



IST 726 FINAL PROJECT

CUSTOMIZED ENTERPRISE ARCHITECTURE APPROACH FOR JETBLUE AIRWAYS

- The Future of Aviation Industry



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TABLE OF CONTENTS

1. SUMMARY	03
2. IMPLEMENTATION OF CUSTOMIZED EA AT JETBLUE	
a. Introduction	04
b. Understanding the Aviation Industry and it's Challenges	05
c. Recommendation – Customized EA Implementation	06
d. How can EA help JetBlue Airways?	08
e. How can EA be applied at JetBlue	19
f. Some major Challenges and how they can be overcome	25
g. Looking ahead into the Future of JetBlue Airways	26
3. REFERENCES	29

SUMMARY

I would like to present my Final Paper, focusing on the various benefits, challenges and approach to implement a customized Enterprise Architecture at JetBlue Airways, which is agile and scalable. JetBlue is transitioning from being a young and growing organization to becoming a mature and complex organization and I believe this presents a good topic for me to research and work on.

This paper focuses on how JetBlue needs to reinvent itself in order to be successful, especially in today's aviation industry, which is facing huge transitions. As an Intern currently working at JetBlue Airways, I have tried to utilize my experience along with my class discussions and research to present this research project.

The approach is as follows:

1. Introduction
2. Understanding the Aviation industry and its challenges
3. Recommendation – Customizing its Enterprise Architecture
4. How would it be useful?

THE FUTURE OF AVIATION

IMPLEMENTATION OF A CUSTOMIZED EA APPROACH FOR JETBLUE AIRWAYS

INTRODUCTION

Today organizations need to keep reinventing themselves in order to stay on top of their game and continue to be successful. Companies have two choices, either evolve with technology or go extinct. Consider the case of Kodak, it had the best technology and the company dominated the photographic industry. Products such as the iconic Brownie camera and the handheld camcorder were major technological innovations that helped Kodak succeed. But as the market scenario changed and as customers shifted towards digital technology, Kodak failed to respond. Other notable examples of companies that failed to respond to changing environments include mySpace, Xerox and Blockbuster to name a few.

New technology such as wearable devices gather lifestyle and health data to determine the risk profile of their clients. Exercise habits assist companies to draft health insurance on a personalized level and price policies based on risk. Examples such as the self-driving car, mobile based ecommerce, use of social media to order a pizza, improved supply chain management to track orders, deliver packages using drones are just some of the various examples that show how the ecosystem is changing. Organizations are aiming to make customer lives easier focusing on making processes faster and improving quality of product and service. All these aspects suggest that organizations have to change and innovate to survive in such a highly competitive market.

The role of Information technology has evolved over the past several years. It has been used as automation tools for critical business applications, strategic tools to redefine processes and increase revenue, improve sales and customer base etc. Since the airline industry is one of the most volatile industry that is affected by various external and internal factors the information system and business technology built must be one that is flexible and agile to business changes. Thus, I strongly believe over the next few years the most likely industry and the related organizations that are going to be impacted by this huge transition in technology, customer preferences, is the aviation industry.

Understanding the Aviation Industry and Its Challenges

The aviation industry continues to enjoy increasing demand. The aviation industry helps connect different cultures, provides access to diverse markets, employs around 7.6 million people in aviation, supports 58 million jobs over the broader ecosystem and contributes around \$2.4 trillion to the world economy. According to Paul, “Manufacturers, airlines, airports, as well as safety, security and air traffic management infrastructures, are experiencing significant growing pains while they develop disruptive technologies to address market demands” (Paul Sillers, 2015)

The global airline forecast for 2034 is over 7.3 billion passengers. According to Boeing forecasts over the next 20 years the need for airliners would grow up to 38,050 new airliners valued at \$5.6 trillion. Rival Airbus estimates a requirement of 32,600 aircrafts over the same time. With the growth of these extra planes there are a lot of challenges such as capacity, CO2 emissions, fickle demands of passengers who continue to look for a connected, seamless, personalized experience.

This has led to stakeholders such as manufacturers, airlines, airports as well as safety, security and air traffic management needing to find new ways to address these huge market demands.

The ultimate objective of any airline company such as JetBlue is to achieve more flights, fewer emissions and quicker passenger journey times. According to Airbus research, “If the Air Traffic Management (ATM) system and technology on board aircraft were optimized today, every flight in the world could on average be around 13 minutes shorter. This would save around 9 million tons of excess fuel annually, which equates to over 28 million tons of avoidable CO2 emissions and a saving for passengers of over 500 million hours of excess flight time on board an aircraft.” (Airbus, The Future) Add to this new aircraft design, alternative energy sources and new ways of flying and you could see even more significant improvements.

RECOMMENDATION

Since, Aviation is one of the most technologically-advanced and innovative sectors in the world I strongly believe that it can further benefit much more utilizing Information Systems strategically. Looking at the various challenges and potential opportunities that the aviation industry presents in the time to come, JetBlue should focus on *Customizing its Enterprise Architecture program* to be even more successful.

What is Enterprise Architecture?

An Enterprise Architecture is a management and technology practice that helps in improving the performance of enterprises by providing an integrated and holistic view of their strategy, business, information and technology resources. Today, organizations face a lot of challenges with the

changing nature of business environments. Having an effective EA helps an organization as it provides the set of all the industry led best practices place on a common platform that can be accessible to all business functions within the organization. Further, the EA is designed according to their organization specific needs helping manage business, technologies, networks, infrastructure and human resources to meet the business objectives. Enterprise Architecture is the analysis of an enterprise in its current state and its future state in terms of an integrated strategic, business and technology perspective. It is mainly used to improve the performance of enterprises with a view of their strategic decision, business practices, information flows and technological resources. Enterprise Architecture thus helps an enterprise manage its transition from its current state to its future state integrating Strategy, business and technology.

Enterprise Architecture integrates Strategy, business and technology thereby helping an organization such as JetBlue, change dynamically. It provides flexibility since it is uniquely built to support activities that are specific to the organization. The Strategic goals defines an organizations vision by comparing its current state with its future state. It focuses on areas such as customer satisfaction, product quality and services, revenue streams and value propositions according to external environmental factors such as competitor strategies, market conditions, customer needs, and changing business trends. Thus strategic goals primarily provide direction by developing short term and long term plans. To complement this strategic direction, organization business activities play a very vital role. This includes improving existing processes, updating technologies, transitioning to newer business models of growth or improving internal activities.

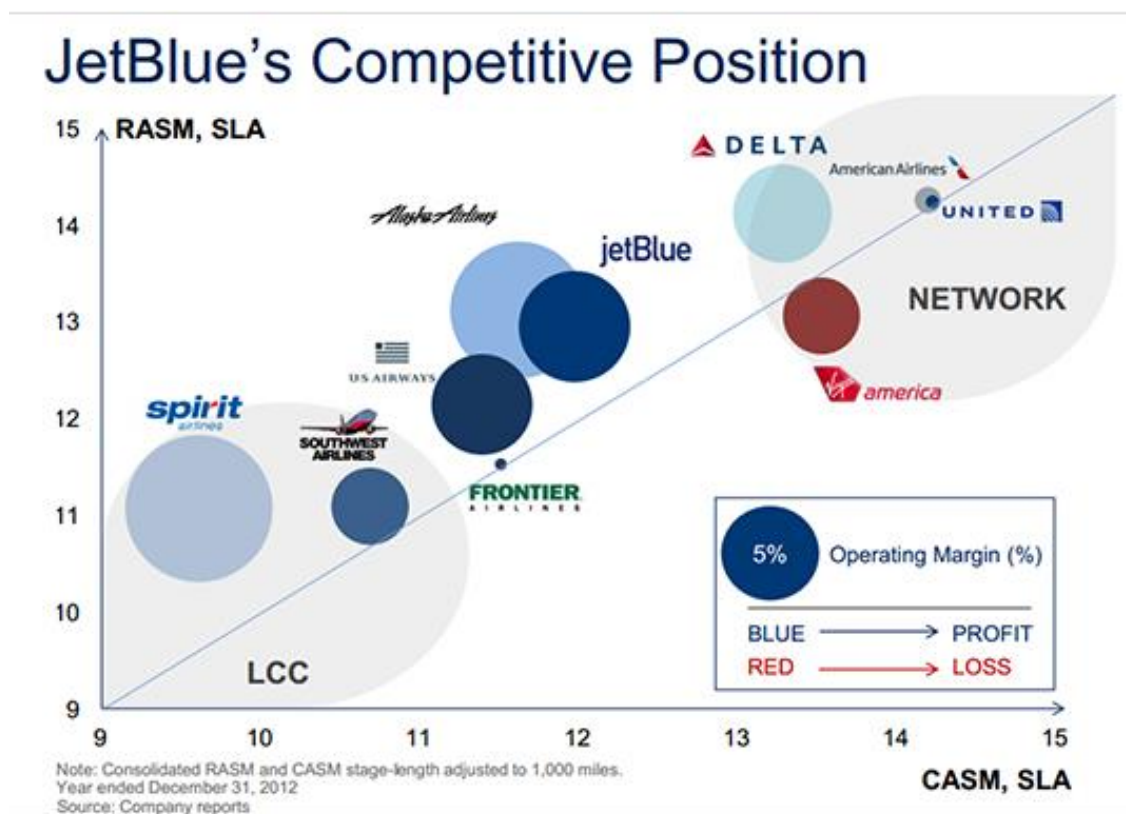
In terms of the value, Enterprise Architecture brings together Strategy, business and technology with strong integration thereby helping an organization change dynamically with change in business environments. Depending on the future conditions, JetBlue would be able to adapt better since EA provides flexibility to an organization.

JetBlue is a large and complex organization, widespread over major US cities and spread over diverse regions, has a diverse set of customers and requires a lot of leaders working together. The organization could survive a small change in the business environment, but a larger change in the business environment would be difficult to deal with. This is where EA provides the most value. It helps in identifying gaps, understanding existing process, business scenarios, technology upgrades and business strategy changes to meet customer needs. This is very important at a company such as JetBlue which relies heavily on analyzing regions and government policies effectively while making decisions on newer regions to fly and JetBlue expansion.



2. Effective Utilization Of The Vast Repository Of Information

The large amount of information allows business to reduce their strategic decision cycle and meetings would become much more effective, since there would be a lot of documentation along with employees with vast amount of experience, working together thereby improving decision making. An EA would allow a company such as JetBlue Airways to integrate information from various areas such as customer travel preferences, number of passengers, meal preferences, type of travel preferred etc. to improve customer interaction providing them with enhanced customization. This would help JetBlue survive and succeed against low cost and network carriers.



Secondly, EA serves as a Meta discipline. As an authoritative reference, it forms the source of standards for processes/resources. This helps in eliminating waste and duplication, as there is

only one single source of reference. The EA, serves as a “meta” context acting as an umbrella, containing the best practices of technology and management. This helps organizations plan better thereby improving decision making. Today, organizations face a lot of challenges with the changing nature of business environments. Having an effective EA could help JetBlue as it provides the set of all the industry led best practices place on a common platform that can be accessible to all business functions within the organization. Further, the EA is designed according to their organization specific needs helping manage business, technologies, networks, infrastructure and human resources to meet the business objectives.

The Enterprise Architecture consists of two other major elements. Artifacts and Standards.

Artifacts define the type of documentation to be used in areas such as strategic analysis, business plans, internal controls, security controls process workflows, databases and systems. While, the Standards element of EA, focuses on identifying the latest business and technology standards that are well recognized international, national, local, and industry standards.

With an effective EA, JetBlue can utilize this large pool of resources to improve their business processes across all areas such as:

- **Strategic Management:** EA helps align business strategy with business plans. This is further implemented through Balanced Scorecard, and Business Motivation models which help to propagate management decisions into technology IT systems. The balanced scorecard is a strategic performance management tool that is used to keep track of staff activities and monitor performance.
- **Quality Management:** EA helps organizations improve their quality and delivery processes by removing redundancies and roadblocks. Some of the widely used approaches

include the Six Sigma, improvised Supply Chain and improvised Quality Assurance methods.

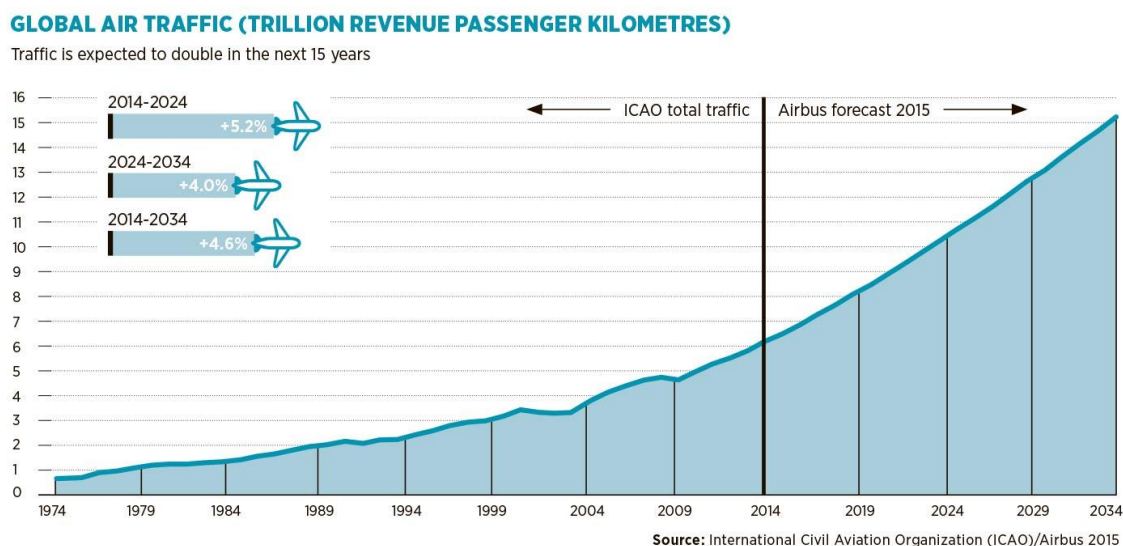
- **Governance:** EA helps focus on the governance aspect across the widely spread organization. This is achieved through, various methods. COBIT is one such method, which provides information on the good practices across domain and processes. It helps to link business goals to IT goals by providing metrics and measurement parameters. Some other governance related frameworks that EA supports include IT standards and practices such as COSO, ITIL, TOGAF and PMBOK.
- **Service Delivery:** The organization service delivery processes are supported through IT Infrastructure library (ITIL). It focuses on implementing the best practices for IT service management. EA helps in improving the application of applications to infrastructure through effective Asset Management.

Thus, EA supports standardized approaches from a holistic point of view, thereby improving existing capabilities and optimizing all the supporting resources, plans and approaches.

3. Reduced Environmental Impact

Implementing an effective EA program would help JetBlue integrate different business functions. This would mean having an integrated approach to solving fossil fuel problems since, the aviation industry relies heavily on fossil fuels. But with the environmental harm caused by fossil fuels and the limited availability, alternate ways for aircraft energy requirements is the way forward. An effective EA could help setup an entirely new business domain that focus on research and findings. The findings could aim at improving fuel cells,

looking at Solar power as a source, utilizing energy harvesting etc. In terms of the Energy requirements, JetBlue would thus be able to focus on alternative energy sources that are cheaper and effective. This is extremely important so that air travel continues to be safe and efficient, means of transportation along with being eco-friendly. According to Eric, executive director of the European public-private undertaking “The steadily growing demand worldwide for flights makes it necessary to develop environmentally friendly technologies for future aircraft” (Paul, 2015)



4. Effective Brainstorming And Improved Decision Making

With the organizations best resources working together with years of experience in a wide variety of business domains, business gaps could be determined quickly this would help improve the organization. An effective EA program could help JetBlue analyze their workforce. This would help the company understand when and the type of expertise that is required. This could in turn help the company to bring in people from advanced technological backgrounds to work on newer systems and technology. Since, Aviation companies have old

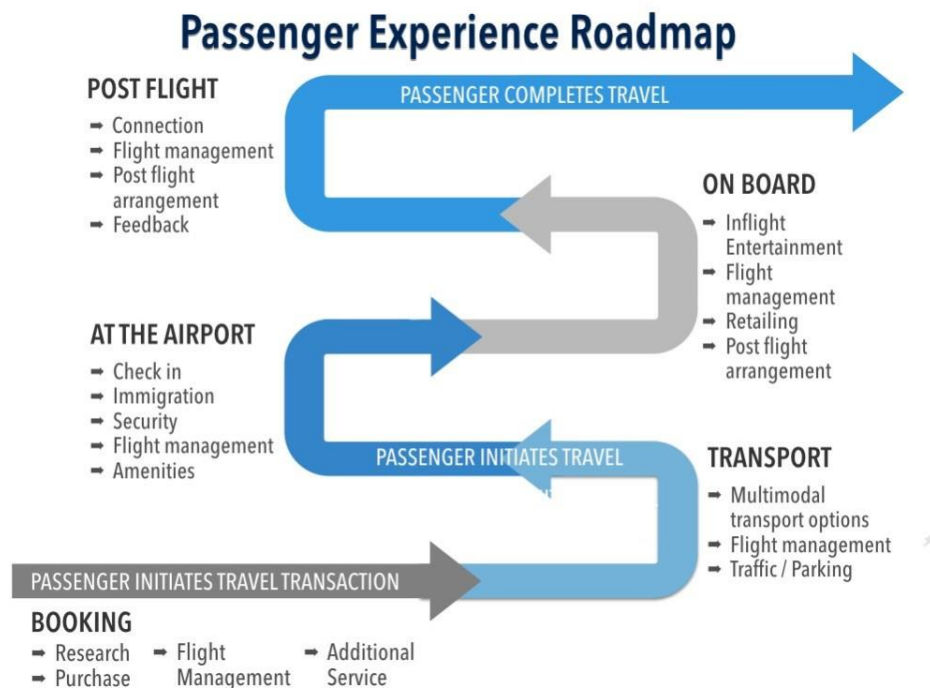
legacy systems, they are largely focusing on transitioning from such older systems to newer systems that are much more efficient and robust. This is one of the biggest area that JetBlue can improve on through an effective EA implementation.

The flow of data into JetBlue began as businesses stored day-to-day information about transactions, production processes, inventory, productivity and other structured data. With the growth of social media, the ability to analyze unstructured data such as likes and comments grew gradually. With the huge advancements in machine learning technologies and increasing volumes of data decision making has become more complex and data driven. Organizations such as JetBlue can adopt a full range of analytic capabilities to discover what is happening, determine why it is happening, predict what is likely to happen and prescribe the best action to take in response. It can be used to improve visibility of equipment inventory, schedules and critical events, benefit from deeper integration with suppliers and their systems and uncover hidden patterns in usage and maintenance data to enhance decision-making. (IBM Whitepaper, 2014)

5. Improved Information Systems

An Enterprise Architecture can help an organization enhance its existing systems and components by effectively analyzing and implementing cost effective standardized solutions. An effective EA in place, would ensure that technological improvements that are aimed, are done only if it fits well with the business strategy. In the years ahead, JetBlue would have to deal with challenges such as keeping customers connected, retaining customers, smarter booking, and convenient check-ins, reduced flight delays, improved Wi-Fi experience etc. All

these challenges are largely technology oriented. JetBlue also faces vast possibilities of integrating technology in years to come so that passenger experience is improved at various stages right from initiating a travel transaction to post flight completion. An EA program could be beneficial in these all these areas, as it helps existing technology platforms adapt to newer environments.



6. Enhanced Information Security

In today's world organizations spend huge amount of money on making sure they have secure systems throughout the organization. The recent data leaks at LinkedIn, Yahoo and various other tech giants show that, there is no company that is 100% secure. This signifies the importance of having a Security Architecture framework that sternly supports organizational EA. The IT Security architecture can be considered as a vertical unit that is common to all the

levels within the EA framework. IT security and data privacy should be integrated within each phase of EA such as planning, designing, implementing, testing and operating phase. It is an eight layered security architecture that governs organization wide processes and operations through enterprise security requirements and resources. It focuses on IT governance, information flow, data flow, system security, application and server level security, infrastructure and physical security. The ultimate goal of IT Security Architecture is to ensure that during Risk events, the organization is in a position to effectively respond to these risks. This is done by strong integration with EA, through effective Risk management and mitigation methods throughout the organization and with the help of strong contingency and disaster recovery plans. Having such a system in place could help JetBlue secure its data and prevent privacy and security issues.

7. Enhanced Risk Management

In today's world every organization has realized the need of a strong Risk Management framework. An effective EA program supports the Risk Management framework. The EA program helps to identify risks through systematic analysis using business, information systems and technology architectures. This helps identify potential areas of vulnerabilities. It also helps to ensure that during Risk events, the organization is in a position to effectively respond to any kind of risk. This is achieved by strong integration with EA, through effective Risk management and mitigation methods throughout the organization and with the help of strong contingency and disaster recovery plans. An EA program also helps measure performance through various metrics. This continuous monitoring of performance helps

identify gaps and areas of improvement. Thus coupled with Safety, Effective Risk Management is the most important area for JetBlue.

8. Increased Coherency

Coherence can be defined as a logical, orderly and consistent relation of different parts to the whole. Coherency Management in an organization, is thus ensuring that different parts of the organization are aligned towards achieving a common goal. Since EA focuses on Technology, Business and Strategy it helps aligning different business functions towards a common goal, creates agility by helping organizations change dynamically and ensures assurance in delivering value.

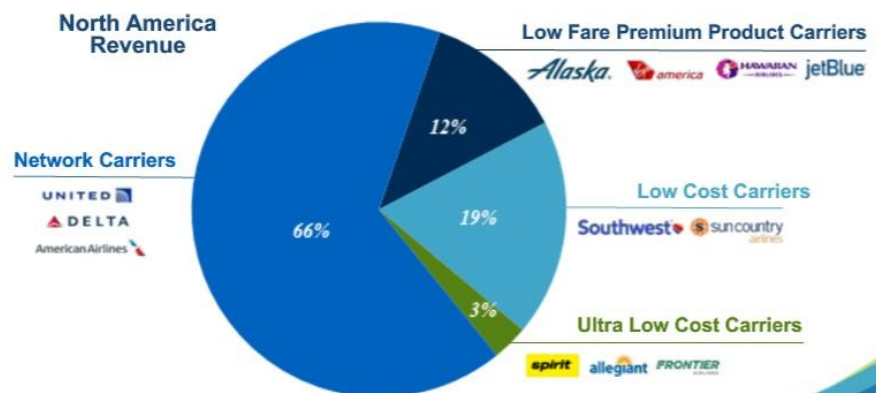
- Alignment: EA ensures standardization, amongst all levels and areas of the architecture. This is achieved through standardization of processes, increased documentation, integrating business functions to work together etc. It helps in sharing ideas quicker and across teams thereby improving collaboration.
- Agility: EA helps an organization change and evolve according to changing business environments. This is achieved through updated systems and technologies, improving existing processes, improving risk management frameworks etc. It helps in embracing changes quickly, by understanding them and through flexible designs.
- Assurance: EA helps organizations improve their quality and delivery processes by removing redundancies and roadblocks. Some of the widely used approaches include the Six Sigma, improvised Supply Chain and improvised Quality Assurance methods.

In today's dynamic environment, JetBlue must adapt to changes, which signifies the importance of Coherency. Coherency Management helps combine strategic planning and business activities, to fill gaps. This helps in ensuring that the organization is clear about what the next steps are to achieve pre-defined goals. Since, coherency also helps an organization achieve a certain level of maturity and aims to improve organizational performance at all levels, it could be vital to JetBlue.

9. Future Mergers and Acquisitions

JetBlue came very close to acquiring Virgin America, only to be outbid by Alaska Air. The possible merger of Virgin America was important for JetBlue Airways because it could have helped the company expand its presence in the West coast of USA, where it is not that prominent yet. This possibility is a glimpse of today's reality. JetBlue being a growing organization has huge potential in terms of merging or acquiring another airline to expand its business horizon. Since the US airline industry is largely divided into network carriers, ultra-low cost carriers, low cost carriers and low fare premium carriers there are high prospects of possible Merger and Acquisitions which JetBlue could be a part of.

We believe there is significant demand for low-fare carriers that offer a premium product.



A Merger & Acquisition done right provides plenty of opportunities to expand organizational footprint. In spite of the several advantages, a corporate Merger and Acquisition is extremely challenging for both organizations. There are many risks that are associated such as collaboration, intellectual property, existing systems and technology, products and goods, etc. According to Sasirekha, “The typical problem faced when two organizations have to merge is in rationalizing their systems, especially so as each side tend to take a view that their systems and processes are superior.” (Sasirekha, 2012)

This is where an effective EA could play a very vital role. Having a sound EA can help reduce such risks. It helps provide a structured system to manage M&A activities promoting planning, implementing new procedures, technologies and controls. It helps M&A strategy by bringing consistency and flexibility at multiple levels within the organization. At the strategy level EA helps align the two different organizations strategies, objectives and operating models which helps guide business and IT transformation of the combined whole. While at the business level, it helps understand the different processes, business unit functions, systems, telecommunications and technologies that helps in transition. EA helps provide a common reference to compare the two organizations in terms of understanding the business capabilities, marketing strategies, sales driving measures, technology penetration, information flow and processes. It forms a basis of comparison- Gap Analysis between the source and the target. This thorough analysis helps the new organization plan for changes accordingly so that they can maximize the benefits of the two organizations after the M&A. For a company such as JetBlue which has huge potential of forming partnerships and the possibility of merging or

acquiring another airline to expand its business horizon, implementing an EA program early on would certainly be beneficial.

HOW CAN ENTERPRISE ARCHITECTURE BE APPLIED AT JETBLUE?

STEP 1: Understanding how EA can benefit the organization

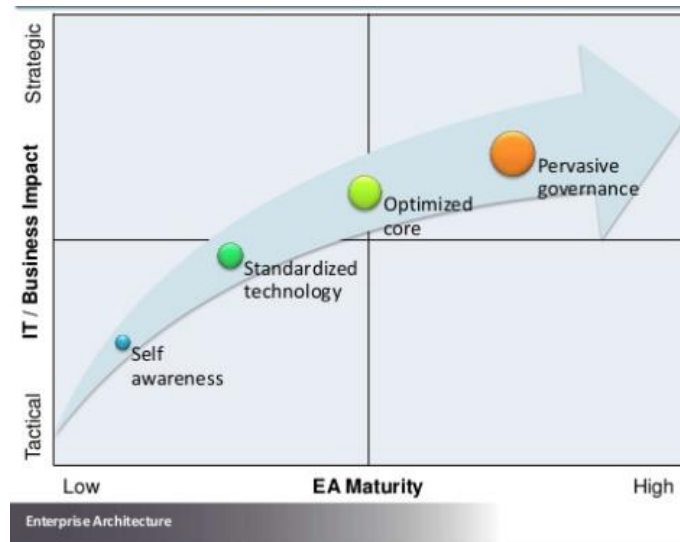
EA is a journey which is often non Linear. It has to be treated as an ongoing program that continues to evolve together with the organization instead of considering it as one-step solution. For an airline company such as JetBlue, having the higher management believe in the benefits of EA is very important. Since, JetBlue is traditionally a Balanced Risk Taking company, the EA analysis team at JetBlue would require to perform a thorough analysis of the advantages of EA in terms of operating costs, cost of implementation and the potential return on investment.



STEP 2: Laying out a vision of EA Programs

This step helps in ensuring success and longevity. The long term vision of implementing EA includes the following elements:

- a) **Self-Awareness:** This step involves analyzing and understanding the problem. Before analyzing the future challenges and possible opportunities, it is important to identify the current state of the organization. This helps understand major problems and prioritize them.
- b) **Standardized Technology:** An understanding of the current state of an organization helps identify problems and gaps. This leads to developing solutions to these problems. In today's world of improving technological advancements, establishing technology standards and moving to a shared infrastructure model which runs throughout the organization becomes highly important.
- c) **Optimized Core:** This phase involves gradually shifting focus from a local to an Enterprise view of technology assets and standardizing business process. This involves changes that affects larger groups within the organization and comparatively takes more time.
- d) **Pervasive governance:** Establishing an effective EA governance which implements feedback mechanisms to continually improve is the last and most effective method to ensure a smooth implementation of EA.

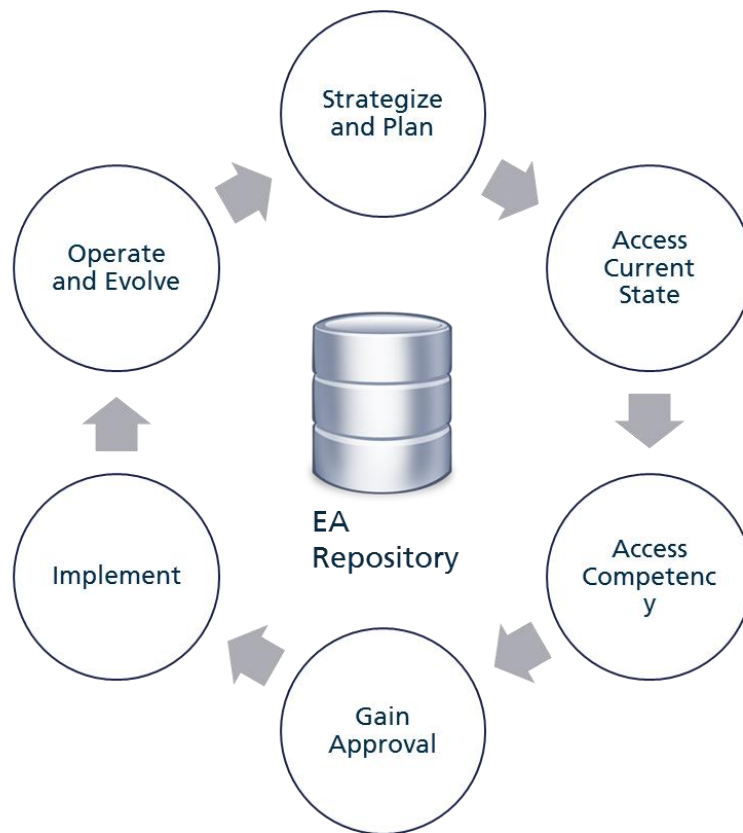


At an organization such as JetBlue Airways that is a growing organization, laying out a vision for EA is extremely important. This step can help the company analyze the potential benefits of implementing an EA program. Further, JetBlue Airways is a company that traditionally has focused on improving its Technology capabilities to help in business expansion or improve processes. Thus, moving to an EA program would prove beneficial to the company as it will help streamline decision making and reduce risks.

STEP 3: Starting the EA Journey

Implementing an EA for JetBlue Airways would involve the following phases:

- Strategize and Plan
- Assess Current State
- Assess Competencies
- Gain Approval
- Implement
- Operate and Evolve



1. **Strategize and Plan:** This phase involves gaining an agreement on the major problems that can be solved. Charter the EA program to formalize its existence. Develop all the program guidelines.
2. **Assess Current State:** Identify the current level of organizational maturity and an understanding of current organizational capabilities. JetBlue faces problems such as operating losses, system failures, scheduled delays, potential improvement in operation planning etc.

3. **Assess Competencies:** Identify EA requirements and review budgetary practices. This involves the creation of a team consisting of resources from various diverse teams. This is where JetBlue employees with different expertise would come together and provide their expertise. JetBlue corporate business strategy experts, planning executives, Technology Infrastructure experts, Systems experts etc. would utilize their wealth of knowledge to come up with different solutions.
4. **Gain Approval:** The most important phase of implementing an EA is the approval phase. Convincing the CEO of an organization to allocate funds to implement EA is challenging. Since, the benefits of EA come at a later stage and aren't visible initially, having a strong business case along with the numeric data in terms of ROI is important to put forward a strong case. This is where JetBlue could be at a slight advantage. Eash Sundaram, the CIO of JetBlue is a very strong personality. Under his leadership JetBlue focused a lot on technology innovations within the organization. Having such a strong personality would make it easier to present the EA program to the current CEO of JetBlue Airways, Robin Hayes.

For the successful implementation of EA to achieve organization's strategic goals the following elements should be analyzed:

- **Return on Investment:** An EA program must be able to justify the long term returns that the EA would provide to the organization. This should be backed up with research using the corresponding data, statistics and reports.
- **Systematic Plan:** After the return on investment has been clearly looked into, the next important element to be considered is the approach. The EA program should

focus on how the changes would be implemented. This focuses on the cost of implementation, the nature of changes, the time required for implementation and a cost benefit analysis to understand the actual benefits of the program.

- **Impact Analysis:** The EA should also focus on the impact of moving from the current state to the future state. The impact on areas such as Security, Technology, Infrastructure, business processes, business partner interaction etc. must be considered.

5. **Implement:** This phase involves analyzing the findings and prioritizing the gaps, developing investment plans using identified business cases and developing an architectural vision. For JetBlue, this step would mean having a thorough understanding of the Current State Architecture, having a vision of Future state architecture, having the resources to bring about the change, creating a strategic roadmap as future action plans.
6. **Operate and Evolve:** This phase involves improving, refining the efforts, continuously evolving future state plans and having a governance structure that monitors, provides suggestions, helping the EA program grow.

SOME MAJOR CHALLENGES & HOW THEY CAN BE OVERCOME?

In spite of the several benefits which EA has to offer, there are certain risks to the implementation and maintenance of an EA program. These include:

- **Schedule Delays:** Creating an Enterprise Architecture for a huge and complex organization would mean spending a lot of time bringing resources together to initiate discussions and planning activities. This would result in a lot of time loss due to differences in common meeting availability date and times etc.
- **Increasing Costs:** Developing a detailed EA document that covers strategy, business and technology would mean disrupting normal business services as business managers, IT and strategy heads would have to take out time from their normal work. This would mean that the employees would not be working on their areas of expertise and such delays could result in loss of revenue for the business. Further, hiring, training and supporting analysts, utilizing new repositories and EA documentation tools would also add on to the costs.
- **Lack of Acceptance:** The designing of EA requires contribution from each and every stakeholder. There is a possibility of disagreements in perception of the benefits that EA would provide the business, which could in turn lead to low acceptance thereby introducing the risk of no return on the investment.
- **Migration:** There are some organizations that have really advanced technologies setup when it comes to their IT departments, while its other business functions such as Payroll, HR etc. might still be using out dated pieces of software and systems. Since, all departments follow their own individual framework, it will be really challenging to implement an EA, so as to migrate all of these out dated systems and technologies on to a centralized one and that to in accordance to a standard organizational framework.

In spite of all these challenges, risks and limitations, I strongly believe that for JetBlue Airways to go ahead with the implementation of an EA, the benefits would outweigh the costs of implementation. But, this would require detailed planning, thorough analysis, building business case that includes alternative analysis, cost-benefit analysis and return on investment calculation.

LOOKING AHEAD INTO THE FUTURE OF JETBLUE AIRWAYS

The primary reason for JetBlue Airways being able to succeed, was that the airline tried to be different. It focused on what it did best that is providing low cost and high standards of service. This helped attract and retain passengers, and at the same time helped the airline remain solvent at a time when other major airlines were crumbling to dust. Having said that, analysts wonder if JetBlue will be able to sustain success over the longer period ahead. The airline is gradually moving from being a growing organization to a larger and more complex organization. This transition would mean it would have to replicate the model on a larger scale with more employees, larger infrastructure, tighter deadlines, and broader business function umbrellas to monitor.

Thus, it is this exciting phase where I believe that JetBlue can implement its Enterprise Architecture to be agile, customizable and scalable. Having agility and customization while building an EA plan can help the organization in future planning. It helps Managers ensure that new Line of Business units, products or processes fit well into the existing architecture. It helps in embracing changes quickly, by understanding it and by providing flexible designs. Agile EA also helps create solutions that can be implemented strategically with reduced risks and flexibility. It allows for different units within the overall architecture to be evaluated for performance benefits helping make the necessary investments for new projects and changes to support future states. It

helps in sharing ideas quicker and across teams thereby improving collaboration. The ultimate goal of an agile enterprise architecture is to enable businesses harness information sources to help the business make key decisions through strategic, business and technology perspectives. This is where EA would be able to provide the organization with huge benefits. With the ever growing field of technology, companies keep innovating and developing new ways to solve problems, meet changing customer needs and evolve their business.

Internet of Things: Many organizations struggle to adapt to new technologies, because they lack planning and foresight. One of the areas that is revolutionizing technology is the Internet of Things. It is described as the booming world in which gadgets can communicate with each other. IoT is thus often believed to be a goldmine of useful data. This data can be measured to review the businesses current systems, or even identify new avenues for the business in the future. Having a sound EA in place can provide benefits such as reducing business risks in the upcoming technology and improved adaptability especially for new business that are completely new to IoT devices. I certainly see this becoming a major factor in the airline industry and can be an important area for JetBlue in future.

Seamless open ecosystem: Another upcoming area is the focus on Ecosystem. Customers are looking for greater personalization and expect companies to deliver engaging, novel and effortless experiences. JetBlue revolutionized its customer engagement through its True Blue Mobile App. It helped customer's book tickets, check flight status, check in remotely etc. This is an area which has the maximum scope for innovation. EA can benefit JetBlue in the years ahead, by

understanding consumer needs to gradually change business strategies and integrate it with upcoming technologies to offer better personalization services.

Security: With the huge rise in technology innovations and data collection, newer threats arise. Hackers of tomorrow will be smarter than hackers of today. This leads to greater vulnerabilities and security gaps which needs to be secured. Especially with all these new upcoming technology innovations, security will always be at the forefront. An EA would provide JetBlue the ability to withstand hacks and data leaks through strong Security mechanisms to protect its data, information and systems.

Big Data: Today's world is filled with information. Managing, maintaining and deriving useful decisions out of this huge large sea of growing data is the next big challenge for organizations. This is another area, where EA will continue to play a major role. Having an EA would help JetBlue in understanding the collected data, improved data driven decision making and solving the challenges that arise while working with data.



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