’BÖRjA’ – Construction logistics for increased resource utilization and transport efficiency (Phase 2)

’BÖRjA’ – Phase 1 (prestudy)

"Resource-efficient circular flows of construction materials supported by efficient data sharing"

ANDERS FORSBERG
Government Affairs | Innovation Deployment Officer
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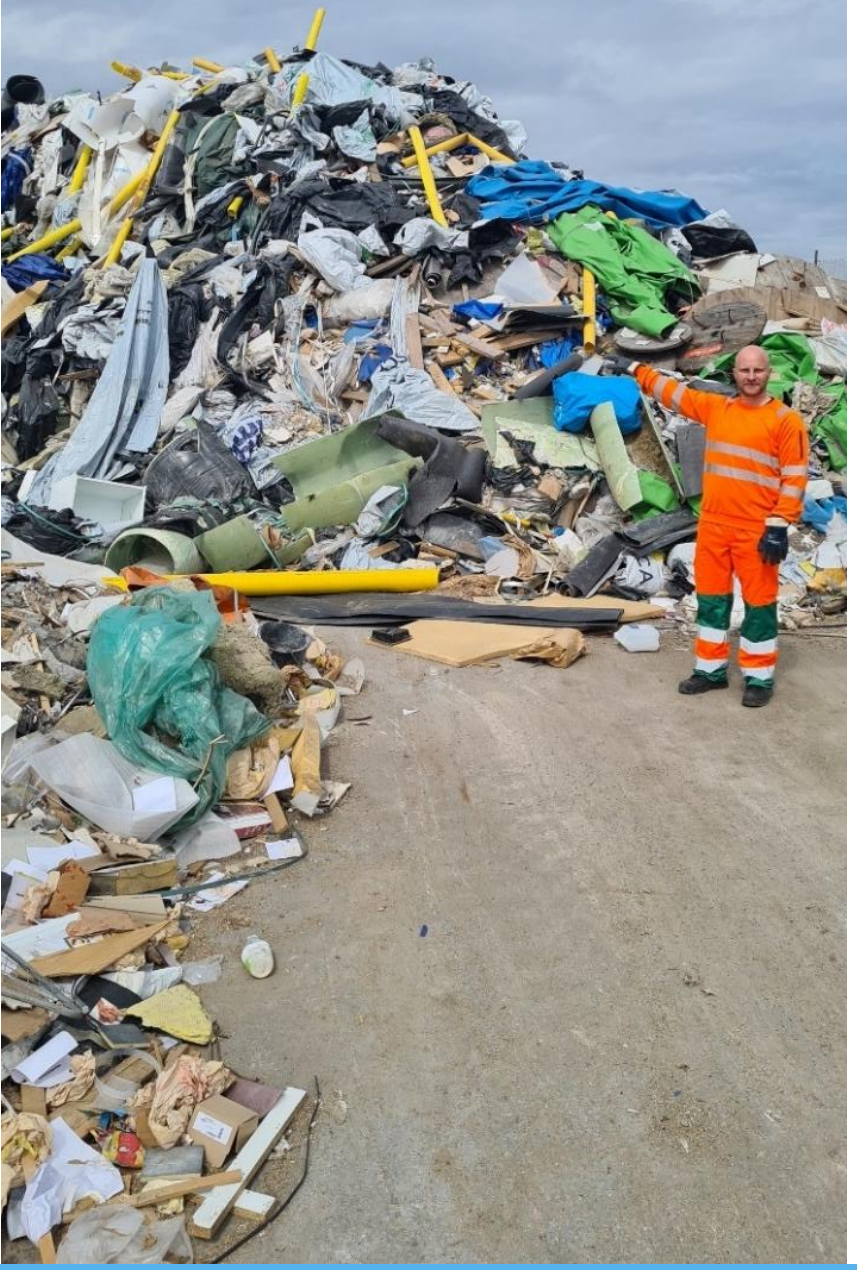
DRIVE SWEDEN

Reality check

Reality chock

Background – major challenges

- Waste from construction industry constitutes 40% of all waste
- Re-use or recycling of waste in the industry is very low
- Lack of Business Model and Supply Chain
  - Need for inbound and outbound logistics and transport
  - Need for data sharing related to material flow
  - Need for coordination and policy on criterias at Public Procurement
  - Need for improved requirement from Contracting Authorities



Background
– major challenges

There are several stand-alone examples of reuse and recycling, but they have not been scaled up due to inefficient logistics!

Break down of challenges

16 examples of types of data/ metrics:

”On site focus”

– **Sorting** rate on site	– **Time** for treatment
– **Number** of load carriers and type	– **Amount** of clean material at the sorting facility that can be reused
– **Number** of square meters for material handling	– **Lying** time in storage
– **Number** of kg/quantity per material in/out	– **Material** handling on site
– **Movements,** time/number	– **Type** of material. Number of fractions
– **Number** of downloads	– **Type** of car
– **Cost** of recycling/ waste management	– **Type** of information/system
– **Amount** of material that can be reused directly on site	– **Off-site** storage

Project goals

”Learning by doing”

- Increased resource utilization / transport efficiency
- Transformation from linear to circular material flows
- Implement and scaling up of approved solutions in a Value Chain
- Improved logistics, enabling small quantity in separated flows
- Provide a Proof of Concept on temporary storage in a Value Chain

  (outbound material-flow-hub)

”Practical approach”

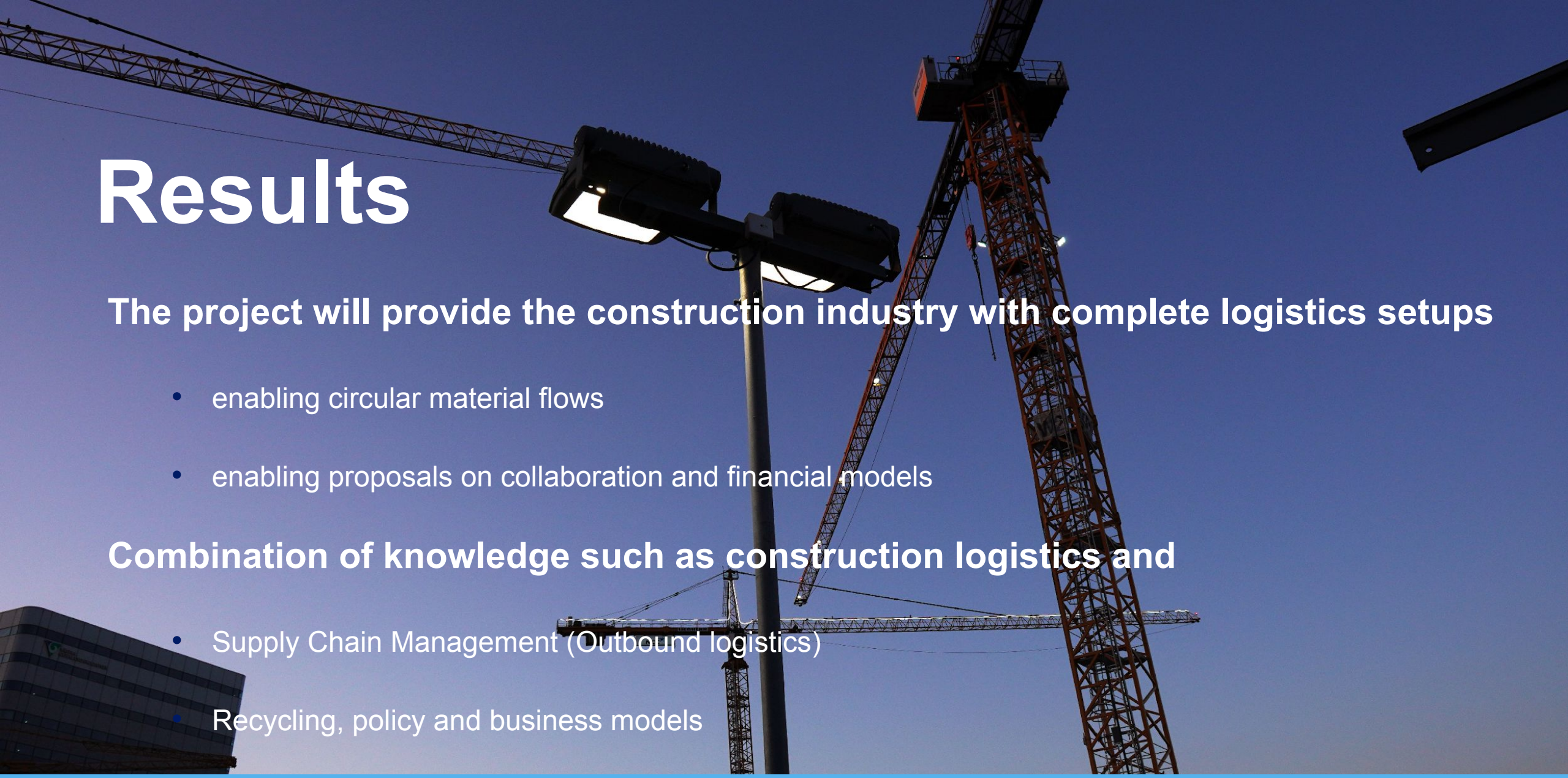
”Hands on”

European Court of Auditors

Special report 17/2023, “Circular economy: slow transition by member states despite EU action”

“
- Transition to circular economy behind schedule in EU countries
- EU countries’ progress halted in recent years, with insufficient focus on product design
- EU’s target of doubling share of material recycled by 2030 looks very challenging

”



Results

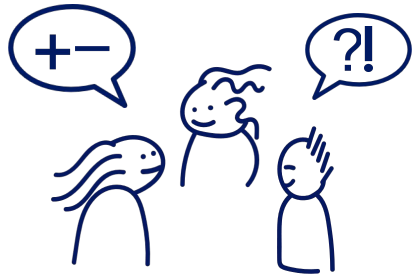
The project will provide the construction industry with complete logistics setups

- enabling circular material flows
- enabling proposals on collaboration and financial models

Combination of knowledge such as construction logistics and

- Supply Chain Management (Outbound logistics)
- Recycling, policy and business models

Partners



Prestudy

4 stakeholders

The Project is addressing three types of construction sites

New construction | Renovation | Demolition

- Linköping University
- Ragn-Sells Recycling AB
- Plan B
- Lindholmen Science Park

LINKÖPING UNIVERSITY

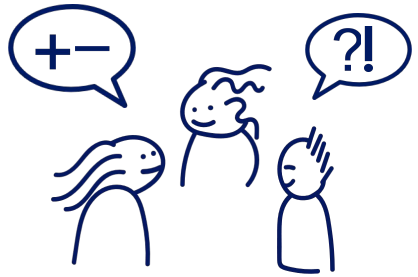
plan b

RAGN SELLS

Lindholmen Science Park

CLOSER

Partners



Demonstrator

23 stakeholders

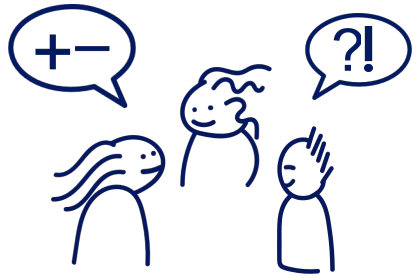
The Project is addressing three types of construction sites

New construction | Renovation | Demolition

”On site approach”

- Alimak Group Management
- Arris
- Beijer construction material
- Chalmers University of Technology
- Cramo
- Fabege
- Global Load Out Solutions
- Gordian Logistics Optimization Systems
- Haga ROT Services in Norrköping
- IVL Swedish Environmental Research Institute

Partners



Demonstrator

23 stakeholders

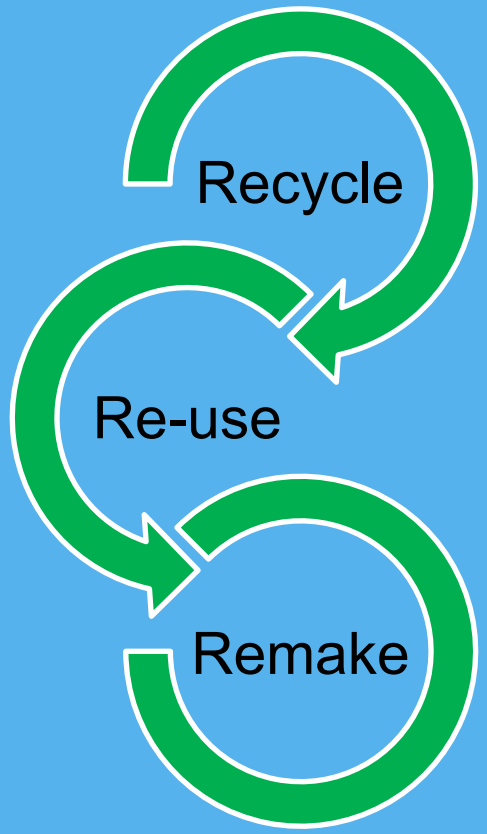
The Project is addressing three types of construction sites

New construction | Renovation | Demolition

- Jansson Contracting in Linköping
- Jernhusen
- Lindholmen Science Park
- Linköping University
- Lund University
- Myloc
- NCC
- Plan B Bim
- Ragn-Sells Recycling
- Scania CV
- Swedish Construction Clients
- Swedisol
- The Recycling Agency AB in Gothenburg

Contact

THANK YOU FOR YOUR ATTENTION



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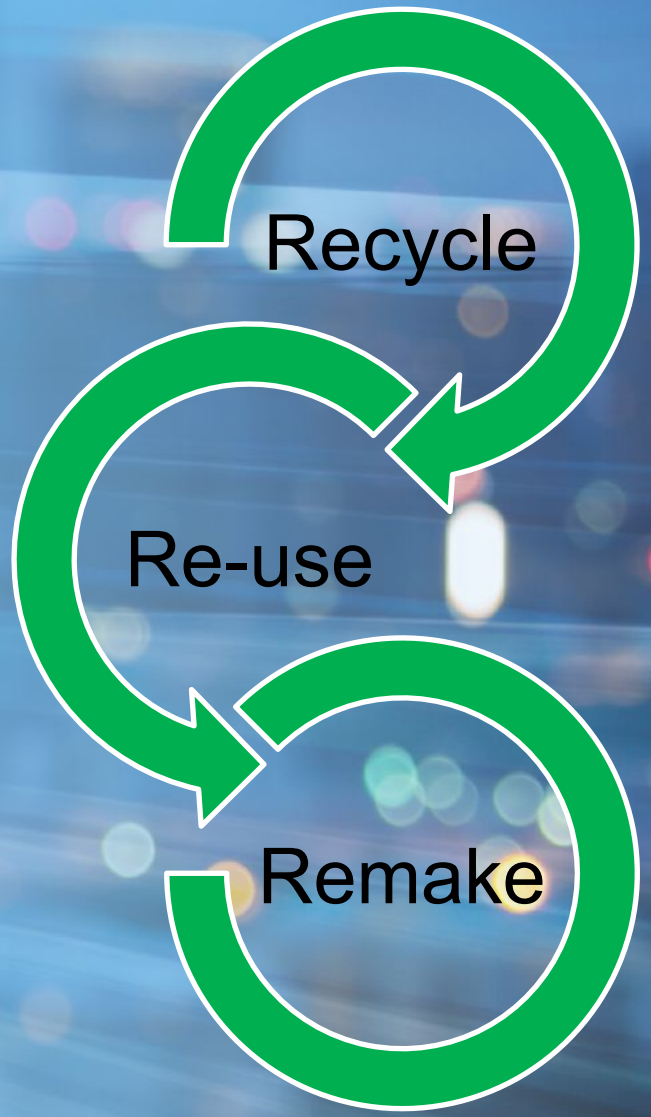

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