Gray Matter
Empowering Intuition

Why Industry Standard Analytics Solution instead of
Custom BI development?

Quick facts

- As per Gartner report, 7 out of 10 BI project fails

- Pre built Industry Standard solutions are proven to be a far more successful and reliable option than custom built BI solutions
  - A well-designed pre built solutions with minor customization is a risk free option which can be deployed faster and users can start reaping benefits

- Custom built BI solution is likely to cost 3x more than an Industry Standard analytics Solution because of the following reasons
  - BI platform & ETL tools cost
  - Expertise in building enterprise level data warehouse model

- Custom BI solution is likely to take 3x more times than an Industry Standard Pre built Solution due to following reasons
  - Understanding business users needs clearly
  - Data mapping from multiple source systems
  - Development of data models to address business users requirement
  - Dashboards, Reports & cube development

Requirement gathering & deployment planning

Custom BI	Industry-Standard Pre-built solution	What would be the Impact if Risk is not mitigated?
Major challenges during business user's requirements gathering a. Multiple meetings with key business users to understand requirements leading to huge investment of time of senior managers b. Incomplete understanding of business users needs due to lack of domain knowledge of vendor c. Inability to factor future requirements due to lack of domain expertise d. Lack of unified objective of business impact with certain KPI due to diff perspectives of multiple stakeholders	**Industry standard Solution comprises of** a. Industry standard KPI' & metrics with relevant logic & calculation b. Pre-built dashboards based on individual roles & responsibilities in the organization c. Pre built Insurance data models covering all elements of business d. ETL connectors with major source systems such as Life Asia, Polisy Asia, Informix & premia. This typically requires minimal customization (5-10)% to cater to specific needs.	a. Incomplete and/or incorrect requirements lead to defects in the subsequent stages of software lifecycle. This typically leads to huge overrun in cost & schedule and often ends up with the project not reaching completion b. Even if the system goes live, albeit with higher cost and schedule, it is highly likely that there would be lot of change requests post go-live arising out of lack of solution capability to scale up to changing industry trends and evolving business users needs. c. The inability of the solution to scale up would also lead to insufficient decision support and result in sub-optimal business decisions

Requirement gathering & deployment planning

Custom BI	Industry-Standard Pre-built solution	What would be the impact if Risk is not mitigated?
- **Selection of technology stack** – ETL Tool – DB for target Data Warehouse – BI tool for dashboards & reports on top of DW – Data Quality tool – Master Data Management	- Technology selected and attested by vendor based on their expert evaluation of fitment between business requirements and technology stack	- Project failure during implementation due to gap between tool capability and business requirements. Even if project goes live system performance and user experience can be sub-optimal
- **Infrastructure sizing**: Inadequate Infra sizing that does not factor for growth in business volumes and hence when transaction volumes increases performance suffers. Also Insurance business is very seasonal with periodic peaks which are not factored usually while infra sizing.	- Solution factors growth in business volumes for next 5 years. The solution is also capable of handling peak business volumes	- System performance dips with increased instances of failure as transaction volumes grow. Ultimately system has to be retired prematurely with sunk investments without realizing significant returns from the investment. - Custom BI system is also often found to be lacking in performance during peak transaction volumes
- No single vendor for hardware, software licenses & domain consulting	- Single vendor for end-to-end-solution implementation	- Reduced co-ordination overheads for client, single point of accountability - Reduced license and hardware costs due to vendor partnership with product companies - Cost of evaluating and hiring high-end domain consulting firms avoided

Design & development

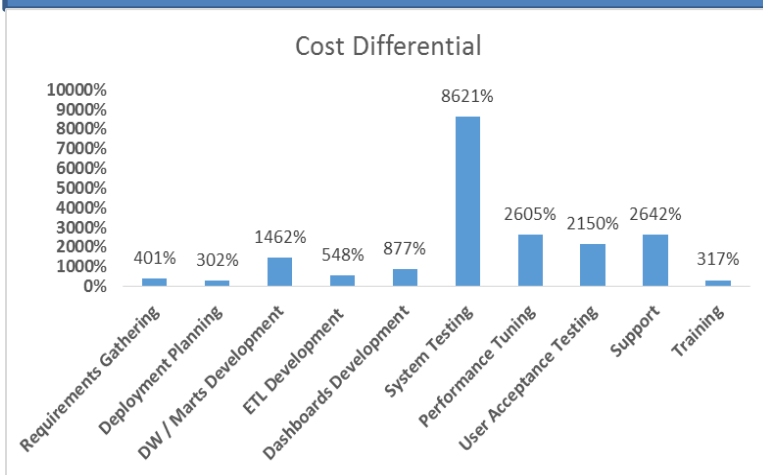| Custom BI	Industry-Standard Pre-built solution	What is the Impact if Risk is not mitigated?
Implementation Approach a. Waterfall model – more accurate for enterprise wide implementation as data across multiple systems need to be integrated before it can be used. Issue is that it takes 18-24 months time for system to start delivering results b. AGILE Model – Some quick results can be perceived for limited scope to individual departments or functional areas with limited data. The issue is that this approach cannot deliver consistent and standardized enterprise-wide BI application	a. Pre-built solution with minimal customization to be implemented in waterfall model to ensure that the changes will reflect in enterprise-wide and there would be no regression defects. b. Also cuts down waterfall model time from 18-24 months to 4- 6 months	a. Project schedule and cost over-run to the tune of 200%-300% which is quite common with waterfall projects, with the risk of project not reaching completion. b. BI projects done in AGILE mode would typically lead to a system that is not fully compliant with business users requirements hence not acceptable to go live

Design & development

Custom BI	Industry-Standard Pre-built solution	What would be the Impact if Risk is not mitigated?
a. Data model expertise requires very good understanding of various Insurance source systems	a. Pre-built data model take care of such challenges which meets more than 85% of business users requirements	a. Errors in the data model will lead to cascading errors through out the entire BI system. It requires significant time and effort to get data modelling done in an expert manner
a. BI systems for Insurance business would require complex source data extractors and transformation routines	a. Pre-built extractors for major source systems available. Transformation routines are pre-built and industry standard	a. Imperfect development of ETL scripts and routines would incur significant cost and time
a. Lack of single vendor means that a suitable implementation partner has to be sourced which means rigorous evaluation & selection process	a. Pre-built solution with minimal customization to be implemented	a. Cost and schedule overheads in evaluating and selecting vendor. Even after this exercise is done there is always risk of vendor's capability

UAT and Production

Custom BI	Industry-Standard Pre-built solution	What would be the impact if Risk is not mitigated?
a. User Acceptance Testing takes significant time and effort primarily due to effort required in test case creation for scope covering enterprise wide BI	a. Pre-built automated test scripts delivered along with the product that ensures significantly lesser testing effort and remarkably higher accuracy	a. Prolonged UAT leads to overrun in cost and schedule. In acute cases, the project may be shelved if the system is in wide variance with the requirements of business users
a. Business User Training on the BI system can be challenging and ineffective particularly due to lack of domain knowledge of vendor, who is unable to explain system functionalities and their utility from a business perspective	a. Pre-built training content delivered by domain experts from vendor's team	a. Significantly higher cost and schedule is the immediate impact. In the longer run, lack of proper training would result in sub-optimal usage and low adoption of the BI system which would ultimately lead to failure of the system

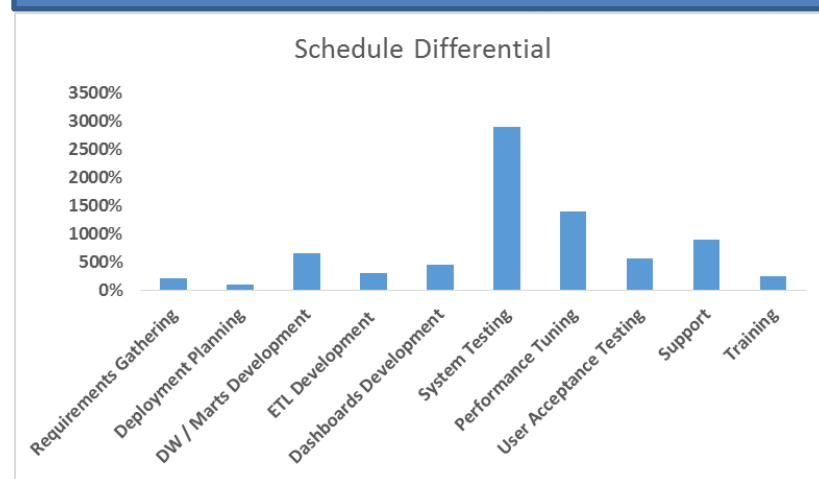# Inflated Cost and Schedule with Custom BI Solution

The comparison herewith is based on study done for custom analytics for one functional area (Sales) in Insurance versus standard solution (IA+ Sales module). The findings show overall **3x EXTRA COST AND 3x EXTRA TIME if custom solution is used instead of standard solution**. Similar results are expected if the scope is expanded to enterprise-wide airport analytics.

Activity wise extra cost in percentages

Overall 3x Extra Cost

Activity wise extra time in percentages

Overall 3x Extra Time

Note: Data Modelling needs zero incremental effort in Standard Solution and hence the percentage comparison for that is not included above

In summary, IA+ comes out as a superior alternative to a custom-built Insurance analytics solution. However, If your business needs are restricted to discrete, one-off reports or dashboards, custom building might make sense.

Thank You