failure to abide by such laws would lead to legal action against the company. As an example, medical companies must report all financial support provided to HCPs/HCIs exceeding SAR 500 per year to the SFDA. In addition, companies are only allowed to provide HCPs gifts in-kind for a modest value.

Based on our extensive experience in FCPA investigations in the Middle East region, we have identified several cases in which HCPs were:

- Paid above fair market value (FMV) for services provided;
- Provided financial support excessively across the year; and
- Provided excessive entertainment/additional benefits.

Companies with a large volume of yearly transactions may find it challenging to track HCP/HCI spending per year or identify irregular transactions exceeding SFDA approved limits. Data analytics can strengthen the compliance program of the relevant companies by creating a dashboard which can identify red flags by analyzing the inputted data and policies as follows:

- Track financial support provided to HCPs/HCIs
- Notify the compliance team if the financial support provided to an HCP exceeds the approved limit by SFDA or the fair market value
- Flag any excessive benefits provided to HCPs such as business-class airline tickets or accommodation in 5-star resorts
- Flag any HCP sponsorships lacking a signed contract agreement between the relevant parties as well as the lack of notification of the HCP’s employer

Another way analytics can aid in FCPA compliance is by creating a system of early warnings based on a set of internal control thresholds. The early warning system can detect unusual transactions that may be suspicious - it is these transactions and the companies' ability to prevent and detect them in real time where the proverbial rubber hits the road for FCPA compliance. Conducting automatic tests for gifts, entertainment, and charitable contributions, for example, can assist in identifying multiple gifts to a single individual or institution, or parties linked to a single institution. Analytics can also assist in identifying charitable contributions to government-affiliated organizations. The true strength of such a system is its ability to detect both discrete activities and suspicious trends.

Showcasing the compliance program itself

While it is critical a company's compliance team has the ability to actively monitor FCPA-related risks as they manifest in the business, it is also important for the team to have access to some slightly more "mundane" analytics as well. By this we mean corralling the various and often disparate ingredients of an FCPA compliance program itself into a single point of reference or dashboard. When the DOJ lawyers ask to see the evidence of a company's compliance program functioning, the company would be well served to demonstrate that it has ready and reliable access to the information required to make a positive assertion that its program is meeting the exacting standards set out in the DOJ's recently refreshed resource guide or the standards listed in ISO37001.

An FCPA compliance dashboard should be readily available to draw together the disparate components of a company's compliance program, which might include the following aspects (among others):

- The compilation and status of implementation of a body of robust, formalized policies (and associated results of any effectiveness reviews completed of those policies),
- Evidence of a series of 'tone from the top' communications or the results of employee awareness polling,
- The codes of conduct and documentation or tabulation of employees' periodic acknowledgment of their responsibilities,
- Its whistle-blower program and the evidence of its use and nature/frequency of the channels and evidence of the company's efforts to respond, review, and tweak the channels for maximum effectiveness,
- Evidence of the online and in-person, localized, reinforcement training, and
- The compliance ratings/reviews of key individuals in high FCPA risk roles.

As with transaction monitoring, the effort required to harness this data into a central point of reference can be a deterrent to companies who might consider moving down this path.

Setting up a compliance data infrastructure – a semantic graph addressing FCPA needs

Companies are frequently confronted with thousands of isolated data silos, posing an information overload challenge. Connecting datasets in a meaningful way, in our experience, is strategic for every business because it allows compliance leaders to gain context on an organization's transactions. Surprisingly, rather than a lack of information, the challenge for organizations attempting to automate compliance analytics is an abundance of information from disparate sources containing complex and vast amounts of data. A semantic graph allows a business to integrate and connect disparate data sets to not only unify and connect various sources of compliance data, but also to apply complex rules and patterns for automated compliance monitoring.

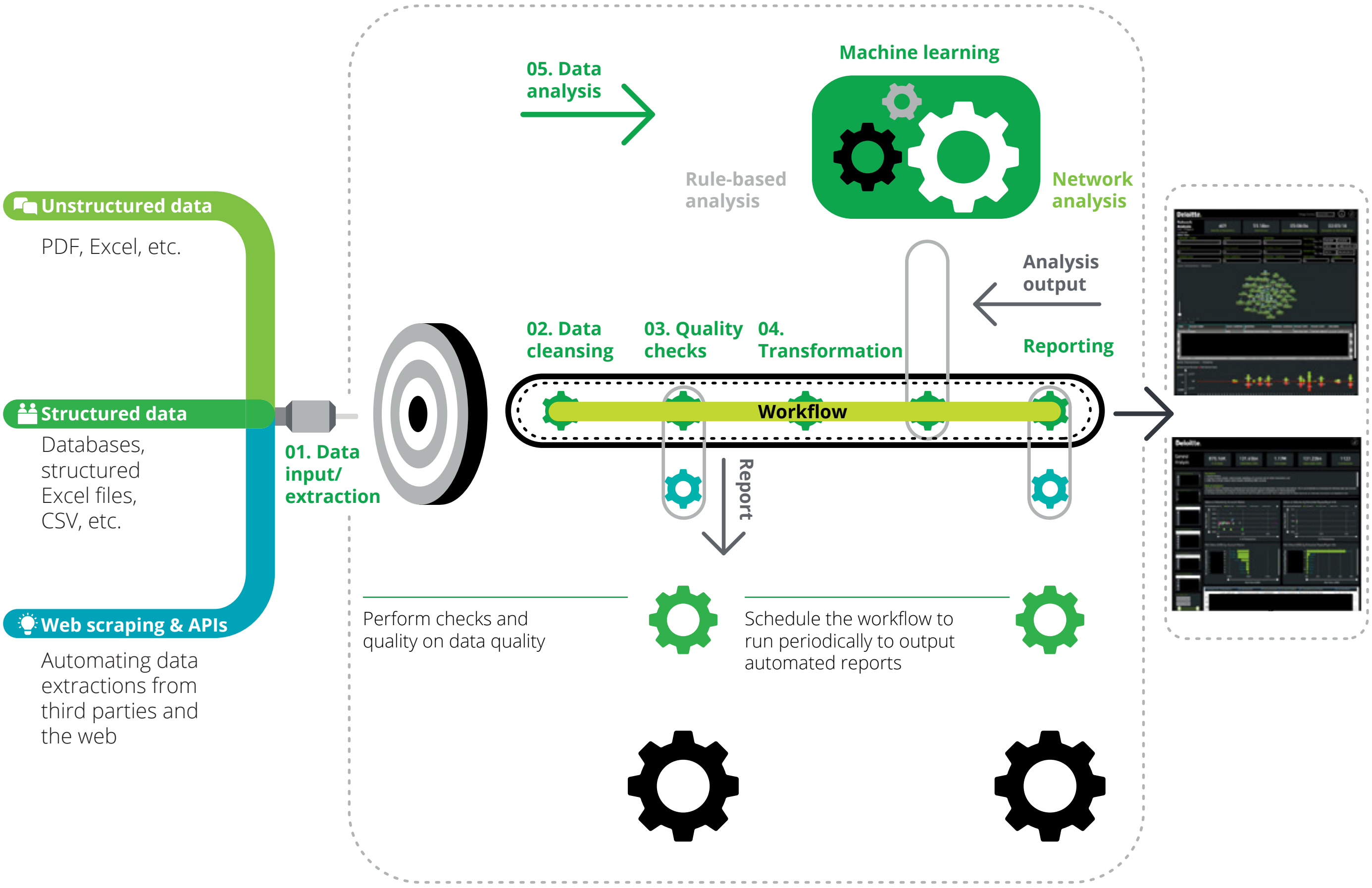
Three components are required for the effective design and implementation of an FCPA Semantic Graph:

1) Connecting disparate data silos

2) Examining interconnected data to uncover insightful compliance and FCPA patterns

3) Obtaining context-relevant knowledge from massive amounts of integrated data, for example, data from customer relationship management (CRM) systems, point of sale systems, and geographic and spatial systems

An FCPA compliance dashboard should be readily available to draw together the disparate components of a company's compliance program



For a company in the early stages of establishing their data infrastructure, this may seem like a massive undertaking. In reality, the initial steps would only consist of implementing a few properly deployed analytics to identify areas that require additional analysis, and the semantic graph would guide the processes going forward.

Looking forward, it is evident that data analytics will play an even greater part in ABAC compliance regimes from a preventive/detective perspective, as well as form a program quality monitoring perspective. Companies across industries will need to rapidly adapt and ensure their teams are able to access the required inputs, run various types of analytics, and manipulate large data sets for different scenarios in an agile manner. This will best equip companies and offer protection against increasing regulatory scrutiny going forward. Therefore, establishing a sustainable data strategy and putting in place the infrastructure early on is a strategic move for all businesses, ultimately making the case for the effectiveness of the company's compliance programs and proving to regulators that you stand for action, not only promises.

By **Muzzi Ebrahim**, Partner, **Sridip Ganguli**, Partner, **Collin Keeney**, Partner, and **Wael Tahtah**, Assistant Director, Forensic, Deloitte Middle East

Tech in the city

Using spatial insights

Digital-first governments and organizations operating within innovative environments can benefit from predictive decision-making and effective value-creation as they progress in their transformation journey. Data analytics combined with real estate market information can provide decision support through an integrated view of the city planning and project development lifecycle.

The application of technology in real estate presents unique opportunities for infrastructure, transportation, and resource planning. When multiple layers of data that have been geo-tagged are overlaid on top of each other, the benefits of geospatial analysis increase. New relationships become visible, and new analytical capabilities become possible. The more accurate, varied, and current the geospatial data, the more opportunities there can be for visual and quantitative analytics.

Geocoding city information

Geospatial analytics can provide benefits for any class of property, including buildings, infrastructure, land, and transport facilities. A common data platform can enable the sharing of information on terrain attributes, such as water bodies and existing infrastructure, for creating efficient transport networks. Additionally, the potential for deploying renewable energy sources, such as solar energy, can be studied using data on building height and rooftop surface characteristics, among other metrics.

For instance, geocoding city information can help answer questions, such as where are the entry points of government facilities in relation to modes of transport or in which districts of a new master planned project would assets maximize accessibility considering the changing demographics?

The benefits of geospatial technology also extend into asset management where an integrated, portfolio-wide view of property information is critical as many budget environments continue to tighten. The use of standardized interfaces to view and analyze information, including extract, transform, and load (ETL) tools and Web Services architecture, can help improve flexibility and usability across the organization.

Geospatially enabled asset management

Using geographic information systems (GIS), among other tools, can allow the power of location to be properly utilized for asset management. This location-based framework provides an organizing principle, which helps bring together all aspects of management in one framework.

Integration of GIS, which highlights locational attributes, with Building Information Modeling (BIM), including data on the interior and exterior of the building, assists in managing assets through a digital representation of its attributes. This can help owners meet several objectives related to asset management from construction to delivery, and further into operations stages.

Data analytics combined with real estate market information can provide decision support through an integrated view of the city planning and project development lifecycle

Figure 1: Enhanced asset management

Source: Deloitte Middle East Real Estate Predictions 2022

Whole-of-government approach

To solve a nation's biggest challenges, the adoption of a geospatial analytics-led governance model can enhance the sharing of information among government entities and provide access to relevant information for residents, students, and the wider public.

An integrated GIS enabled platform can collate geometric and image data from different public agencies, as well as 2D data and information from existing geospatial and non-geospatial platforms. This enables the roll out of initiatives supporting wayfinding, traffic management, efficient infrastructure and building design, and land management - as well as critical capabilities such as sustainable emergency evacuation procedures.

Case studies

Project summary

Name: Virtual Singapore (VSg)
Overview: VSg, (coverage approximately 720 sq km) US$ 53 million GIS based project aimed at efficient urban planning, improved accessibility, and sustainable development
Key focus areas:

- Sustainable environment
- Transport management
- City planning
- Efficient utilization of natural resources

Key entities/agencies

Government entities

National research foundation
Leading entity
VSg platform (data dissemination) executed by programmes dept.

Singapore Land Authority
3D mapping national project (data collection)

GovTech Singapore
Expertise in information and communications technology (ICT) initiatives and its management

Vendors

Dassault Systèmes
Developed 3D simulation model data is utilized by key sectors/departments

Asset Allocation and Management
Data, collection aerial and terrestrial surveys

Bentley Systems
To capture and convert the survey data in CityGML format

Case studies

Project summary

Name: Brussels Smart City
Overview: A centralized mapping portal 'geo.brussels' set up by a 'GeoBru' committee comprising six government entities that manages the functioning and the coordination of the portal, and allows data exchange between different government agencies in Brussels
Key focus areas:

- Establishing a digital map of the Brussels capital region of approximately 162 sq km
- Improving urban mobility
- Sustainable development

Key entities/agencies

Government entities

The Brussels Regional Informatics Centre (BRIC)
Leading entity
An ICT partner with the focus on computer, telematics and cartographic development across government organizations in the Brussels capital region

Software providers (open source)

Geo.brussels
GeoNode
GeoNetwork
GeoServer

Note: CityGML (City Geography Markup Language) exchange form
Source: Deloitte; Virtual Singapore (nrf.gov.sg); Smartcity.brussels

Supporting sustainability initiatives

The adoption of geospatial technologies can be extended to support sustainability initiatives as well. By accessing detailed information about building surface materials and land cover, urban planners can form insights related to noise propagation or setting up accurate solar panel roof angles.

Potential benefits include:

- Identification and monitoring of environmental quality (air, groundwater, and marine water)
- Reduction in carbon footprint by removing the need for paper use by governments and citizens
- Reduction in the risk of adverse environmental impacts by improved monitoring of hazardous materials

Value creation

Both public and private entities in the Middle East stand to benefit from harnessing the value of geo-tagged data to unlock innovation, drive growth and transformation, and improve competitiveness. The opportunities that exist in the Middle East region are difficult to match in terms of scale and complexity as a number of projects are in early development or planning stages.

To thrive in this disruptive environment, harnessing the exponential power of spatial insights can help transform the data analysis process from the start. Key decision makers stand to gain an advantage in city building activities by early-stage adoption of cohesive data analytics to drive real, tangible outcomes.

By **Manika Dhama,** Assistant Director, Real Estate Development, Deloitte Middle East

Leading the implementation of IPSAS in Saudi Arabia

Interview with Mr. Abdullah Al-Mehthil, President of the Accrual Accounting Center at the Ministry of Finance & Assistant Undersecretary, Deputyship of Finance & Accounts, Ministry of Finance, IPSAS Board Member, Saudi Arabia.

In line with the global trend, the Kingdom of Saudi Arabia (KSA) has taken a major step forward in the development of its public sector financial management through the adoption of accrual accounting standards commonly known as International Public Sector Accounting Standards (IPSAS). Based on Royal Decree Number 13059, these new standards issued in Saudi Arabia on 16 Rabi al-Awwal 1438AH will require all governmental institutions to convert their financial accounting basis from cash to accrual. This IPSAS implementation and journey, being led by the Accrual Accounting Center at the Ministry of Finance, will enable the government to have a vibrant view of its financial position and will enhance decision-making in order to support the wider ecosystem and the Kingdom in its ambition towards Vision 2030.

Basel El Malki, Partner, Audit and Assurance, Deloitte Middle East, had the opportunity to meet with Mr. Abdullah Al-Mehthil, President of the Accrual Accounting Center at the Ministry of Finance, to discuss how they have navigated the journey in the Kingdom and the progress achieved so far.

Mr. Abdullah Al-Mehthil, President of the Accrual Accounting Center at the Ministry of Finance & Assistant Undersecretary, Deputyship of Finance & Accounts, Ministry of Finance, IPSAS Board Member, Saudi Arabia

Basel El Malki, Partner, Assurance, Deloitte Middle East

Q. In light of progress made thus far in the transition towards IPSAS adoption, how important is it for the governmental entities and what are the opportunities it creates for them?

A. This transition is of great importance because it enables the governmental entities to develop and achieve a set of important strategic objectives at the state level including:

- Enhancing the principles of transparency and accountability through sharing information with the community and increasing focus to enhance control.
- Creating an integrated financial system, unifying IPSAS, and preparing consolidated financial and statistical reports at the state level, based on a unified account structure and financial and accounting policies.
- Supporting decision-making and providing more accurate and comprehensive information to enhance planning and decision-making processes with regard to risks and opportunities, and to access accurate financial information about government service costs along with their future obligations.
- Improving the Kingdom's capabilities in all social, economic, and financial fields in the public sector. Financial reports also help in conducting international benchmarks.
- Listing all assets and liabilities of governmental entities, and thus highlighting entities' financial position independently and the state's financial position in a consolidated manner.

As much as it is challenging, the transition towards the accrual-based IPSAS adoption meanwhile creates significant opportunities including:

- Enabling the building of a unified financial center for the state.
- Supporting and advancing financial control.
- Improving the governmental accounting system.
- Achieving spending efficiency and planning.
- Contributing to the Kingdom's credit rating reinforcement.
- Improving accounting audit standards.
- Applying accrual-based accounting across the government.
- Enhancing the readiness of governmental entities to implement the Government Finance Statistics Guide 2014.

Q. What challenges were encountered during the IPSAS adoption and how were they addressed?

A. Challenges can be divided into three categories:

Category 1: Operation and Processes

Challenges under this category include:

1. Implementation of a number of initiatives as part of the accrual basis accounting transition project, for example, initiatives of opening balances, recordkeeping, assets listing, inventory, and evaluation within the specified timeframe.

Challenge Management: Prior to the launch of initiatives, the governmental entities communicated with the Accrual Accounting Center to obtain the action plans and the implementation periods to work accordingly, regularly track initiative progress, and escalate issues and difficulties to address them in real time.

2. Information from affiliates was inaccurate to build opening balances.

Challenge Management: The governmental entities sought other sources to obtain information to validate data.

3. Lack of records of outstanding claims or overdue expenditures.

Challenge Management: The governmental entities created a Supplier Claim Record by following reliable alternative procedures regardless of disbursement.

Category 2: IT Systems

Challenges under this category include:

1. Inability to carry out accounting activities using the current IT systems.

Challenge Management: The governmental entities worked on the IT enabler (transformation platform) as a temporary technical solution for accrual accounting registration in parallel with the current system, while working to configure the current system with the functional requirements for accrual-based accounting work.

Category 3: Human Resources

Challenges under this category include:

1. Lack of specialized and qualified human resources to implement the transition to the accrual-based accounting project.

Challenge Management: The governmental entities attracted qualified talents and conducted training courses for their personnel based on the comprehensive training plan at the Accrual Accounting Center.

Q. What improvements have you observed in your financial reports as a result of IPSAS adoption?

A. Reading the financial statements of governmental entities prepared according to the accrual basis of accounting, and by following IPSAS, the following positive points were noted:

1. Consistency in presentation, recognition, measurement, and disclosure between governmental entities as a result of applying unified accounting standards and policies, which are expected to help consolidate and compile financial statements at the level of governmental entities and the country as a whole.

2. Better quality of disclosure in the financial statements of governmental entities, which included elements of materiality such as disclosure of guarantees, commitments, pledges, and related parties. This enhances the financial statements reader's understanding of the operations and obligations of the governmental entity and its relationship with other entities.

3. Comprehensiveness and accuracy of items presented in the financial statements, for example, proving and presenting assets and liabilities in the financial statements of public sector entities that were not previously established on a cash basis.

4. Transparency in the presentation of the accounting processes of governmental entities provided more accurate and comprehensive information that helps in enhancing planning and decision-making processes with regard to risks and opportunities.

Transparency in the presentation of the accounting processes of governmental entities provided more accurate and comprehensive information that helps in enhancing planning and decision-making processes with regard to risks and opportunities

Q. Following completion of the current stage of IPSAS adoption, what will be the next step?

A. Our next step is to transition to the sustainability of the financial reports of governmental entities. Transition in itself does not end with the completion of the project, but rather by following the methods of medium and long-term financial planning to sustain the public finance situation and achieve a balanced budget. Since its launch, the center has contributed to establishing capabilities and tools effective in influencing and positively interacting with the changes and transformations at financial and accounting levels, in order to keep pace with the current requirements of the transition stage and beyond. The center has also contributed to strengthening financial control and developing public finances. This will lead to strengthening and enhancing the Kingdom's financial position and raising the quality of financial reports.

Q. How do you envision the impact of developing financial reporting in the Kingdom of Saudi Arabia after completing the transition process in the near future?

A. In fact, the development of financial reporting after the completion of the transition process will have **three-dimensional effects**: starting with the government employee, and then the governmental entity, and finally having the greatest impact on the Kingdom of Saudi Arabia.

The first dimension - Impact on the government employee:

The impact of developing financial reporting after the completion of the transition process will be reflected as follows:

- Improving employee efficiency and skills to apply IPSAS.
- Learning about the procedures to prepare opening balances.
- Full knowledge of the methods of asset inventory, recording, and categorization in accounting.
- Awareness and full realization of the impact of the work of governmental entities on the performance and financial position of the entity, and thus the public sector as a whole at the level of the Kingdom.
- Full knowledge of IPSAS, which are similar to those used in the private sector and supports them to work in both sectors. As a result, financial management practices in terms of budgeting and accounts have become a part of employees' daily work and decisions through trainings and workshops to implement accrual-based accounting standards derived from international accounting standards.

The development of financial reporting after the completion of the transition process will have three-dimensional effects: starting with the government employee, and then the governmental entity, and finally having the greatest impact on the Kingdom of Saudi Arabia

The second dimension - Impact on the governmental entity:

The impact of developing financial reporting after the completion of the transition process will be reflected as follows:

- Enhancing the ability to provide more accurate and integrated accounting records in accordance with the highest standards of efficiency.
- Providing a feasibility of the financial statements for a number of years, allowing the comparison and analysis process to be conducted over the years.
- Accurate knowledge of the inventory with the possibility of making a better and more efficient comparison between various options for the use of resources.
- Improving modern management practices when making financial decisions.
- Providing accurate measurement indicators that support the processes of estimating needs, purchasing, warehousing, disseminating services, and controlling oversight.
- Providing more accurate and comprehensive information to enhance planning processes at the level of the governmental entity.
- Improving asset management and accountability for capital expenditures.

The third dimension - Impact at the KSA level:

Many positive impacts of developing financial reporting after the completion of the transformation process will be reflected as follows:

- A better evaluation of the government's performance in terms of cost, effectiveness, and achievement of the services it provides.
- The state's ability to develop strategic plans based on accurate and complete government financial information.
- Giving a clearer picture of the government's success in managing its resources and rationalizing its expenditures.
- Defining and comparing the total cost of services provided by the government with the cost of services in the private and volunteering sectors.
- Providing a clearer picture on inventorying and evaluation of fixed assets, revenues, obligations, and future expenses of the Kingdom of Saudi Arabia; this will be reflected on the budget.
- Evaluating the performance of government ministries and agencies in terms of their financial position and cash flows.
- Enabling international organizations to measure the Kingdom's credit rating more accurately and clearly based on data prepared in accordance with international standards.
- The possibility of comparing financial statements with members of international organizations (G20 countries).
- Clearer vision, control, and accountability in terms of managing governmental entities.
- Availability of accurate information to the decision-maker if he/she wishes to privatize a specific sector.

The adoption of IPSAS will not only enhance decision-making abilities, but will also create a comprehensive overview of all financial management matters. This essential step taken by the Ministry of Finance in the KSA reflects yet another relevant global trend that will prove to be promising for all governmental entities involved.

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Family firm focus:

How family businesses are demonstrating sustainable leadership

To a great degree, family businesses in particular are ideally suited to a 'sustainable' concept, being created and maintained with future generations in mind, and balancing economic prosperity with the protection of legacy

Sustainability means meeting our own needs without compromising the ability of future generations to meet their own. It also involves ensuring that natural, social, and economic resources are utilized and employed in ways that result in continued, sustainable prosperity. To a great degree, family businesses in particular are ideally suited to a 'sustainable' concept, being created and maintained with future generations in mind, and balancing economic prosperity with the protection of legacy.

As non-family businesses face the challenge of balancing and reflecting competing stakeholder demands made by shareholders, consumers, suppliers, employees, regulators, and capital providers, family businesses may be better able to manage their stakeholder expectations and quickly develop their strategy around their inherent purpose: building business for successive generations. Certainly, a perception of family businesses is that they were built organically around people and the environment and profitably, at least in the first generation. This ecosystem fits well with the inclusivity demanded of today's companies towards wider stakeholders and considerations for the environment[1].

The role of family businesses in the global economy is surprisingly significant; companies that are owned and controlled by families account for two thirds of all businesses, 70-90 % of annual global GDP, and 50-80% of jobs in most countries[2]. Decisions made by family businesses therefore can have a great impact.

Against a backdrop of concerns globally regarding climate change, an increase in pollution, a depletion of resources, and societal change, awareness and actions on sustainability initiatives is becoming increasingly important. Sustainability is an umbrella term for a wider range of business activities to support the future prosperity of a company, involving the development of governance processes to support the long-term strategic direction, identifying both risks and new opportunities, increased information collation and reporting, and capital raising initiatives. All of this should reflect the central purpose of the business.

Certainly, family firms are becoming more aware of their contribution to the sustainability debate. In particular, the Family Business Network partnered with the United Nations Conference on Trade and Development (UNCTAD) to jointly develop the global initiative Family Business for Sustainability Development and the Family Business Sustainability Pledge. This focused on mobilizing business families and their firms to embed sustainability into their business strategies by helping them to integrate sustainability into their conventional business models[3].

In the Middle East, a recent survey by Deloitte confirmed that many family businesses were considering the sustainability agenda with 51% of surveyed companies confirming that such issues were being discussed at board level and 41% having already identified key risks to business with regards to sustainability. Interestingly, the idea that family businesses are more people and environment-focused than listed companies was supported by the question - What are your priorities ranked highest to lowest with people, purpose, planet, and profit? - being the ranking reported back[4].

Whilst sustainability risks feature high on the agenda, the opportunities presented by significant environmental and social changes should not be overlooked. Those companies that adapt best to sustainability see opportunities in new products and markets, operational cost reductions, strengthening of supply chains, and reputational enhancement. Building both risks and opportunities into a sustainability strategy together with definable goals, and in alignment with the business vision and strategy, is key to the successful implementation of sustainability within an organization.

However, family businesses in the Deloitte survey tended not to have recognized these benefits as only 21% had identified opportunities and only 18% had constructed a sustainability strategy, created incentives, and devised targets[5]. Nevertheless, it is a short step from discussing sustainability at the board level and then moving forward to develop a strategy.

"Whilst non-family businesses struggle to embed a sustainable strategy alongside business strategy, because of their inherent strengths and succession structure, family businesses are more able to merge the two so there is a single sustainable business strategy." - Scott Whalan, Financial Advisory Family Enterprise Leader, Valuation & Modeling Partner.

As a starting point, many companies benefit from aligning their business strategy with the United Nations Sustainability Development Goals (UNSDG) which provides an excellent framework together with key performance indications that help to develop targets and report progress. From this approach, business initiatives will quickly develop, bringing changes to governance and reporting.

Whilst family businesses may be ideally suited to bringing in change quickly, society is demanding increased transparency of operations reflecting their concerns for companies' impact on the environment and society. To survive, family businesses will need to be comfortable with increased levels of scrutiny and accountability. And although they may not have the regulatory driven sustainability reporting requirement that listed companies are increasingly facing globally, family businesses that are seeking to raise capital or sell off assets will have to face questions regarding their sustainability strategy, and awareness of risks and opportunities will increasingly be raised as part of ESG (environmental, social, governance) due diligence and fund-raising discussions.

Driven by increasing sustainability awareness and activism by investors, many asset management firms are adopting responsible investment principles in their transactions. The United Nations Environment Programme Finance Initiative (UNEP FI) backed organization, the PRI (Principles for Responsible Investment), has over 3,826 signatories representing $121 trillion of assets under management[6]. Each signatory commits to the incorporation of ESG issues into their investment analysis and decision-making processes, being active owners and incorporating ESG issues into their ownership policies and practices, and seeking appropriate disclosure on ESG issues by the entities in which they invest.

Whilst family businesses may be ideally suited to bringing in change quickly, society is demanding increased transparency of operations reflecting their concerns for companies' impact on the environment and society

Similarly, the UNEP FI backed organization, the PRB (Principles for Responsible Banking), is a framework designed to bring purpose, vision, and ambition to sustainable finance. Over 270 banks representing over 45% of banking assets worldwide have now joined this movement for change[7].

Some family-owned businesses are actively embracing sustainable (or green) finance and playing to their strengths of family, legacy, and sustainability, and attracting the green investment dollar. In 2021, Majid Al Futtaim, the leading family-owned shopping malls, communities, retail, and leisure pioneer across the Middle East, Africa, and Asia, signed its inaugural $1.5 billion Sustainability-Linked Loan (SLL), a financial instrument secured primarily on ESG related performance. Previously, in 2019, Majid Al Futtaim was listed as the world's first benchmark corporate Green Sukuk and the first issued by a corporate in the region. It was valued at USD 600 million with a tenor of ten years to fund environmentally friendly projects[8].

In a world where awareness and action on sustainability is becoming more important, it is becoming clearer how family businesses that effectively adapt their internal processes with an eye on the development of legacy and succession, while demonstrating strong sustainable leadership, are more likely to withstand future challenges and identify future opportunities. We will watch with interest as Middle East family businesses, in particular, position themselves as custodians of the future.

By **Damian Regan**, Sustainability Reporting & Assurance Leader, Deloitte Middle East

Endnotes
1. 'Family Business: A Voice for Change in Sustainability', IMD & Pictet, 2020, Family business: A voice for change in sustainability - IMD Report
2. 'The Institutionalization of Family Firms', INSEAD's Global Private Equity Initiative, 2020, the-institutionalization-of-family-firms-europe.pdf (insead.edu)
3. 'Family Business for Sustainable Development', About | FBSD (unctad.org)
4. 'Transformation: fit for the future', Deloitte Middle East Family Enterprise Survey, 2021, Deloitte Middle East Family Enterprise Survey 2021
5. 'Transformation: fit for the future', Deloitte Middle East Family Enterprise Survey, 2021, Deloitte Middle East Family Enterprise Survey 2021
6. About the PRI | PRI Web Page | PRI (unpri.org)
7. Principles for Responsible Banking – United Nations Environment – Finance Initiative (unepfi.org)
8. https://www.majidalfuttaim.com/en/who-we-are/sustainability-and-esg/sustainability/case-studies/2019/majid-al-futtaim-green-sukuk-case-study

Blurred lines

Incorporating mobile devices in corporate investigations

The majority of corporate investigations today involve electronically stored information (ESI). In the past, this has typically amounted to corporate email or computer data.

In this day and age, corporate fraud perpetrators are becoming smarter and more aware of the controls organizations put in place to ensure security and compliance. As a result, fraudsters are regularly circumventing these controls by using both advanced and common personal communication applications and mobile devices to plan, coordinate, and/or execute actions related to fraud and misconduct. Data extracted from mobile devices can be crucial in corporate investigations. However, corporates are urged to have proper controls and mechanisms in place to be able to reap the benefits of this critical information, while still ensuring employee privacy and legal compliance. Failing to do so can result in reputational risk with material consequences.

Importance of mobile devices in corporate investigations

The majority of corporate investigations today involve electronically stored information (ESI). In the past, this has typically amounted to corporate email or computer data, whereas mobile phones were overlooked given the limitations of extracting information of interest in a forensically-sound manner. However, this is quickly changing due to three main factors:

Factor 1: Richness of data that currently can be forensically extracted from mobile devices

The development of mobile forensics, a subset of digital forensics focused on the recovery of mobile digital evidence in a manner that is acceptable by law, and the development of capabilities and functionalities of mobile devices, allow existing forensic tools to extract significant data such as:

- Instant messaging data e.g., WhatsApp, iMessage, Telegram;
- SMS;
- Call history;
- Internet artefacts e.g., history, inputted data;
- Contacts;
- Accounts;
- Multimedia and documents including metadata; and
- System files including activity logs.

Factor 2: High smartphone penetration rates and use in business

With the current smartphone penetration reaching 75% of connections, as well as the significant dependence on mobile devices in people's daily lives, including businesses where 80% of companies believe that mobiles are necessary for employees to perform their jobs, it is very likely to find investigation relevant corporate data on both corporate and personal mobile devices.

Factor 3: Rising flexible work and Bring-Your-Own-Device (BYOD) trends

The rising trend of remote/flexible work and BYOD, as well as a market expected to achieve a compound annual growth rate (CAGR) of 1% over the next 5 years, contributes to blurring the lines between corporate and personal information. These factors make mobile devices, in particular, personal mobile devices, an essential data source for corporate investigations, helping piece together the puzzle or identifying the "smoking gun" in a corporate investigation.

Case examples:

Let's consider WhatsApp as a key mobile data source; it is the number one instant messaging application in the UAE (and probably several other countries), with 80% of the country's population using the application. Whilst some organizations prohibit the use of WhatsApp for business communication within their policies or terms, others welcome it, including governmental entities. In both cases, employees can still use personal or business WhatsApp accounts to plan or commit wrongdoing, leveraging its ease of use, popularity, and end-to-end encryption.

Drawing on the extensive number of corporate investigations we have been involved in, WhatsApp has proved imperative in investigating various types of fraud, such as collusion, conflicts of interest, asset misappropriation, and other forms of misconduct. In one case, a custodian deleted the entirety of the application prior to imaging; however, we were able to prove that WhatsApp had previously been installed based on extracted digital forensic artifacts. In addition, we were able to recover chat data that contained evidence of the custodian exfiltrating confidential data via the application.

Other key mobile data sources include internet browsing history. An organization is likely to monitor web traffic and searches on a corporate-owned computer, but may be less likely to do so (or be able to do so) on a mobile device - particularly personal devices not on their network. In one case, we found that the device owner had searched for anti-forensic tools and techniques in which to delete data on their mobile following a notification of data collection. We were able to correlate this to digital artifacts on their laptop, which indicated the use of anti-forensic tools on the same day. In another corruption case, we were able to recover and correlate web history data related to purchasing expensive gifts for government officials.

Incorporating mobile devices in investigations

Whether a corporate-owned, personally enabled (COPE) or a personal mobile device, special care must be exercised in collecting, processing, and reviewing data from such devices as both are likely to contain personal data. Just like an organization strives to protect its business, it should also ensure it protects its employees' privacy. In most jurisdictions, this is not just a moral obligation; it is also a legal one with severe breach consequences. Personal data collection and processing restrictions will depend on applicable laws. Adequate legal council should be obtained prior to processing such data or implementing related controls.

Key considerations when incorporating mobile devices in investigations include:

Policy considerations

1. Ensure corporate data collection, processing, and transfer policies are in place and conformed to during corporate investigation.

2. Identify restrictions and the legal basis on which personal data can be collected, processed, and transferred.

3. Deploy and enforce personal data processing and retention policies for corporate-owned and BYOD devices.

4. Deploy and enforce policies and guidelines on segregating personal and corporate data.

Policies should include both personal and corporate devices and attention should be on how best to segregate personal and corporate data. For example, with mobiles, the use of two SIMs or the use of WhatsApp Business for corporate matters could help in segregating business and personal communications. In the same way, storage of personal data on corporate devices should be limited and managed appropriately, such as through restricting access or using access logs.

Depending on jurisdiction and policies in place, the organization may have the right to obtain all corporate data, including any business communication on personal devices. However, appropriate legal advice should be sought in all cases. This also includes how data may be transferred, based on the applicable laws and regulations.

Procedural considerations

1. Ensure proper corporate data monitoring, protection controls, and tools are configured, deployed, and monitored as a proactive procedure.

2. Ensure the use of proper forensic tools and procedures within investigations.

3. Obtain adequate legal counsel and explicit consent from the custodian prior to the data collection, processing, and review.

4. Be aware of cultural sensitivities such as gender, religion, and customs, as well as the likelihood that personally identifiable information (PII) will be held on these devices.

5. Consider targeted versus complete data collection approaches.

6. Utilize impartial professional third parties for the collection, processing, and review.

There are various tools available for monitoring activity; for mobiles, at a minimum, Mobile Device Management (MDM) should be in place. More in-depth controls may help detecting and supporting with an incident.

During an investigation, in most cases, custodians are concerned about who will view their data, especially because of the intermingling of personal and corporate data that occurs on mobile devices. We have noticed that custodians often feel more comfortable with an impartial third party holding their data, as opposed to someone from within the organization. A successful approach we have used during several investigations has involved collecting a custodian's data, selecting specific data types to be reviewed, and then performing keyword searching on reviewable data - with only data responsive to investigation defined search terms being reviewed. It is also possible to segregate data collections by targeting specific data sources or applications.

In summary, organizations are strongly urged to be aware of the impact of data privacy laws and regulations when it comes to collecting employees' data for the purpose of an investigation. Whilst data privacy and protection applies to all corporate data sources, mobiles can be particularly complex due to their use in our everyday life and data ownership.

Nonetheless, mobiles and the data they hold often prove critical to an investigation, and end up being the most valuable data source at hand. Implementing the right policies and procedures will help drive an organization's ability to collect and review this data, however, the appropriate controls and considerations need to be in place to ensure the organization respects employee privacy and maintains legal compliance.

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Endnotes

1 https://www.gsma.com/mobileeconomy/wp-content/uploads/2022/02/280222-The-Mobile-Economy-2022.pdf
2 https://www.oxfordeconomics.com/resource/maximizing-mobile-value/
3 https://www.mordorintelligence.com/industry-reports/byod-market
4 https://www.globalmediainsight.com/blog/uae-social-media-statistics/
5 https://medium.com/damian-radcliffe/how-the-middle-east-uses-whatsapp-6dc921d83d2a

A walk down ‘Green’ Fashion Avenue

Gearing towards sustainable
fashion and responsible consumption

The fashion ecosystem is an open space that needs to be clearly dissected before doing a proper sustainability review since sustainability can be defined in various ways

Does the world really need sustainable fashion? This is a question asked again and again. We walked down Green Fashion Avenue to answer this query, looking at different perspectives, challenges, and opportunities along the way.

Like many other industries, fashion has been leaving its environmental and economic impact on our planet and resources. In response to this, the United Nations created 17 Sustainable Development Goals[1] (SDGs) as a universal call-to-action to protect the planet, and for people to live in peace and prosperity. But what does sustainability actually mean for the fashion industry in particular?

What does sustainability mean for fashion?

The fashion ecosystem is an open space that needs to be clearly dissected before conducting a comprehensive sustainability review since sustainability can be defined in various ways. The fashion ecosystem can be described as a matrix with one axis covering the end-to-end value chain from sourcing, design, production, advertisement, up to fulfillment, and the other axis holding commercial channels and fashion product categories like apparel, accessories, etc., with all its styles and materials. Understanding these two perspectives is essential as sustainability in fashion is not as straightforward to elaborate on as it might seem.

To put it straight, sustainable fashion refers to clothing that is designed, manufactured, distributed, and used in ways that are environmentally friendly[2]. This starts with the choice of sustainable material, i.e., material that is organic and re-usable, preferably vegan over leather, and produced by avoiding the use of water and toxic chemicals. Essentially, the final fashion product needs to fulfill certain criteria in order to be called sustainable, encompassing a timeless style and being of high quality that will last longer than what we typically call "fast fashion."

There are also other elements related to social and human aspects to protect the rights of workers and ensure their security and fair compensation to achieve what is referred to as "ethical fashion." This is very closely connected to sustainable fashion as caring for the environment goes hand in hand with positive social practices.

Why does it really matter?

If the fashion industry was sustainable, it would be able to operate in ways that can continue working for years and decades to come, and transpire with minimal internal and external risks, and much less public scrutiny. Unfortunately, this is not the case today as fashion is considered one of the most polluting industries ever. It is especially not true of today's dominant fast fashion, which refers to cheaper clothing generally designed for quick consumption. This tends to lead shoppers to view clothing as being disposable, wearing items just a few times before throwing them out or moving on to newer, trendier, and lower priced items. This fast fashion cycle is far from being sustainable because it depletes the earth's natural resources at exponential rates, exploits workers around the world, and results in an overwhelming amount of waste.

In contrast to traditional fashion houses that only have a few seasonal collections per year, fast fashion brands may churn out as many as one or more new collections per week in an effort to drive continuous consumption.

To dive deeper into what sustainable fashion and responsible consumption actually mean, and examine why they should matter to us, we need to look at them from three different angles:

1. Do we really care about sustainability?

So once again we must ask ourselves: Does the world really need sustainable fashion? The answer is absolutely yes! Not only does sustainable fashion create less waste, save on water consumption, and preserve animal lives, it also reduces CO_2 emissions and ensures fair wages and proper working conditions[3].

The first challenge is defining what sustainability and responsible consumption actually mean within the fashion ecosystem. For example, sustainability can cover the production process of a textile, the textile itself as raw material, the way consumers buy it, or all three combined. Fashion has evolved drastically from one generation to another. Today, fashion revolves around fast changing trends leading to fast fashion, i.e., trendy new products that disrupt traditional seasons. No matter how we define sustainability, by simply looking at such trends, we find a major conflict of interest, not to mention the speed of production with the need for high margins versus the aim to become "sustainable." This is driving companies to search for a balance between both. Despite the fact that fast fashion utilizes non-sustainable material-like plastic (estimations say that approximately 60% of fashion apparel is made of plastic or non-natural fibers and 40% of the clothes sold have never been worn and are just filling up wardrobes), some companies are at least trying to change their packaging material by heading towards more reusable options.

Moreover, in the last two years (and boosted by COVID-19), we have witnessed a rise of more and more sustainable fashion brands, many of which have been very successful. As a result, traditional fashion companies are now starting to prioritize sustainability; however this raises the question of whether sustainability is just a new business model rather than a true purpose that should be followed by disrupting the traditional fashion ecosystem. The success of new global players like Pangaia or the Middle East-based The Giving Movement shows that despite being a new business model and a new opportunity, sustainability is also really desired by consumers. The sustainability factor in those examples is not just the branding, but the usage of as many sustainable steps of the value chain as possible, starting with material over production processes and working up to a good cause they are supporting. For example, The Giving Movement donates AED 15 for each product sold for a good cause.

2. What can we do to be sustainable?

• As consumers

The pandemic has changed consumer behavior and consumption trends in many ways, one of which is relying more and more on natural material, local products, and supporting local productions. It is true that sustainability is often looked at from a supplier's perspective, i.e., fashion houses, brands, etc. However, consumers are equally responsible to be part of these sustainability efforts since they are the consumption drivers. Consumers, for example, need to ask themselves: Do I really need to buy another new item, especially when it comes to fast fashion? Trends are out there, and trends will always be followed, but consumers should also be able to stand against "harmful" trends. And this automatically poses two other questions: Do consumers actually know what "sustainable" and "responsible" mean looking at the entire fashion ecosystem? And why do they still continue to buy and therefore support fast fashion?

To address this reality, two key interventions must be made. First of all through education; this is one of the main drivers of sustainability, and accordingly, the first step to be taken in creating more awareness about what sustainability really means, how consumers represent a core element of it, and thus how they can support it. Another major driver for sustainability (or the lack of it, especially with Gen X) is through influencers. Until today, their main focus has been on revenue generation; however, couldn't they also become effective advocates of sustainability? In the world we live in today, they really have the power to make an impact that matters. Taking the example of Pangaia... initially they were a successful brand starting purely with e-commerce; however, they managed to become well known and massively boosted their revenue. This success came with the recognized help of certain influencers, which demonstrates the potential impact of taking the right lead on responsible consumption.

• As brands, retailers, and regulators

As stated at the beginning, consumers are just one side of the coin, with the other side being brands, producers, and retailers. It is obvious that sustainability is more than just a business model; everyone needs to do their part in saving the world we live in. However, just defining Corporate Social Responsibility (CSR) targets and compensation is not enough, especially taking into consideration that in the end, it is the P&L that counts. Global standards and regulations and standards for sustainability are required across the entire fashion ecosystem, including material, production, chemical usage, fulfilment, etc. Countries are imposing rules and regulations for sustainability and tackling fast fashion, however, there are still many loopholes, and these regulations vary significantly between one region and another. A minimum set of requirements for the fashion ecosystem is a must, not just driven by the governments, but also by having private entities creating a fair game with the same conditions for all players.

Rome wasn't built in a day, and that being said, learning about sustainability within the general population won't happen overnight either

3. What are some new possibilities for sustainability and responsible consumption?

• Education

The fundamental challenge as stated above remains: How do consumers see, define, and act sustainably? Rome wasn't built in a day, and that being said, learning about sustainability within the general population won't happen overnight either. Certainly, outlining sustainability facts on labels and in campaigns is helpful, but it goes much deeper than that. Education starts with our children; they often come home from school and teach parents about what waste means and how we can all take better care of the environment. It is thus our job to be role models and execute what this means in real life by displaying and teaching sustainable behavior. It will require long-term effort that needs to be driven by consumers at home with the target that future generations will truly live and breathe sustainability into all aspects of their lives.

• Afterlife

As all of these needed standards and regulations seem to be very ambitious and long-term, the question now is: What can we do in the short term? The afterlife of fashion could be a step that turns the problem into an opportunity. Collectively, we can save more than 20 billion tons of clothing from being destroyed or polluting our environment (Fact: approx. 1 garbage truck of clothes is dumped in a landfill every second). The market for unsold deadstock and vintage wear is still relatively small, especially in our region, whilst it has become a proper business model in other parts of the world. Vestiaire Collective recently announced its growth plans in China, Galeries Lafayette has an entire department just for second-hand items, and in the Middle East, The Luxury Closet is expanding. The problems need to be solved at the root cause, however, tackling the current issues contributes to the overall progress and also opens up a promising new market in the Middle East and globally.

• Technology and the metaverse

Another essential and important factor which is becoming a major disruptor for many industries is technology, especially digital and the new and omnipresent metaverse. Looking at new technologies, such as automation, analytics, IoT, artificial intelligence, and machine learning, many organizations could potentially optimize and digitize their processes to become more sustainable. An example of this is a markdown optimization solution, which supports retailers to plan the assortment and prices across regions, stores, and products based on sales date, customer behavior, and external factors. It is a solution that entirely digitizes the fashion design process by connecting directly to the sales channels in 3D, VR/AR without producing even one piece of the product.

Additionally, today we are witnessing the rise of an entire new world - the metaverse. This dimension of the metaverse and Non-fungible Tokens (NFTs) is still very nascent, and no one really knows how it can be used; yet one thing is clear: it could be the next big thing and also a major driver for sustainable fashion. The first metaverse fashion events are already taking place, and fashion brands are creating their first NFTs, or at least starting to work on them. The roadmap and tools might not be clear yet, and the current generation might struggle with their imagination, but it has huge potential to becoming the next big thing.

With the rise of the metaverse, the fashion world will also see a complete shift in digital marketing and commerce, where lines will blur between the physical and digital world, and a solid understanding of the right mix of channels for each customer profile will be key to providing an elevated customer experience. The increased use of digital technologies will also help to increase transparency on a company's level of sustainability. Blockchain - as an example - will provide more traceability, which means that all supply chain partners joining the blockchain will have visibility of each other's operations, including information about how responsibly products and materials are sourced, shipped, processed, and distributed. The use of robotics can also reduce waste by efficiently sorting materials that can be recycled and re-used, even quicker and more efficiently than humans, and thus reduce the input power and costs associated with such processes.

At the end of the Avenue... what is the answer?

In the next few years, we will undoubtedly witness a rising demand for sustainable fashion, especially among younger generations who are already sustainability-oriented and environmentally conscious. The emotional connection that young consumers will establish with their sustainable brands will inevitably bring forth a new definition of both brand loyalty and brand purpose. This will in turn push fashion companies to create new circular business models such as in areas like resale, rental, repair, and refurbishment, leading to a new circular consumer experience.

One thing is clear: sustainability is "en vogue" and on the rise, consumption is becoming more and more responsible, but... coming back to the initial question: Does the world really need sustainable fashion? The answer is unequivocally yes! However, it will take some time, and most importantly, we are all in this together and responsible for making it happen.

Deloitte's contribution to the Middle East Fashion Week

In the last week of March 2022, the Middle East Fashion Council co-hosted the first Middle East Fashion Week (MEFW) in partnership with The Sustainable City, bringing together thought leaders and change makers as they discussed key issues around fashion. The event was held in Dubai, the region's fashion capital, and attracted a stellar line-up of both regional and international designers. The five-day event was held across different locations, with the three days of fashion shows and showrooms held at The Agenda in Dubai Media City. Key objective of the Middle East Fashion Council is to start a movement towards sustainable fashion, one that brings together the brightest minds to engage the industry in addressing the pressing issues of climate change.

With key issues raised, such as water wastage, fast fashion, and pollution, the forum addressed, among other topics, the impact of climate change on fashion and highlighted the main issues and also commonalities in solutions for both the construction and fashion industries. Deloitte was present at the event and contributed to the agenda by moderating two panel discussions with experts and thought leaders. The first panel on "Partnerships for Sustainable Fashion" was moderated by Dr. Ahmed Hezzah, Director of Digital Customer at Deloitte Middle East. Speakers included Stefano Galassi, Senior Advisor at Luxury Open Innovation, Ben McLean, Head of E-Commerce at DHL UAE, and Payal Kshatriya Cerri, Co-Founder of the Middle East Fashion Council. Joerg Meiser, Monitor Deloitte's Director for Consumer & Retail, moderated the second panel on "Responsible Consumption" with panelists Layal Akouri, CEO of The Giving Movement, and Amanda Rushforth, environmental advocate and Board Director of Azraq.

The vision is for this to be a bi-annual event to boost the industry in the region not just by showcasing the vast array of talent, but more importantly to facilitate new business opportunities.

By **Dr. Ahmed Hezzah**, Director Digital Customer, Consulting, Deloitte Middle East, and **Joerg Meiser**, Director Consumer & Retail, Consulting, Monitor Deloitte Middle East

Endnotes

1. Source: https://sdgs.un.org/goals
2. Source: https://greendreamer.com/journal/what-is-sustainable-fashion
3. Source: https://thevou.com/fashion/sustainable fashion/#what-is-sustainable-fashion

MEFW website: http://middleeastfashionweek.org/

One thing is clear: sustainability is "en vogue" and on the rise, and consumption is becoming more and more responsible

Smart security for smart grid

The challenges and risks with implementing effective security and controls for smart grid

Smart grid is a highly cohesive integration of mechanical and electric components supported by Information Technology (IT) aiming to enable intelligence within the grid and allowing two-way traffic of power where electricity can be both consumed and generated and sent back into the grid by the end consumer. In order to realize the economic value of a fully deployed smart grid, select power companies are taking the necessary steps to implement smart grid networks, taking the leading edge within their industry.

In order to fully realize the benefits of smart grid, power companies must address the challenges associated with such implementations; one of the major challenges being the application of effective security and controls across the grid components. Physical security, such as guarding the perimeters of electric components, is and will always continue to be a requirement. Nevertheless, there are several challenges smart grid implementations must address in order to carry out effective security and controls for the mechanical and electric components involved. These challenges include ensuring effective controls are implemented within the smart grid architecture, safeguarding the data generated through smart grid components, and the risks of intrusion present within the different smart grid components on both the Operational Technology (OT) and IT components of the system.

Smart grid implementations are evident

Smart grid implementations are becoming evident primarily due to the benefits they identify for both power companies and their consumers. Several Middle Eastern governments recently introduced initiatives and set up channels to finance energy sector reformation. Local providers, software companies, and governments are partnering with worldwide smart grid manufacturers and early investors as a result of these policy measures.

Within the UAE, Dubai Electricity and Water Authority (DEWA) is aiming to employ a smart grid and smart meter foundation with investments totaling US$1.9 billion.

In order to realize the economic value of a fully deployed smart grid, select power companies are taking the necessary steps to implement smart grid networks, taking the leading edge within their industry

At the Mohammed bin Rashid Al Maktoum Solar Park, the world's biggest solar park in the world, DEWA has developed two pilot projects for energy storage technologies, one of the first in the Middle East. By 2030, it is expected to have an industrial capacity of 5,000 MW. This will save approximately 6.5 million tons of carbon emissions per year once completed .

Business cases for smart grid implementation identify a number of benefits which include enabling Load Management and Time of Use (TOU) billing to meet peak demand times, reducing meter reading costs for power companies, distributing generation (which in addition to integrating multiple sources of power generation, also allows for consumers to actively participate in power generation), and enabling intelligence by allowing two-way grid communication between power companies and their consumers.

These benefits propose smart grid implementations to be the smart choice in reducing carbon footprint and modernizing the grid network.

Contrary to implementing a smart grid, the business case of not implementing smart grid solutions for power companies is becoming a challenge. These challenges include maintaining status-quo and potentially increasing costs to consumers given economic inflation and increasing demand for power, risks associated with not practicing load management, lost opportunity to track data and power consumption at the individual component-levels of the grid, and lost opportunity to participate in carbon reduction/green initiatives.

Controls within the smart grid architecture

As power companies look into smart grid operations, a common smart grid architecture is becoming evident. At a high level, from the distribution perspective, the architecture includes smart meters at consumer locations (homes, offices, factories, etc.) communicating with a power region access point that transmits data back to the power companies' master data management centers where processing takes place. This is commonly supported by an Advanced Metering Infrastructure (AMI), GeoSpatial Information System (GIS), and Distributed Management System (DMS).

Contrary to implementing a smart grid, the business case of not implementing smart grid solutions for power companies is becoming a challenge

Although a common architecture helps enforce standardization, industry acknowledged consortium reviews, and a best practiced framework for power companies, it is not evident if effective controls are in place to ensure secure and reliable two-way communication between grid components. Controls help implement preventive and detective measures, and not being able to identify and implement controls within the smart grid architecture can pose a number of threats to power companies and their consumers. These threats can include data theft, alteration, and power theft for intruders looking to collect data or steal power.

The availability of mobile computing and external storage devices can provide the tools for intruders looking to access data if they can gain access to the smart grid network through the most vulnerable points (such as smart meters, power region access points, and databases at data management centres) or obtain the correct credentials and parameters to connect to the network. Access to individual components requires controls to ensure the components collecting, processing, and storing confidential data are secure.

Controls also help mitigate risks, create audit trails, utilize logs, and enable segregation of duties. It is estimated that the 2005 blackout in Dubai could have cost residents a loss of an estimated US$73 million due to the loss of power and the interruption in telecom services if it had lasted the entire day. A cascading power outage like this could be caused by lack of controls at any point in the power grid which smart grid implementations can address.

Data generation

One of the key components of a smart grid is a smart meter. The smart meter replaces the current analog meters and increases functionality to collect data on electricity consumption during different times of the day. It is estimated that a residential smart meter collecting data and forwarding to the master data management center will require approximately 170 Megabytes (MB) of data storage per meter per year if data is collected twice a day. According to the Advanced Electronics Company (AEC), Saudi Arabia is one of a small set of countries working on big plans to shift from traditional electrical grids to smart grids. One of the Kingdom's key efforts is reflected in the aspirational 'Vision 2030' plan. By the end of the next decade, it is expected that the KSA will have established itself as a global hub for smart energy technology. This initiative will spread the smart meters to a huge margin; thus, data collection and reports will be updated frequently.

By collecting vast amounts of data, power companies have an increased responsibility to secure their data collection and storage techniques. Securing the data generated through smart meters will assist power companies in building customer trust, which is essential as it provides assurance that the organization is meeting legal 'protection of consumer privacy acts' and fulfilling its communicated commitments. Losing consumer trust can lead to legal actions against power companies resulting in unnecessary costs. Similarly, unsecured customer data can also be subject to theft, which can result in failure to comply with 'protection of consumer privacy acts' as well.

One of the key components of a smart grid is a smart meter. The smart meter replaces the current analog meters and increases functionality to collect data on electricity consumption during different times of the day.

Risks of intrusion

There are multiple points of intrusion within a smart grid that must be monitored, safeguarded, and controlled to ensure effective security measures and controls have been implemented. Network entry points, such as smart meters at each consumer end point with a connection back to the power company over wireless transmission, carry an inherent risk of intruders being able to gain access to the network to gather information and potentially alter the information being transmitted back to the master data management center. This risk creates integrity concerns on the data being collected, which can result in mislead decision-making by processes and systems relying on the data.

Safeguarding the grid against intrusion under defined security standards can support benefits associated with the 'smart-security for smart-grid' concept. Smart security measures can protect grid wide intrusion points, such as residential and industrial meters and other smart grid components located within the power company perimeter. These protection configurations can address both data protection and failover scenarios for the different components integrated within the grid.

Smart security

The threats and vulnerabilities identified drive the need to enforce smart security standards and ensure measures taken to implement 'security-in-depth' are regulated and applied for smart grid implementations. Effective application of security and controls across grid components can ensure the data generated is accurate, stored, and analyzed in a manner where confidence in the integrity of data can be maintained. It can also allow power companies to engage in 'risk-intelligent' approaches by allowing them to balance the risks such as security, privacy, and business continuity to the costs associated in delivering the true value of smart grid implementation.

Smart security can also support a flexible, manageable, and consistent configuration among the smart grid architecture which can allow scaled protection from as low as 500 access points (power company offices, substations, and generation stations) to over 1,000,000 (residential, consumer, and industrial smart meters) access points. Smart security can also allow staff, contractors, and auditors to do their jobs effectively by implementing preventive, detective, and corrective measures while ensuring responsible resources are assigned least privileged access.

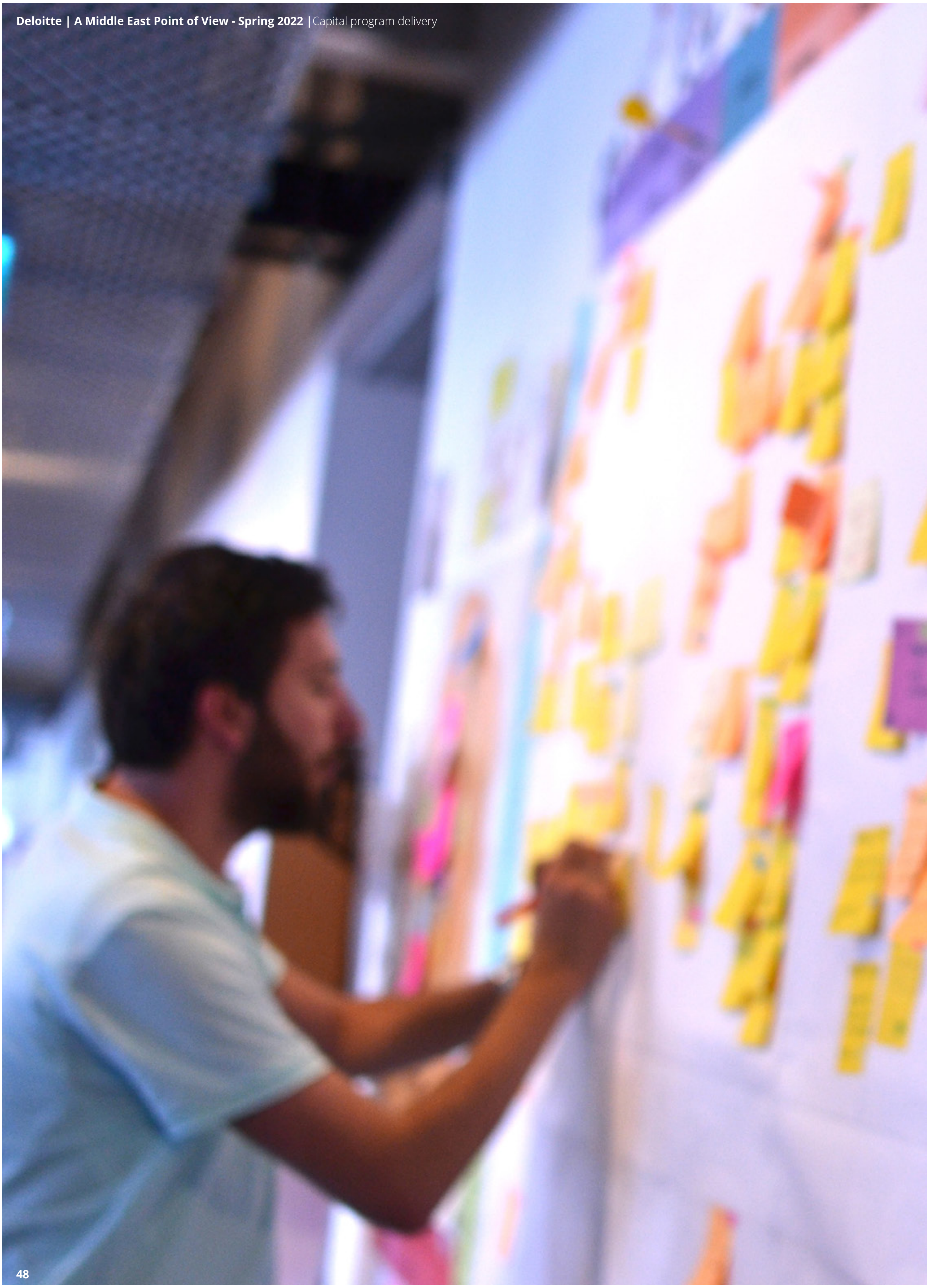
In the end, security is everyone's responsibility. The challenges presented for smart grid implementation can be approached in a positive and effective way by utilizing a structured 'risk-intelligent' method. The tools and technology can be made available; however, it is how we decide to use them that will prove to be successful after all.

By **Ali Khan**, Partner, Cyber Detect & Respond Leader, and **Tamer Charife**, Partner, Energy, Resources & Industrials Cyber Leader, Risk Advisory, Deloitte Middle East

Effective application of security and controls across grid components can ensure the data generated is accurate, stored, and analyzed in a manner where confidence in the integrity of data can be maintained

Endnotes

1. Smart Grid Report. https://www.dewa.gov.ae/~/media/Files/About%20DEWA/Smart%20Grid%20Report%20EN.ashx?la=en
2. Blackout cost Dh11m an hour | Business – Gulf News. https://gulfnews.com/business/blackout-cost-dh11m-an-hour-1.290410



Adapting capital program delivery with organizational agility

The delivery of complex capital projects is fundamental to economic diversification in the region and currently there is a US$3.5tn pipeline of awarded and planned capital projects in the GCC. Historically, to support the delivery of these projects, public sector entities and real estate development organizations have relied upon outsourced (or third party) capabilities such as Project Management and Cost Management Consultants (PMCMs). However, with the growing scale and volume of projects and complex programs initiated in the past five years, the effectiveness of the PMCM/outsource delivery model has been impacted and may have run its course. While there are advantages of an outsource-dependent delivery model, the overreliance on these services, and the inevitable supply chain constraints, is leading to diminishing benefits for delivery organizations.

The outsource delivery model & added-value

During the region's construction boom in the last two decades, the outsource delivery model was the preferred approach for managing capital projects within delivery organizations. This allowed organizations to embed external capabilities of PMCMs to support their own internal skillset. Through this approach, delivery organizations were able to maintain lean organization structures while relying on external expertise to manage consultants and contractors, report costs, monitor schedules, coordinate construction activities, and ultimately manage the project as a whole.

In some instances, the role of the PMCM extends beyond augmented resource and includes the development and application of entire functions (such as project controls). This approach is typically seen across emerging start-up delivery organizations, which have not yet established their own controls and governance arrangements.

The outsource delivery model engages technical and commercial specialists to manage complex projects and programs, who bring tried-and-tested project management frameworks and strong track record to organizations for a price. The more subtle benefits allow delivery organizations to reduce recruitment overheads, labor turnover, and training costs. The outsource delivery model provides flexibility to the capacity of resource, which is beneficial to the scaling/downsizing of capabilities. Based on these factors, the outsource delivery model can provide benefits if implemented correctly.

Role and accountability split

The success of the outsource delivery model is derived from how effectively organizations are able to embed and integrate external resource into the delivery structure. Clear demarcation of roles and responsibilities will preserve the delivery of an organization's accountability over projects. The client organization will always remain accountable by being the ultimate decision-maker on projects. The PMCMs help inform the client owner by providing performance monitoring and project management to navigate the complex and ever-changing project environment.

However, the outsource model may limit the development of internal capabilities, leading to organizations being over-reliant on outsourced capabilities. This can diminish the client's ownership and lead to the external capability taking on more accountability from the owner.

While there are advantages of an outsource-dependent delivery model, the overreliance on these services, and the inevitable supply chain constraints, is leading to diminishing benefits for delivery organizations

Diminishing benefit through outsourcing

Beyond accountability, overreliance on external support can also impact long-term growth and development prospects of the organization's capabilities. Rather than fostering internal capabilities or acquiring new talent, relying on third party resource is unlikely to bring innovative ways of working and may even be a drag on productivity. For emerging start-ups in multi-phase programs spanning beyond five years, the outsource model can stifle the growth and maturity of the internal capabilities.

PMCM contracts have time and fee restrictions, which reduces flexibility of project timelines, so any delays will be used as the basis for prolongation claims. With a thin organization structure, it is likely that challenges associated with handover and skill-transfer will emerge, with limited internal resource to manage delivery continuity-leading to higher than envisaged costs.

Commercially, heavy dependence on external resource will lead to large teams of expensive expert capabilities augmented into the client organization. Most of this spend would be at a premium over internal resource recruited through conventional channels. This is not cost-effective in the long-term.

Recent shifts in market forces have made the access to external project management services even more limited and indeed fast becoming a constraint to the way client organizations set up their delivery model.

A seller's market

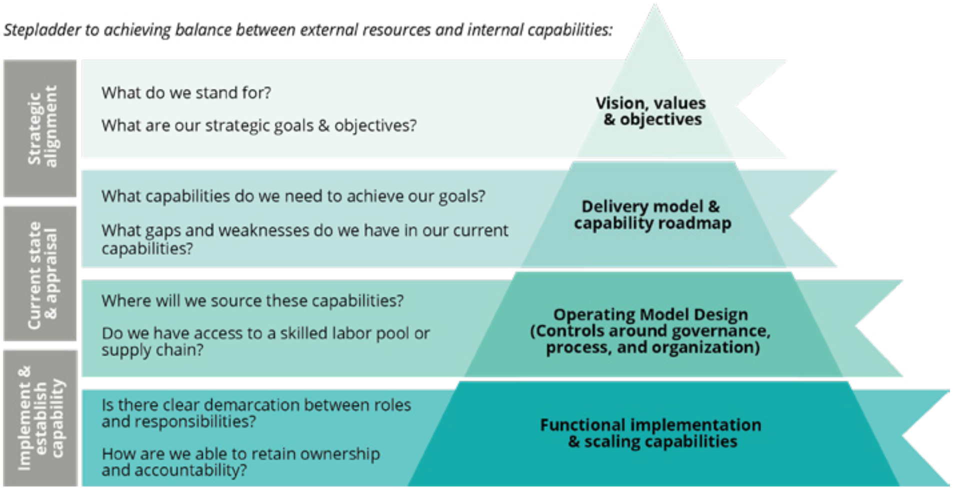
Start-up development organizations and competing giga-projects (and programs) across the region are all relying heavily on the outsource delivery model to scale their capabilities. With each program more complex and time-demanding than the next, access to top-tier PMCMs is becoming increasingly strained and first-to-move programs have already begun cannibalizing market capacity. Through supply-demand dynamics, the procurement of external services has transformed into a seller's market. With overreliance on the outsource delivery model, delivery organizations in the medium-to-long term will face a shortage of PMCM services. In addition, delivery organization will encounter difficulties in procuring services at optimum value and diminish their commercial leverage over the supply chain.

Restoring benefit and defining capabilities

With fast-changing market conditions, alternatives, or adjustments the outsource delivery model needs to be considered to restore the value and benefits of outsourcing capabilities.

It is essential for organizations to be aware of their existing capabilities; this can be achieved through an appraisal and gap analysis of their internal skillset. Once the operating vision and delivery strategy have been defined, in accordance with enterprise values and strategic goals, a capability model and roadmap can be developed, and subsequently the Operating Model Design. The Operating Model Design will firmly establish the organization's inner workings and put up the controls surrounding governance, process, and organization. Through this, client ownership and accountability, complemented by tactical support of external skills and capabilities, can be defined to support efficient and effective decision-making on capital projects.

Stepladder to achieving balance between external resources and internal capabilities:



Success drivers

To conclude, access to external capabilities through a strained and cannibalized supply chain has significantly reduced the ability to heavily rely on PMCM services. Start-up and emerging delivery organizations dependent on the outsource delivery model are likely to experience challenges in the development of their internal capabilities and advancing their maturity. Organizations that use a capability roadmap, aligning capability requirements with their values, objectives, and supply chain constraints, will be most successful. Functional implementation and scaling internal capabilities, combined with tactically procured external services that clearly define ownership and accountability, provide the best value for money and are key components for successful program delivery.

By **Paul Hirst**, Director, **Matthew Hanson**, Senior Manager, and **Ishaq Jarallah**, Manager, Capital Programs, Deloitte Middle East

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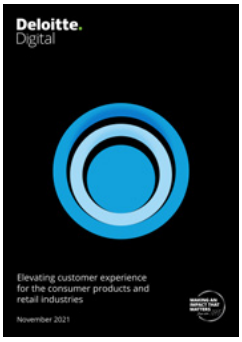

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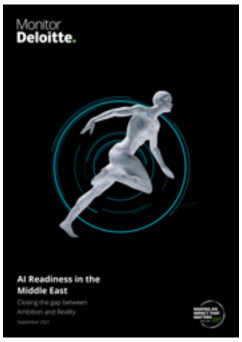

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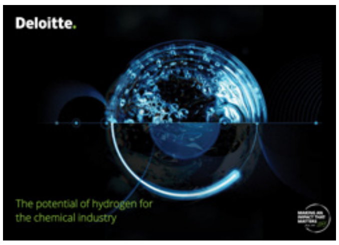

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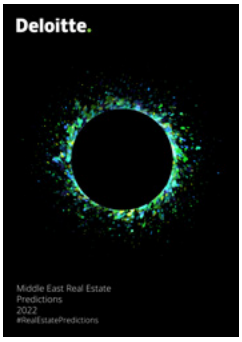

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