

How to Build an Egg – Finding Success in Complex Projects

Why I Wrote this Book

For several years, I had the interesting opportunity to work at a highly respected global company that defined large-scale integration as one of its three core competencies. During my time there I was founding Chief Architect for two very large programs. The objective of each program was to integrate hundreds of pre-existing independent processes and systems in order to take advantage of new technologies.

The two programs had varying levels of success. They also had some differences in the way they were planned. One was done as a skunk works project and was paid for by an underrun of a division's IT budget – in other words barely funded. The other program was heavily funded and broadcast to the world. This broadcast included a rosy case study in the Harvard Business Review.

As we got started on the heavily funded program, I asked the owner, “How integrated do we want this program?” My objective was to align the program's design and architecture, through integration of existing products, with what the company was planning to tell and sell to customers. For several years, I had promoted reducing total cost of ownership through creating commonality in customer facing attributes such as technology platforms and services.

So my question really was this: If this is an integrated program, what does that really mean and how will it be manifested? Does it mean that we have a significant competitive advantage when customers acquire more of our products in this system? If so, how do we manifest that advantage –for example, by discounted pricing, common technology platforms, or reduced training costs for users and technicians?

Given that the products were scattered across a large organization without a common leader or owner, the program owner's sponsorship would have a significant impact on moving these proposals into planning and implementation.

The program owner did not understand this question or the examples, nor did he seem to wish to talk about it. To him, integration was defined as simply fitting the existing pieces together as expediently as possible so that a string of functions were connected and that a positive value proposition outcome occurred for customers—again, the current method of conducting business. Elegance and the potential business values of network effects and lock in were difficult to quantify and calculate into a business case, and therefore were not relevant to him. The task was instead defined this way: Develop an architecture to integrate hundreds of systems and services, such that it met the individual product

needs and the overall system needs. In other words, meet the needs and wants of many or all the individual players, and create a winning team with those players.

The result of the program owner's perspective on integration was a tug-of-war constraint that would eventually ripple through the architecture and the integrated business and compromise the program .

Over time, I learned several things when I put this encounter into the context of many other products I worked on. Integration needs can vary. Architecture is the backbone and framework of a product or service, but to be successful at integration we need more than architecture. We need clarity across the organization of the level of integration desired. For example, the architecture of a building has only so much impact on what an owner, tenant, or visitor might see or experience when walking through the building. This could include the colors or furnishings, which would be visible, but also such services as power and plumbing, which would be less so.

Through my experience in these and other projects, I learned that money, schedule, and publicity were not the primary factors determining the success of a project. These lessons have driven me to find a better way to think, organize, and execute an integration project. This book represents the outcome of a multi-year journey.

Consider this perspective from Steve Jobs: "Creativity is just connecting things." Many companies engage in innovation and creativity by connecting things. Apple is widely regarded for creating products more integrated than those of other companies in its markets. Is Apple using different methods and processes? Architecture is used by Apple and its competitors to create and enhance its products by the creators and third parties, yet consistently Apple products are more integrated.

This book will explore how to improve your organization's ability to integrate and therefore improve value and quality that is an output of better integration practices. I created this book in order to better understand and decode how integration really works. It was a labor of challenge and love. I hope you enjoy it.

By the way, do you remember the skunkworks project I mentioned earlier? It was, and continues to be, wildly successful. While the project did not necessarily benefit from applying all of the principles of effective integration, it did apply many. Specifically, among the attributes that led to its success was a focus on a short list of integration requirements that was executed by a small, empowered, dedicated team that shared a consistent view of the project's vision.