



MAKING DATA & ANALYTICS

THE CORNERSTONE OF CORPORATE STRATEGY

ENABLING MODERN DATA ECOSYSTEM ADOPTION



FOREWARD

The world of big data, business intelligence, artificial intelligence, automated decision systems etc is evolving at an unprecedented velocity, outpacing technology developments in the past. Today there are many off the shelf big data and analytics products and accelerators made easily available by big players as well as niche firms. The questions CXOs try to answer are:

Which of these products are right for my organization?

Does my organization need a bespoke solution instead?

Are we ready to move to the cloud for insight generation and consumption, and if yes, which cloud provider is the best for my organization?

Are we leveraging the data assets in the most optimal way?

Every company wants to stay ahead of the curve. They want to be known for great customer experiences like Amazon, be at the cusp of cutting-edge technology like Apple, or even challenge traditional business models, like Uber. Advancements in data & analytics has made businesses more aware of their customers' needs allowing them to fulfil the needs at a much faster pace. The rapid pace of change this has brought across all industries compels organizations to adopt market disruptive technologies to create new competitive differentiation, drive innovation and reduce operational costs. However, the race to adopt the best in the market without a clear roadmap and assessment of real pain points leads to ineffective and in some cases, siloed implementations that fail to show the promised benefits despite companies pouring in huge investments. Since every company has a different business and operational DNA, and not every company leverages the full value from its data value chain. This leads to failed investments and derails long term strategic initiatives.

The Big Data and AI Executive Survey of 2019 has quoted that 55% of firms are investing greater than \$50MM in Big Data & AI, still 77.1% report that business adoption of Big Data and AI initiatives remains a major challenge. Why does this challenge persist and are organizations thinking of course correction?

There are a lot of questions that arise when organizations decide to adopt these latest technologies, few of them being:

- **Impact:** How is the business impact measured and will the desired ROI be generated?
- **Costs:** How will the implementation, maintenance and infrastructure costs be kept under control?
- **Scalability:** Is the solution enterprise ready and how is it being planned to be adopted at an enterprise level?
- **People:** What are the hiring/training needs to make this implementation a success?
- **Compliance:** Are data privacy and security aspects being considered?
- **Governance:** How will data governance be managed in the new scheme of things?
- **Tools:** There are a hundred tools have seemingly similar feature set, which one is the best?
- **Ethics:** What type of decisions should these automated systems be allowed to make?

Are organizations considering these factors and do they have an approach in place that ensures it is done the right way? - is the question of the hour !

DASH

DATA AND ANALYTICS STRATEGIC HARMONIZATION FRAMEWORK

WITH RIGHT

- K**nowledge
- I**nsightful Metrics
- T**echnology



THINK

- B**usiness & Data Strategy
- I**nsights to Risk
- G**overnance

IN THE RIGHT

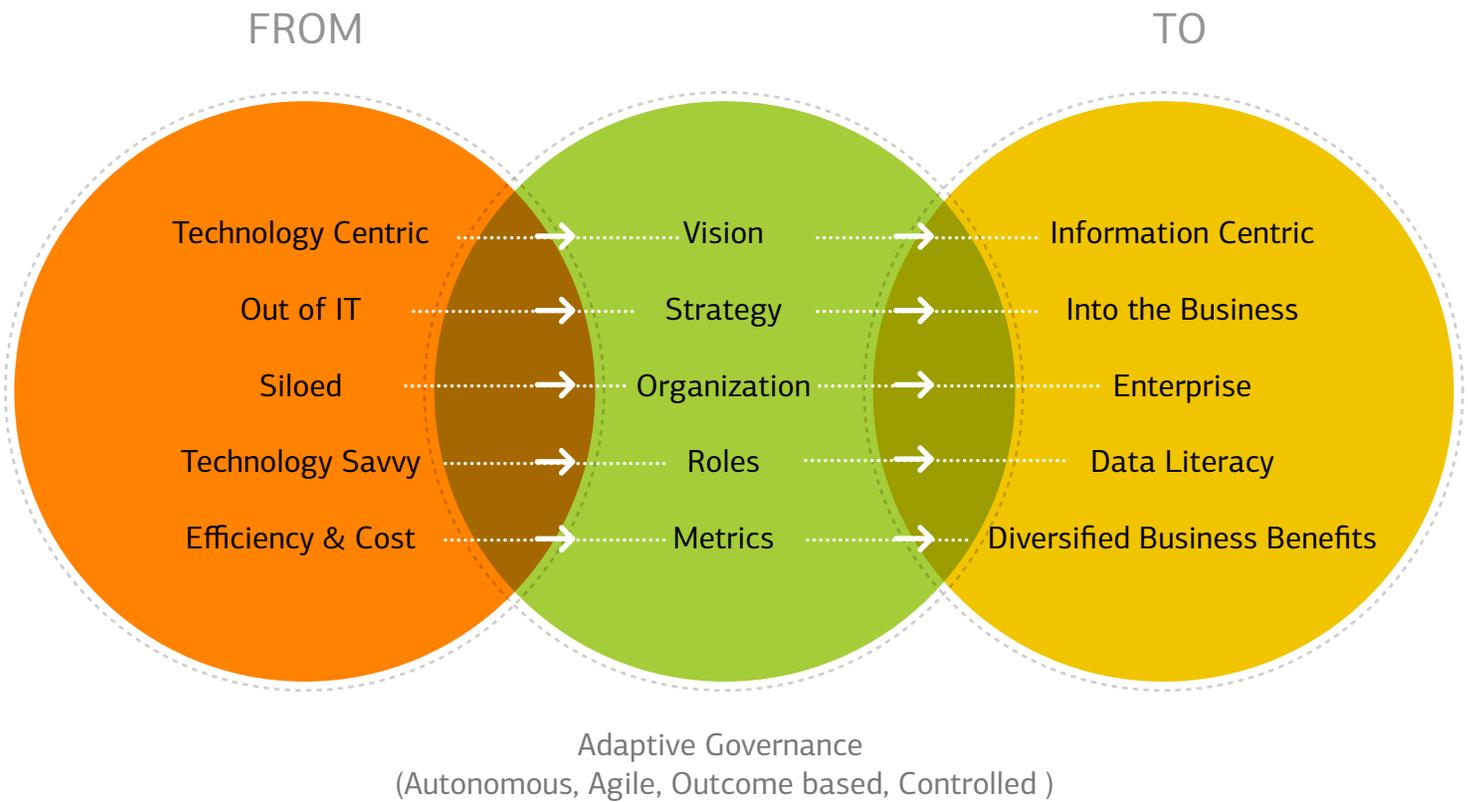
- W**hole
- A**gile Framework
- Y**our Policies

- A**nchor
 - C**onduct
 - T**eam Skills
- ### WISELY

Brillio's DASH – Data and Analytics Strategic Harmonization Framework will help and support organizations in a structured way to begin their Data and Analytics Transformation Journey by having a well-defined and simple 4 step approach. Its emphasis on laying the cornerstone the right way: To successfully understand the Business Strategy that needs to be addressed followed by the Technical Strategy that will help address.

Purpose and People aspects must be considered while crafting the Business Strategy. On the other hand, Method and Tools should be accounted for while working towards the Technical Strategy. These aspects are coalesced together in the forefront with DASH through a structured execution approach, set of accelerators & frameworks that will help define a comprehensive strategy for a successful data & analytics transformation.

BUSINESS STRATEGY



Gone are the days where Business strategies were created in silos and just by discussions. Today, each decision is driven by data and thus each data and analytics adoption undertaken is to address a business strategy. This data needs to be made available in a ready to consume format to the non-technical business users and help them derive accurate insights that will eventually help in decision making.

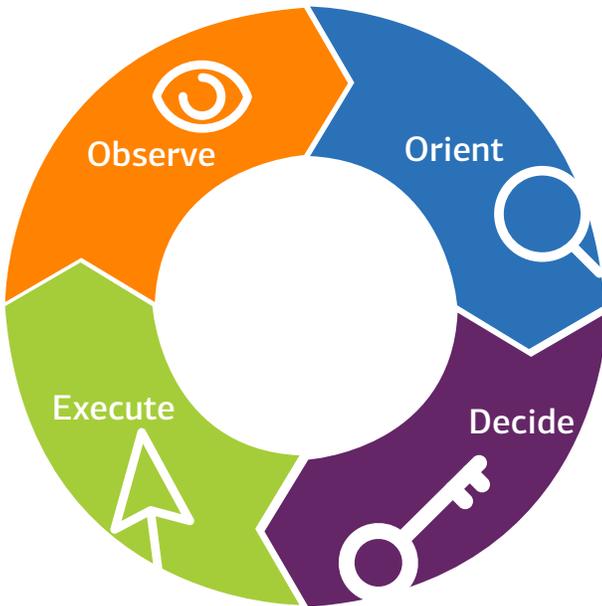
DASH adopts a paradigm shift while doing the Business Strategy assessment. The key aspects the assessment is pinned upon are depicted alongside underlaid by an Adaptive Governance method that integrates the Organizational and Data & Analytics governance to determine the governance style and mechanism that will help deliver the required business outcomes in a given context.

Identifying the PURPOSE is the most crucial and an important step that an organization should undertake as they step into a Data & Analytics Adoption Journey. It is easily possible to identify the purpose if the right questions are asked to the right stakeholders in a structured manner. Few of them being:

-  Are there ways in which customers can receive better experience through existing data assets?
-  Are there additional revenue generation channels or cost reduction levers which are untapped? Is it due to incomplete or low-quality data?
-  Are the business stakeholders receiving correct and relevant insights that they want on time, and in full?
-  What is working and what's not working in the data value chain (from generation, storage to consumption)?
-  Which data and analytics initiatives have worked / not worked in the past and why?
-  Is it possible to estimate or measure benefits (monetary or other measures—such as customer satisfaction scores) from data/analytics programs in the past?
-  What do you want to do now with data (such as AI/ML) but are not able to do due to technology or resource competency limitations?
-  Who are the end users and how do they consume the insights?
-  Are all end users facing the same challenges (is the problem systemic)?



DASH has a framework to ask the right questions and get the right answers and to mind map it to craft the Business Strategy that an organization is trying to address and the probable solutions that will help address the risks associated, and the organizational governance challenges encountered. DASH emphasizes on the fact that information needs to be taken to business in an iterative way as depicted in the below diagram to help ensure that the defined purpose is attainable and measurable and analyse each business objective in a 4 step approach



- Observe** – brings in the feedback loop: Defines the methods of measuring the desired outcomes and contextualizing the results to realize the business outcome synergies the adoption is oriented towards
- Decide** – brings in the insights required: Defines the need to derive the insights and the related anticipated outcomes
- Execute** – brings in business execution approach: Defines the process and organization changes required and corresponding governance and change management desired
- Orient** - brings in the Business Acumen: Defines the requirements, scope, opportunities, challenges, conditions, associated risk.

DASH framework helps to identify the stakeholders and bring consensus to have the right crew to kick start the execution. It looks top down upon the existing operating model to ensure if the solution is in line with the organizational model or if there is a change required for better Business-IT alignment. It helps to bring a team together who can connect with the business goals by creating a structure to measure what is meaningful, drive change through metrics and align stakeholders accordingly.

DASH looks at the changing spectrum and brings in the new Business – IT hybrid roles. It helps set the guidelines to empower the leadership team with the desired organizational changes and an active communication approach to share successes. It accords to carve out the talent required to support and explore the core and in accordance the new skills, roles and training that will be desired

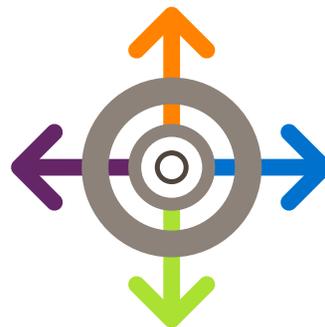
With the overall Business Strategy, DASH ensures alignment of Data & Analytics strategy with the Organization’s vision.

BUSINESS VALUE

- Data Driven Business Design
- Business Outcome Improvements
- Information Value and Cost- Benefit Analysis

ORGANIZATION

- Centralized and Federated Design
- Workforce Enablement
- Data-Driven Culture



TECHNOLOGY

- Advocacy and Decision Framework
- Stewardship
- Compliance

GOVERNANCE

- Advocacy and Decision Framework
- Stewardship
- Compliance

The Business is usually conversant with ‘people, process and technology’ changes that happen in an organization, but they still don’t speak “data” fluently, even though it has become a critical capability of the digital society. Hence, in the new narrative – ‘The Data Literate Organization’,

Gartner formally defines data literacy as, ‘ the ability to read, write and communicate data in context, including an understanding of data sources and constructs, analytical methods and techniques applied, and the ability to describe the use case application and resulting value. Informally – Need to Speak Data. DASH simplifies it with a structured technical strategy framework.

TECHNICAL STRATEGY

The value-driven data analytics assessment needs a mapping of individual solution components to business needs, vision, and objectives. Enabled through prepackaged IPs which are aligned to data analytics lifecycle, ensures hypothesis-driven top-down approach for focused consulting engagement. DASH comprises of key frameworks that ensure the adoption of right METHODS powered with the right TOOLS that will help achieve the Business Strategy identified. The identification of the right tool could be an activity that is intervened with identifying the right method if the client strategy is to leverage the existing toolkit or could be a succeeding activity if the requirement is to adopt best in industry or the right fit.

The DASH engine enabling this is depicted below,



**Analytics
Readiness
Index**



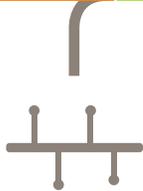
**Tool
Evaluation
Matrix**



**BI Assessment
Framework**



**Analytics
Assessment
Framework**



**Architectural
Evaluation
Matrix**



**Data Quality
Assessment
Framework**



**Data
Governance
Framework**



**Data Security
& Compliance
Framework**

ANALYTICS READINESS INDEX™

Analytics Readiness Index™ (ARI) provides an end to end assessment framework to evaluate current state and future readiness. Encapsulating assessment questionnaire, metrics and evaluation criteria across 150+ dimensions, ARI ensures a complete assessment of the current enterprise data analytics landscape. Additionally, the framework also defines future architecture objectives based on multiple dimensions. Rather than taking a bird's eye view, ARI takes a granular and metrics-based approach to define objectives.

The framework adopts a metrics-based approach mapped to requirements and priority at the organization and individual functional area level.

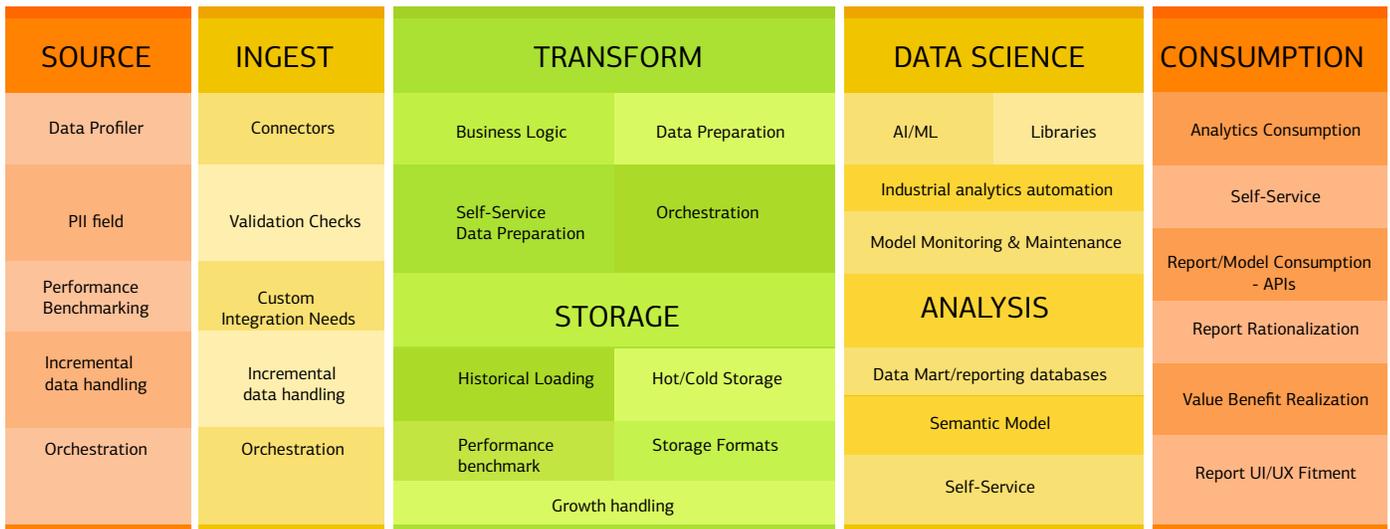
ANALYTICS ASSESSMENT FRAMEWORK

There's no secret about the value analytics can bring to any organization. Sophisticated artificial intelligence models have tremendous potential to generate new revenue by understanding the customer's psyche and behavior, but unless the models are operationalized effectively and monitored regularly, their impact would rapidly diminish. Through DASH, the entire model lifecycle is evaluated, from problem discovery to model governance; this is done along the dimensions of tools, technologies, and skills. DASH looks to unearth low hanging fruits in terms of high potential analytics use cases with short turnaround times and estimate the forecasted benefits as a result of the implementation of same.



ARCHITECTURAL EVALUATION MATRIX™

Based on perceived gaps between as-is and desired to-be states through ARI, the next step is an architectural recommendation that fills the aforementioned gaps. Architectural Evaluation Matrix™ (AEM) encompasses multiple frameworks, tools and IPs to design an end to end future data analytics architecture. Following illustration provides a map of components that comprise the AEM.



The assessment framework enables current to future state mapping for the AEM. The various tools within the framework maps the individual solution components to objectives and provide scoring. The scoring helps in identifying the right fit architecture from a library of 20+ architectural patterns. The success of a strategic data analytics architecture is dependent on the ability to scale to current and future objectives of the organization. The AEM augments this by bringing in TOGAF recommended and cloud architectural frameworks and tools to provide organizations with the right architectural components.

In addition, the framework drives taxonomies and convention to ensure data is processed, stored and governed within the right governance methodologies. With the big data landscape and multi-structured data growth, it's key that data is accessed by the right people and applications at the right time. The availability of data is enabled by ensuring accessibility, findability, and security designed as part of the architecture.

TOOL EVALUATION MATRIX

There has been significant growth in the number of tools available for the data and analytics needs of the enterprise. The growth in the tools along with the capabilities it provides to organizations also drives additional challenge of choosing the right tool for the enterprise. Companies are often bogged down by the myriad number of tools available and hence get stuck in the quagmire wherein they either choose a tool that has a large list of features but still does not solve the needs.

Tool evaluation matrix (TEM), helps organizations to identify the right tool-set for needs mapped to ARI. These tools needs are mapped to requirement and future objective along with its fitment to user needs. The user needs will be spread across enterprise IT teams, business users and hence the needs range from self-service to advanced customization capabilities. The tool fitment is also evaluated across the landscape across multiple performance benchmarks and service capabilities. This is evaluated through partner resources and Brillio knowledge bases. The scoring is augmented by POCs to ensure that the tool fits the needs and is evaluated by the relevant stakeholders within the enterprise.

DATA QUALITY ASSESMENT FRAMEWORK

Data quality is one of the key pillars driving the success of any data analytics transformation. The evaluation hence needs to focus on the data quality issue at sources mapped to the consumption requirements. In addition, to the usual data quality candidates of duplicate data, null fields and field correction; focus needs to be on functional data quality needs. Data profiling is performed on data sources to identify data quality issues at source. In addition, the functional data quality assessment looks into various functional aspects of reporting and analytics needs.

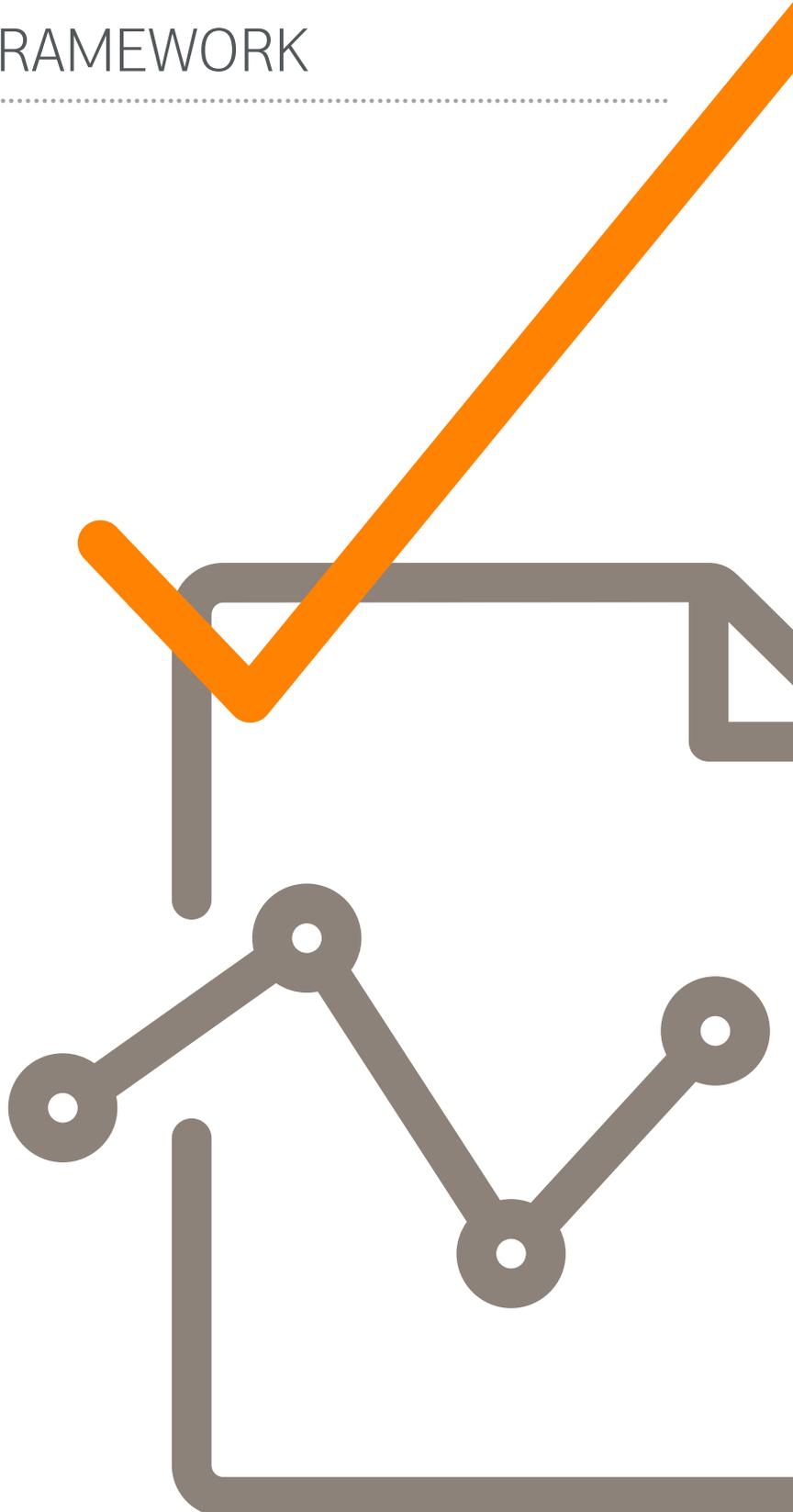


DATA GOVERNANCE FRAMEWORK

Some of the key reasons big data adoption fails are big data environments becoming data swamps and not governed, resulting in right people not finding the right data. This has been attributed to the absence of right governance policies and enforcement across various data levels. Reporting and analytics teams often fall back to older data access methods and not a big data environment, as they attribute non-findability of data assets.

The data governance evaluation defines an end to end governance solution across data analytics lifecycle, focused on self-service to enable easier governance capabilities and adoption across the organization. This is to ensure that the data governance stewards and owners drive adoption across the organization. In addition, the solution enforces the right taxonomy and data conventions to enable right governance and security controls for data.

The solution encompasses multiple governance capabilities including lineage, notification, search, and traceability. The solution covers the ability to govern multi-structured data at large quantities through support and scalability and a metadata-based approach. The metadata management capabilities, supported by crowdsourcing within the organization tags and catalogs data to augment findability of data, thus ensuring the success of the data analytics transformation.



DATA SECURITY AND COMPLIANCE FRAMEWORK

Data privacy laws including GDPR, DPA 2018 and 2018 California Privacy Act requires organizations to adopt multiple data compliance tools and standards across their data lifecycle. There have been multiple failures which have been attributed to unclear understanding and adoption at an enterprise level. This can be resolved through:

Data classification at source: identification of personal and sensitive data fields at the source and classifying them based on data protection policy requirements.

PII data treatment: defining personal and sensitive data treatment either at source or target (anonymization, pseudonymization or encryption)

Storage and access regulation: defining access and security guidelines based on data type, access, and use case

Retention and removal policy: enabling automated data retention and removal policies

Audits and notification: automated audit reports, notifications and action enablement

This is enabled through the adoption of right tools, processes and best practices identified through ARI assessment. Based on regional data protection requirements and consumer use cases, compliance is ensured at various stages of the data flow, storage, and access.



BI ASSESSMENT FRAMEWORK

The business intelligence function is a critical cog in the wheel for decision making for any stakeholder. DASH tries to delve deeper into challenges that stakeholders may face when they're analyzing datasets, such as:

Is there consistency of KPI definitions within the enterprise, does it differ across business units or geographies?

Do the report users understand all the terms used in the reports? Is there a standardized business glossary of report terms?

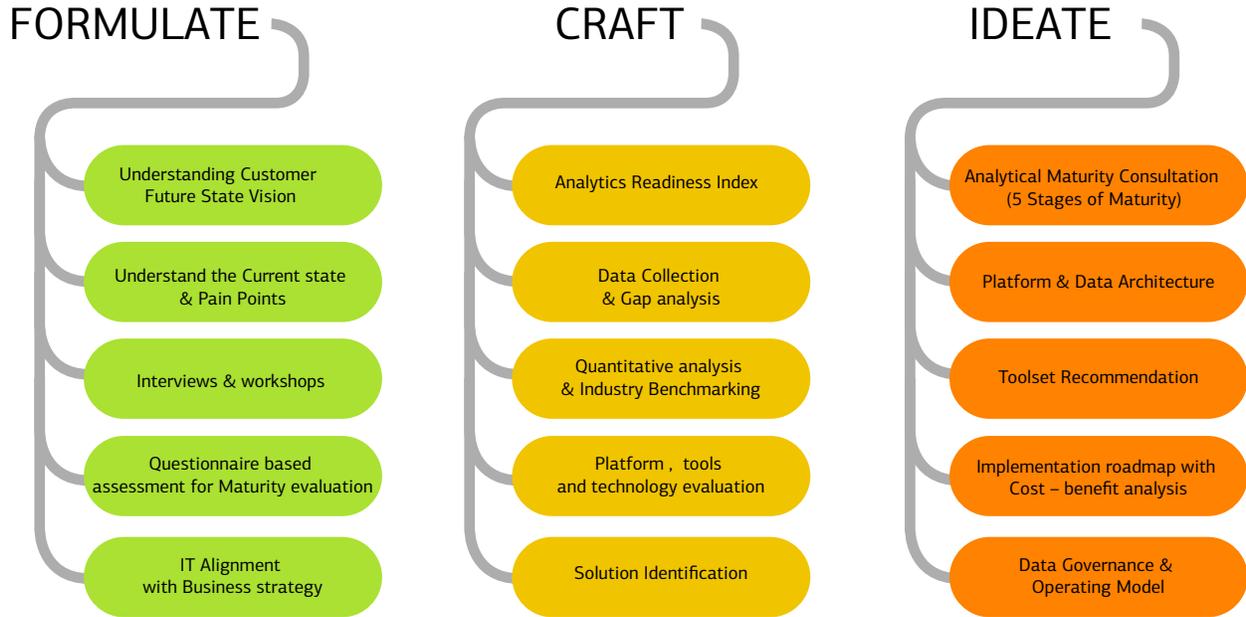
Are the stakeholders able to rely on the reports and the underlying data itself? Are there any data quality issues which delay decision making?

What is the adoption feasibility of self-serve BI amongst the business users?

Are there opportunities to rationalize the reporting ecosystem (be it tools, or reports themselves)?

HOW DOES IT ALL COME TOGETHER?

DASH brings it all together in a short span of 4-12 weeks, depending upon the complexity of the data ecosystem by adopting a structured approach as depicted below:



4 - 6 Weeks*

*depends on the complexity of the data landscape

FORMULATE

As this is the very first stage in the execution approach, it is one of the most crucial stages. We start with identifying the right stakeholders, have interviews and workshops to get the right context and the essential content as well as materials. We start with understanding the scope, the vision, the value that the transformative journey needs to drive and then deep dive to understand the existing pain points and the reason behind them. We ensure the right questions are asked from our questionnaire to get the answers we seek to ensure Business-IT alignment.

CRAFT

Once we have gathered the Data, we derive an understanding of the As-Is and To-Be maturity through:

Perform a thorough gap analysis

Do a quantitative study

Weigh the different solutions that can be adopted and evaluate them from multiple angles using DASH accelerators and frameworks both from a Business & Technical Strategy perspective.

A thorough analysis is done from multiple aspects to crafting the best fit solution that will ensure the specific ask is met, what would be the outcomes and how will they be measured, how can the outcomes be attained in a structured approach in less time and at low cost.

IDEATE

In this phase, the deliverables depicted below are finalized after doing complete due diligence and in collaboration with clients at the workshop as per the scope identified, the DASH frameworks leveraged for analysis.



Target Operating Model



Execution model to optimize the existing landscape by ensuring business continuity and IT alignment

Architecture



A architectural pattern that is compliant and flexible to accommodate any future enhancements & features with ease

Roadmap



The implementation Journey comprising of standing up the base and use case prioritization

Business Case



Investment in terms of infrastructure, delivery, support with YOY synergies that will be realized

Along with the frameworks and architectural model required for successful project execution, DASH empowers the Organization with a Target Operating Model, a Transformation Journey, and a Business Case. This will help the organization have the visionary approach of what is in store in the future, what are the commitments and dollars that would be associated with it and what is the Operating model that needs to be adopted for setting things right today for a confident, data & analytics led tomorrow!

Governance Model	Risk & Mitigation Strategy	Possible Analytics Adoptions	Visualization Optimizations
As Is & To Be Landscape	Analytics Readiness Index	Change Management Approach	

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ABOUT BRILLIO

Brillio is the leader in global digital business transformation, applying technology with a human touch. We help businesses define internal and external transformation objectives and translate those objectives into actionable market strategies using proprietary technologies. With 2600+ experts and 10 offices worldwide, Brillio is the ideal partner for enterprises that want to quickly increase their core business productivity, and achieve a competitive edge, with the latest digital solutions. To learn more about our personal approach to technology, partnership, and success, visit

www.brillio.com

