

Construction Consolidation Centre

A sustainable Urban Mobility Solution

SMART SOLUTION 2: SMART BUILDING LOGISTICS



- Ensures greater economic and environmental efficiency during refurbishment.
- Coordinated deliveries reduce number of journeys to and from construction sites, lowering emissions and increasing air quality.
- More efficient building process leads to time savings, reduction in damaged or stolen material, and reduced transport time.



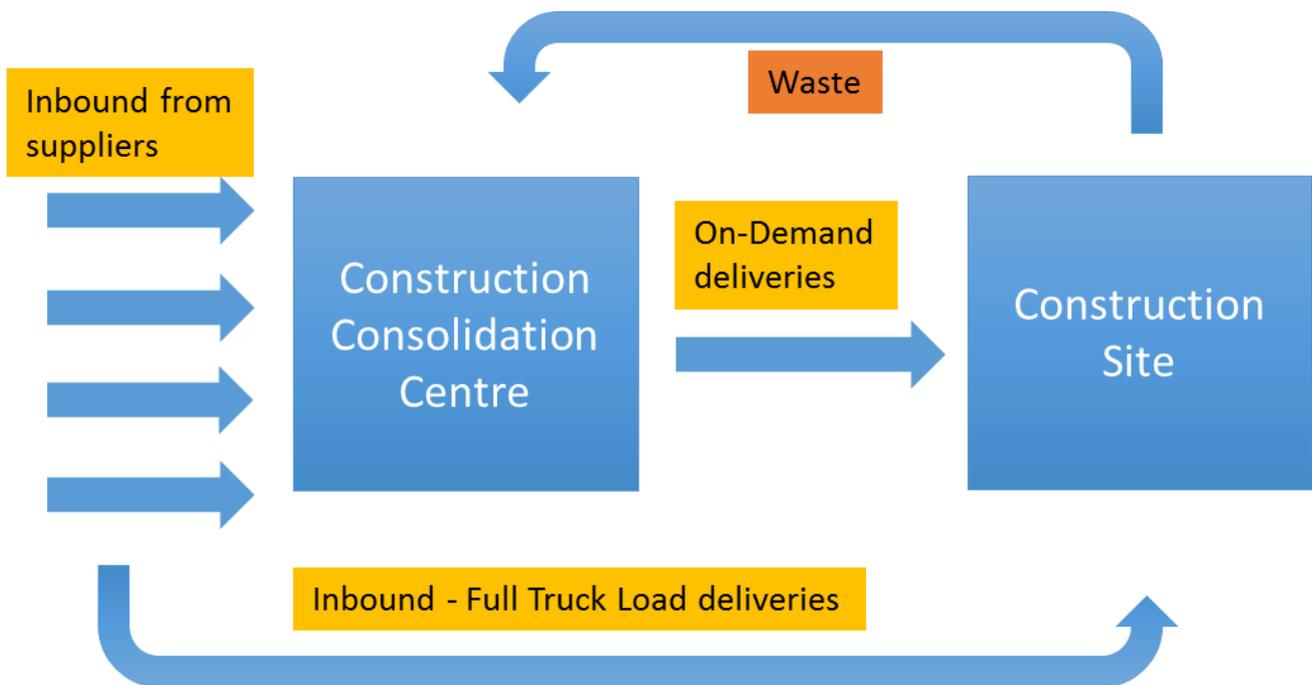
Stockholm

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What is the solution?

The Construction Consolidation Centre is a logistical set-up to improve the conditions for construction projects such as new developments or refurbishments. By planning the material flow and steering inbound deliveries to the Consolidation Centre, it is possible to increase the efficiency of the building process. Possible savings are measured in reduced time, as well as damage to material during deliveries and handling, and waste. This can contribute to a major reduction in the environmental impact of a construction project.

The main benefit of the consolidation centre is an overall reduction in the number of deliveries to the construction site. This will lead to less damaged or stolen material, less time spent for workers waiting or searching for material, and a safer working environment on site. Deliveries between the Consolidation Centre and the two refurbishment sites in Valla Torg and Slakthusområdet in Stockholm will be made with alternative fuelled vehicles.

How does it work?

By planning the material flow to a construction site the efficiency in the flow of materials can be increased. Most of the inbound deliveries are directed to the Consolidation Centre instead of the Construction site allowing for better control of the inbound material. It will still be necessary, however, for some deliveries to go straight to the site. The Construction site will order material from the Consolidation Centre, when needed, at a specific time and location at the site. This means that very little material will be stored on site. The number of deliveries to the site is reduced by 40-60%, since small direct deliveries are avoided and instead grouped as larger deliveries. The truck doing the delivery of building materials will bring waste from the refurbishment sites back to the Consolidation Centre. The same truck will be handling both new materials and waste, further reducing traffic to and from the site.

Expected impact

The Consolidation Centre is expected to provide the following positive impacts in terms of the key GrowSmarter objectives:

Reduced environmental impact

There will be less trucks delivering goods and collecting waste. The vehicles operating from the Consolidation Centre will use biofuels or an electric driveline. This will reduce both emissions and noise.

Improved conditions for more efficient building processes

Less time will be spent waiting for, searching for and picking up material to use for the building. Less risk of materials being stolen or destroyed by bad weather.

Promoting sustainable economic development

There will be a reduction in damage to materials and a reduction in time spent on activities other than building.

Potential for replication

Similar consolidations centres have been used in Stockholm with good results. This is the first time the solution has been applied to refurbishments and should hopefully inspire others to use consolidation centres in a similar way elsewhere.

About GrowSmarter

GrowSmarter (www.grow-smarter.eu) brings together cities and industry to integrate, demonstrate and stimulate the uptake of '12 smart city solutions' in energy, infrastructure and transport, to provide other European cities with insights and create a ready market to support the transition to a smart, sustainable Europe.

GrowSmarter project partners



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