

# Data Modernization: Imperative for Digital Transformation

LEADING ORGANIZATIONS ARE  
REMODELING THEIR DATA  
PLATFORMS TO GARNER REAL-TIME  
BUSINESS INSIGHTS AND BECOME  
MORE CUSTOMER-CENTRIC

# Adopting Modern Data Management Practices Is Essential For Constructive Use of Data



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The Covid-19 pandemic has uncovered the holes in the ways an organization manages its data. With the world locked down, offices shifting to home, and nearly all customer interactions happening remotely, businesses have no way to know their customers other than through data lenses. Organizations have realized the importance of a modern data infrastructure to make data easily accessible, useful, and compliant.

Besides, the digital explosion and millennial adoption of digital culture have caused a vast data disruption that business leaders struggle to tap into to unlock any business value. Data Modernization benefits them by overpowering this issue and applying powerful data analytics in a cost-efficient, scalable and secure manner. They can learn about their customer's persona, behaviour, and transaction patterns to make informed business decisions.

At IGT Solutions, we partner with customers in their Digital Transformation quest by empowering them with a modern digital backbone. We can support them with a complete Data Modernization strategy; prepare a roadmap; do end-to-end implementation involving data analysis and data migration, or build an entire business intelligence solution. We deliver with precision that too at a much faster pace and lesser cost.

Let the following case studies speak of the benefit that leading companies are deriving from Data Modernization. I am sure; it will inspire you to transform your operations that result in superior and personalized customer experience.



# Data Platform Modernization for a Leading Cruise Line to Optimize Costs Towards Air Travel Bookings

## About the Client

The client is a leading international cruise line group in the world. It owns one of the largest fleet of vessels in the industry and carries millions of passengers annually. The group organizes several cruises in the luxury segment from various destinations around the world.

## Business Challenge

The client incurs high cost annually towards air travel bookings of their onboard crew members, generally done in advance. It could not take advantage of airfare fluctuations since the in-use data platform didn't allow viewing of airfares in real-time and make re-bookings at a cheaper rate. The existing system had following limitations:

- It didn't provide any insights from the existing air booking data and associated airfare fluctuations.
- The data architecture was complex and not scalable.
- A need to ensure data privacy and GDPR compliance was identified.

## Business Need

The cruise line identified the need to build a new data platform to overcome the existing system's challenges. It was looking for a platform to take advantage of airfare fluctuations and save millions of dollars in air travel bookings. The new platform should:

- easily integrate with the internal pricing and booking management tools to perform re-bookings in real-time to near real-time.
- process PNRs retrieved from current GDS on a real-time basis.
- have the capability of real-time re-pricing of air ticket for cheaper rates and routes.
- mark priority messages for "at sea" cruise liner and transmit them within an SLA time of 1 minute.
- have scalable architecture extendable to other brands and GDS systems as the business continue to grow.
- able to generate revenue reports for business, detailing the re-pricing changes.
- secure all PII (Personal Identifiable Information) fields

## Solution

IGT Solutions partnered with the client for its requirement for modernization of their existing platform & reporting requirements. With our techno-functional experts, IGT Solutions implemented the following solution as the best fit of the challenge faced:

- Scalable, geo-segregated, high availability AWS architecture
- Real-time highly parallel PNR processing engine
- Near real-time emergency notification system for message broadcast to ships
- Real-time on-the-go and at-rest encryption and security of data-keeping adhering to GDPR compliance.

## Benefits

- Significant savings made from the re-pricing alone.
- Throughput of **5000 PNRs** processed every hour on average.
- Scalable cloud infrastructure which is future-ready.
- Fully-automated process leading to improved data quality and performance.
- Near real-time insights and reports for the business.

# Data Platform Modernization for a Leading Hospitality Solution Provider

## About the Client

The client is a global leader in the hospitality industry upsell solutions. Operating in Asia-Pacific, the Middle East, and North America, it has enhanced business performance for its 1000+ hotel partners, while optimizing and developing their people.

## Business Challenge

The client's existing data platform wasn't equipped to service the growing pool of customers across various geographical locations and cater their demands. It had the following challenges:

- Not able to handle heavy volume of data required for on-boarding of new properties.
- Was neither optimized nor scalable towards provisioning the data from multiple sources required for real-time advanced analytics.

## Business Need

To resolve the issues encountered in the existing data platform, it was essential to modernize the platform that:

- is capable of serving their growing customer-base worldwide.
- provides accurate reports in a reduced turnaround time.
- acts as a secure report distribution and analytics platform for the clients, internal consulting team and senior management.
- allows seamless integration for new data

## Solution

The client selected IGT Solutions for its requirement for data platform modernization & reporting. IGT leveraged its extensive domain knowledge and technical expertise to implement a solution best-fitted to address the challenges. The modern version offers the following:

- Scalable cloud architecture segregated by geos to ensure high availability
- Server-less and highly multi-threaded ETL using AWS Lambda and AWS Glue for near real-time data consumption and processing
- Multi-region distributed database for each client property
- Connectivity to various Hotel PMS systems, LMS, Salesforce and HR systems
- Centralized RedShift analytics warehouse enabling cross-functional analysis across business units
- A web portal with an analytics feature for the internal team and the customer
- Permission and role-based reporting capabilities with various distribution methods
- Embedded visualization within the provider's portal
- Data migration from existing current system to the new platform

## Benefits

- Scalable cloud infrastructure which is future-ready and geographically distributed
- Secure physical segregation of data between the various properties
- Fully automated process leading to improved data quality and performance.
- Reduced complexity and turnaround time for onboarding of new properties
- Near real-time insights to the properties



# Data Platform Modernization for a Leading Middle East Airline

## About the Client

The airline is a budgeted carrier in the Middle East, flying 70 million passengers to 95 destinations across Europe, Middle East and GCC, Africa, and Asia. The airline continues to expand its network with more regular flights, more direct routes and more comfortable inflight options.

## Business Challenge

The client's existing data platform was an on-premise solution built using traditional tools and technologies. It had following challenges:

- Lacked Integration capabilities with other modules
- Legacy Data Architecture built with an intent of historical reporting
- Not scalable to cater the growing demands of platform's data
- Huge licensing and infrastructure cost

## Business Need

The airline wanted to modernize its data platform to resolve the challenges posed by the existing system. The new system should:

- refresh real-time / near-real time data for effective decision making.
- provide real-time intelligence by modernizing data architecture and infrastructure.
- provide unstructured data integration and analysis.
- support execution of complex resource intensive queries generally requested by business.
- support peak hour user work load by paying additional cost for peak workload window.

## Solution

The client selected IGT Solutions for its requirement for data platform modernization & reporting. IGT leveraged its extensive domain knowledge and technical expertise to implement a solution best-fitted to address the challenges. The modern version consists of the following:

- Cloud-based infrastructure to provide scalability during peak hours, performance improvement and cost saving on Data center, Software licensing and Appliances/ Servers.
- Cloudera Impala for EDW to support complex queries, massively parallel processing and vertical scaling based on the user workload and complex business logic.
- Kafka for real-time PNR data integration, so business operations can know the actual inventory positions and make effective decisions.
- Utilization of modern ETL best practices to uplift the existing data architecture and enable parallel processing.
- Unstructured data integration in Big Data, so businesses can perform social analytics, sentiment analysis, surveys and customer 360 analysis. Social media connectors, web scrappers, Python are utilized for the same.
- Complex ETL processing and business logics are coded in Map Reduce, Pig, and Hive to improve performance and resource utilization.
- Power BI and SSRS are applied for supreme data visualization
- Scoop is utilized for CDC processing. Scoop merged with data architecture best practices to refresh data near real-time.

## Benefits

60%

saving on infrastructure cost

4x

improvement in processing time

## Integration

of social media and survey data in EDW

## Real-time

integration support in data architecture



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IGT Solutions (IGT) is committed to simplify complex customer interactions while delivering a seamless experience. It provides integrated BPM, Technology and Digital Services & Solutions for clients across industries.

Established in 1998, with 100% focus on customer experience, IGT employs more than 13,500 customer experience and technology specialists providing services to 75 marquee customers globally. IGT's global footprint consists of 19 delivery centers in China, Philippines, Malaysia, India, UAE, Romania, Spain, Colombia and the USA.