

### The challenge

Stockholm's airport shuttle train, Arlanda Express, was delivered by Alstom 1999 specifically for this service operated by A-Train.

At the start of revenue service a series of technical issues remained to be resolved. Experiences from the operation added further items to the list.

There were large and small issues, ranging from pantographs down to the wheels, thus covering most vehicle disciplines.

In 2002, A-Train and Alstom entered into a Settlement Agreement, with the purpose to resolve the technical issues and thereby to end the vehicle delivery project.

Transrail, having good knowledge of the vehicles and the contractual conditions as well as experience from similar projects, was engaged by A-Train to manage their part of the agreement.



### The solution

Together with A-Train a management process was established. For many items specific activity programs were set up.

In many cases the work consisted of activities to:

- identify the cause of the problems,
- specify requirements,
- find solutions,
- agree on designs,
- test and/or agree on the final modification.

To carry out this type of project is a matter of engineering and project management craft. It involves experience, analytic competence and a capability to communicate and argue. Know-how and understanding of practices and functional solutions is necessary. Determination and patience are other important qualities since these things do not always run the way and as quick as you would like.

Our experience from similar projects and capability to understand design intentions and systems helped us guide the troubleshooting and to identify solutions. To resolve some of the issues, Transrail used its network of partners, such as for noise, ventilation, advanced mechanical engineering. Good results came from making experienced staff from both the customer and the supplier work together.

A previously established system for reliability monitoring became helpful in tracking intermittent failures and those occurring under specific operating conditions.

---

<b>Year of realization:</b>	2002-2004
<b>Contact:</b>	Jörgen Gustafsson, Phone +46-8-404 09 96, E-mail <a href="mailto:jorgen.gustafsson@transrail.se">jorgen.gustafsson@transrail.se</a>
<b>Transrail Sweden AB:</b>	Allén 6A, S-172 66 SUNDBYBERG, Sweden, Phone +46-8-404 09 90, Fax +46-8-404 09 97, E-mail <a href="mailto:transrail@transrail.se">transrail@transrail.se</a> , Website: <a href="http://www.transrail.se">www.transrail.se</a>