High capacity city transport with intelligent access – A Swedish case study of transporting excavated material

SCOPE and PURPOSE
The purpose of the project is to perform field tests in ongoing construction projects. The project will test the hypothesis that the HCT-concept will improve both productivity and transport efficiency and thereby reduce CO2 by up to 40%.

The main contribution of this paper is the description of the challenges and benefits of applying the HCT concept to construction operations in urban contexts.

CHALLENGES and BENEFITS
Challenges:
• Transport volumes keep increasing
• A complex system-of-system landscape
• Business eco-system with many actors
• Regulation and dispensation process

Benefits:
• Reduce CO2 by up to 40%
• Improved productivity and transport efficiency
• Fewer heavy construction trucks per tonne-km

METHOD
Real world field test in ongoing construction projects, in two major cities, Stockholm and Varberg.

NEW CONCEPT VEHICLE
5-axle truck with steerable axles and double payload

DIGITALIZATION AND INTELLIGENT ACCESS TECHNOLOGY CONCEPTS

RECOMMENDATIONS and CONCLUSIONS
Input and recommendations for further research and development with new pilots for urban construction projects with HCT-systems. The project will contribute with recommendations regarding procurement of transport and materials handling, and to a legal, institutional and digital framework for successful HCT reform deployment.