

Customer: A-Train (operator of Arlanda Express)

### The challenge

During the first years of operation of the Arlanda Express shuttle trains, A-Train was in need of systematic follow-up on their reliability and reliability growth. There was also a need for a tool by which reliability improvement actions could be identified.

Transrail was engaged to set up and manage a reliability monitoring programme on behalf of A-Train.



### The solution

Good reliability and problem statistics requires a monitoring of the full chain of each failure:

- the system or sub-system that has failed,
- the cause of a failure,
- its impact on the operation, and finally
- which rectifying action was taken.

The Arlanda Express reliability program was set up as follows:

- The drivers got a reporting form, where they had to report each run and whether it was run on time or with a delay exceeding 2 minutes. Also other problems with the vehicles or identified repair, but not affecting the scheduled traffic, was reported by the drivers.
- In case of a delay or cancellation the driver had to report the cause of the delay and any associated information. Classifications could be vehicle sub-system, infrastructure, delays due to other trains etc.
- The information from the drivers was put in to a database.
- Each record on vehicle faults was followed up against the workshop records, i.e. what and when had the failure been investigated/repared by the maintenance staff.
- Finally the database was used to monitor trends and to identify various long-term actions to improve reliability of the vehicles and the service. The data successfully used not only for discussions with the vehicle supplier but also for discussions on infrastructure and traffic control improvements.

To the reliability monitoring database was later added a software tool by which the statistics could easily be displayed graphically and filtered on various search items. This software was developed by Transrail InfoSys.

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#### Year of realization:

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