

Enterprise Business Intelligence Strategy

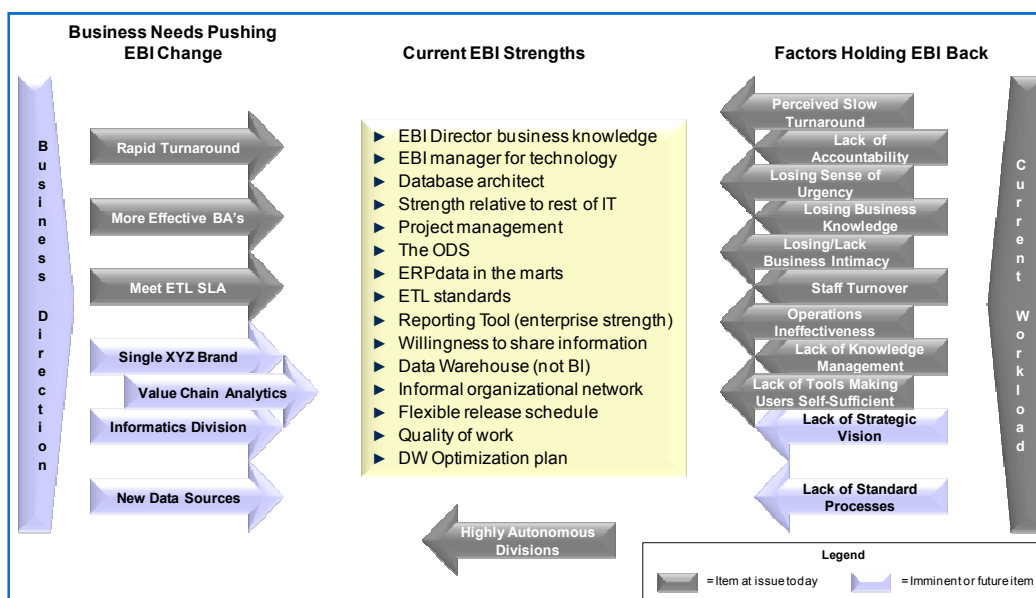


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The Opportunity

The corporate IT group of a multi-billion dollar firm had developed a successful data warehousing and business intelligence solution as an IT “skunk works” project. The executives and Director of Enterprise Business Intelligence (EBI) noticed expectations of the existing Data Warehouse (DW) architecture and environment were increasing (see Figure 1).

Figure 1 - Forces of Change, Strengths and Weaknesses of the EBI Team



Within the company, business expectations were increasing as usage of the current DW was on the rise, and becoming integrated into mission-critical business processes. As the business reliance on the DW was growing, the expectations for reliability were also increasing. When the DW was first formed the data came from the Enterprise Resource Planning (ERP) application. As more diverse data was integrated into the DW, concern about data quality was rising.

External customers were bringing new requirements to the DW. Customers were expecting higher service levels and availability from the DW to meet their business objectives. Various internal business units were shipping data to customers after they pulled it from the DW. No longer satisfied with this mode of operation, there was a plan to create product offerings, which would allow external customers direct access to their data. This required integrating external data and data matching, more sophisticated data security requirements, and analytics which could be easily customized to meet individual customer needs.

Furthermore, the EBI team was seeing risks in sustaining the success of the DW from a functional, resource, and infrastructure perspective. Business knowledge needed to be shared with a larger group of people to support scaling DW development and support – at the time only a few people understood the meaning and quirks of the data in the DW. The team structure and resources needed to support the changing demands of the DW environment. Clear lines of responsibility and accountability needed to be established.

A method of accounting for costs, based on users receiving services was needed. More robust environments were needed, for development, quality assurance, and production. The existing mode of

making changes in production was beginning to cause serious problems. The team needed to be more productive – they were not being as efficient as they could have been in delivering new data and functionality on the DW platform. Additional and/or improved DW tools were needed – the components served the original purpose well, but there were concerns about reliability and scalability.

Challenges were amplified by the fact that the central corporate function, of which the central IT group was a part, was relatively small compared to the number of business stakeholders. They serviced a collection of more than a dozen highly entrepreneurial business units – many with their own IT departments. Also, the central IT group did not have strong political influence over other business units or their IT departments. They had to prove their worth through the value of the solutions they provided.

The EBI team was overwhelmed as they contemplated the magnitude of changes they needed in order to scale their overall EBI architecture to support the growing interest in business intelligence. The company needed to understand how they were going to turn their departmental success into an enterprise triumph. An enterprise architecture approach and solution were needed.

The Approach

Resisting the temptation to engage in a six-month long strategy definition exercise, and the inevitable accompanying three-inch binder of mind-numbing documentation, the project team was determined to provide an actionable roadmap in three weeks. The challenge was daunting and complex. The project team believed a long analysis with a large program to be launched at its conclusion, would be self-defeating. In order to complete the strategy in the targeted three weeks, the project team would have to rely on frameworks to help them evaluate the situation (see next section). The goal would be to move the organization forward incrementally and quickly, pursuing good practice and not allowing perfection to be the enemy of good.

The project team interviewed key stakeholders to determine perceived strengths and weaknesses, as well as future expectations. The team analyzed interview results, along with other background material to identify common themes which could be addressed, perform root cause analysis on the perceived symptoms, and develop organizational objectives to guide the organization. Care was taken to identify and interview not only proponents of the DW improvements, but those critical of the DW as well.

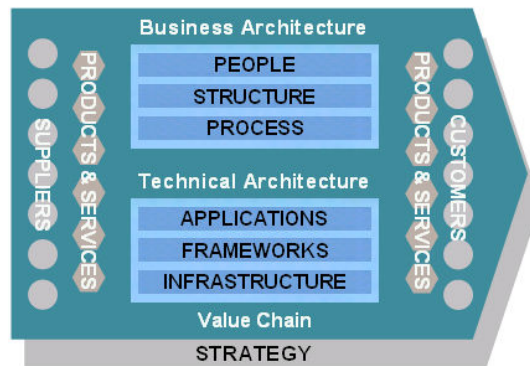
The project team worked closely with the EBI leadership team to identify and recommend twenty prioritized, distinct, actionable projects. While there were business interests and initiatives pushing the EBI team to new heights, the team differentiated between projects that would keep the status quo from collapsing and those that would support imminent and future needs.

The project team consisted of one full-time architect supported by one part-time analyst. The project team consulted almost daily with the Director of EBI to advise her of progress and obtain further guidance, based on findings. Results, including the proposed projects and roadmap, were presented at the end of the project.

Tools and Models Used

All work was conducted in the context of the Pariveda Solutions Enterprise Architecture Framework (EAF) (see Figure 2). This was the primary model used, and essential to decompose the complicated situation, involving people, structure, and process. Using the EAF, the project team was able to not only break the complex problem down into actionable projects, but was also able to show how the projects integrated to solve the larger problem. The model helped the team visualize the complex system of relationships between various components and stakeholders in the EBI environment and frame their solutions as systems thinkers.

Figure 2 - Enterprise Architecture Framework

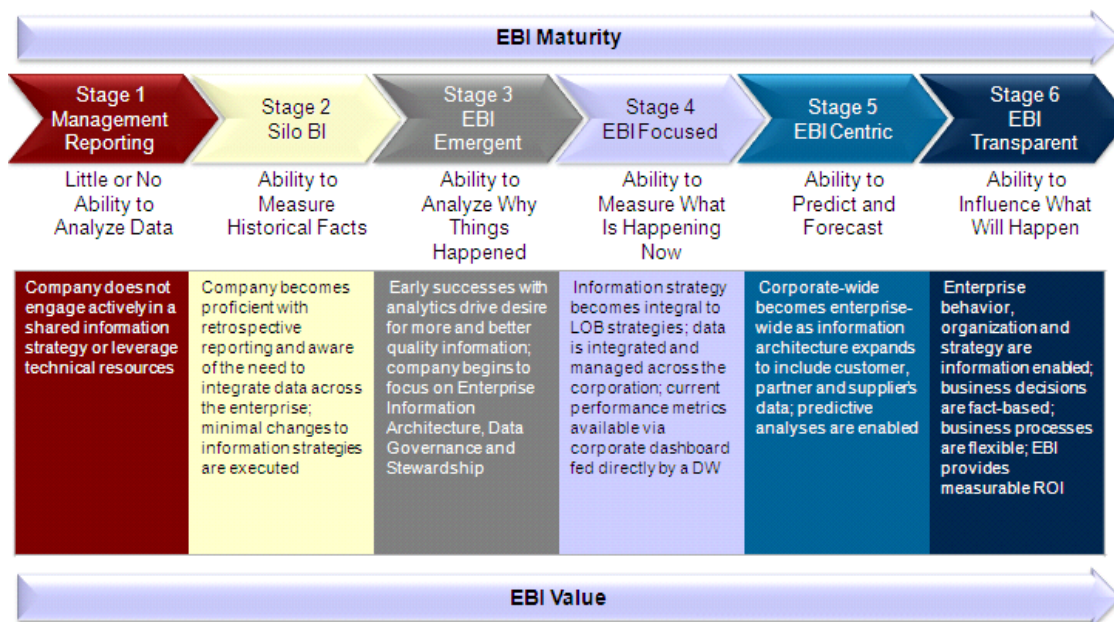


The second framework used was the Pariveda Solutions EBI Maturity model. This was utilized to assess where the EBI team was and where they needed to be. This model helped establish the desired end state, based on typical maturations of an EBI environment, even when the stakeholders have difficulty envisioning the objectives.

The EBI Maturity model breaks down each level of maturity into dimensions which lay out specific expectations for that level. For instance, there is a Metrics dimension common to each stage of EBI maturity. In Stage 1 (Management Reporting) metrics are not well defined and may exist in individual departments. In Stage 3 (EBI Emergent) some dashboards begin to emerge, metrics tend to be static, and some tuning of metrics begins. In Stage 6 (EBI Transparent), the enterprise is metrics-driven, has mature predictive analytics, and other sophisticated tools to get the most from their data.

The dimensions of maturity line up well within the EAF higher level maturity framework and call out areas of specific importance to EBI architecture.

Figure 3 - Pariveda Solutions EBI Maturity Model (top-level)



Specified EBI maturity dimensions include communications, metadata, training, data architecture, OLAP / data access / reporting architecture, security architecture, administration plan, and configuration management. Other dimensions overlap with the EAF including people, structure, and process.

While the frameworks were essential to understanding the challenge and formulating the solution, the project team was also acutely aware of the environment in which they were working. They recognized change would have to be implemented incrementally, and that they needed to show success and value added along the way. The project team also recognized the power of small rapid projects executed in a unifying strategic context and developed a project roadmap accordingly. This approach delivered these changes at a reduced cost and risk, while delivering faster benefit realization.

Results

When looking at the results, it may all seem rather simple, but it is the EAF which allowed the team to properly define the complex environment, problems, and possible solutions. For example, the CIO's leadership team knew demand for EBI was increasing, but what they did not realize was their capability to deliver was simultaneously shrinking – creating a widening gap. Identifying and then evaluating the relationships between customer demand and the business architecture capacity highlighted the dangerously diverging directions. Another example of insight delivered through the systems thinking fostered by the EAF is the overall scope of the solution space. The CIO and many of his leaders thought that any improvement efforts would be focused within the EBI team. Identifying the value chain, process, structure, and people needed to deliver EBI solutions showed that challenges extended far beyond the EBI team. Focusing changes on the EBI team alone would leave several “weak links” in the value chain, which would still leave customers without the products and services they need.

A final example is important to tie the projects together in a strategic context as further described below. The project team took the existing strategy (IT vision and mission) and suggested a further level of detail

to provide more focus and direction for the EBI team. Ideally, in the EAF, the strategy is set and provides direction for the other components, but in this case the other components, especially definition of the products and services requested by customers, provided a basis for a clearer direction for the EBI team by defining team objectives. Those objectives then served as focal points for the projects and helped define the effort required to realize them. The EAF led the team to think of their complex set of problems as a system, and led them to change the EBI strategy itself.

The EBI Maturity model further enhanced the problem and solution definition by comparing the customer demand for products and services with the current maturity level of the EBI environment. Understanding the values for the underlying dimensions in the model (e.g. metrics, metadata, configuration management) at the desired level of maturity requested by the customers also gave form to projects like *Metadata Definition and Delivery*, and *Data Stewardship*.

The analysis and roadmap defined the gap between the current and desired future state and how it could be bridged. Twenty projects were classified into quadrants by phases and by impact to current and foundational value and imminent and future value (see Table 1). Through the phases we can see the focus of projects transitioning from addressing the current needs to the imminent and future needs.

Table 1 - EBI Roadmap Project Matrix

		Projects		
Current Need Focus	Stabilize	Fortify	Retain	
	<ul style="list-style-type: none"> ▶ ETL Task Force ▶ Metadata Definition & Delivery ▶ Knowledge Management ▶ Resolve EBI Ops Issues ▶ Staffing & Hiring ▶ Training In Business ▶ Fortify SLA's ▶ EBI KPI's 	<ul style="list-style-type: none"> ▶ Data Stewardship ▶ Training & Communications ▶ EBI Process Definition ▶ Leadership Training 	<ul style="list-style-type: none"> ▶ EBI Career Path 	
Imminent/Future Need Focus	Create Quick Value	Lay Foundation	Advance	
	<ul style="list-style-type: none"> ▶ BI Competency Center 	<ul style="list-style-type: none"> ▶ IT Strategy 	<ul style="list-style-type: none"> ▶ EBI Strategy ▶ Business Case for Change ▶ Strategic Architecture Review ▶ Project/ Program Management ▶ Project Portfolio Management ▶ Project Backlog Assessment 	
		Phase 1	Phase 2	Phase 3

The projects were mapped to the company, IT, and EBI team strategy and objectives (see Table 2 and Table 3). These different perspectives on the projects illustrated both the ability of the project to make a difference, as well as the power of the projects executed in a coordinated fashion, to achieve larger objectives. Another insight from this exercise, taken in combination with the phase information in Table 1, is the objectives which can be stressed at what points in time. For instance, many of the projects to support the objective, “Help ensure quality, completeness, and timeliness of XYZ data” are completed in phase one and nearly all are complete by phase 2. This was useful to define areas of emphasis for the communications with stakeholders.

Table 2 - Mapping of Current Need Projects to EBI and Enterprise Objectives

XYZ IT Vision Be a world class IT organization and be the preferred provider of business solutions to the XYZ organization				
XYZ IT Mission Provide scalable, adaptable and reliable infrastructure and architecture to proactively deliver flexible tools to the business that enables them to control daily operations and to strategically guide the business.				
Recommended Action Supporting EBI Team Objectives Based on Current Needs	EBI Team Objectives			
	Be responsive to the reporting and analysis business needs of XYZ	Help ensure quality, completeness, and timeliness of XYZ data	Support the business in delivering solutions as a single XYZ brand	Employ expertise in data, analytical tools, & techniques to partner with XYZ to deliver optimum business value
ETL Task Force	Important	Critical		
Data Stewards & Metadata	Important	Critical		Important
Training & Communications			Important	Critical
EBI Career Path	Critical			Important
EBI Process Definition	Important	Critical		
Leadership Training	Critical	Important		
Knowledge Management	Critical	Important		
Resolve EBI Ops Issues	Important	Critical		
Staffing & Hiring	Critical			Important
Training from Business	Critical		Important	Important
Fortify SLA's	Important	Critical		
EBI KPI's	Critical	Important		

Table 3 - Mapping of Imminent or Future Need Projects to EBI and Enterprise Objectives

Recommended Action Supporting EBI Team Objectives Based on Imminent or Future Needs	EBI Team Objectives			
	Be responsive to the reporting and analysis business needs of XYZ	Help ensure quality, completeness, and timeliness of XYZ data	Support the business in delivering solutions as a single XYZ brand	Employ expertise in data, analytical tools, & techniques to partner with XYZ to deliver optimum business value
EBI Strategy	Important	Important	Critical	Important
IT Strategy		Important	Critical	
Business Case for Change	Important			Critical
BI Competency Center	Important			Critical
Strategic Architecture Review			Critical	Important
Project/ Program Mgmt	Critical		Important	
Project Portfolio Management	Critical	Important		
Project Backlog Assessment	Critical		Important	

Thanks to the systems thinking, the CIO now has confidence that the EBI team has a plan to address the issues that will allow them to step up and support mission-critical business initiatives. The entire IT leadership team has a better understanding of the interrelationships between EBI and other groups in IT and the need for those other groups to also step up to meet the challenges ahead of them. They now understand that strengthening the overall system will not only allow them to meet the known challenges, but also be optimally positioned to handle the challenges which have not yet surfaced.

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About Pariveda Solutions, Inc.

Pariveda Solutions (Pär-ē-vā-da) works with organizations to improve their profitability through the deployment of process and technology. Pariveda delivers solutions in the areas of IT Strategy, IT Executive Advisory services, Program and Project Management, Application Development, System Integration, CRM and Business Intelligence. Pariveda’s goal is to establish relationships with clients on a local level, offer and deliver high value solutions.

Pariveda Solutions was ranked the 16th fastest growing company in the Dallas Business Journal’s 2007 edition of the Dallas One Hundred, comprised of the 100 fastest-growing private companies in the DFW Metroplex. Pariveda Solutions was also recently named to the Dallas Business Journal’s “Best Places to Work” for 2008 as well as one of Consulting Magazine’s 7 “Small Jewels” for 2008. Launched and headquartered in Dallas, Texas, Pariveda Solutions has grown to over 150 employees since 2003. The company has additional offices located in Chicago, Denver, Detroit, Houston and Seattle.