



August 2025

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The Annual Meeting: Note the date! Welcome to participate!

Next AGM to be held in Copenhagen on September 21, 17.00.
Meeting is held at the Light Rail Day Office
Frankrigsgade 17 DK-2300 Copenhagen S

Participation by Teams or Zoom will be possible.
Please write to nlra@marknadslank.se for your participation

Working Groups

Ice on Catenary

Malmö and Teams
September 24, 10.00

Predictive Maintenance

To be decided,
Late Autumn 2025

Apply by email to
nlra@marknadslank.se

Read more in this letter about

- Report from Maintenance Working Group
- NLRA Award
- NLRA Study tour to Norway (in October)



Newsletter from Nordic Light Rail Association, NLRA

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Editor

Thomas Lange

Next issue

September 10

The Board

Heidi Heikkilä; Finland (Chairman)
Tom Potter, Norway (Vice Chairman)
Stephan Marstrander, Germany
Michael Borre, Denmark
Bernd Reuss, Denmark
Thomas Lange, Sweden (Secretary General)

NLRA Predictive Maintenance Workshop II

Last meeting was held:

June 4, 2025, 10.30-14.00
at the Tram Depot, Norrköping and by Teams

Participants:

- Antti Laiho, EKE Electronics Ltd. (first part of the meeting)
- Johan Warenlöv, Tux AB (first part of the meeting)
- José Munoz, Camlin Rail (first part of the meeting)
- Rainer Droste, Boom software
- Miran Mraz, Škoda Digital
- Jan Pertmann, Norrköpings Kommun (Local host)
- Thomas Lange, Nordic Light Rail Association
- Ville Sjöholm, Turku Tramway Ltd. (Group Leader)
- Manuel Simon, CEMIT 13:30-14:00
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Agenda:

10:30-11:30 Introductions

Objectives of the workshop

Getting to know each other = short presentation on each "site/organization"

11:30-12:00

Need for separation of infrastructure and rolling stock topics?

Separation into non-commercial and commercial topics?

Comments/questions & Development ideas

12:00-12:45

Lunch break

12:45-13:30

Jan Pertmann / Norrköping spårvägar

Maintenance activities regarding Norrköping rolling stock

13:30-14:00

Manuel Simón /CEMIT

Expertise in the field of predictive maintenance (both trams&infrastructure)

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Objectives of the workshop

We had the first Predictive Maintenance workshop in March, and this was now the second workshop. The event is still under development, and we are trying to find the best practices. We would like to hear your comments and development ideas about this workshop during or after the event.

Our purpose is not to tell you what to do, but rather to share information and experiences. We are here more to listen and to arrange a possibility for an open discussion and exchange of ideas.

This workshop aims to engage infrastructure owners, fleet owners, and operators in discussions about current and upcoming projects.

This is not intended to be a sales event, but it is always possible to include an interesting commercial presentation to this workshop, like CEMIT did today.

Need for separation of infrastructure and rolling stock topics?

All participants commented that both rolling stock and infra topics should be discussed together because the topics have an interface with each other.

For example, by adding sensors to bogie, both track condition and vehicle dynamics can be measured.

Track and fleet condition monitoring

Fast developing faults in the track (broken rails, frost in winter...) can be found with "normal operating vehicle" if it is equipped with sensors. Cost/rail km is quite low, and measurement frequency is much higher compared to measurements with "measurement vehicle".



For autonomous drive the need to monitor the status of the fleet and infra has risen a lot. For example, VDV requires environment sensors and different measurements of status of the vehicle, bogie, catenary...

Track wear and lubrication

Wear of the track is mainly depending on the type of tram used (pivoting bogies, non-pivoting bogies)

Norrköping uses manual lubrication to the tracks, but there are also some fixed places. They are not using wheel flange lubrication anymore in the vehicles.

Automatic lubrication in vehicles is usually done by GPS (trams are located in maps)

Corrugation can be also detected (mainly on stops when acceleration and braking), accelerometer signal can find the corrugation (but usually driver is the best “meter”)

Topics for the next meeting

(Suggestions)

- Leafs on track, how to remove leaves from tracks
- Track condition monitoring
- Interaction with wheels and track, as pantograph and catenary
- Combining operational data and not just using sensor data (to make it more easy)
- Wheel hardness (how to find right wheel hardness and profile)
- Retrofitting old fleet with new components

Notes by Ville Sjöholm

Help Us Find the Next Nordic Light Rail Prize Winner!

Did you know that the Nordic Light Rail Prize (NLRP) is a truly special award? It honours individuals who have made exceptional contributions to tramway development in the Nordic region—people whose efforts deserve our recognition. And you can help us find the next recipient!

Since 2016, the Nordic Light Rail Association (NLRA) has awarded the NLRP, originally established by *Bernd Reuss*, to recognise the pioneers behind new tramway systems in Northern Europe. It also celebrates those who have dedicated their careers to urban tramways.

Who Can Receive the Prize?

- Up to 12 individuals (aged 80 or younger) may receive the first-degree award.
- There is no limit on recipients for the second-degree award.
- In exceptional cases, the prize may be awarded to an organisation rather than an individual.
- The NLRP is not awarded annually, but only when truly deserved.

The First-Degree Medal

Master goldsmith *Gisbert Saal* (Aurich, Germany) has designed an exquisite medal and pin for the first-degree award. The medal is crafted from solid 585 gold, set on a silver chain, while the matching pin features a gold setting and a jewel.

Do you know someone who deserves this honour?

Let us know—it may be time to celebrate their achievements!

Write your suggestion to nlra@marknadslank.se.



Study trip Norway:

Don't miss this opportunity!

For members of NLRA



October 12-15, 2025 Trondheim and Oslo

Friends and members of the Nordic Light Rail Association (NLRA) are invited to participate in a study trip to visit Trondheim and Oslo in October 2025.

The trip will start in Trondheim on Sunday, 12th October 2025 with a dinner in the evening.

On Monday, October 13th, we will visit Gråkallbanen, the historic tram line in Trondheim which celebrated its 100th anniversary in 2024.

In addition we plan to meet with the PTA for Trondheim, AtB as well as transport officials in the city and county government.

The group will then travel to Oslo on Monday evening by plane or overnight train. We will meet with the operator Sporveien and the PTA Ruter in Oslo on Tuesday and Wednesday, October 14th and 15th. Participants can choose whether they will leave the trip on Tuesday evening or Wednesday evening.

More information about this study trip and a detailed program will be available by early September 2025.

Questions or suggestions? Write to nlra@marknadslank.se

You have to be a member to participate, please apply here:

<https://nlra.net/become-a-member>