

T2RL'S First View is our rapid analysis of breaking news. It helps provide perspective, putting the facts in the context of our wider and deeper knowledge of the market.

AISystems has landed

T2R Staff

The Facts

T2RL spent two days at the beginning of December with the founders of the AISystems, Roy Miller and CEO Steve Johnston, at their head office in Toronto. The sessions included a demonstration of the planning product, Business Planning Suite (1.0), and a presentation of the commercial go-to-market strategy together with discussions on the evolution of the market place for planning tools and their relationship with operations.

The Analysis

AISystems has been developing software for over four years. The company went into public ownership through a set of reverse mergers in March 2010 and is currently listed on the OTC bulletin board (AYSI).

Sizing the market place for airline business planning is challenging. There are a number of tools that allow airlines to plan their business from very simple Excel spreadsheets to software products from specialised vendors such as Sabre, Lufthansa Systems, Jeppesen and IBS. The boundary between planning and execution is also difficult to draw. Schedules are changed for reasons of profitability and operations alike, making the separation of the planning component even more difficult. Based on a sample of data points from large complex network carriers and simpler point to point LCCs we have estimated that airlines annually spend around \$350-400 M on planning systems. This includes people, tools and third-party consultants such as SH&E or Oliver Wyman.

AISystems started with a focus on the operational systems of an airline tied to the production of the schedule. The creation of a valid schedule is a mammoth task for most airlines, especially the larger carriers. There is a multitude of aircraft types, crew rules and restrictions on airport operations. AISystems founder Roy Miller is familiar with mathematical problems of this complexity, but had no existing experience in the airline industry when the company was launched. We are certain he would have picked another industry if he had been more familiar with the complexity and vagaries of the airlines.

T2RL has always believed that the combination of readily available and cheap computing power and better algorithms would eventually deliver services to allow airlines to make planning and execution of plans much more dynamic. This would inevitably lead to much improved asset utilisation.

Miller and co-founder Steve Johnston's journey has been remarkable and somewhat troubled. They have managed to attract significant investment from a wide variety of sources but have found that selling services to the airlines is particularly challenging.

However they appear to be about to reap the fruits of their labour. AISystems Business Planning Suite has everything an airline strategy department needs. It allows the creation of business plans and the modelling of different planning scenarios. It always builds a fully valid schedule and airlines can experiment with frequency and route combinations. Inputs are simple .csv files and outputs are directly into Microsoft Excel. It produces all of the relevant statistics and more importantly provides management with an efficient frontier¹ to measure revenues against risk to profits, or indeed any other measure deemed meaningful.

The user interface is intuitive and simple, the calculations are fast and the outputs are clean. Valid schedules are generated in seconds, even for complex network carriers. The underlying thinking appears flawless, but you would expect nothing else from Miller backed by development spending of \$30-40M.

The Speculation

BPS will become a “must have” product for airline strategists and planners. It will reduce cycle times in planning to a level that allows airlines to rapidly revise their schedules in the face of unexpected events. These might include sudden changes in fuel prices, shifts in competitive dynamics or even significant disruption to a hub airport caused by bad weather or volcanic ash.

By producing the theoretical efficient flight plan and allowing simulation around this, airline CEOs, CFOs and COOs can engage with their strategic planning teams in a meaningful way. The Business Planning Suite produces the business plan but leaves the hard part, the execution, to the experts. However by producing a valid schedule that respects crew and fleet maintenance rules the airline will be able to focus on what it should be doing, satisfying its customers with service.

BPS is both the end and the beginning for AISystems. It is the first product from the company that is consumable by real-world airlines and it has massive potential. It is the end of a difficult road but it is also a beginning as it provides the basis for a multitude of additional products that will always feed into and improve the results of the planning capability. The company now has the building blocks to allow airline management to understand the financial consequences of their actions. This alone will be welcome to the stock analysts that cover the airline industry.

As AISystems establishes revenue flow (It has still to sign the first paying customer) it will attract a great deal of attention. AISystems will render the inherent complexity of the airline business more transparent and bad decision making through lack of information will be less tolerated by shareholders. Let's hope so. Lack of information through complexity has made profitable airline management a matter mostly of luck with a small measure of judgement. If AISystems is successful that will change for good.

¹ The efficient frontier is a term used in portfolio theory and describes the sum of returns for a group of assets and the risks associated with those returns. Miller has treated the airline as the sum of the routes (or O&Ds) and has produced something that allows the airline to manage its portfolio of routes.