



# IGH Credentials - Digital

KPMG Islands Group

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KPMG Islands Group is a regional network of KPMG member firms providing Audit, Tax and Advisory services with more than 2,500 outstanding professionals working together to deliver value in The Bahamas, Barbados & the Eastern Caribbean, Bermuda, British Virgin Islands, Cayman Islands, Guernsey, Isle of Man, Jamaica, Jersey, Malta and Trinidad & Tobago. KIG is uniquely structured across island jurisdictions, having worked together for over 20 years, with common clients and industry sectors including financial services, tourism, healthcare, infrastructure and digital.

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# Bahamas National Health Insurance Authority

## KPIs, Analytics & Performance Management

### Context

The National Health Insurance Authority ("the Authority") in The Bahamas was undergoing a significant enhancement of its technology assets to take advantage of modern technology solutions.

The Authority is tasked with administering the government funded National Health Insurance scheme in The Bahamas through public and private entities.

A key technology asset identified for construction was a 'Global Reporting Platform', the purpose of which is to automate reporting and provide population and other analytics to the Authority.

### KPMG's role

Project methodology was split across 4 phases:

1. Data Catalogue and Metrics:
  - A full review of the data available within the Authority was combined with discovery exercises to understand the KPIs and information required by the Authority to measure its performance and support decision making.
  - A Data Catalogue describing the data assets available and the transformations that would be required in order to extract the desired metrics was created.
  - Data quality issues were flagged for resolution.
2. Business Case and Proposed Architecture:
  - A business case for the benefits of the Global Reporting Platform was prepared, which included a proposed cloud architecture, that made use of Platform-as-a-Service resources. Moreover, a running cost estimate was prepared, presented, and approved.
3. Implementation:
  - A tenant was set up for the Authority, following dev-test-prod and security best practices.
  - Extract, transform, load ("ETL") processes were designed and built, including the use of external data sources through application programming interfaces ("APIs") for population and standardized diagnosed data.
  - Data validation checks were designed and built, including connections with logs and automated alert systems to facilitate monitoring of the quality of the ETL process.
  - A data warehouse was designed and built following the Kimball methodology.
4. End-to-End Testing, Documentation, Training:
  - A an end-to-end testing plan, with specific test cases, was generated and carried out.
  - Documentation was assembled to support the client with maintenance of the system going forward and training given as necessary

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# Government of Malta

## National Digital Strategy

### Context

The Government of Malta (“the Government”) considers Information, Communication and Technology as key enablers for the economy, as well as an important economic pillar in its own right contributing gross value added.

The path towards the digital economy, in the fast lane of technology, was clearly laid out in ‘Digital Malta’ – the National Digital Strategy 2014 – 2020.

Notwithstanding this clear vision, six years in the realm of technology may seem and feel like perpetuity. Technology has progressed at an accelerating pace and, whether by intent or necessity, we have become even more digitally connected and technology-dependent than ever before. Couple this with the plethora of emerging technologies on the horizon which have the potential to revolutionise the way we do things, and the need for a new and refreshed National Digital Strategy becomes increasingly more apparent.

### KPMG’s Role

KPMG in Malta was called upon to assist the Government with revamping the 2014 –2020 National Digital Strategy, taking note of the profusion of technologies that have emerged over the past years with a view to articulate a new and refreshed National Digital Strategy.

KPMG in Malta led a workshop-driven approach involving over 50 stakeholder consultation sessions with technical specialists, economists, lawyers, educators, researchers, public sector officials, investors and entrepreneurs to elicit cross-sectoral feedback on the pain points, lessons learned, opportunities and socio-economic needs in relation to digitalization.

More specifically, KPMG in Malta carried out the following activities:

- Conceptualisation & Planning
- Capturing the ‘As-is’;
- Articulating the ‘To-be’; and
- Drafting of the Digital Strategy

Particular focus was also placed on lessons learned from the COVID-19 pandemic and how this contributed positively, or otherwise, to uptake in digitalization. In the final strategy submission, KPMG in Malta identified a number of pillars and proposed a number of initiatives tailored to the island’s needs.

For this engagement, KPMG in Malta selected a team with the depth of skill and experience required for a project of this profile, drawing on extensive knowledge of representatives across the Advisory and Tax functions.

### Outcome

The National Digital Strategy, branded as ‘Malta Digitali’, established Government’s commitment on how it intends to maintain momentum as a global digital leader and champion of emerging technologies.

It also clearly set out Government’s vision on how it will act as an incubator and accelerator for change towards digitalization, apart from the traditional role as a promoter and regulator.



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# Securities Commission of The Bahamas Compliance and Regulatory Interface (“CoRI”)

## IT advisory services

### Context

The Securities Commission of The Bahamas (“SCB”) was experiencing data accessibility and quality issues which impeded its ability to conduct key supervision functions effectively. Specifically, regulatory and statistical submissions by regulated entities were not centrally facilitated by a web portal, making data management both resource- and time-intensive.

KPMG in The Bahamas developed an intuitive, flexible, cloud-based platform for SCB to facilitate the online submission of regulatory and statistical filings.

### KPMG’s role:

Through the completion of the development phase, KPMG in The Bahamas along with KPMG in Malta have built an intuitive web portal that improves the quality and management of regulatory and statistical filings, facilitates monitoring through dashboards and reports, and creates efficient data management.

Key workstreams included:

- **Set-up infrastructure:** design and construct the architecture of the web portal and associated modules.
- **Web design:** design web templates (HTML) and associated designs (CSS), working with SCB through a series of co-creation workshops to ensure that the designs not only meet their requirements but are tailored to their unique user experiences.

- **Develop web portal:** develop key platform functionality such as user registration and authentication, user and entity management module, file upload module, DMS integration and data migration, workflow implementation, web form framework, and dashboard and reporting modules.
- **Deployment and go-live:** conduct extensive user acceptance testing (“UAT”) to ensure platform aligns with system requirements. This workstream also included train-the-trainer sessions and concluded with system launch and monitoring.

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### Outcome

CoRI has become a pivotal application in advancing SCB’s digital transformation agenda by optimizing data accessibility and quality related to regulatory and statistical information, while improving the overall user experience of SCB’s licensees and internal stakeholders.

# Government of Malta - Ministry for Health

## Implementation of National eHealth Services

### Context

The Government of Malta's Ministry of Health required support in implementing the EU-wide digital strategy to improve the efficiency of local health services. The strategy promotes information sharing between member states in a uniform manner.

The Ministry of Health's Information Management Unit was tasked with implementing IT projects, totalling approximately €5 million over a 2 year period as part of its EU member state obligations.

### KPMG's Role:

The services included:

- Project management and digital advisory services to support delivery of the project plans,
- Development and regular updating of the project procurement and implementation plans,
- Oversight of third-party suppliers that had been awarded contracts to implement the projects, and
- Assistance and guidance in the budgeting process for the program, in line with the wider EU-Funded IT Program Plan.

### Outcome

KPMG in Malta provided skilled and dedicated resources who support the Information Management Unit with successfully delivering on its digital strategy commitments.

Currently, KPMG in Malta is supporting the Ministry of Health with project management of post-project implementation and new projects.

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# Malta Digital Innovation Authority

## Development of Artificial Intelligence (“AI”) Certification Framework

The Malta Digital Innovation Authority (“MDIA or “the Authority”) engaged KPMG to build an AI Certification Framework, aligned with national regulation and based on the Authority’s existing Digital Ledger Technology (“DLT”) Certification Framework.

The KPMG Digital Solutions team in Malta led the project, working with Audit team members, to consider international AI Audit Frameworks and identify Control Objectives that may be applied to the framework in order for an applicant to obtain certification by the Authority under the Innovative Technology Arrangement & Services (‘ITAS’) and MDIA Acts.

Once the Control Objectives were identified, KPMG assisted the Authority in developing guidelines for applicants (and auditors) as well as in-depth Blueprint structures to enable information about the AI solution to be shared with both the Authority and service providers.

## Development of a Technology Assurance Sandbox

In promoting innovation by smaller entrepreneurs, and Malta as a preferred central hub for blockchain technology, the Malta Digital Innovation Authority reached out to KPMG for assistance in making the jurisdiction attractive whilst still addressing the Authority’s control objectives. The Authority considered that the existing infrastructure needed to lower the cost barriers whilst retaining oversight.

KPMG in Malta participated on a government appointed Task Force and subsequently assisted in shaping a framework for the set-up of a Sandbox environment, which gives a high degree of flexibility to the applicant in return for increased mitigation controls. KPMG provided input to stakeholders from across the technology industry (both applicants and service providers). Subsequently, KPMG assisted in providing subject matter expertise in relation to the development of the Sandbox Framework.

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# Bahamas Ministry of Tourism

## Intelligent character recognition IT advisory services

### Context

For many years, the Ministry of Tourism of The Bahamas (“MoT”) has collected, analyzed and published tourism data from immigration landing cards. In the past, the immigration cards were scanned and the information entered via a highly manual process.

In a 2-year period leading up to 2018, the MoT experienced a significant backlog of immigration landing cards (~1.2 million cards) that were not processed and integrated into MoT’s statistical platform. Further, the statistical platform did not have the necessary workflows and business rules to ensure that data was efficiently detected, structured and comprehensively corrected before reaching end-users in order to prevent inaccurate insights.

In May 2018, as part of the Ministry’s wider digital strategy, MoT sought to implement a data and analytics (“D&A”) platform capable of providing strategic insights from the advanced analytics of immigration landing cards, enhanced as necessary with external data.

Key technical requirements of the D&A platform included:

- An automated end-to-end solution with an integrated system architecture that supported data capture, storage, online analytical processing and data visualization.
- A robust data pipeline with intelligent character recognition (“ICR”) models that digitize and structure both handwritten and marked fields on immigration landing cards.
- Machine learning to incorporate comprehensive business rules to automate data detection, cleansing and transformation.

### KPMG’s role

KPMG in The Bahamas has acted as advisor to MoT in the design and implementation of the D&A platform and provides ongoing maintenance and platform evolution support.

Key areas of consultancy include:

- Building a core platform comprised of ICR models, automated workflows, and machine learning algorithms to structure and transform data.

- Creating a solution which processed and provided direct access to legacy data consisting of ~22.2 million records and backlog data.
- Building online analytical processing cubes for efficient data processing and access controls implementation.
- Ongoing maintenance and platform evolution support.

### Outcome

The D&A platform allows MoT and its stakeholders to gain actionable and near real-time insights into key performance indicators (“KPIs”) and correlations regarding the tourism industry as well as the identification of regional, socio-cultural, and generational travel patterns.

Further, the D&A platform facilitates the development of a more targeted tourist incentive program to promote satisfaction and loyalty.

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# Securities Commission of The Bahamas supervision platform

## IT advisory and risk consulting services

### Context

In order to stay ahead of international regulatory best practices, the Securities Commission of The Bahamas (“SCB”) sought to implement a highly automated risk-based supervision (“RBS”) platform that facilitates the efficient supervision of its regulated entities and enables operational agility to better respond to regulatory disruption.

Key functional requirements of the RBS included:



A robust methodology and framework that allowed consistent quantitative and qualitative analyses.



Dynamic benchmarking and the integration of external data sources to facilitate the comprehensive risk rating of regulated entities and sectors.



A user-friendly reporting front-end to visualize actionable insights.

### KPMG’s role

KPMG in The Bahamas acted as advisor to SCB in the development of the RBS and provided the following services:

- Conducted a gap analysis to identify fundamental weaknesses and evaluate SCB’s RBS-F readiness.
- Designed and developed a framework that suited SCB’s mandate, existing operations, and workflows.
- Implemented an extract, transform and load solution using KPMG “Sofy” which integrates disparate data sources and provides a web-front end to manage data capture and warehousing.
- Developed and deployed the RBS and coordinated stakeholder workshops and market briefings.

### Outcome

The RBS coupled with the KPMG Sofy data capture tool allowed SCB to efficiently fill critical data gaps and augment its supervision framework, adding additional metrics and perspectives to its risk rating methodology. With the RBS’s automated workflows and streamlined operating procedures, SCB can use its supervisory resources more efficiently and better prioritize regulatory activities.

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