

Development of Technology to Automate Snowplow Operation

~ Labor Savings through Autonomous and Multi-Vehicle Convoy Technologies ~

Développement de technologies de conduite autonome pour les engins de déneigement

~ Réduction des effectifs grâce à la conduite autonome de plusieurs véhicules et à la conduite en convoi ~



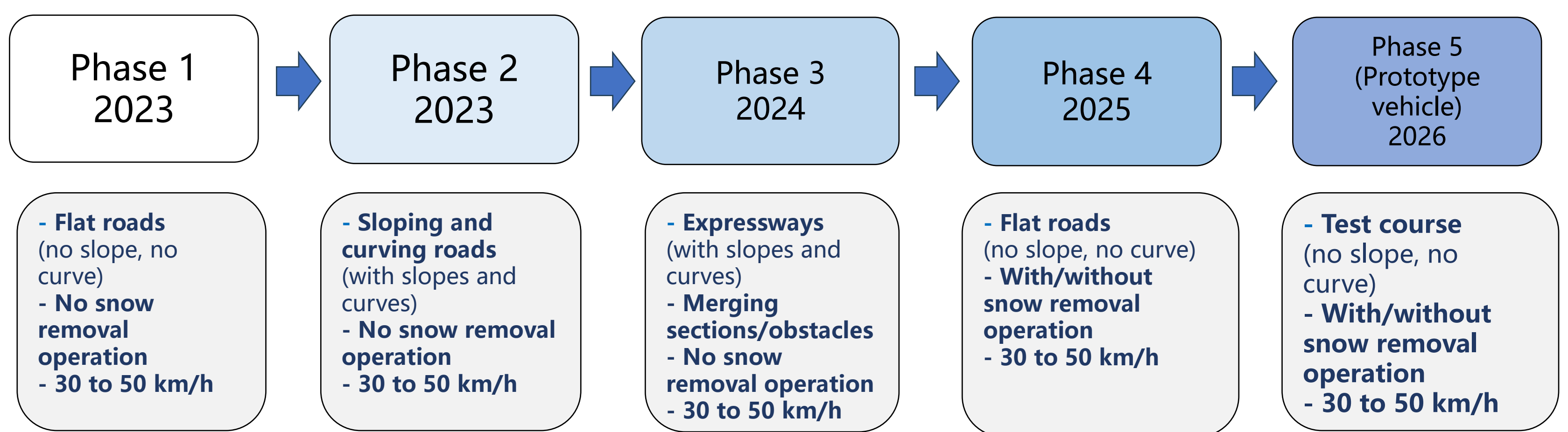
In view of the shortage of skilled snowplow operators due to the aging of population and a declining workforce, we are working on developing the technology to automate snowplow operation with the aim of reducing or eliminating workforce requirements associated with the convoy operation of snowplows. The goal is to reduce the number of snow-removing equipment operators for the second and third snowplows in a convoy from two to one.

Features of technology development

- Each snowplow moves autonomously on a different path (autonomous driving technology).
- Each trailing vehicle runs on a different path from the vehicle ahead while keeping an appropriate inter-vehicle distance (inter-vehicle distance maintenance technology).

Development phases

As shown below, the technology for the convoy operation of snowplows has been developed in phases. The ongoing Phase 4 involves field testing under realistic snowfall conditions. The next step is to move onto the validation stage using prototype vehicles for further demonstration.



Establishment of convoy technology for practical operation

Establishment of technology to transition from single-row operation to convoy operation

Phased development process

