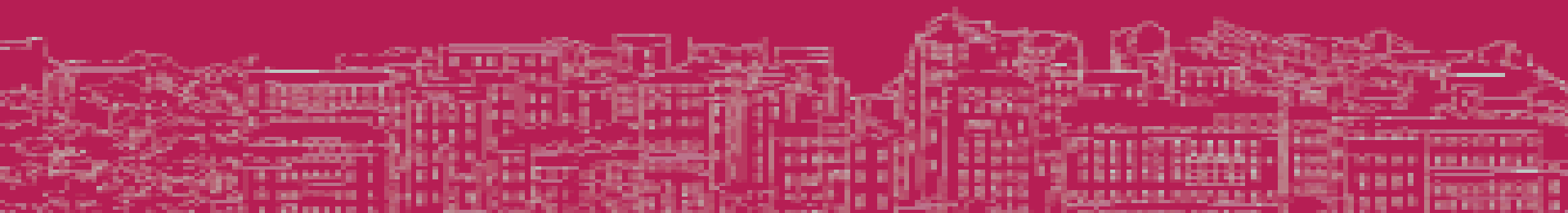


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- **Guidelines for renewal of public transport and heavy vehicles**





Renewal of public vehicles

- Old or ageing vehicles
 - Designed for capacity, not noise
 - Noisy engines
 - Car body
 - Low sound insulation
 - Vibrating structures
 - Non acoustic aspects
 - Fuel consumption
 - Air pollution
 - Accessibility



New vehicles

- Acoustics is now a design component
 - Reduced engine vibration
 - Better assembling
 - Attention to equipments
 - Brakes
 - Ventilation
- New engines
 - Purely electric
 - Hybrid



Informations required

- Noise emission levels of existing vehicles
- Distribution PT / rest of traffic
- What can one expect from current technology ?
- Available sponsorships
- Financial situation
 - Local transport companies
 - Logistic companies



Implementation aspects

- Actors
 - Public transport authorities
 - Local transport companies
- Efficiency
 - Potentially high initial costs but modern vehicles are usually less costly to run on the long term
 - Efficient where PT is dominant
- Difficulties
 - Financial



Warnings

- Investment AND Servicing
- The maintainers must be informed of the new objectives
- Noise is also a matter of behaviour
- Noise specifications are seldom met by manufacturers
- Air conditioning is not a good idea when noise matters
- PT vehicules with low floor can be noisy