Construction consolidation centre

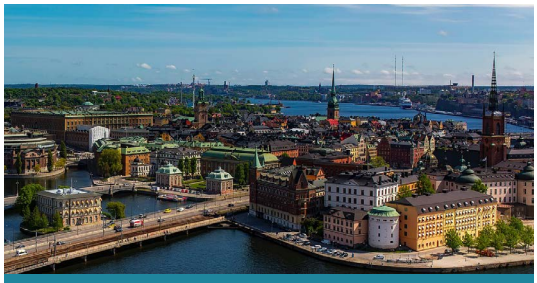
Smart solution 2
Smart building logistics

Measured impacts

45%
reduction in CO_2 emissions

54%
less time spent by trucks in traffic

845
road minutes by trucks moved to nightime



Stockholm

Technical partners

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What is it?

A centralised logistics depot for construction materials, where different product types are grouped into single deliveries for distribution to the construction site at the right moment. Waste can then be removed from the construction site using the same transport. With construction materials accounting for 30-40 % of goods moved around modern cities, this approach avoids multiple deliveries by various suppliers, and combined with using alternative fuel vehicles for distribution can help drastically cut emissions from freight transport.

What did GrowSmarter do?

The distribution company Carrier established a consolidation centre in Slakthusområdet, the GrowSmarter pilot area in Stockholm to supply an office-block construction site in Hammarbyhamnen with logistics for a refurbishment.

The original technical partner Skanska was unable to adapt the solution because it was introduced too late in the key planning process on the Skanska site. Instead a project by Arcona (a local Stockholm-based construction company), who was already preparing to handle logistics in a more advanced and digital way, at a challenging site in Hammarbyhamnen was chosen and the measure was moved to this construction site.

Lessons learnt

Carrier acquired experience in the operations of delivering consolidation services through the measure, enabling them to provide this service to other construction sites in the Stockholm area. Arcona, the local contract company, gained new insights into the organizational demands of logistics, such as the need for very early integration of consolidation into project planning and the need to adapt pre-existing supply agreements to enable consolidation to work more smoothly.

Municipalities could demand fossil-free transport at construction sites and regulate allowed transport volumes to promote consolidation centers.

Upscaling & replication potential

The scale of a construction project, along with its geographic location, influence the extent to which consolidation centres can deliver for less cost, less environmental impact and other benefits. Consolidation centres offer clear benefits when implemented at larger, complex sites (e.g. multiple construction projects, many actors operating and diverse deliveries' range).

The extent to which small-scale projects offer benefits varies depending on the local context and pre-conditions. To ensure maximum impact, regulatory authorities could introduce or extend zoning requirements to make consolidation of logistics services for construction and other traffic-intensive activities compulsory in the strategic context of reducing emission and traffic.

How did the measure work?

Technical feasibility ●●○

The measure is technically feasible.

Economic feasibility ●○○

The measure is not economically sustainable for a single agent or just one site. Including more actors or coupling the consolidation centre with major public infrastructure projects is needed.

Replication potential ●●○

Possible to replicate; important though to take into account what type of construction project it is (e.g. restoration/renovation or new construction) as the prerequisites can differ.

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