



INTERGLOBE TECHNOLOGIES

A global leader in travel technology and business processes



Introduction

The travel and hospitality industry is a rapidly growing customer-centric business. For verticals like Airlines, Hotels, Cruise lines and TMC's, the need to know and uniquely identify their valued customers is a business imperative which helps them optimize their operations and increase the impact of their marketing strategies, ultimately keeping them ahead of the competition.

Many organizations struggle to formulate a strategy optimal to their business model which makes the most of their existing customer data, since in a dynamic environment it becomes difficult to gauge the value of their customers.

It costs 10x more to acquire a customer than to retain, and 100 times more to win back one already disillusioned with the company. This problem usually translates into finding out which customers are valuable, and how many of them are dissatisfied. And organizations struggle to maintain up-to-date and integrated knowledge base essential to understand customers. This challenge is partly due to the organization's inability to maintain a complete and consistent customer profile (which records all customer activities) since there are multiple disparate systems maintaining disintegrated local copies of the same customer, and partly due to an incomplete understanding on how to best utilize such a repository (in case it is already present).

Even if they do possess a customer knowledge base, it is difficult to identify the true value of a customer primarily because there are multiple dynamic factors contributing to this value. Adding to the complexity is the fact that the factors valid today might not stay relevant tomorrow.

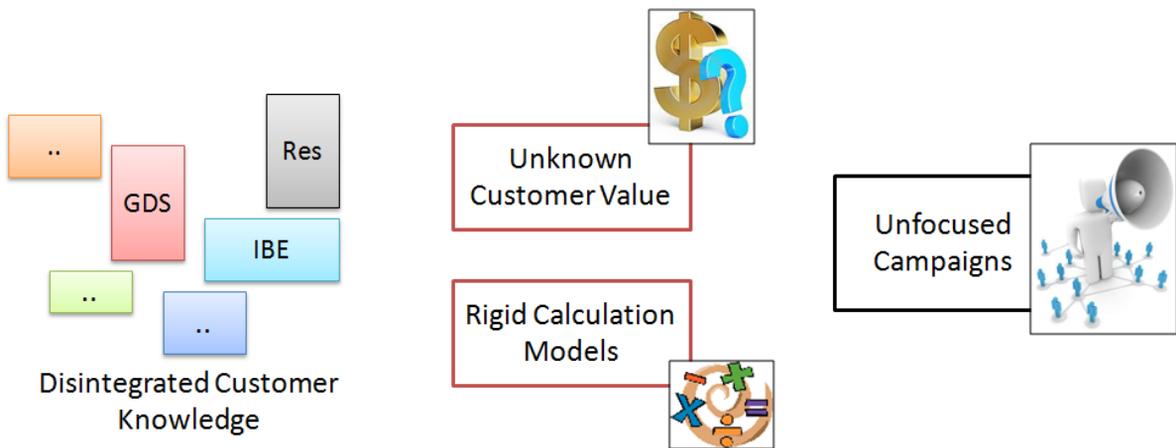
Therefore, organizations need to formulate a 'Customer Value Implementation' strategy where they can have a robust model to gauge the net worth of a customer based on factors that are present today, as well as one which is flexible to adapt to changing market scenarios tomorrow.

Identifying true customer value will help organizations unlock valuable insights, which when combined with analytics and creativity can achieve amazing results. Customer value helps in providing increased customer retention, better ROIs with targeted promotions and more focused customer service (in line with the customer's profitability to the business). It also create a consensus across the business units - a common base for decision making on investments. In order to generate more thought about customer value and to increase the loyalty of its customer base, an organization might wish to promote a customer value proposition.



Typical Customer Challenges for an Organization

For an organization attempting to extract the most from their customer data, problems can be identified at each step. We try to exemplify a marketing campaign scenario here, starting from preliminary information retrieval to final campaign creation.



- **Localized Disintegrated Customer Knowledge:** Big organizations have multiple channels of interactions with the customer, resulting in multiple entries being maintained across various systems. In a typical airline operation, data about the same customer can be found in the GDS, Reservation System, IBE, ground operations (check-in, boarding) etc. These functional silos work independently, with little or no interaction between them.
- **Unknown Customer Value:** In cases where functional silos have been integrated and a comprehensive customer knowledge base exists, organizations are often found wanting on a customer ranking system front.
- **Rigid Static Calculation Models:** Organizations which do have the ability to arrive at a “Customer Value score” after significant investment tend to opt for static calculation models which are designed in a way that renders them inflexible to change. Any changes business functions lead to changes in business parameters for the calculation of the customer value and necessarily triggers changes in the calculation model.
- **Unfocused Campaigns:** Without the knowledge of the customer value, organizations can not segregate customers and therefore treats them equally – requiring higher investments, and a lack of visible differentiation for highly valuable customers.



IGT's Solution: IGT's Customer Value Framework

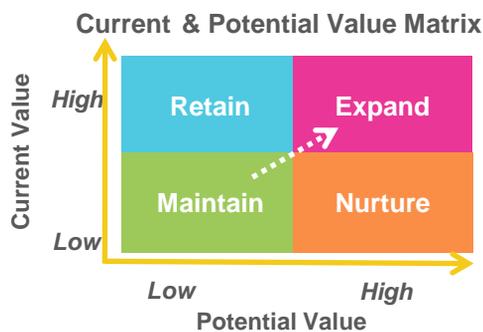
IGT understands the complexity and the dynamic nature of the travel and hospitality business and has come up with a "Customer Value Framework" that caters to the needs of customer-centric organizations. This framework can be easily used by any airline, hotel, cruise line or a TMC to come up with a solution to the problem of customer value determination.

"IGT Customer Value Framework" consists of three major processes:

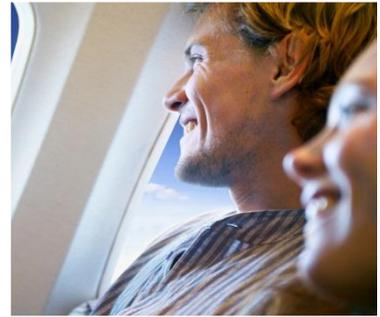
- **Implementation of the Unified Customer Database:** In order to make sense of customer data, an integrated repository needs to be in place. IGT has a unified 'Customer Data Model' which can be used to keep all the customer details. This would be a single source of data about the customer.

This information needs to be propagated to all the customer touch points. Any new customer entries captured in these systems need to be replicated and maintained in a consistent manner in the unified customer database.

- **Identification of Major Contributing Factors:** IGT has come up with an exhaustive list of major parameters contributing to the customer value for a customer centric business. For example, in a travel industry organization, the major factors affecting customer value include travel information, passenger information, ancillary service spend, social influence score, frequent flyer information among others. This list may not be complete, and may shrink or increase depending on the organization's choice on how it wants to evaluate its customers.



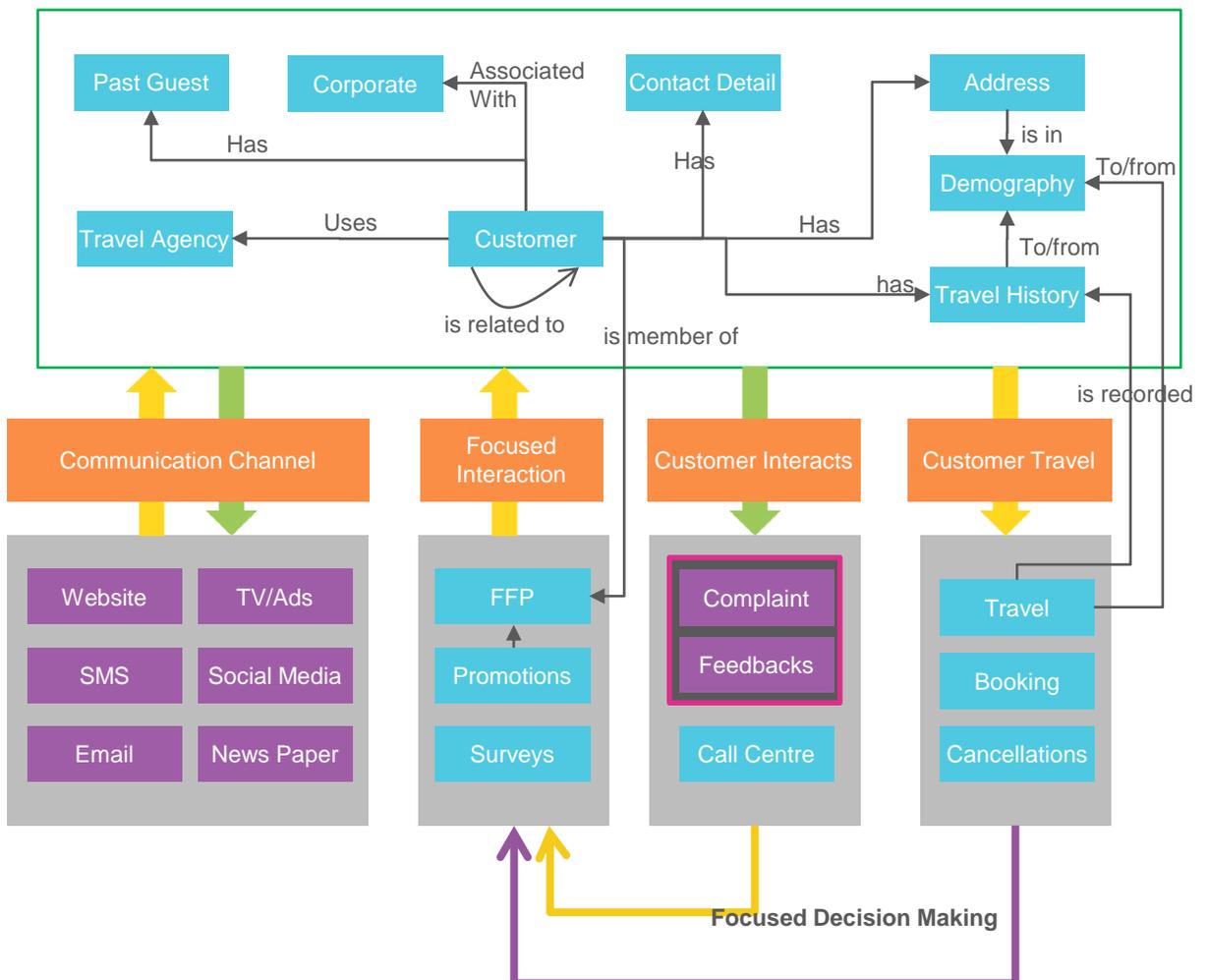
- **Customer Value Calculation Model:** IGT has come up with a generic calculation methodology which can easily be adopted to cater to the need of any customer-centric travel organization. The IGT calculation method is a flexible approach which allows changes in the weight and choice of parameters and the way they may affect or contribute to the customer value.



IGT's Customer Data Model

IGT's Customer Data Model (CDM) is generic and can be applied to most organizations in the travel & hospitality space with a little customization. The example below is a singular view of the IGT Conceptual CDM for Airlines..

IGT Customer Data Model for Airlines



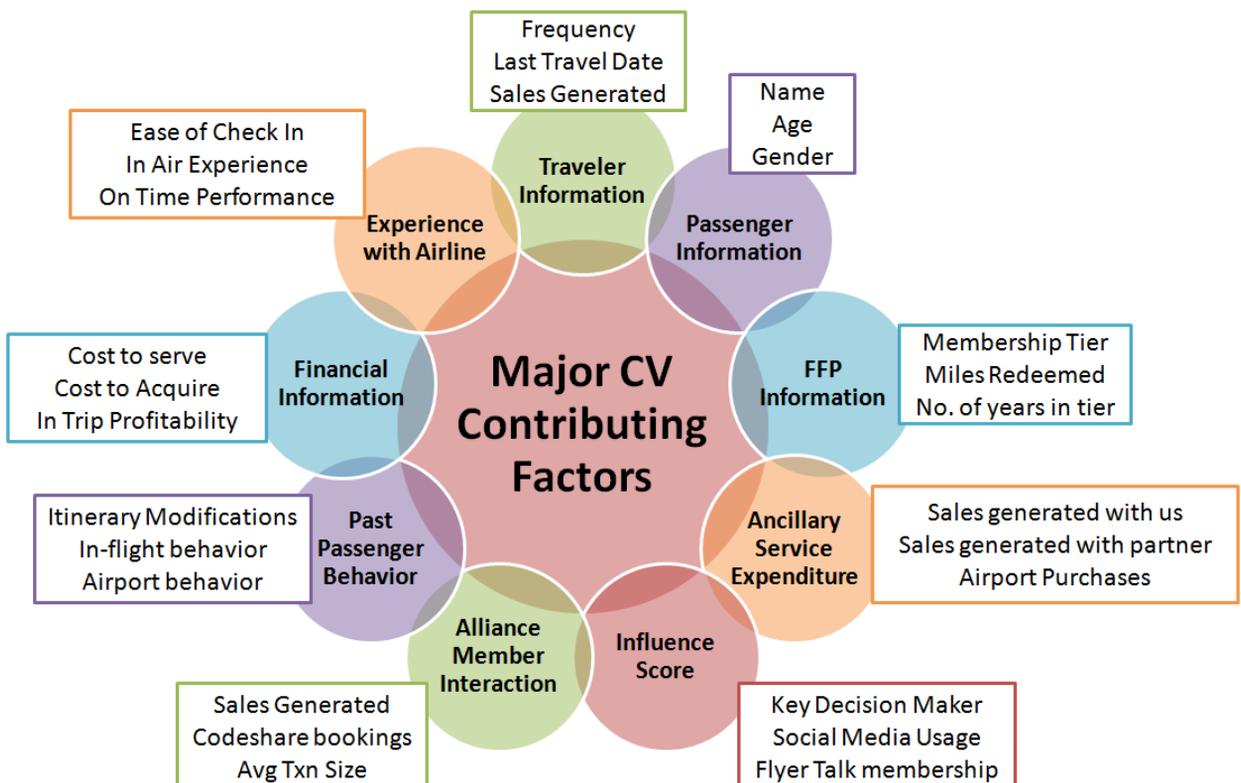


Identification of the Major Contributing Factors

From our experience, we have chosen some significant factors for airlines, which can be segregated under the following categories:

- Travel Information
- Passenger Information
- Loyalty Program Information
- Ancillary Service Expenditure
- Social Influence Score
- Alliance Member Interaction
- Past Passenger Behaviour
- Financial Information
- Experience with Airline

These factors are elaborated below.





The IGT Customer Value Calculation Model

IGT has developed a calculation framework which is designed in such a way that it can adapt to the changing needs of the business. The factors defined are generic and can be easily changed in consultation with the customer business team.

Here is how IGT solution approach works:

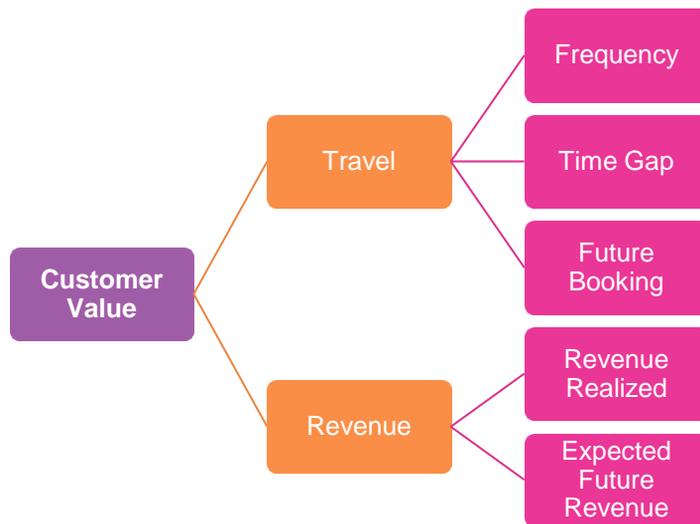
- IGT classifies the customer factors in the hierarchy as explained in the above section.
- For each factor a **“benchmark”** is set and the factor is given a weight within each hierarchy level (weight total at each hierarchy level to all its children is 1).
- For each factor we calculate the **“factor deviation”** which is derived by dividing the actual factor value with the **“factor benchmark”**.
- Then we multiply **“factor deviation”** with the **“factor weight”** and derive **“factor contribution”**.
- **“Factor contribution”** is added for all the children to a hierarchy level and **“hierarchy level contribution”** is derived.
- **“Hierarchy level contribution”** is multiplied with **“hierarchy weight”** and added and **“parent hierarchy level contribution”** is derived. This step is repeated for all the levels until the top level, which is what the **“Customer Value”**.
- This entire process is applied for **each and every customer** existing in the customer database.

This entire process is flexible and can be altered in case of change in business strategy because for each factor at each level, business can control the “factor weight” and can increase or decrease the “factor weight” based on the change in the business environment.



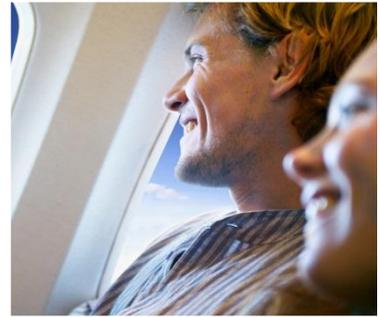
IGT Customer Value Calculation Framework - in Action

The below example describes the IGT customer value calculation model in action. To maintain readability, we will only consider the following factors:



The following four customer templates are being considered:

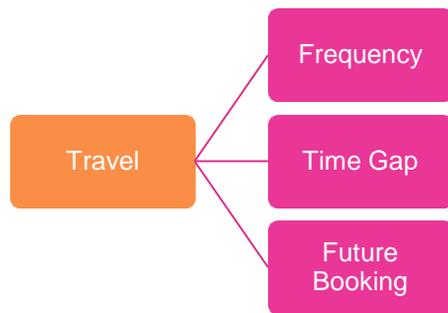
Mr. Tan	Mr. Chan	Ms. Smith	Ms. Lee
Time Gap = 3 mths.	Time Gap = 4 mths.	Time Gap = 12 mths.	Time Gap = 2 mths.
Travel Frequency=2.	Travel Frequency=1.	Travel Frequency=1.	Travel Frequency =1.5.
Future Bookings= 2.	Future Bookings= 0.	Future Bookings= 1.	Future Bookings= 1.
Revenue Realized = \$5,000.	Revenue Realized= \$4,000.	Revenue Realized= \$4,000.	Revenue Realized = \$200.
Expected Revenue = \$300	Expected Revenue= \$0.	Expected Revenue= \$300	Expected Revenue = \$450



IGT Customer Value Calculation Framework - in Action (Contd.)

The first step would be the calculation of the travel's (hierarchy level's) contribution. Suppose the following benchmark and weights are being used:

Metric Value (Benchmark)	Metric Weight
Time Gap=2 months	20%
Future Bookings=0.8	50%
Travel Frequency=1.5	30%



With these benchmarks and factor weights, if the calculations are executed as described in the IGT's customer value calculation model then we would get travel level scores (hierarchy score):

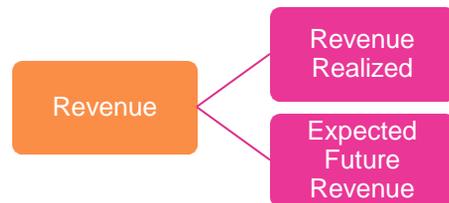
Customer	Time Gap Score (A)	Frequency Score (B)	Future Booking Score (C)	Travel Score (A+B+C)
Mr. Tan	$(2/3=.7) \cdot .2 = .1$	$(2/1.5=1.3) \cdot .3 = .4$	$(2/.8 =2) \cdot .5 =1.25$	1.75
Mr. Chan	$(2/4=.5) \cdot .2 = .1$	$(1/1.5=.7) \cdot .3 = .21$	$(0/.8=0) \cdot .5 =0$	0.31
Ms. Smith	$(2/12=.5) \cdot .2 = .03$	$(1/1.5=.7) \cdot .3 = .21$	$(1/.8=1.25) \cdot .5 = .62$	0.86
Ms. Lee	$(2/2=1) \cdot .2 = .2$	$(1.5/1.5=1) \cdot .3 = .3$	$(1/.8=1.25) \cdot .5 = .62$	1.12



IGT Customer Value Calculation Framework - in Action (Contd.)

Now we calculate the Revenue's (hierarchy level's) contribution. Suppose we have following benchmark and weight as:

Metric Value (Benchmark)	Metric Weight
Time Gap=2 months	20%
Future Bookings=0.8	50%



With these benchmark and factor weights if we execute the calculations as described in the IGT's customer value calculation model then we would get revenue level score (hierarchy score):

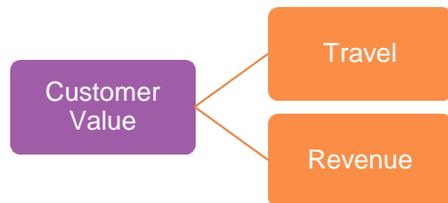
Customer	Revenue Realized Score (A)	Future Revenue Score (B)	Revenue Score (A+B)
Mr_Tan	$(5,000/4,000=1.25) \cdot .45 = .56$	$(300/300=1) \cdot .55 = .55$	1.11
Mr. Chan	$(4,000/4,000=1) \cdot .45 = .45$	$(0/300=0) \cdot .55 = 0$	0.45
Ms. Smith	$(4,000/4,000=1) \cdot .45 = .45$	$(300/300=1.0) \cdot .55 = .55$	1.0
Ms. Lee	$(200/4,000=.05) \cdot .45 = .02$	$(450/300=1.5) \cdot .55 = .82$	0.84



IGT Customer Value Calculation Framework - in Action (contd.)

Finally we calculate the 'Total Customer Value' (top hierarchy level's contribution). Lets suppose we have following benchmark and weight for the travel and revenue hierarchy levels:

Metric Value (Benchmark)	Metric Weight
Travel Score=1	40%
Revenue Score=1	60%



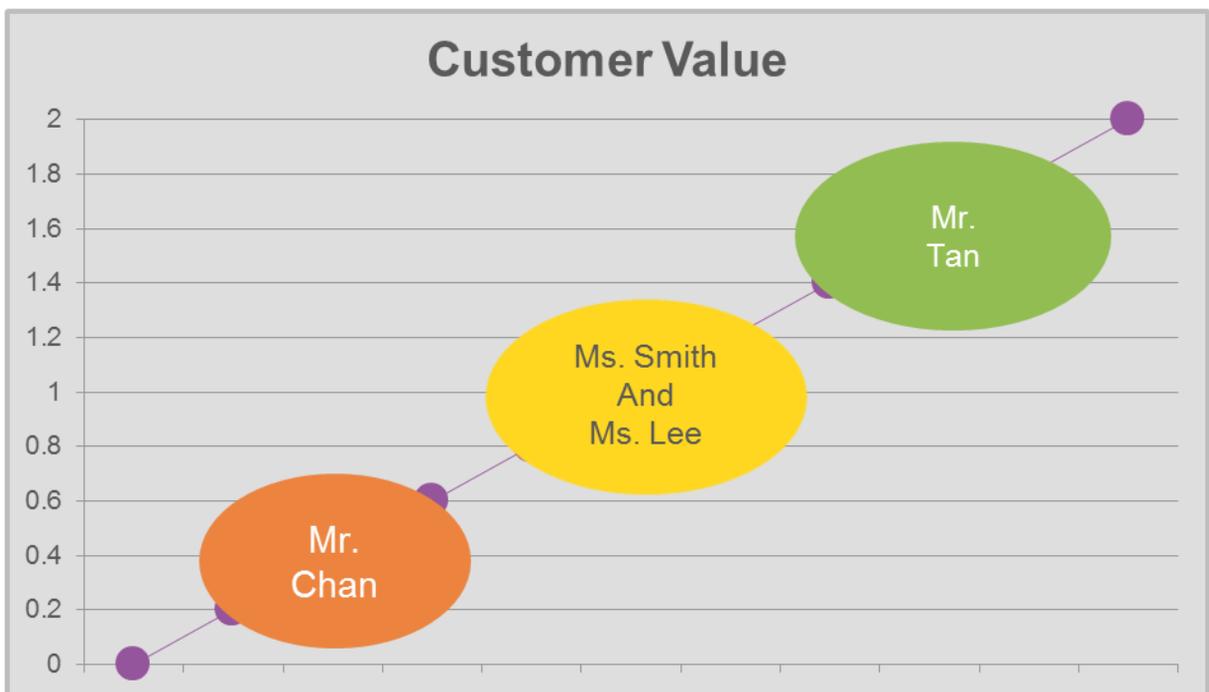
With these benchmark and factor weights if we execute the calculations as described in the IGT's customer value calculation model then we would score the Customer Value as (the top hierarchy level score):

Customer	Travel Score (A)	Revenue Score (B)	Customer Value (A+B)
Mr. Tan	$1.75 \cdot .4 = .7$	$1.11 \cdot .6 = .67$	1.37
Mr. Chan	$.31 \cdot .4 = .12$	$.45 \cdot .6 = .27$	0.39
Ms. Smith	$.86 \cdot .4 = .34$	$1.0 \cdot .6 = .6$	0.94
Ms. Lee	$1.12 \cdot .4 = .44$	$.84 \cdot .6 = .5$	0.94



IGT Customer Value Calculation Framework - in Action (Contd.)

With the above selected example data set, Mr. Tan has been identified as a high value customer, Ms. Smith and Ms. Lee as customers who provide average value, and Mr. Chan as a customer with the least value when compared with his peers.



Conclusion

Through the above value calculation exercise, we were able to re-segment 4 Airline customers on the basis of their cumulative net worth. This helps us draw valuable conclusions – for instance, a customer with significant realized revenue but low future revenue can be identified as one who is taking his business elsewhere. Likewise, a customer who consistently books the same flight segment at equal intervals would appreciate being recognized and being enrolled in a rewards program which lets her enjoy privileged status, thereby assuring her loyalty.

The Customer Value score has the potential to introduce exciting new possibilities about how Airlines and other Travel organizations evaluate and treat their customers. However, developing a good customer value score is a complex exercise which requires analytical and IT expertise, combined with a thorough understanding of the domain.

This article was an attempt to introduce the reader to the benefits and development of a functional Customer Value Scoring framework.



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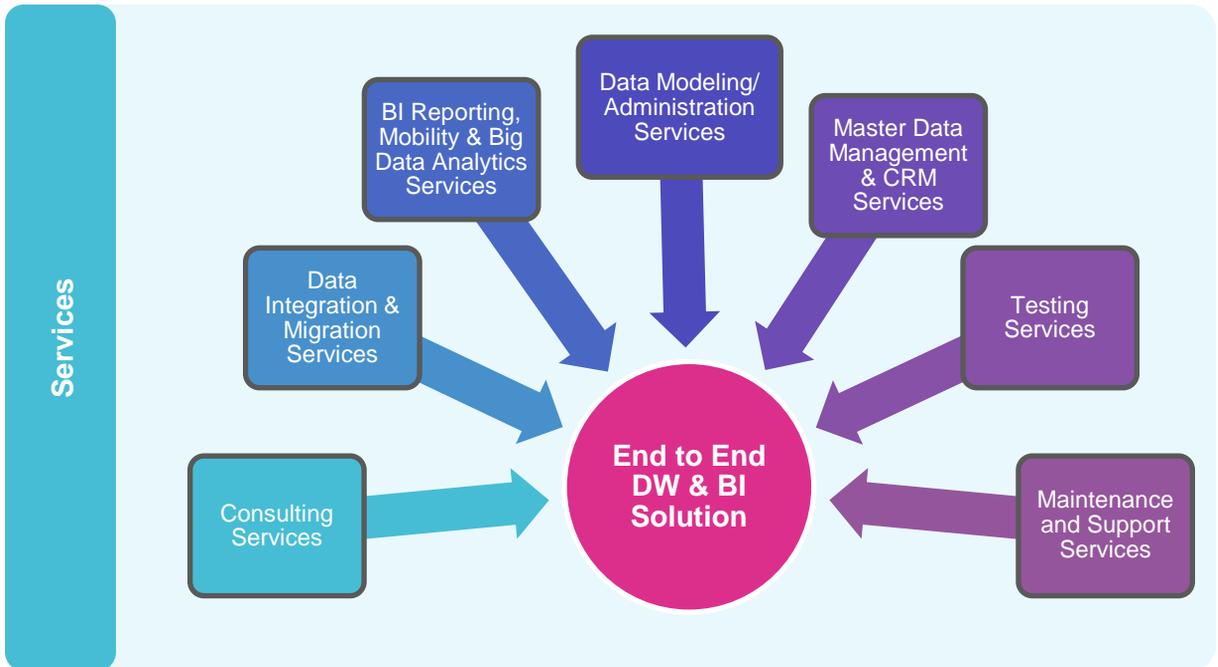




IGT DW/BI CoE Service Offerings and Capabilities

IGT has a dedicated DW/BI Center of Excellence (CoE) to help travel and hospitality organizations to achieve their strategic financial and operational goals, using quick and easy-to-implement analytical solutions. The challenges of designing high performance data warehousing solution that meet the varying and evolving demands of travel business require exceptional skills. IGT's DW/BI CoE meets client specific needs and are focused on delivering results which provide true business value.

The travel industry is one of the most strategic and competitive industries in the world. Our customers leverage on the combined strength of our technology expertise, domain knowledge, software quality assurance expertise, process focus and commitment to long term client relationships in order to deliver the utmost in value. IGT's DW/BI CoE provides end to end DW/BI solution.



Tool Capabilities	OS Platform	DB Server	CRM & MDM Tools	Big Data Tools	ETL Tools	BI Tools
	Windows Server Sun/HP Unix Linux	DB2 Oracle 9i/10g/11g MS SQL Server Teradata Exadata	Siebel CRM MS Dynamics CRM Oracle PIM Oracle CIM IBM InfoSphere	Hadoop Hive Hbase Pig Cassandra	Informatica IBM Datastage Oracle Data Integrator Warehouse Builder Microsoft SSIS	Microsoft SSRS Cognos BI OBIEE Plus Microstrategy Business Objects



InterGlobe Technologies (IGT) is a leading BPO & IT Services provider committed to delivering innovation and business excellence across the entire spectrum of the travel, transportation and hospitality domain.

The company offers integrated IT-BPO services comprising of Application Development and Maintenance, Contact Center Services, Back Office Services, Consulting Services and Solution Frameworks to the travel industry worldwide.



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