



LUND
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Use of reserved capacity for trackwork in Sweden

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Trackwork and Maintenance windows

- **Trackwork** - maintenance or renewal of railway infrastructure components that require temporary capacity restrictions for the section on the track where the activity is taking place
- **Maintenance windows** - regular capacity blocked in advance during which preventive maintenance and temporary capacity restrictions are expected to be executed

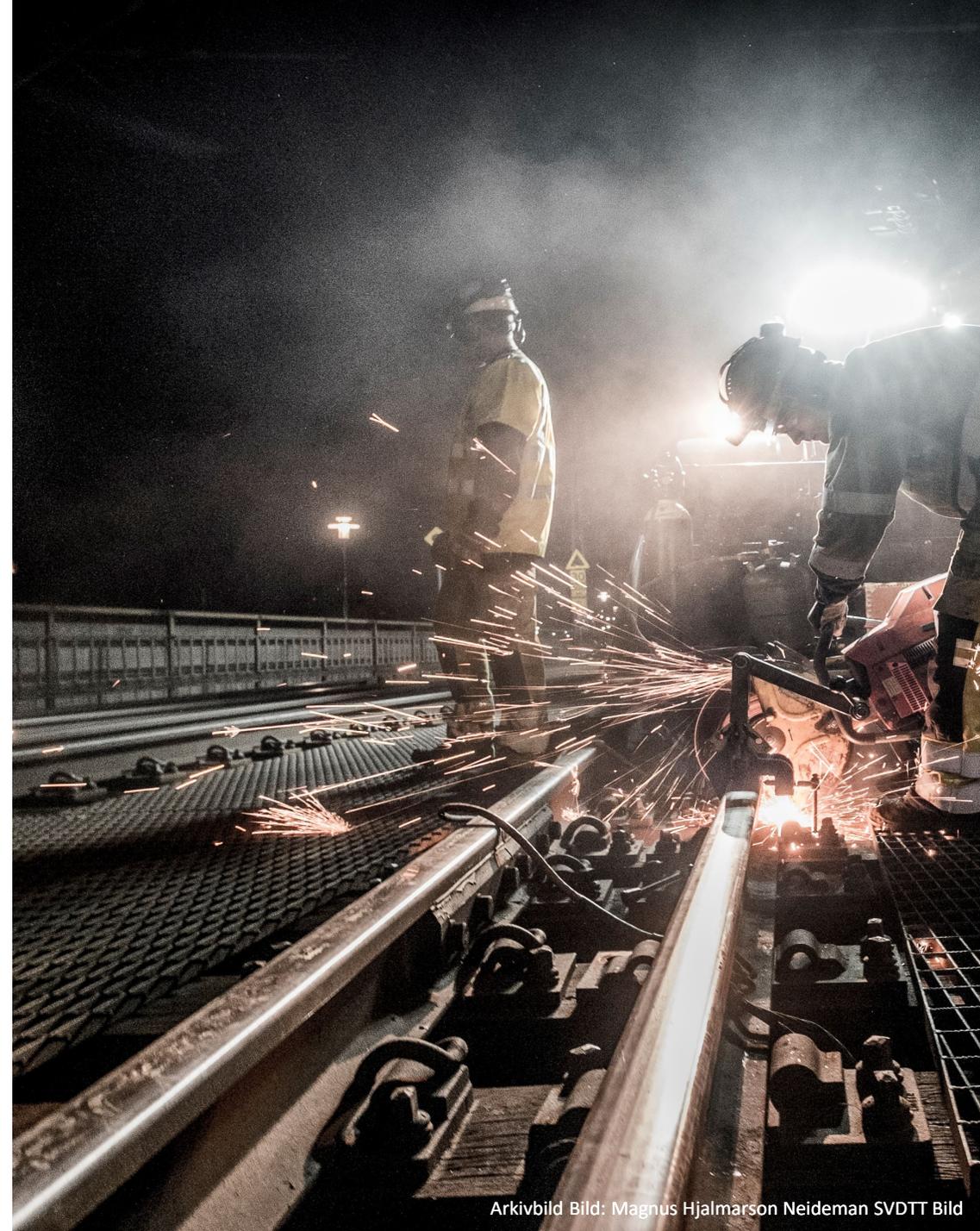
Research objectives

Aim:

Investigate the actual use of reserved capacity inside maintenance windows to perform trackwork in Sweden

Research questions:

- How much of the reserved capacity in maintenance windows is used for trackwork?
- How much of trackwork performed within and outside of planned maintenance windows?
- What is the utilisation rate of maintenance windows in 2019 and 2020?

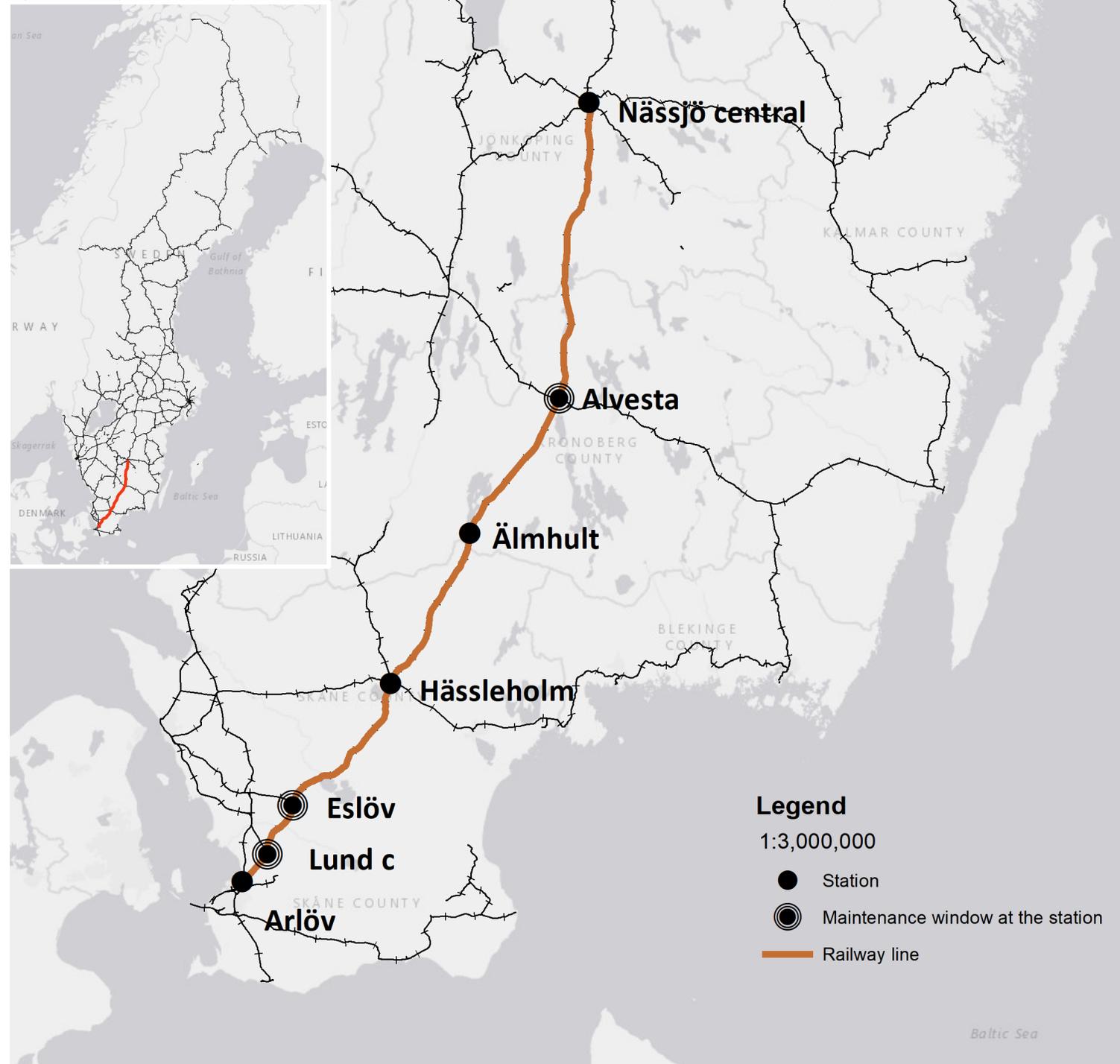


Data

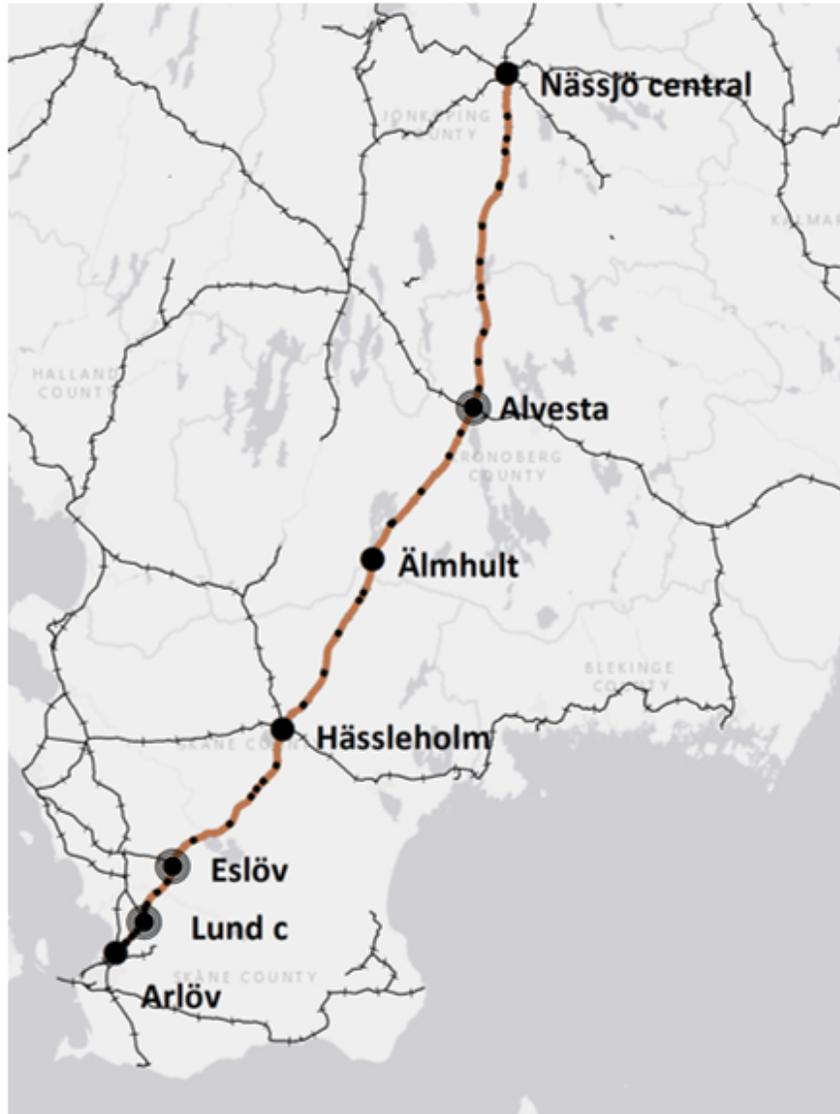
Trackwork (maintenance and renewal)	Maintenance	Maintenance windows
826 h	~ 83 % of trackwork	N=13 781 h

Arlöv – Nässjö C

July – October 2019
January – December 2020



Maintenance windows



	2019	2020
Näsjö C	MW 1	MW 5
Alvesta Station		
Älmhult	MW 2	MW 7
Hässleholm		MW 8
Eslöv Station	MW 3	MW 9
Lund C Station		MW 11
Arlöv	MW 4	MW 13

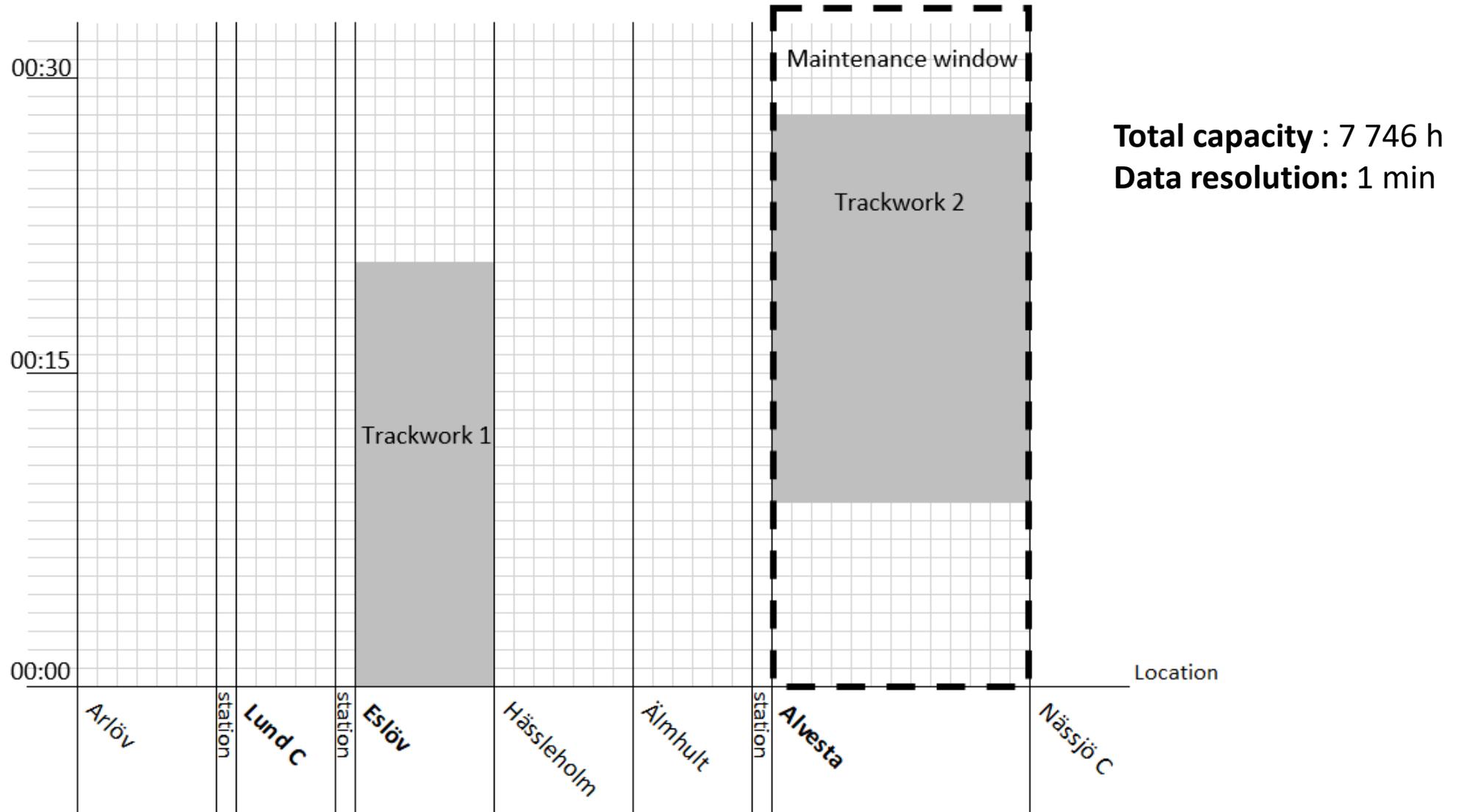
Night time:
From 23:00 till 05:00

MW 6

MW 10

MW 12

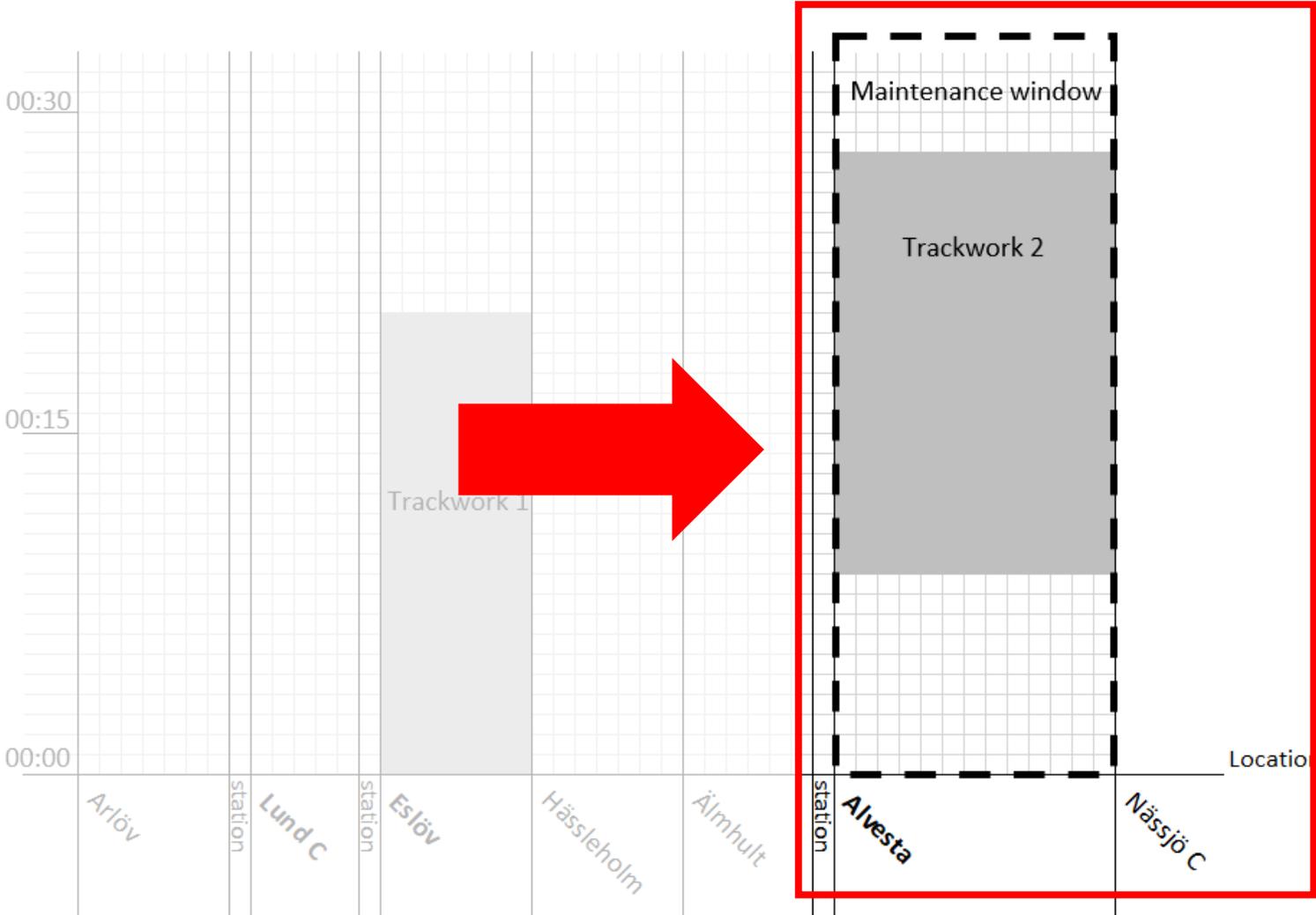
Data analysis



A perspective view of a railway track with the word "RESULTS" overlaid in white serif font. The track consists of two parallel steel rails on concrete sleepers, supported by a bed of dark grey gravel. The rails are secured to the sleepers with rusty metal clips. The track recedes into the distance, creating a strong sense of depth. The background shows a grassy area on the right side of the track.

RESULTS

How much planned maintenance windows is used?



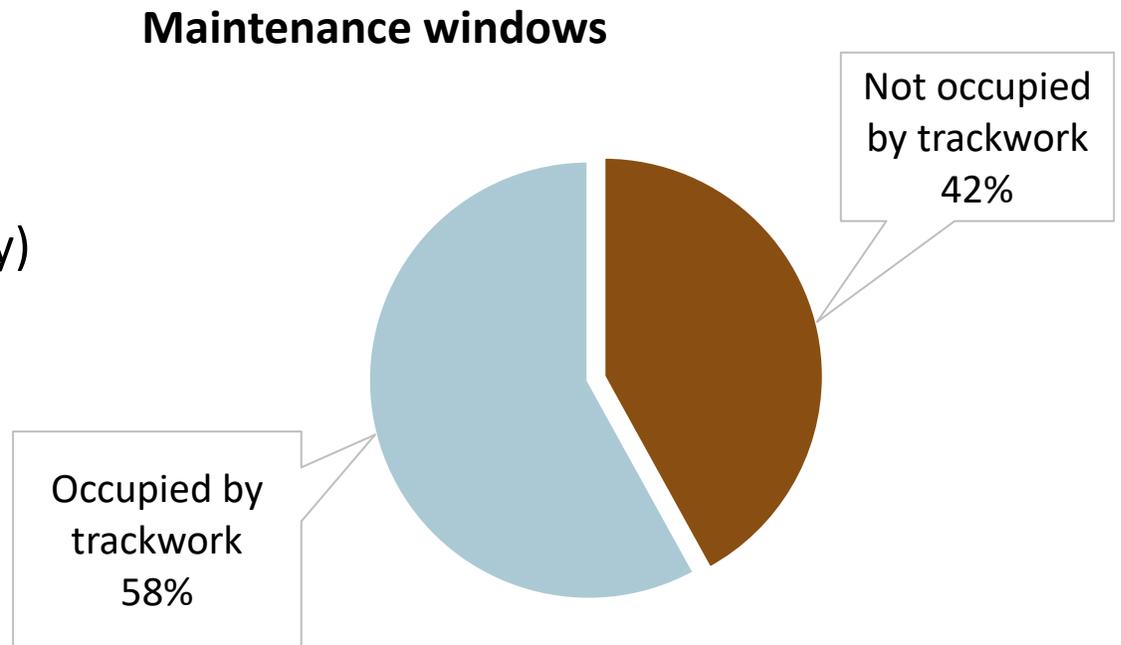
How much of the reserved capacity in maintenance windows is used for trackwork?

Total capacity : 7 746 h

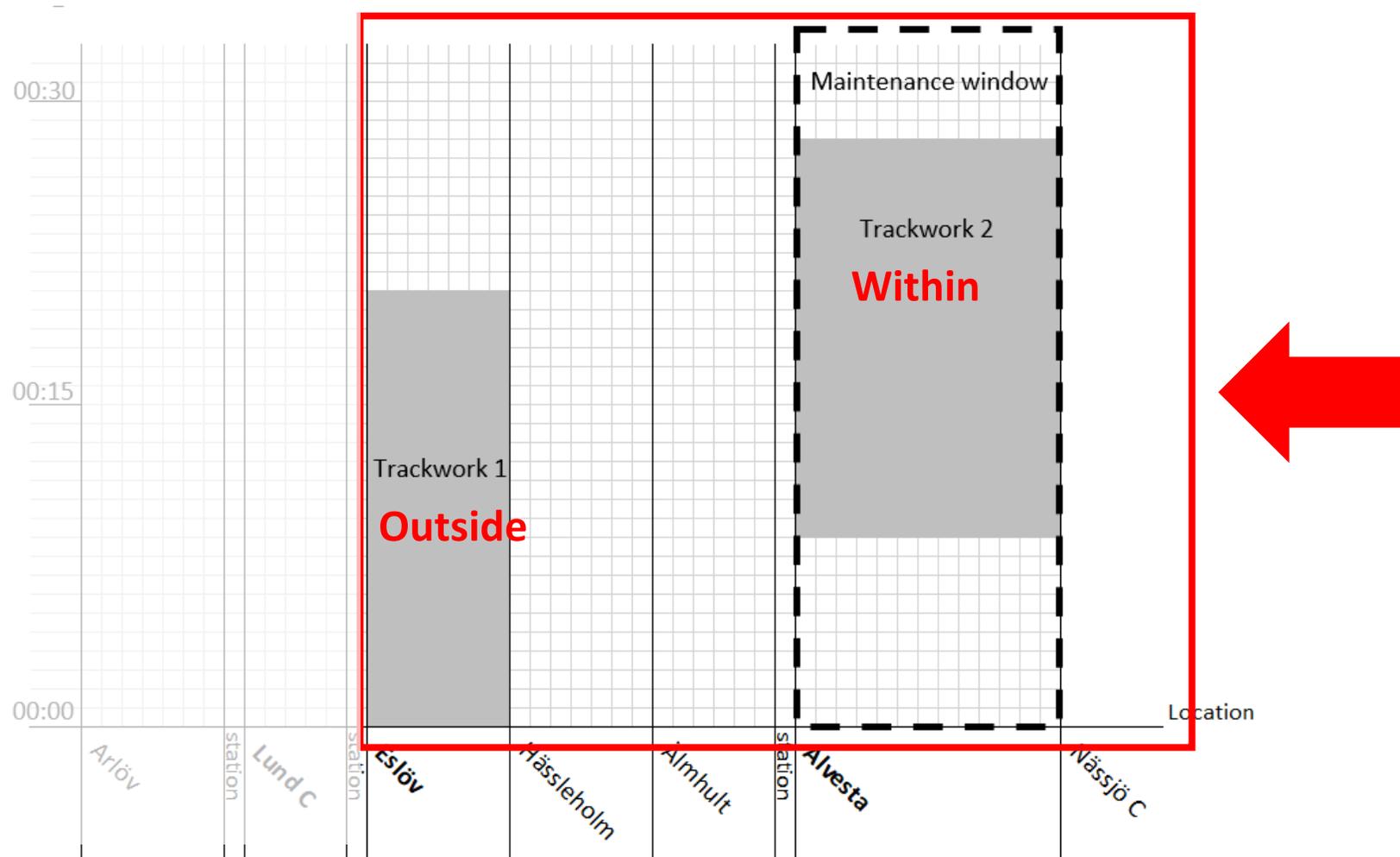
Trackwork: 826 h (11% total capacity)

Maintenance windows: 781 h (10% total capacity)

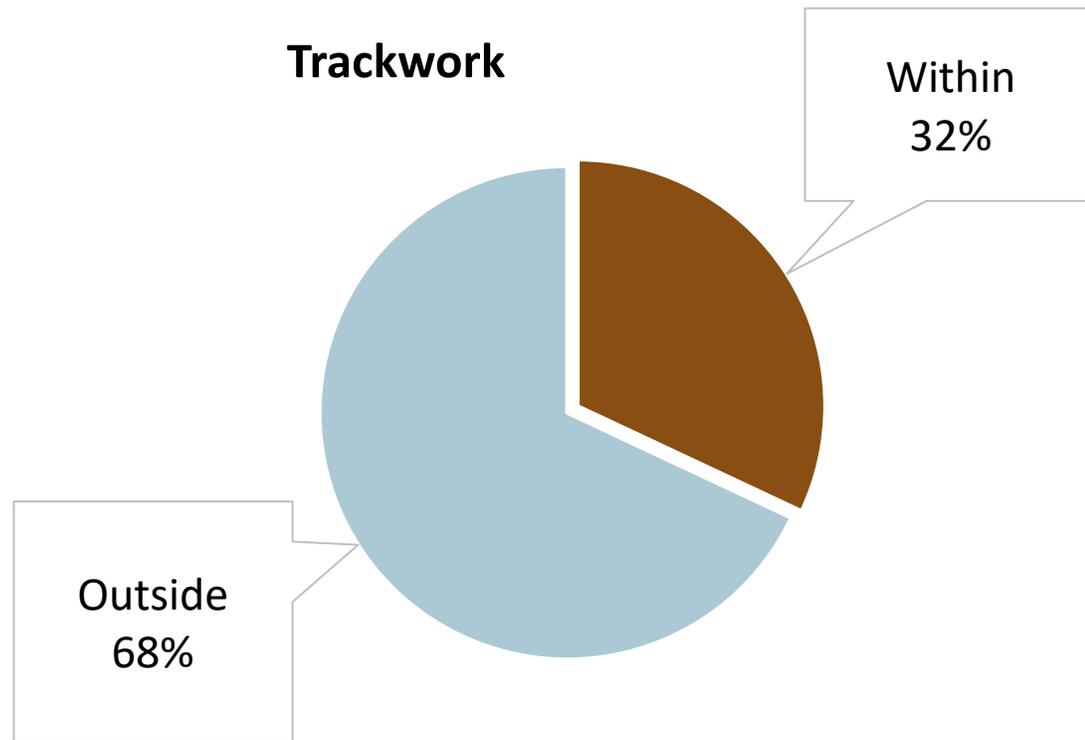
Maintenance windows for a night time



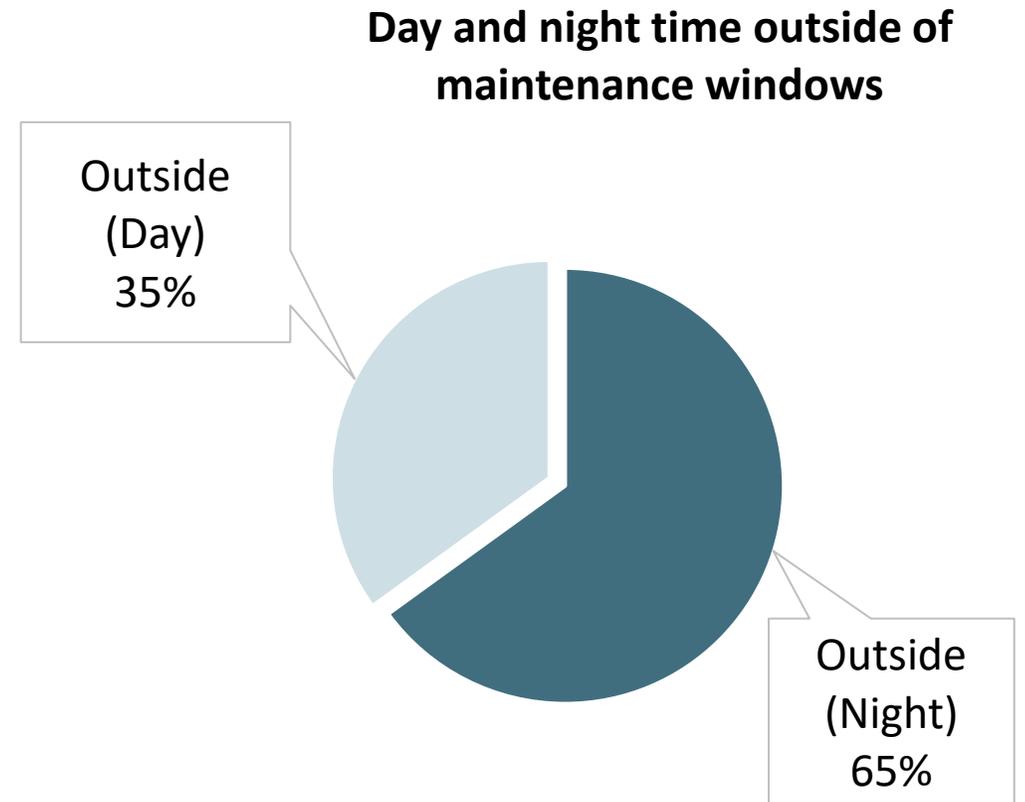
How much of trackwork is performed within and outside of planned maintenance windows?



How much of trackwork is performed within and outside of given maintenance windows?

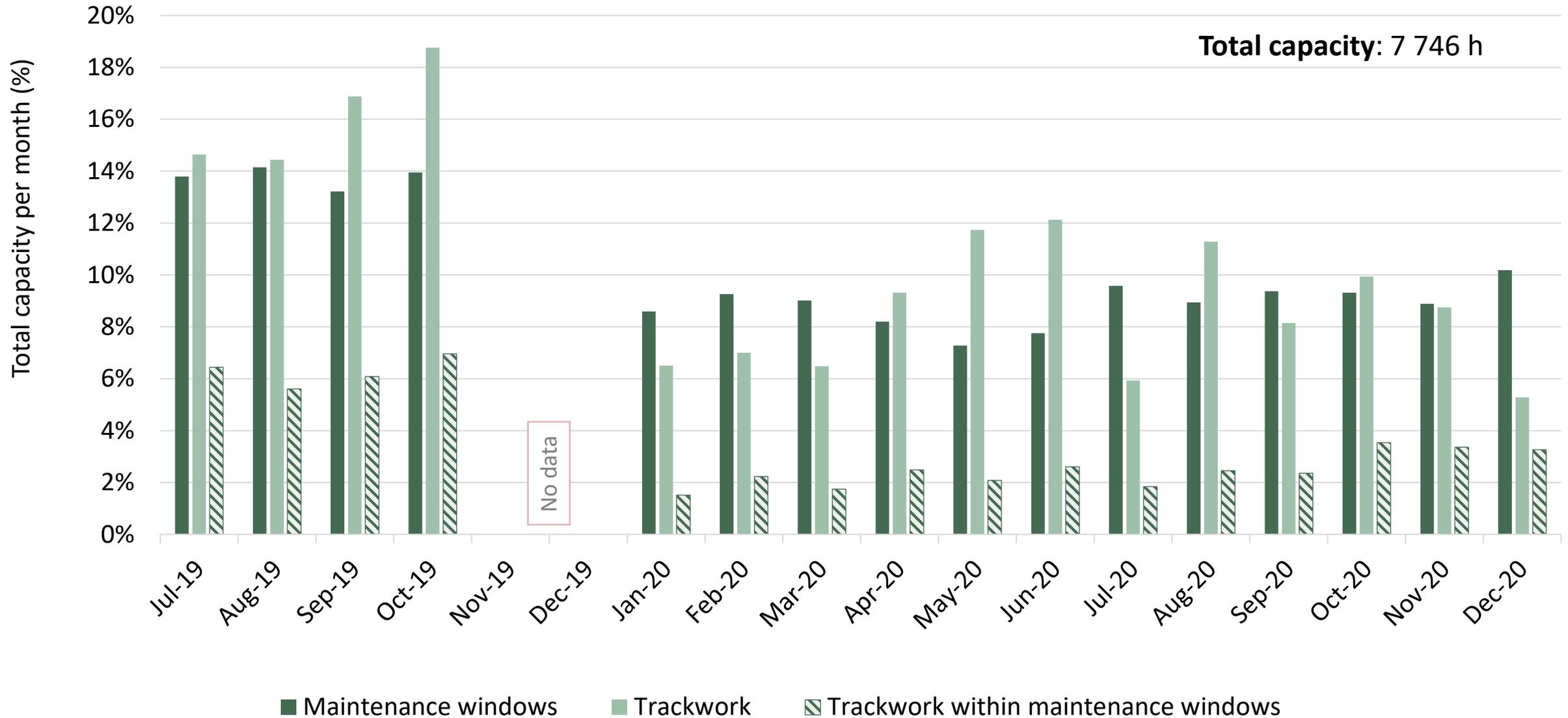


Trackwork: 826 h (11% total capacity)

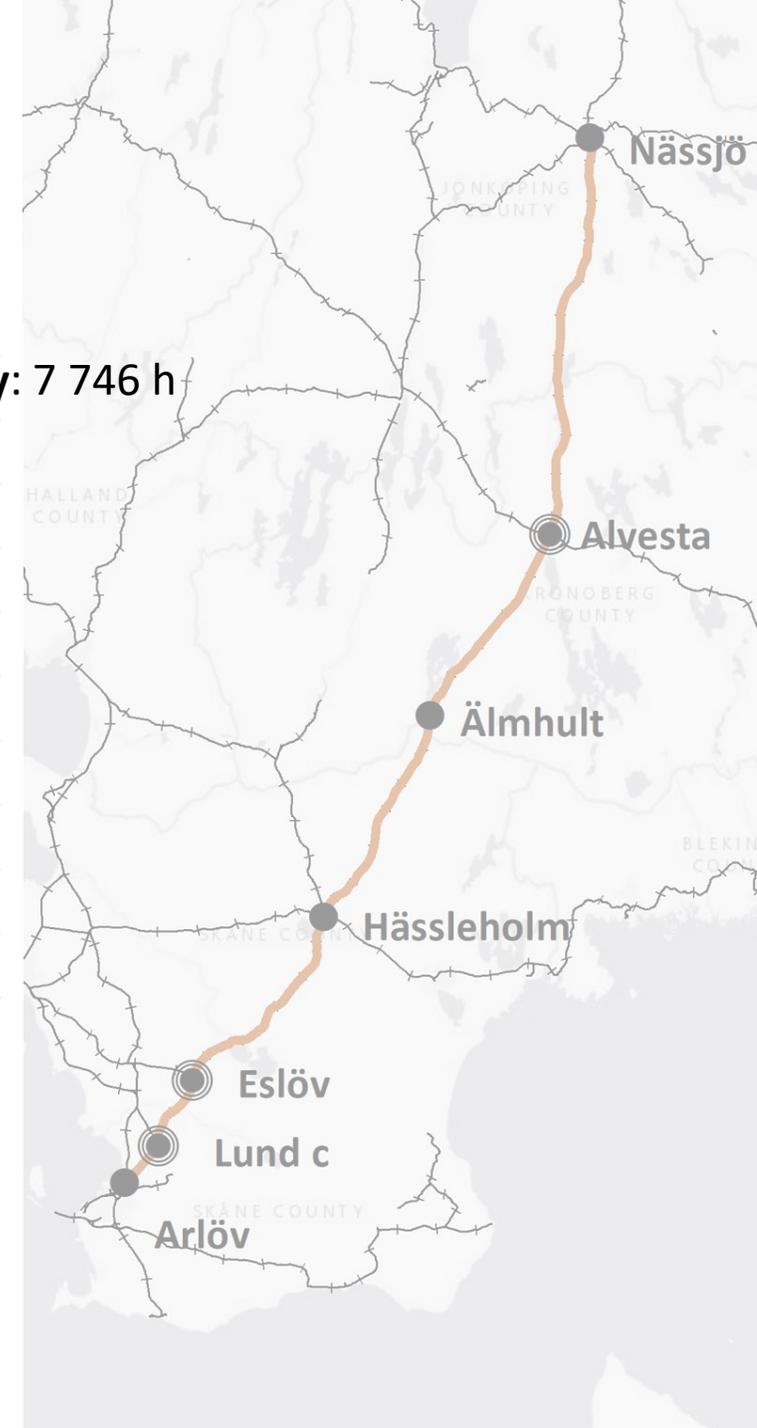
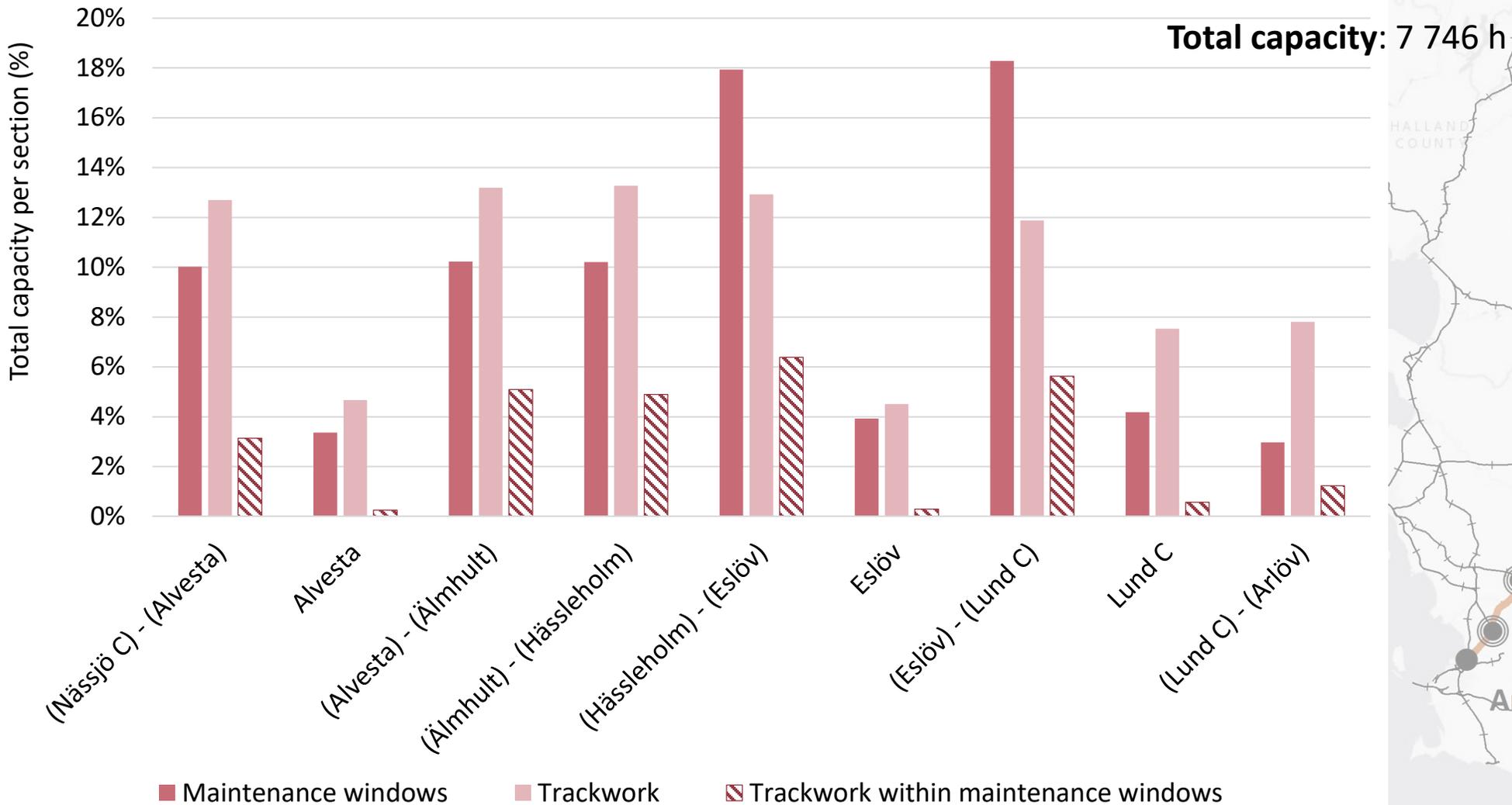


Analysed maintenance windows: night time

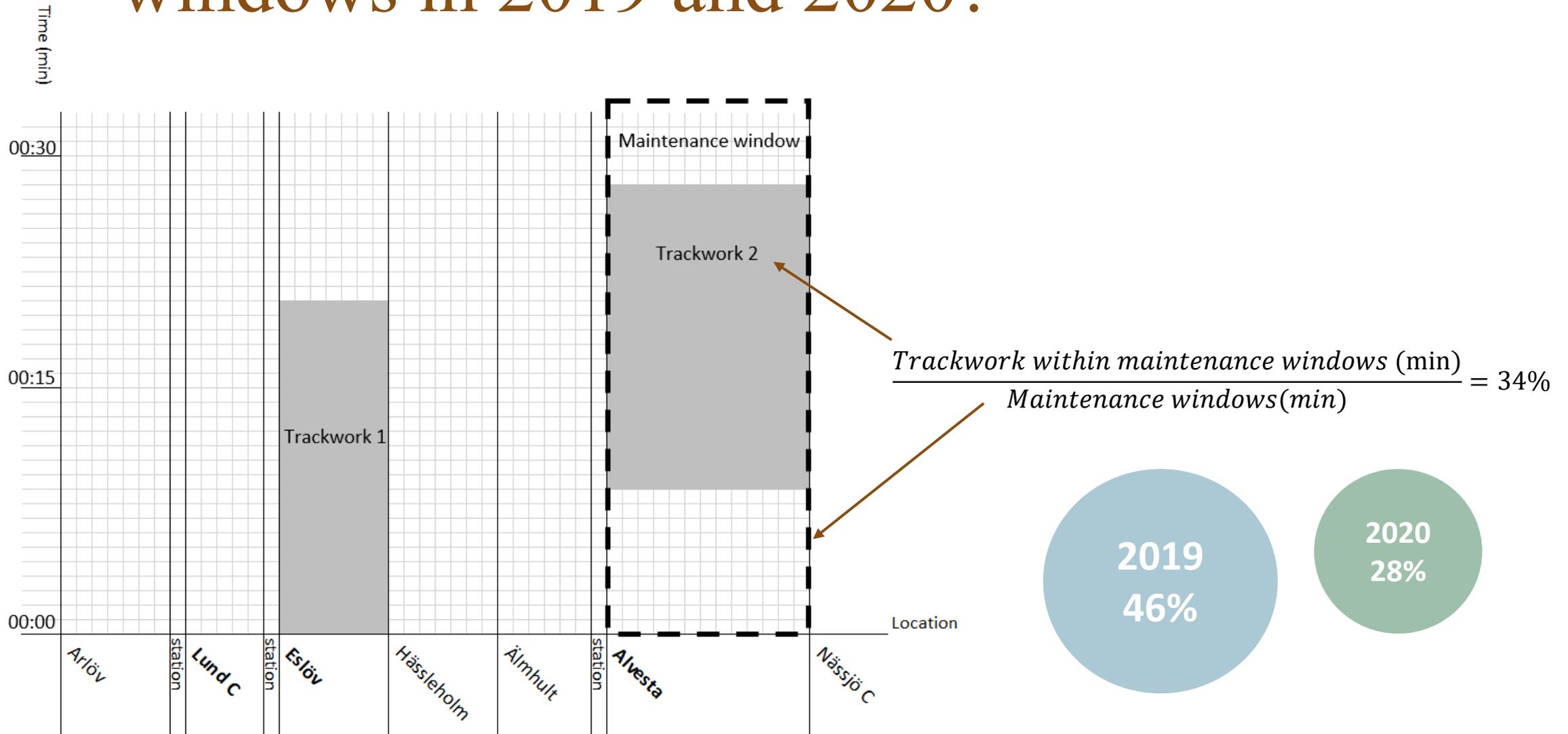
Trackwork and maintenance windows capacity occupation by month



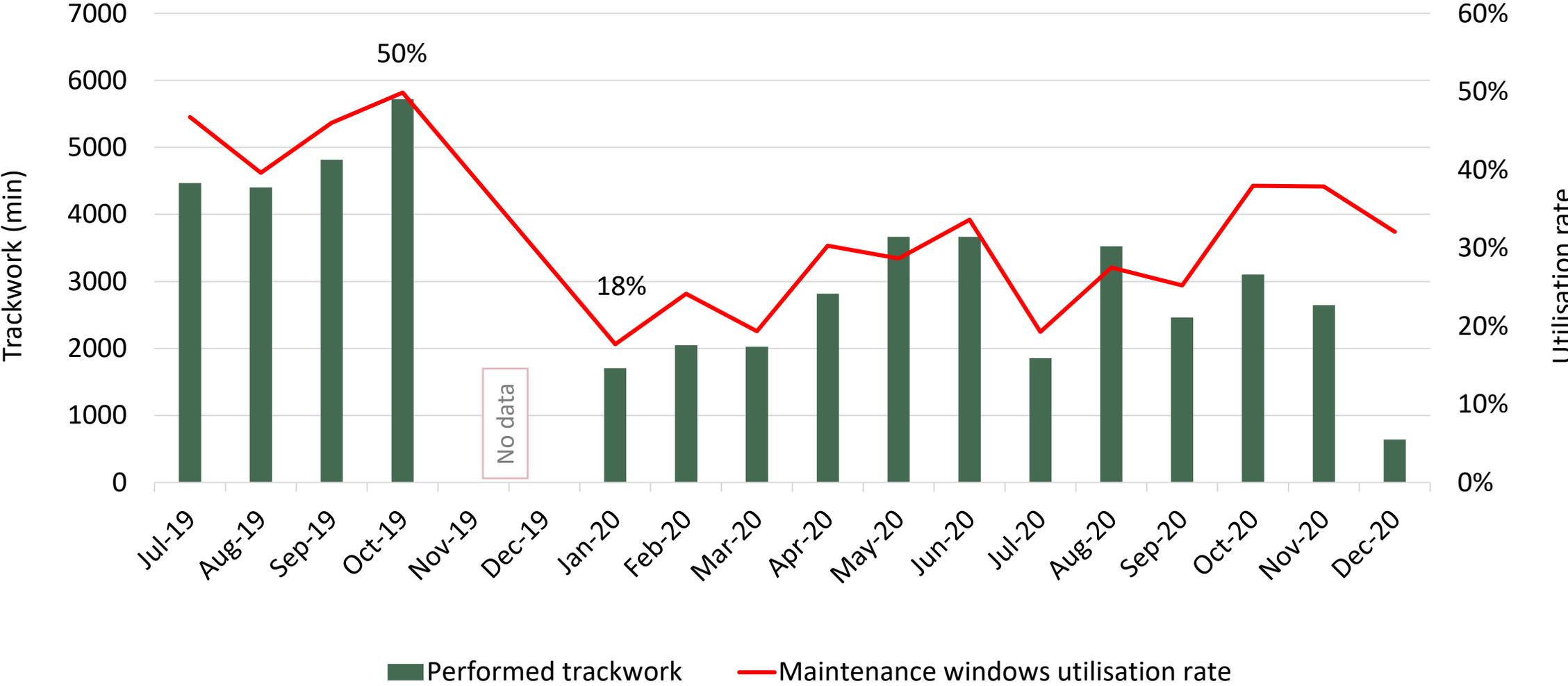
Trackwork and maintenance windows capacity occupation by location



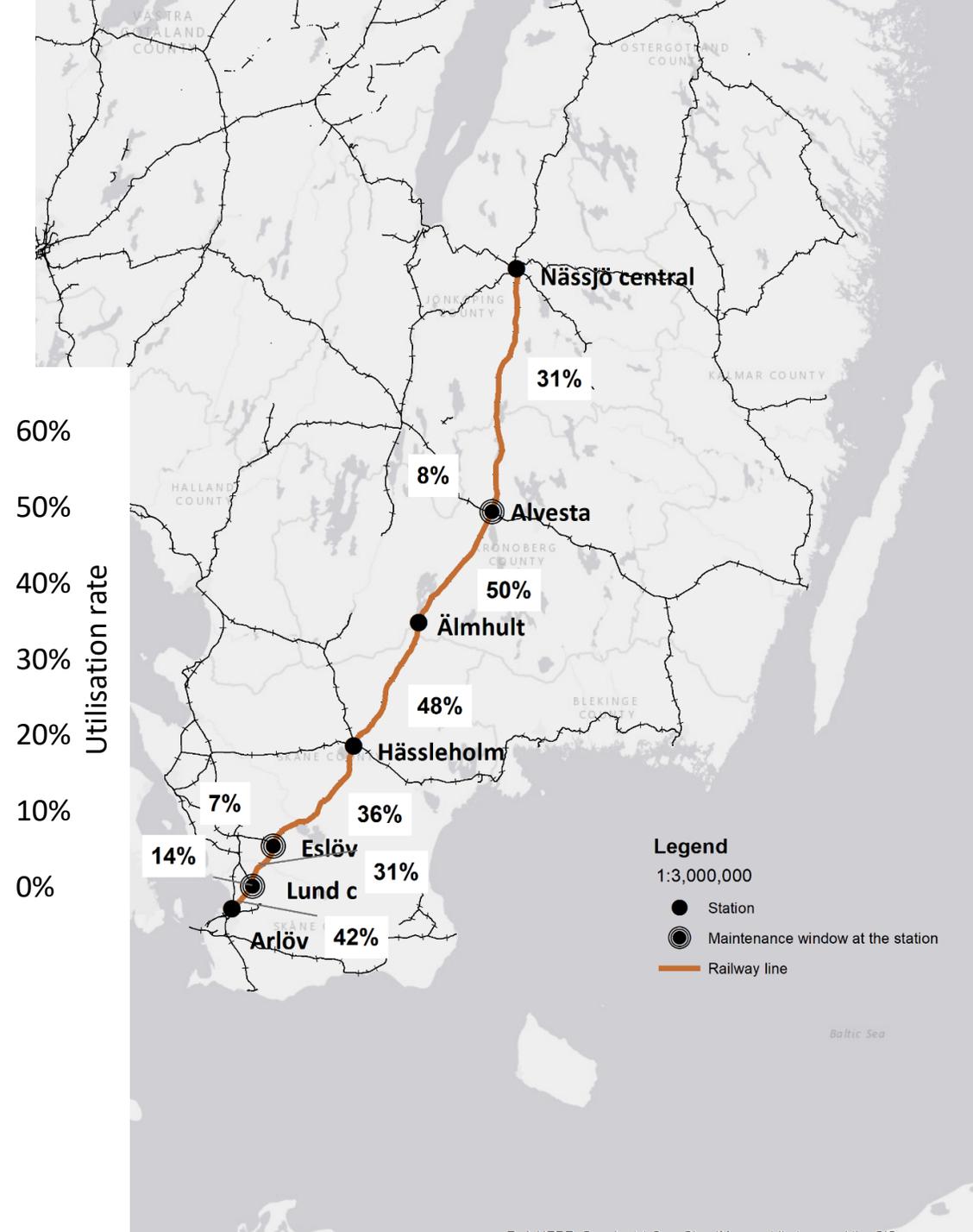
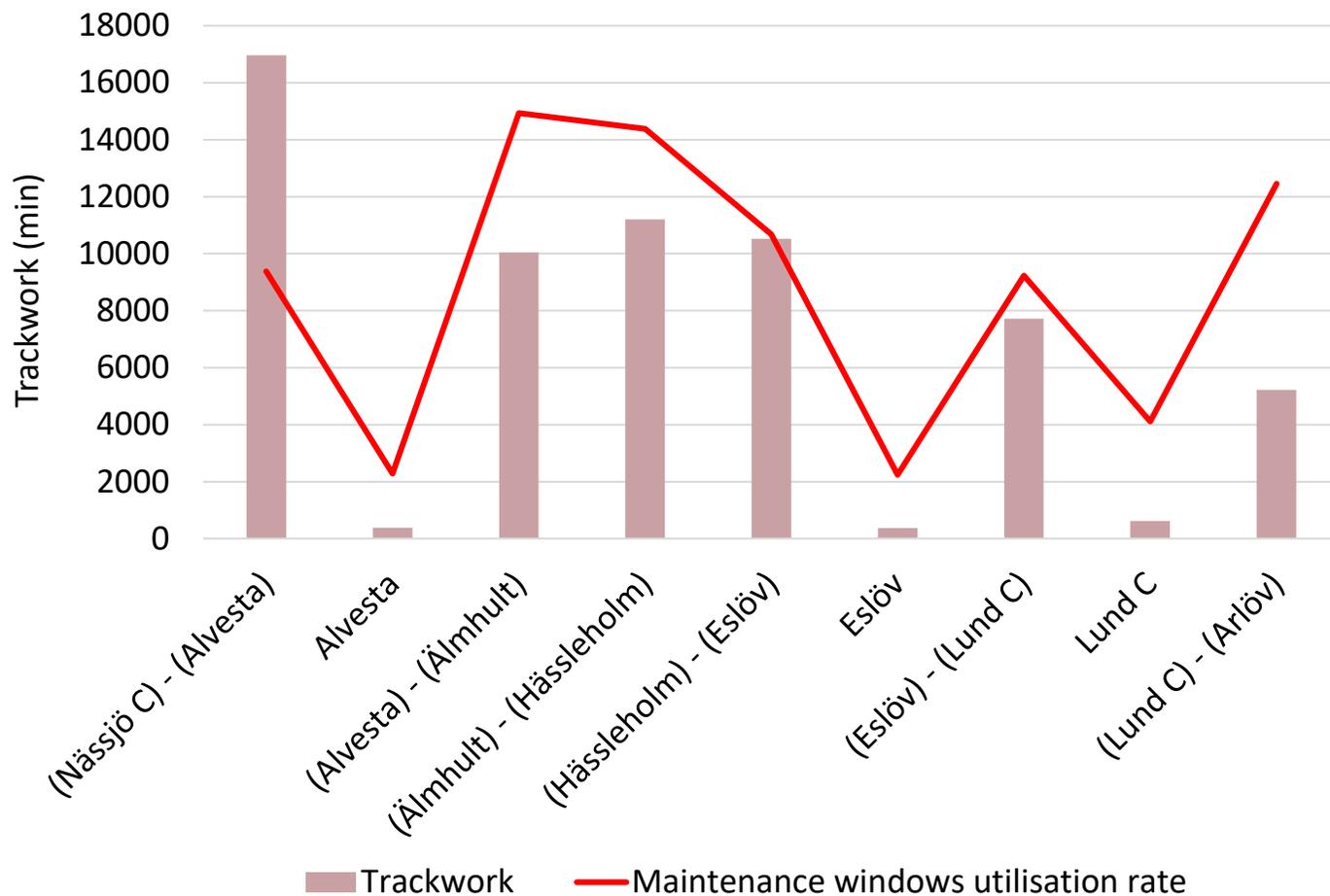
What was the utilisation rate of maintenance windows in 2019 and 2020?



Maintenance windows utilisation rate by month



Maintenance windows utilisation rate by location



Conclusion

- 11% of total railway capacity was utilised for trackwork, while 10% of capacity was booked in maintenance windows
- 29% of trackwork performed within maintenance windows in 2019 and 2020
- The estimated maintenance windows utilisation rate is 34%
- Use of maintenance windows depends on a volume of planned trackwork, time and location

Thank you for your attention!

Questions?

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TRAFIKVERKET

