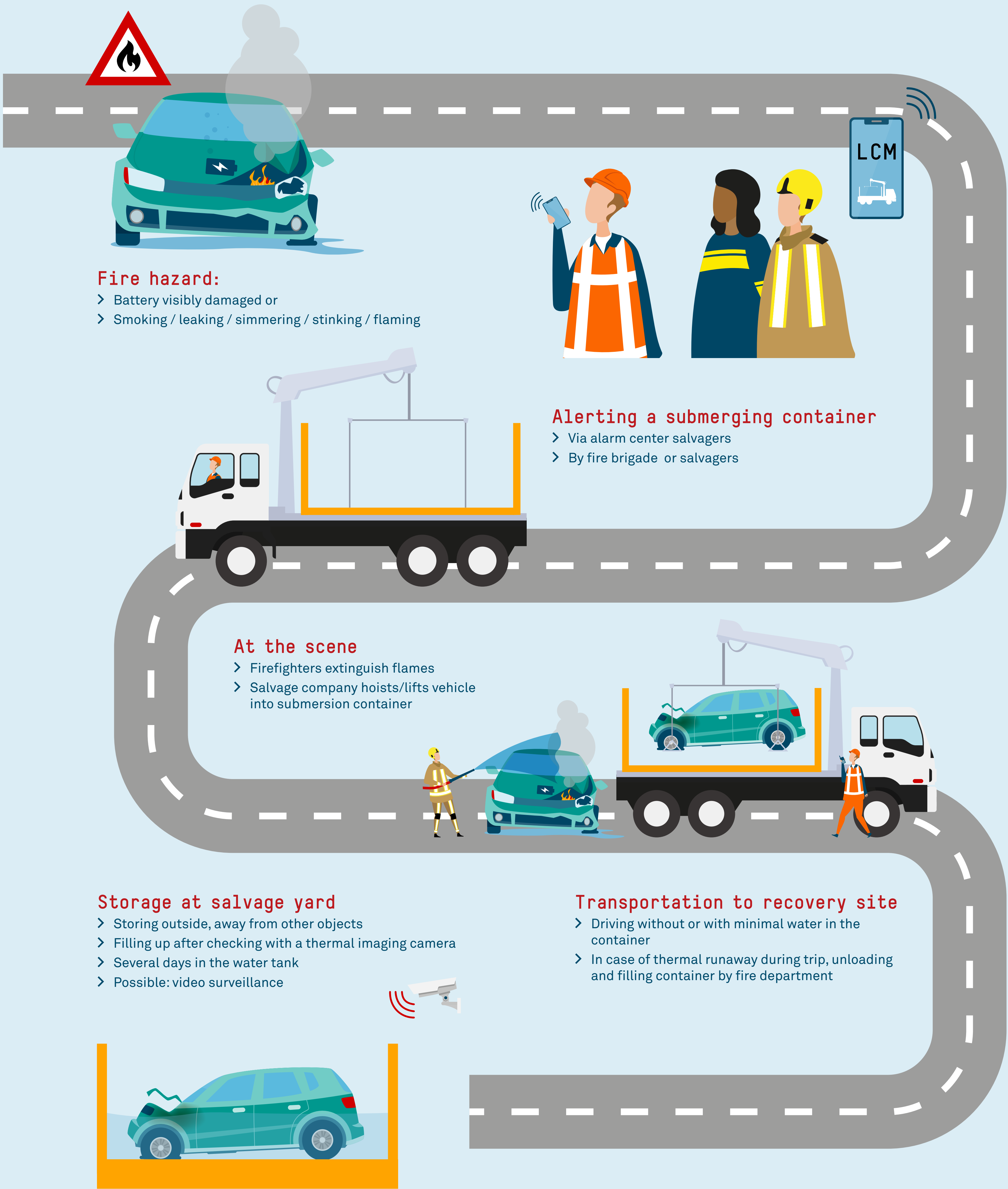


# Submerging container and its possible alternatives

a comparative assessment study

## Deployment of submerging container



## Techniques for battery packs of electric vehicles

### Scenarios

> Fire in electric passenger vehicle  
> Battery pack involved  
> Vehicle easily accessible

**1st choice technique**  
Fire-access in battery pack

**2nd choice technique**  
Submerging of an electric vehicle in a submerging container

> Fire in electric passenger vehicle  
> Battery pack involved  
> Vehicle poorly accessible

**1st choice technique**  
Fire-access in battery pack

**2nd choice technique**  
BEST battery extinguishing system

> Battery pack manipulated  
> Risk of thermal runaway

**1st choice technique**  
Place in submersion container without water

**2nd choice technique**

- > Fire blanket
- > Mobile sprinkler
- > Aerosol container

NIPV examined twelve techniques in three scenarios involving the battery pack of an electric vehicle. The techniques were assessed on the following criteria: safety of firefighting personnel, safety of recovery personnel, cooling effect, environmental impact, collateral damage vehicle, deployment time and practicality.

Submerging container alternatives and their applicability to incident management activities

Method	Extinguishment	Suppression	Transport
Submerging container	X		X
Aerosol container		X	X
Cobra Coldcutter	X		
E-Extinguishing Lance	X		
Mobile sprinkler		X	
Mobile submerging unit	X		
Fire blanket		X	
Transportation blanket		X	X
BEST battery extinguishing system	X		
Extinguishing bag	X		X
Fire-access in battery pack	X		
Let the vehicle burn out	X		



Want to know more?  
Read the report Research Submersion  
containers - An assessment of the  
submersion container and possible  
alternatives on nipv.nl