

# Swedish Train Operator SJ Invests in RCM to Meet Challenges

## CHALLENGES

Focus on customer service.

Increase availability of the fleet.

Realise potential cost savings and pass these on to customers.

Improve monitoring of bearings, increasing safety.

Aims to become one of Sweden's most digitalised companies within the next five years.

## THE SOLUTION

Awarded Perpetuum a 10 year contract with Swedish state-owned train operator SJ to monitor its fleet of high speed X2000's.

Formed in 1856, and a Limited Company since 2001, SJ links Sweden together, and opens the doors to Scandinavia's capitals: Stockholm, Copenhagen and Oslo. It has around 4,500 employees and carries around 47.5 million passengers to 275 stations.

With over 4,500 employees and serving 275 stations, SJ aims to be one of Sweden's most digitalised companies within the next five years.

It has chosen Hitachi's cutting edge RCM technology and analytical solutions to move its wheelset maintenance away from distance-based to condition-based decisions.

Hitachi's solution will give 'inflight' analysis of train fleets, track, bearings and wheels and ensure maintenance is correctly focused.

## SUPPORTING THE SOLUTION



Hitachi won the contract following tests conducted during an 18-month trial on 80 wheels in the harsh Scandinavian environment. Hitachi will monitor all the wheelsets across the X2000 fleet by using its Bearing Health Index and Wheel Health Index solutions, the algorithms of which have been deployed around the world on over 8,000 wheels travelling over four billion km.

Supporting the solution through a 10 year service agreement means Hitachi can future-proof the data and information streams for SJ, even if there are upgrades to the on-train or back office ICT architectures.

**HITACHI**  
Inspire the Next



Founded in **1856**

Fastest train is **200km/h**

**4,500** employees

**SEK 7.5 billion** turnover

**275** stations served

Owned by the **Swedish state**



**10 year** contract

Move wheel bearing maintenance overhauls from distance based to **condition based**

**8,000** algorithms used on bearings worldwide

Manufacture: **2017** / Installation: **2018**

**2160** wheels to be equipped

## CUTTING EDGE TECHNOLOGY

The opening up of the rail market in Sweden to introduce competition has been a catalyst for SJ to take the next step when it comes to customer experience and its desire to be successful and profitable as a company. Being able to have lower ticket prices, high availability and good customer service becomes ever more important.

The company's move towards digitalisation was a big enabler for the SJ team to get approval for the initial trial. Rail travel is culturally very popular in Sweden, thanks to its lower environmental impacts. Investment in RCM, bringing together the combined benefits of digitalisation and customer service has made perfect sense.

"Hitachi has proven to be a reliable RCM supplier who delivers cutting edge technology that will help us improve our operation and service to our customers even further," explains Arvid Fredman, Fleet Manager X2 for SJ. "The investment fits well with our strategy to be in the forefront of digitalisation and continuously striving for efficient and cost effective maintenance."

## MEETING INCREASED DEMANDS

The data collected by Hitachi will be used to help predict failures, increase asset management efficiencies and improve safety, meaning more time on the track for the bogie and a better chance of meeting increased demands over the next decade.

"The support from Hitachi has been fantastic," continues Arvid. "Not only me, but other colleagues have found this too and it's very good to have a supplier who wants you to succeed with a project and reach the end goal you have set."

"Moving from the traditional asset management to RCM was a cultural shift and it was good to be able to show you're not the first one trying something. For safety departments and other stakeholders it's been a great advantage to sit down with other vendors and discuss and get their experience. And of course Hitachi are very knowledgeable about their system, how it works and what to do and what not to do."

