

Improving Link Light Rail Reliability

System and operations resiliency update

Rider Experience and Operations Committee

6/5/2025



Why we are here

Provide quarterly update on operating systems resiliency progress:

- How unplanned disruptions are trending.
- Field work completed since March to reduce unplanned disruptions.
- Plans to complete remaining resiliency work.

Update only, no Board action requested

Unplanned disruptions

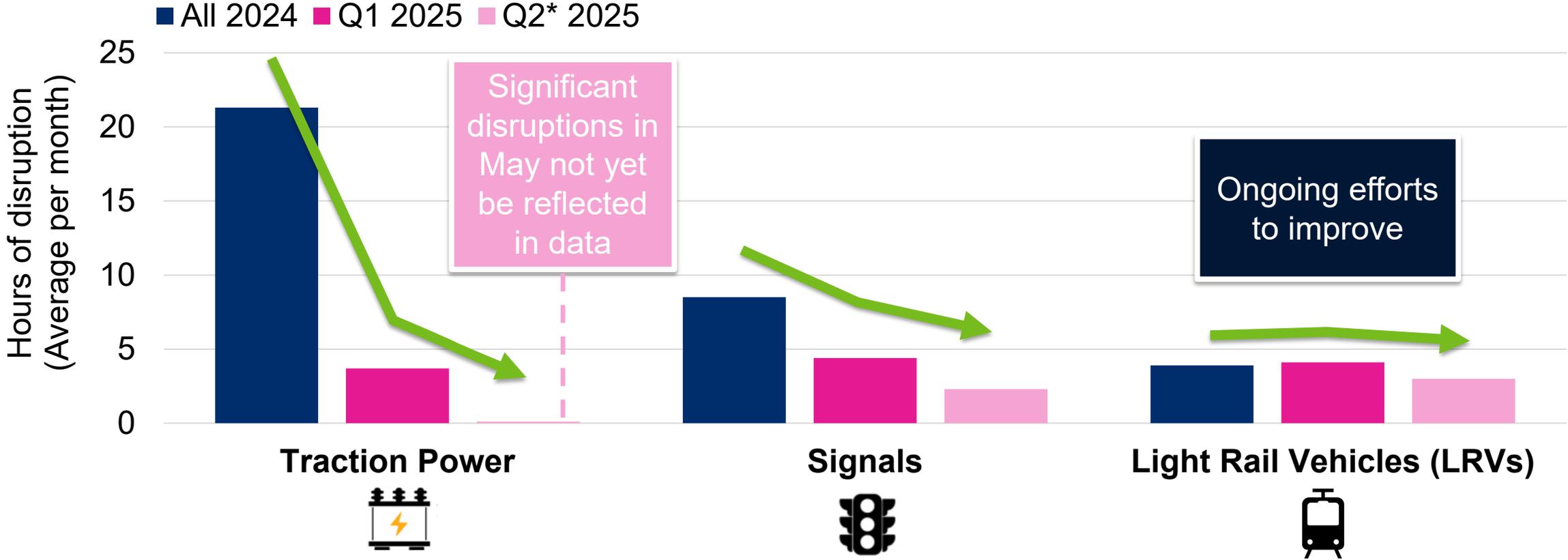
Unplanned disruptions

Average hours per month of system downtime has decreased.



Unplanned disruptions

Resilience efforts have focused on highest-impact areas.



Focus: May 2025 unplanned disruptions

While Q1 2025 had fewer unplanned disruptions over 2024, in May we saw significant disruptions due to:

- Two overhead catenary system (OCS) power loss events.
- Signal issues.
- Brake faults on light rail vehicles.

ST staff have identified actions and are working with KC Rail partners to integrate lessons learned into operating practices.

***Work completed
since March to improve
system resiliency***

Improvements since March

Rail

- **Replaced** worn rail to reduce unplanned disruptions due to rail breaks
- **Expanded** scope of signal inspections to catch issues earlier

Traction power

- **Improved** monitoring from control center to traction power switches along Lynnwood Link Extension for better system management
- **Recalibrating** settings to reduce power outages and improve worker safety
- **Instituted** validation period to establish system stability prior to revenue service at Downtown Redmond Link Extension opening

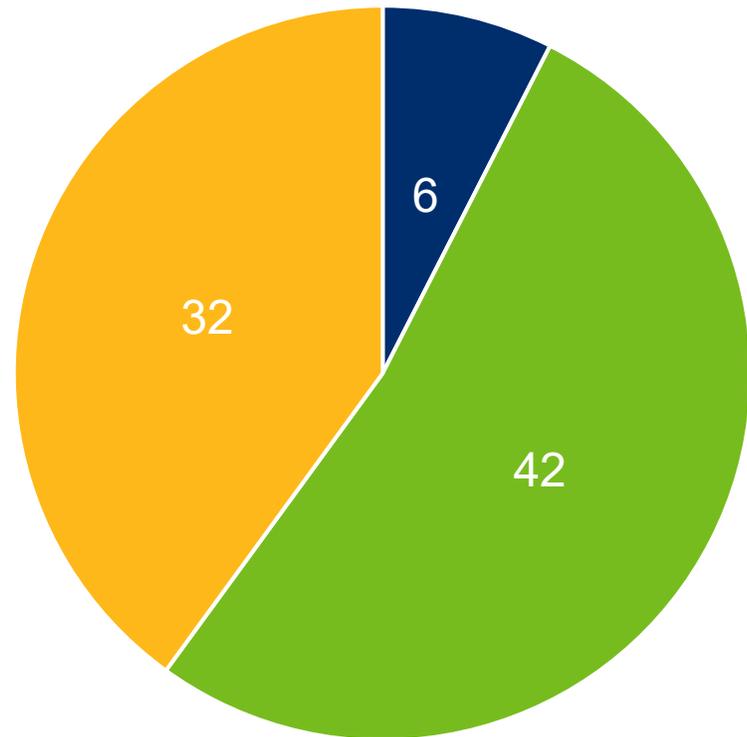
Operational response

- **Established** IT Operations Center to ensure faster response to network issues
- **Reallocated** KC Rail staff for quicker response times for maintenance and repairs
- **Established** new KC Rail positions to support faster response to power outages

***Completing the remaining
resiliency work***

80 Recommendations Reviewed

ST staff have identified deliverables and timelines



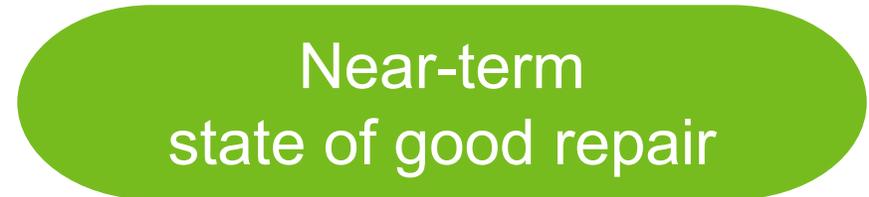
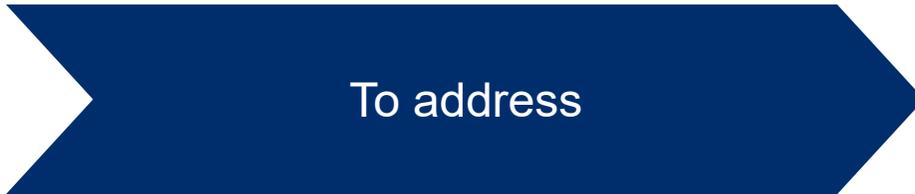
■ Complete ■ Near-Term ■ Longer-Term

- Response efforts have been integrated into department workplans.
- Service Delivery and Agency Oversight assigned the majority.
- Over half are expected to be complete within the next 4 years.

Advancing the resiliency program



Smaller
Projects



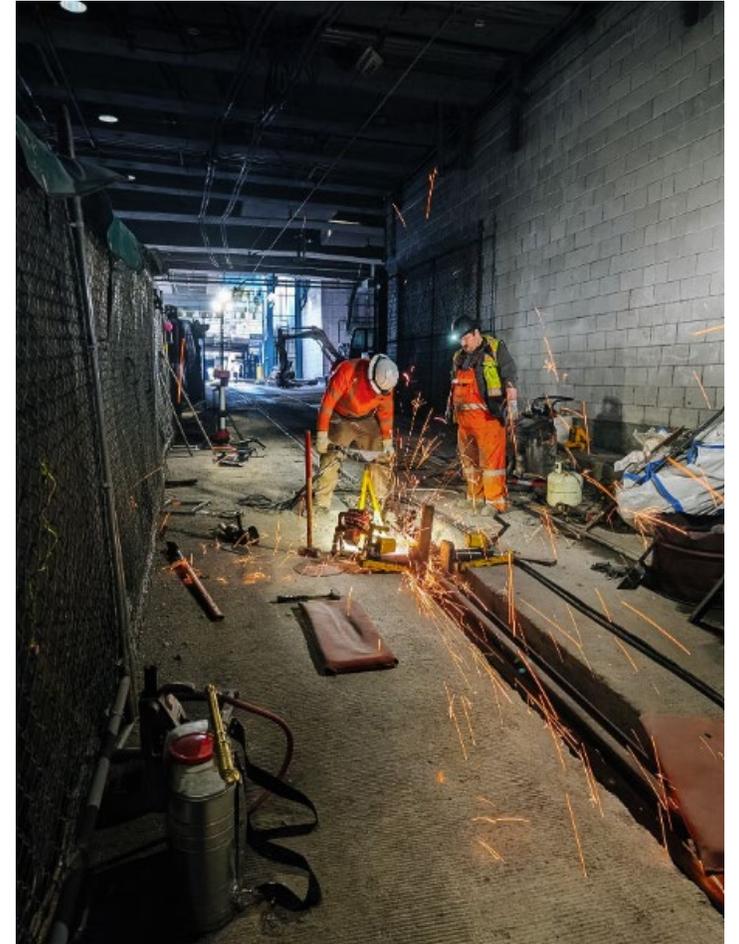
Feasibility
Studies



Actioning projects for resiliency



- Work progressing as part of state of good repair projects. 22 projects currently identified:
 - 2 complete
 - 13 in-progress
 - 3 new in 2025
 - 4 anticipated to begin in 2026
- All projects will be complete in the next 4 years
- Remaining near-term recommendations are addressed in departmental workplans



Studies to assess capital investments



Potential investments to improve operational flexibility

- Feasibility studies required to determine cost-benefit of potential investments such as:
 - Adding crossovers
 - Changes to signaling system
 - Building a Unified Control Center
- We'll return when studies are complete for Board review

What's next

Work continues. We'll continue to aggressively move project schedules forward to improve system resiliency, and to track data to show where progress is seen or not.

We'll return in Q3 with an update on the overall health of the system and continued progress.

We're committed to reducing unplanned disruptions for our current riders everyday, as we also prepare the system for increased complexity when more service opens in 2026.

Thank you.



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