

## North America's foremost airport investment, management and development company demonstrates its master planning abilities using Simio.

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### The Company

Vancouver Airport Services (YVRAS) manages and develops a global network of 19 airports on 3 continents. The organization is ranked among the world's premier airport operators and provides a full range of management and investment services to its clients. Part of the value YVRAS offers to its member airports is direct access to skills and planning tools that increase airport efficiencies.

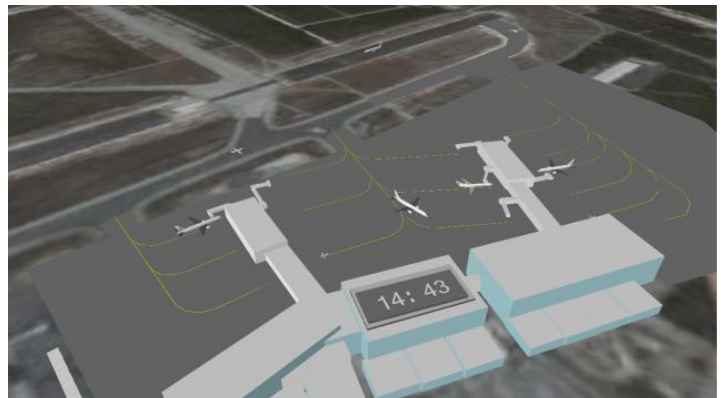
### The Challenge

It can be difficult to evaluate the value of engineering design work before a facility opens, and by then it may be too late. For YVRAS' team to effectively help its clients, it must convince them into action and to do so, it must convince its partners of the quality of the advice it offers.

Recently, an opportunity presented itself in The Bahamas where Nassau Airport Development Company (NAD), a company owned by the Bahamian government and managed by YVRAS, just completed stage 1 of the expansion of the Lynden Pindling International Airport terminals. This successful undertaking delivered a level of quality and efficiency never seen before in Nassau, the Bahamian capital. The authorities understood that the new terminal is sufficient to accommodate existing and projected traffic and as part of the master planning process, NAD secured the services of a consultant to review the airside capacity regarding the ability of the single runway to handle the additional traffic that would eventually be fostered by its new terminal. YVRAS managed the project on behalf of NAD and prepared the simulation model reflecting the results of the analysis developed by the consultant.

### The Approach

As part of the airport's master planning exercise, NAD requested YVRAS construct a Simio model. They envisioned that the model would simulate arrival and departure schedules minute by minute. Just like within the real system, if a runway was in use, arriving aircraft would take position within holding patterns until the runway frees up. Within the Simio 3D environment, aircraft would realistically flow from airspace to runway, to taxiway, to gate and back. YVRAS went on to build the model and once completed, as expected, it showed that infrastructure in place was



## Case for Enhancing Master Plan Decision Support: International Airport Operations

sufficient to accommodate existing traffic for the medium term.

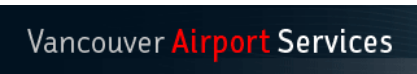
[Click here](#) to view the model on YouTube.

YVRAS validated the model to make sure that the results of the model made sense. They then incorporated planned arrival and departure schedules that reflected future traffic levels.

### The Results

By providing very realistic visuals combined with a validated modeling approach, YVRAS' airside simulator illustrated to everyone's satisfaction, that a second runway was not required at this point in time. According to YVRAS airport process engineer, Pascal Poudenx, the biggest quality of the model was in the realm of visualization. Simio made it easy for those involved to understand the current situation and the projections for future growth. The structure also enabled people to understand how things worked in the background. This simulation which was built in a little over 50 hours is now ready to test other airside ideas.

The long-term benefit for Lynden Pindling International Airport is they now have a way to evaluate how terminal and airside infrastructure capital projects will impact the facility's overall capacity. They can now develop a balanced investment strategy that addresses capacity issues as they arise. For YVRAS, it was able to demonstrate how their airport master planning efforts can provide Lynden Pindling International Airport with significant value on an ongoing basis.

	<p>YVRAS is a recognized leader in the area of airport management. It operates network of 19 airports located in Canada, the Caribbean, South America and Europe. <a href="http://www.yvras.com">www.yvras.com</a></p>
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