

# Supplier Day 2021

## Presentation 1



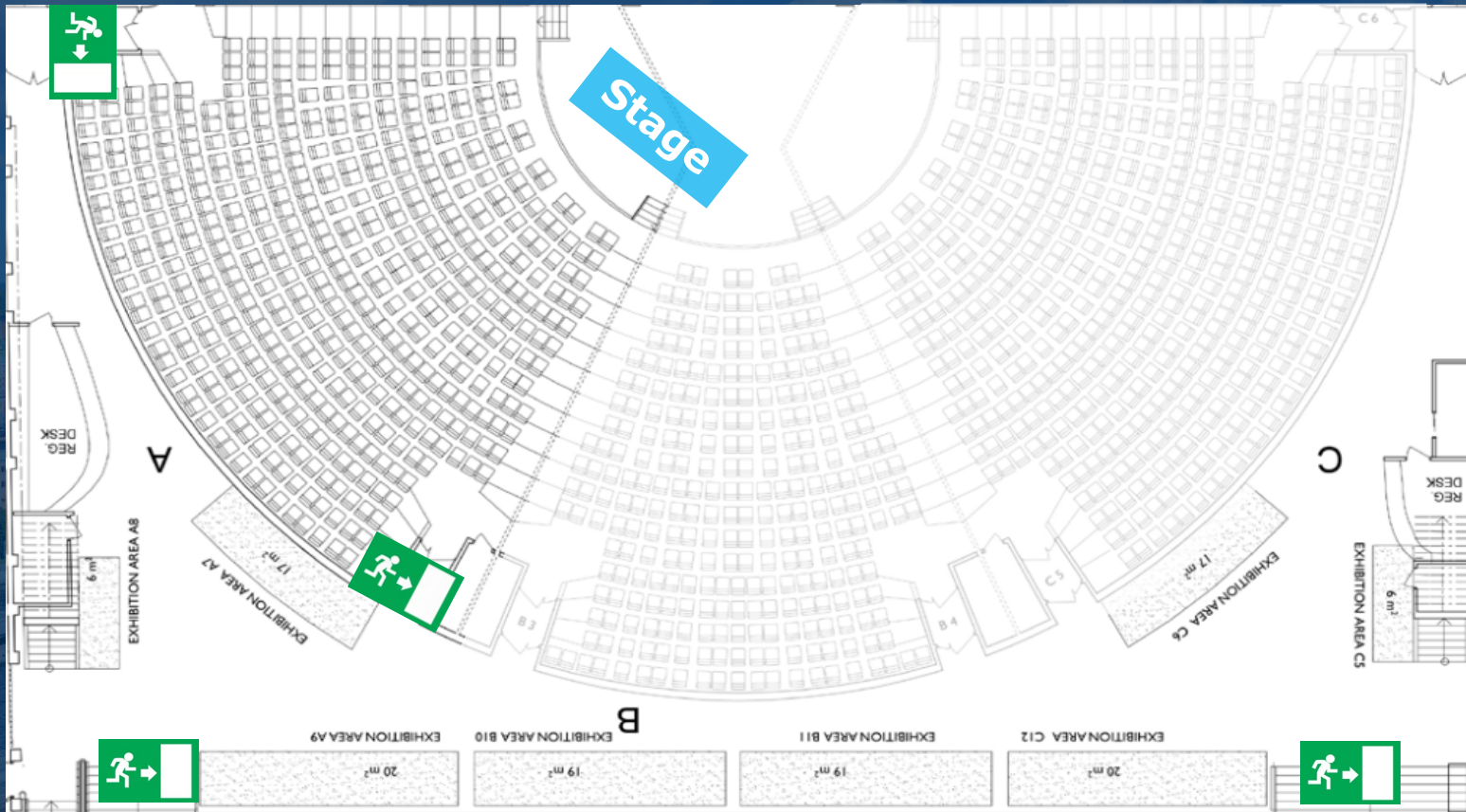




**Niklas Bergman**  
Director of Administration  
for Extended Metro



# Safety first!





# Program

## **09:00–10:30 Presentation 1**

Upcoming procurements for installations of railway facilities, tracks, signals, escalators, elevators, ventilation, framework supplements of stations as well as services for logistics and coordination.

## **10:45–11:45 Presentation 2**

Upcoming procurements for planning and design project: The Metro to Älvsjö

## **11:00–13:30 Lunch with exhibitions and mingle**

## **13:30–15:00 Exhibitions and mingle**



# Presentation 1

- **Introduction** Niklas Bergman, Director of Administration for Extended Metro
- **The procurement process** Iveta Sandström, Head of Procurement
- **BEST and construction** Metro to Barkarby, Malin Harders
- **Construction, Installations and BEST** Metro to Arenastaden, Malin Harders
- **Construction, Installations, BEST, Coordination and logistics**  
Blue line to Nacka, Södermalm and Söderort, Tor Thomassen, Marcus Andersson,  
Allan Lindfors, Ann-Christin Zander Holwaster, Mats Vornanen
- **Summing up** Niklas Bergman, Director of Administration for extended Metro



## Signature of the Stockholm Negotiation Agreement in 2014



## The National Negotiation on Housing and Infrastructure 2017













# Ongoing Contract



**Barkarbystaden**

**SBT**  
Main tunnel

**Barkarby**

**Akalla**

**Blue line to  
Barkarby**

**Construction time: 8 years  
Planned start of operation: 2026**







## Ongoing Contracts

## Implenia Access tunnel

**SBT**  
Access tunnel

**NCC**

# Metro to Arenastaden

## Construction time: 8 years

## Planned start of operation: 2028



# Ongoing Contracts



**PEAB**

Cut and cover tunnel

**YIT**

Access tunnel

**NCC**

Buildings

Extended Depot  
at Högdalen

Construction time: 5 years



# Ongoing Contracts



Blue line to Nacka,  
Södermalm and Söderort

Construction time: 10 years  
Planned start of operation: 2030



# Ongoing Contracts



**WSP**  
Location study

**Metro to Älvsjö**  
Start planing process: 2020







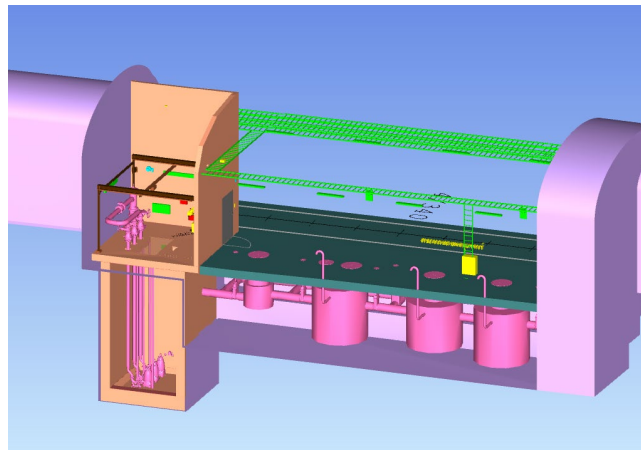
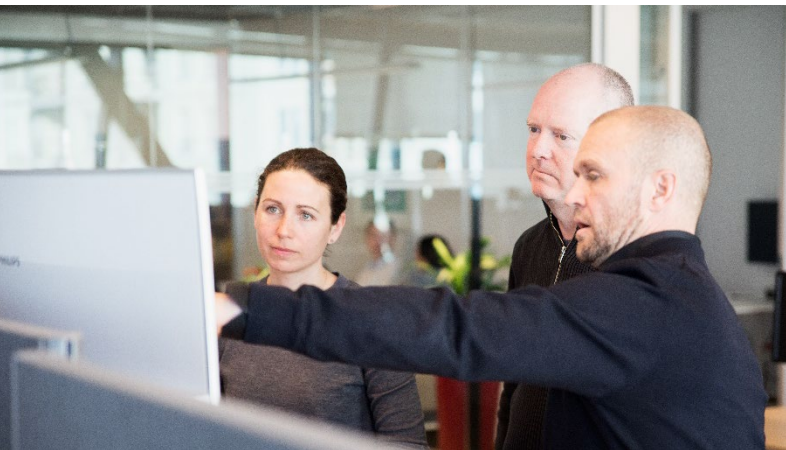


**Iveta Sandström**  
Head of Procurement



# Be part of extending the Stockholm Metro!

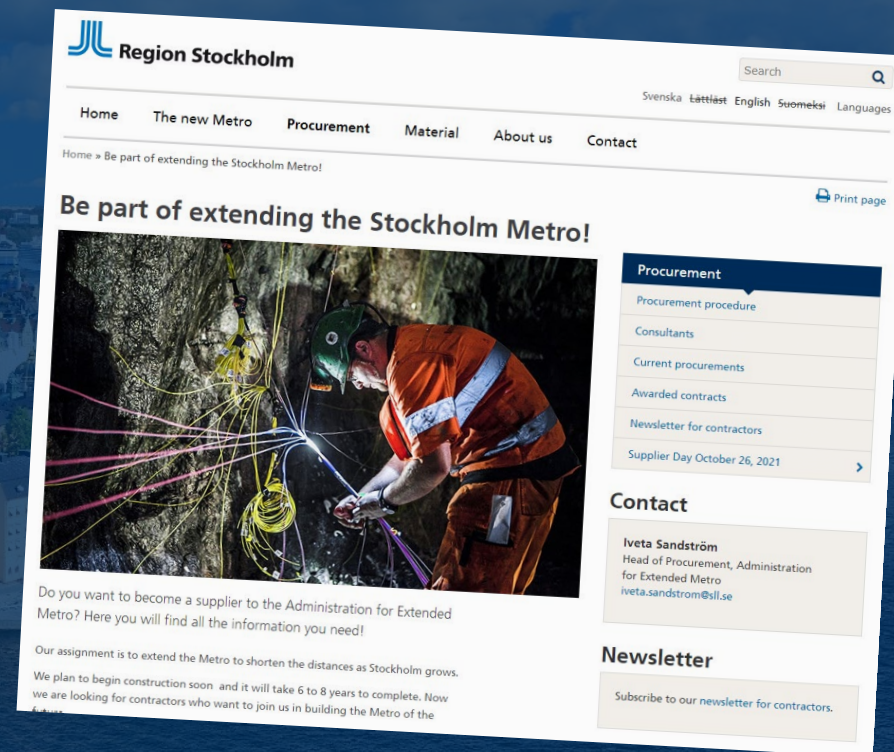
- Many opportunities
- Large variety
- >25 upcoming procurements for a total of approx. SEK 10 billion in 2022–2023.





# nyatunnelbanan.se/en/procurement

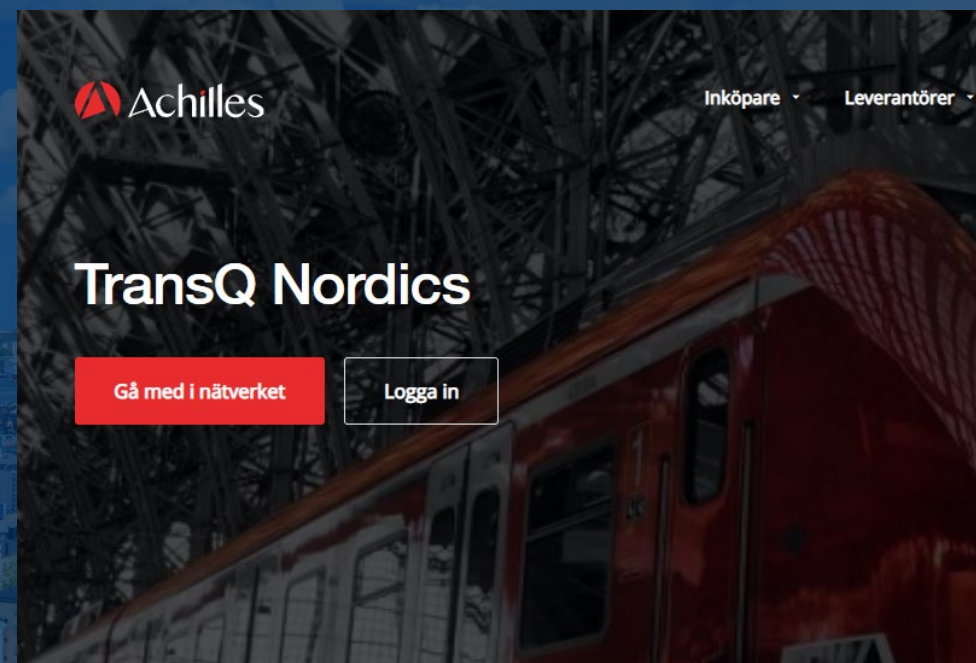
- Procurement procedure
- Consultants
- Current procurements
- Awarded contracts
- Newsletter for contractors





# Do you want to participate?

- Suppliers must be registered in TransQ (Achilles) TransQ is used for supplier selection and can also be used for qualification.
- Suppliers themselves are responsible for contacting Achilles for registration [www.achilles.com](http://www.achilles.com).
- When registering, please provide all essential information about your company and do not forget to update the information in case of any changes.





# Our procurement process based on EU public procurement legislation

Selection of suppliers in TransQ

Additional questions for qualification, not mandatory

Invitation to tender, Q&A and tendering through TendSign

Evaluation of tenders and possible negotiation

Award decision



Dialogue before and after the procurement



# nyatunnelbanan.se/en/procurement

Keep track  
with our  
procurement  
time schedule

Uppdrags- beskrivning/ utövning	Typ av arbete	Projekt / utbyggnadsdel	För deltagande krävs registrering hos konsultmälare eller i kvalificeringssystem.	Enbart leverantörer som är prekvalificerade i TransQ kan delta, registrering på kod avslut sedan	Entreprenad- form	Planerad kvalificering av leverantörer	Planerat utskick av förfrågnings- underlag	Planerad anbuds- infordran	Planerad uppdagsstart	Bedömd kostnad MSEK	Prognos- säkerhet för upphandlings- tider	Kommentar
Entreprenaden omfattar stomkompletteringar installationer för entréer, biljetthallar, anplan, perronger, teknikplan, service-tunnel, ventilationsschakt, brandschakt m. vid stationer	Bygg- entreprenad	Nacka-söderort	Prekvalificering krävs i TransQ	Ja TransQ kod 9.4.1 – 9.4.9 eller 9.4.99	Totalentreprenad	2022-05-01	2022-09-01	2023-04-01	2024-05-01	600-700	Gul - relativt säkra uppgifter	Denna entreprenad ersätter följande tre (3) planerade upphandlingar av byggentreprenader avseende: - Sofia & Hammarby kanal - Gullmarsplan & Slakthuset - Sickla, Nacka och Järla
Entreprenaderna omfattar bl.a. iordningsställande av etableringsområde, utförande av arbetstunnel, bergschakt för huvudtunnar på sträckan Arenastaden till Södra Hagalund, plattformsrums, vertikalschakt. Arbeten med tyngre stål- och betongstommar för stationerna Arenastaden och Södra Hagalund samt anslutande tunnel mot Hagastaden. Mark- och grundläggningsarbeten för biljetthallar.	Berg- och anläggningsent- reprenad	Arenastaden	Prekvalificering krävs i TransQ	Ja TransQ kod 9.4.1 – 9.4.9 eller 9.4.99	Utförande- entreprenad	Pågår	Upphandling pågår	Tilldelad	2021-Q3	>1 000	Grön - säker (inom 3 månader)	Tilldelningsbeslut är överprövat
3727 Bygg, installation, tele, styr (BITS)	Bygg- och installationsent- reprenad	Arenastaden	Prekvalificering krävs i TransQ	Ja TransQ kod 9.4.1 – 9.4.9 eller 9.4.99	Utförande- entreprenad	2022-Q1	2022-Q1	2022-Q4	2023-Q1	>1 000	Röd - uppgifter ej säkra	Sammanläggning av 3722, 3723 och 3728. Nytt entreprenad id 3727.  Miljödom - erhållen maj 2018 Järnvägsplan - lagakraftvunnen december 2020









**Malin Harders**  
Project Director, Metro to Arenastaden





Barkarby handelsplats

Barkarbystaden

**Barkarbystaden**

Kyrkbyn

Robothöjden

Landningsbanan

Gamla flygfältet

Hägerstalund

Akallalänken

Akalla

Akalla Stadspark

**Akalla**

Husby

**Husby**

Kista

Koloniområde

Järvafältet

Granholmstoppen

Hästa

Norrviksvägen

275

Enköpingsvägen

E 18

E 4

E 18

Veddesta

Barkarby

**Barkarby**



# Upcoming procurements

**Concrete tunnel Veddesta** ID:4715

**Signalling** ID:4744



# Concrete tunnel Veddesta ID:4715

- Design and build
- Fixed price
- Dimensions:
  - Length: 113 meters
  - Width\*height: 5,5 m\*7,1 m to 7 m\*9,7 m
  - Thickness: 700–800 mm
  - Approximate volume of concrete: 2 300 m<sup>3</sup>
  - Inclination: 1:7
- Procurement start: Q1 2023
- Construction: 2024–2025





# Signalling ID:4744

- Build only
- Fixed price with bill of quantity
- Scope:
  - Extension of existing system, 4 new km
  - Prebuild and install 4 signaling installations houses
- Procurement start: Q4 2021
- Planning and construction: 2022–2026













# Upcoming procurements

**Construction and installation  
Arenastaden and Södra Hagalund ID:3727**

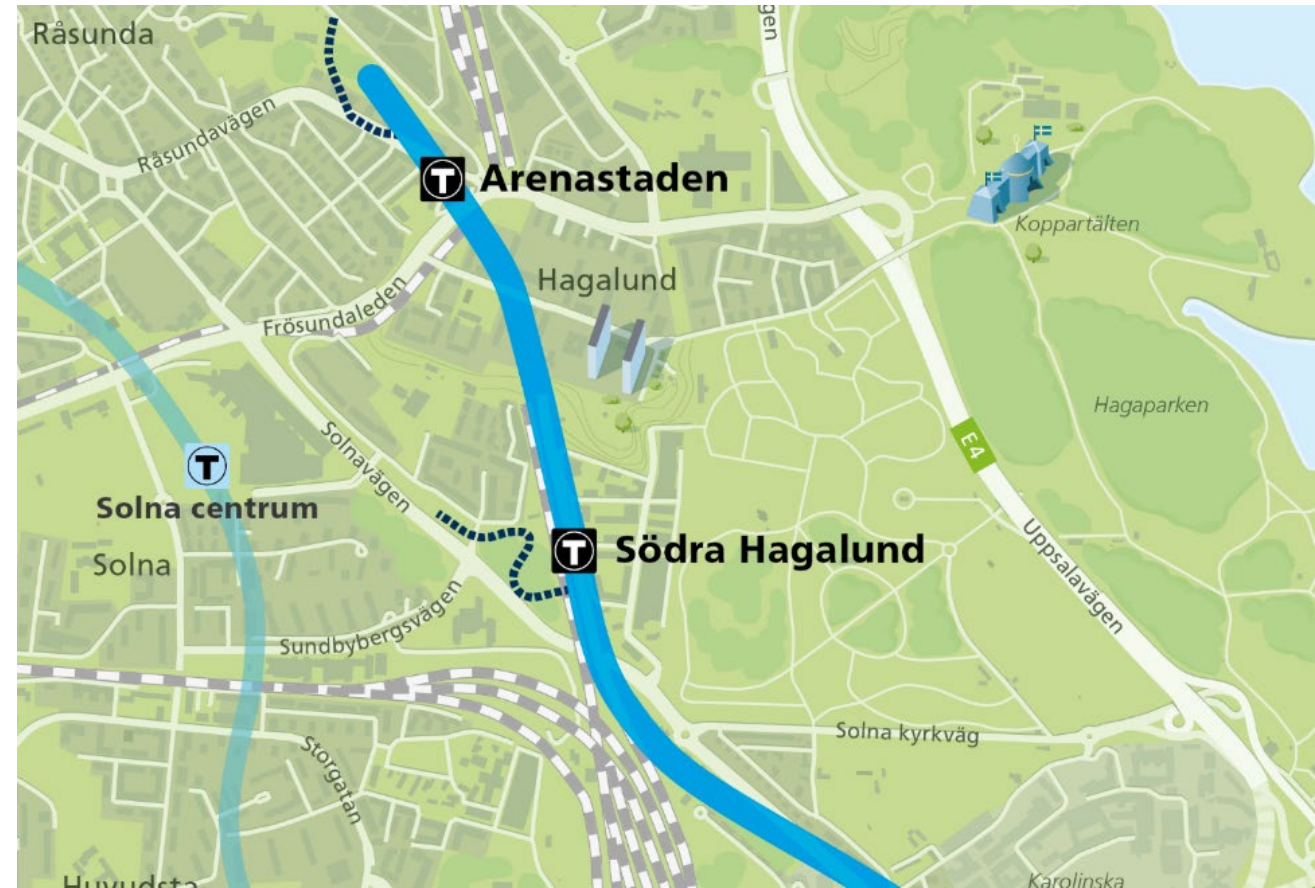
**BEST assembly along the entire line ID:3742**



# Construction and installation

## Arenastaden and Södra Hagalund ID:3727

- Build only
- Fixed price
- Scope
  - Non-structural works
  - Installations
  - Elevators and escalators
  - Tele also for the third station
- Procurement start: Q2 2022





# Construction and installation Arenastaden and Södra Hagalund ID:3727

- Two work sites
- Two access tunnels
- Previous contract consists of rock, concrete and construction.
- Side contractors:
  - BEST assembly
  - Rectifier station
  - Hagastaden NCC ID:3711





# Primary building parts

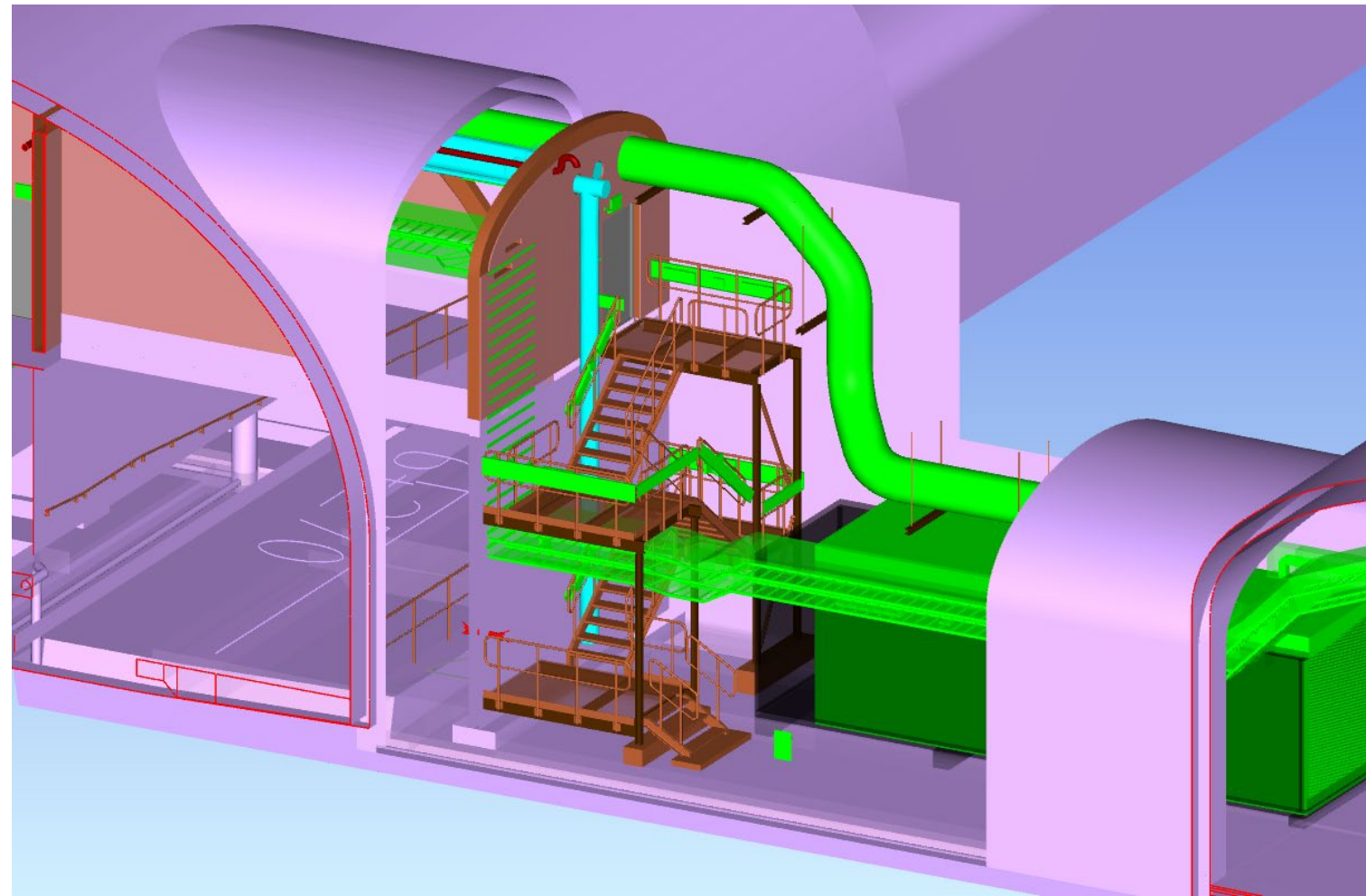
- 6 000 sqm tiling, glass and ceramic
- 5 200 sqm suspended ceilings
- 250+ steel doors
- 2000 sqm glass partitions
- 3000+ sqm of in situ concrete terrazzo flooring





# Structures

- Steel, painted: 400 tons  
(excluding stairs and railings)
- Steel, stainless: 67 tons
- Bolts: 36 000 pcs
- Concrete: 175 m<sup>3</sup>
- Masonry (LECA): 230 m<sup>3</sup>





# Electric works

- 102 km installation cables
- 20 km power cables
- 22 km cable trays
- 6500 lighting fixtures
- Container-based diesel generator
- UPS systems

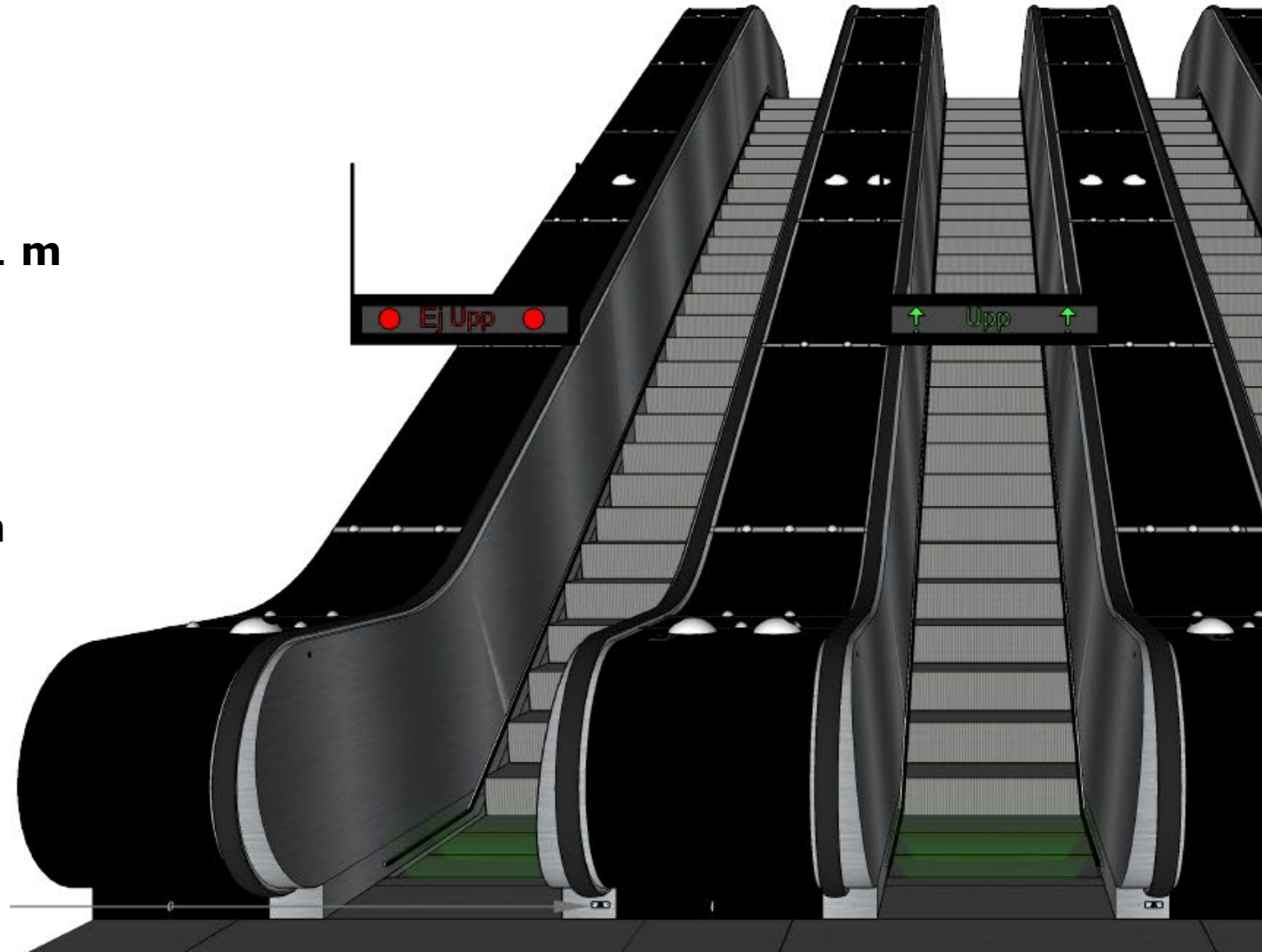




# Escalators

In total 22 pcs

- 9 with lifting height **35,4–40,1 m**  
27,3 degree slope, 0,75 m/s
- 4 with lifting height **16,7 m**  
30 degree slope, 0,65 m/s
- 9 with lifting height **4,2–6,0 m**  
30 degree slope, 0,65 m/s



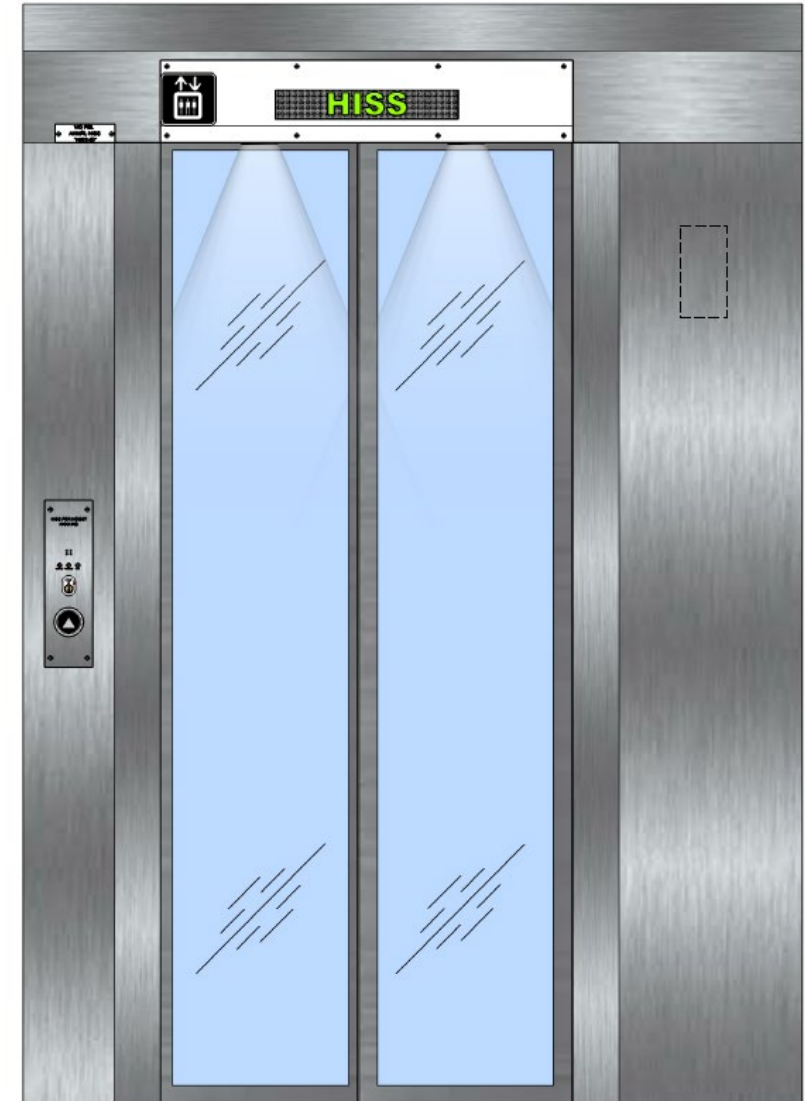


## Elevators

- 5 elevators
- Speed: 1 m/s
- Lifting height: 4,3–8,1 m

## Inclining elevators

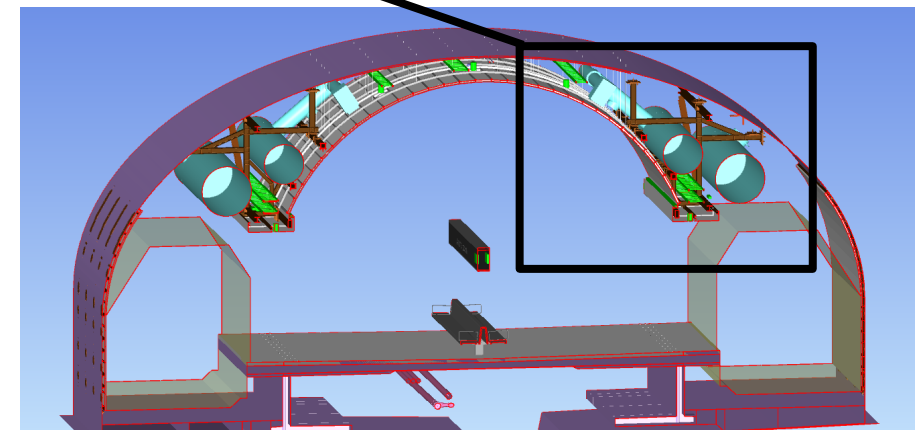
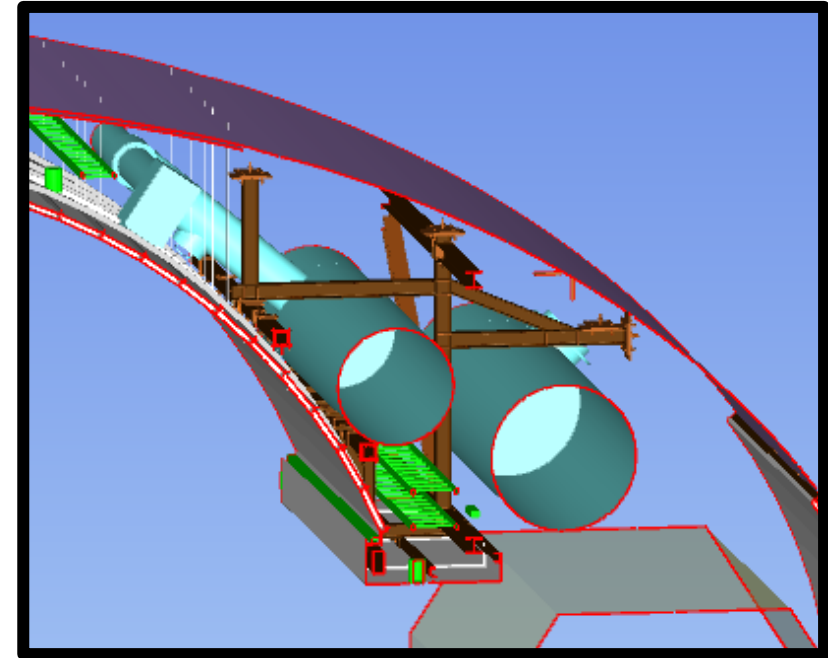
- 4 inclining elevators
- Speed: 2,5 m/s
- Lifting height: 16,7–40,1 m





# Ventilation

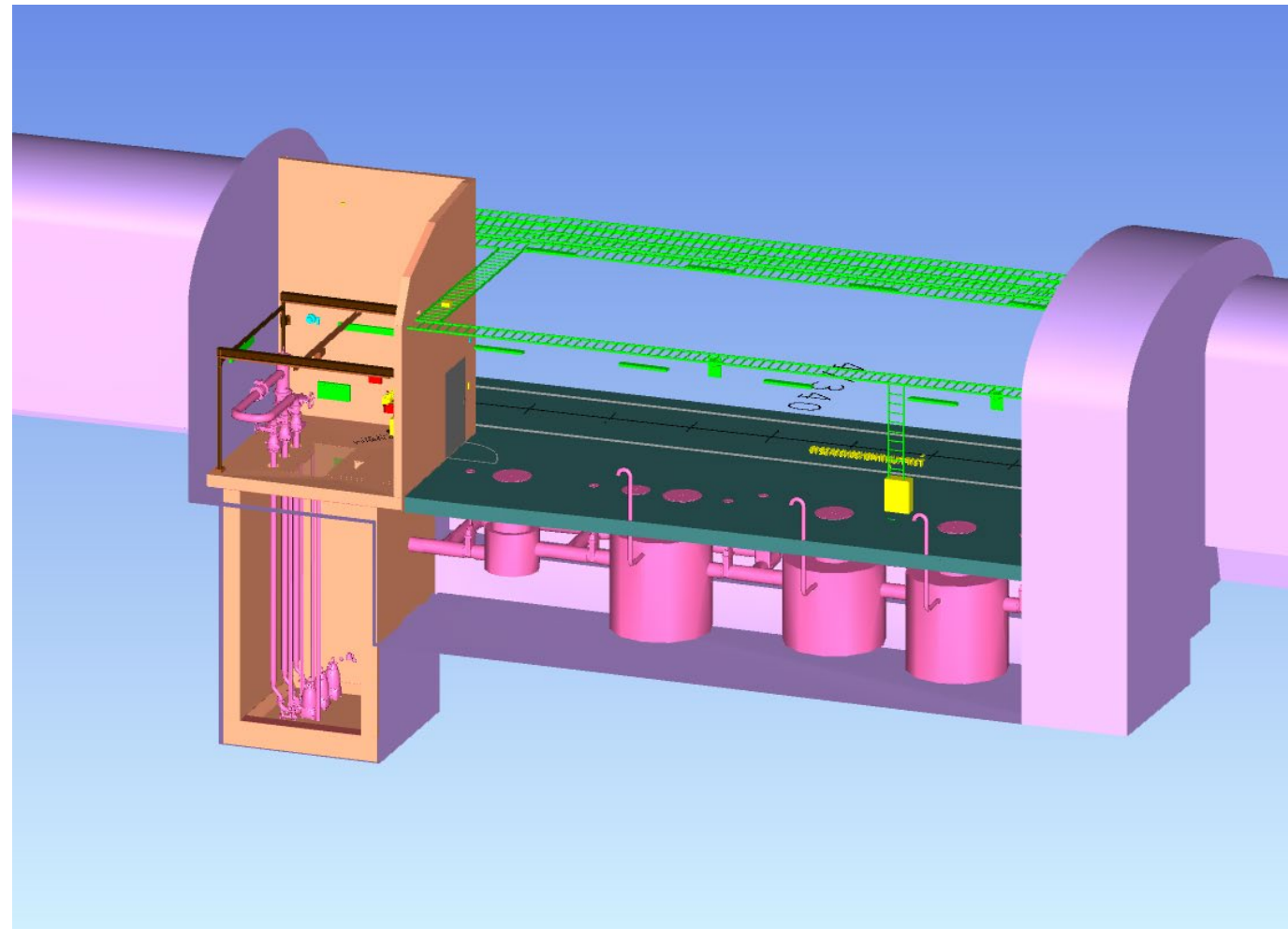
- Total duct running length 1800 m
- Duct dimension range, 125–1600 m
- Number of fans/air handling units:
  - 10 pcs modular units
  - 40+ smaller site-built cooling units
  - 10 jet fans





# Pump stations

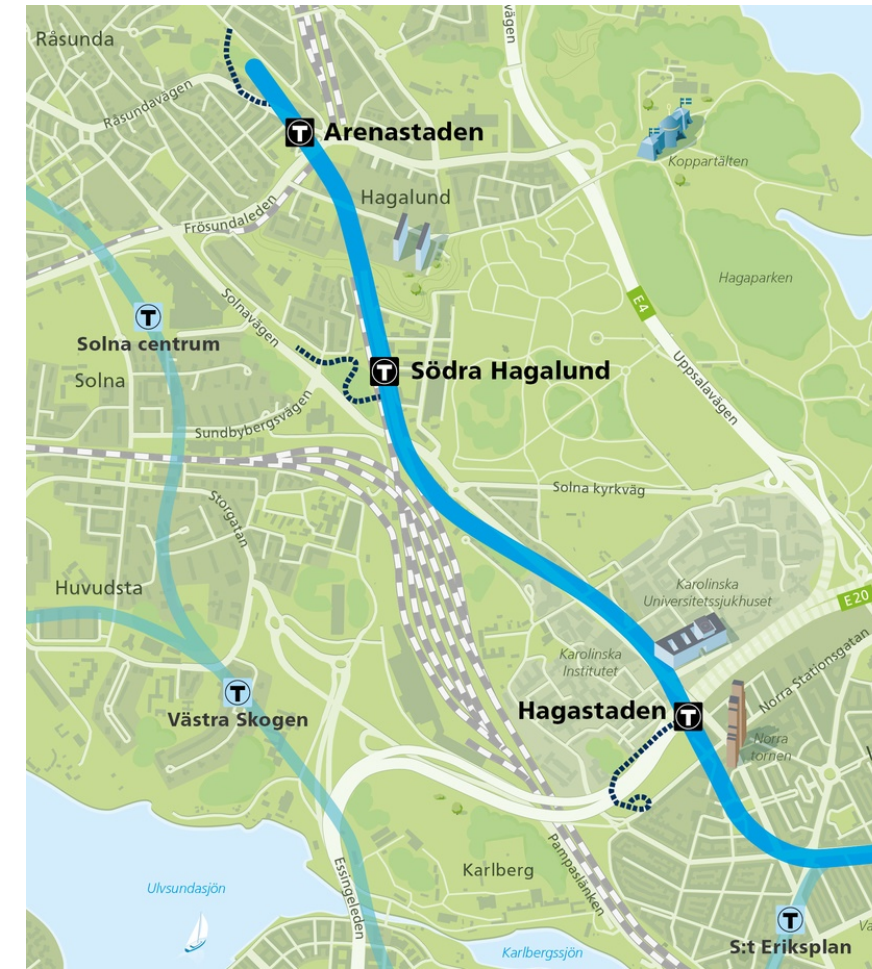
- 9 pump stations
  - 20 pumps
- 1 treatment plant
  - Design and build
  - Pneumatic and electric pumps, separator, filters
  - Automatic control under normal conditions





# Telecom, control and monitoring

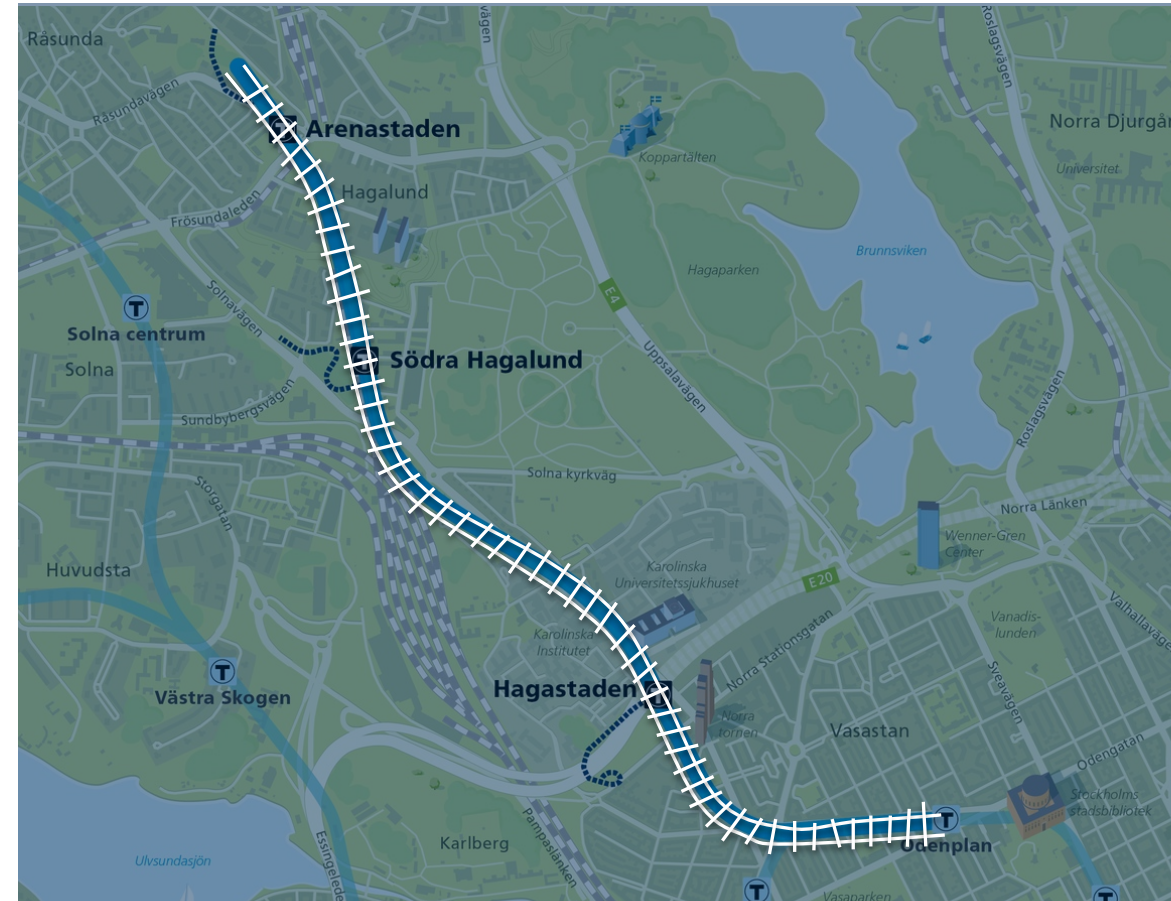
- IP network
- Cameras
- Radio, speaker and telephone systems
- Fire alarms and evacuation alarms
- Access control system
- Dynamic signs
- Ticket and payment system
- 95 control cabinets
- HVAC systems (211 systems) and electrical systems





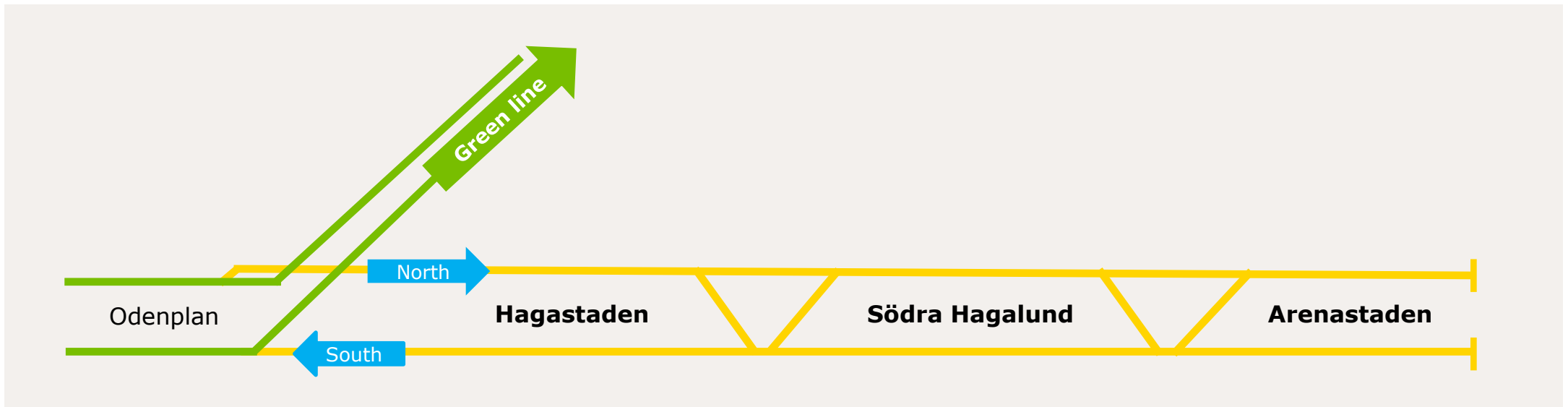
# **BEST ID:3742** (Track-, Electricity-, Signal- and Telecom)

- Build only
- Fixed price with adjustable quantities
- Scope:
  - Parallel single tracks in Stockholm and double tracks in Solna
  - Third rail
  - Signalling
- Procurement start: Q1 2023





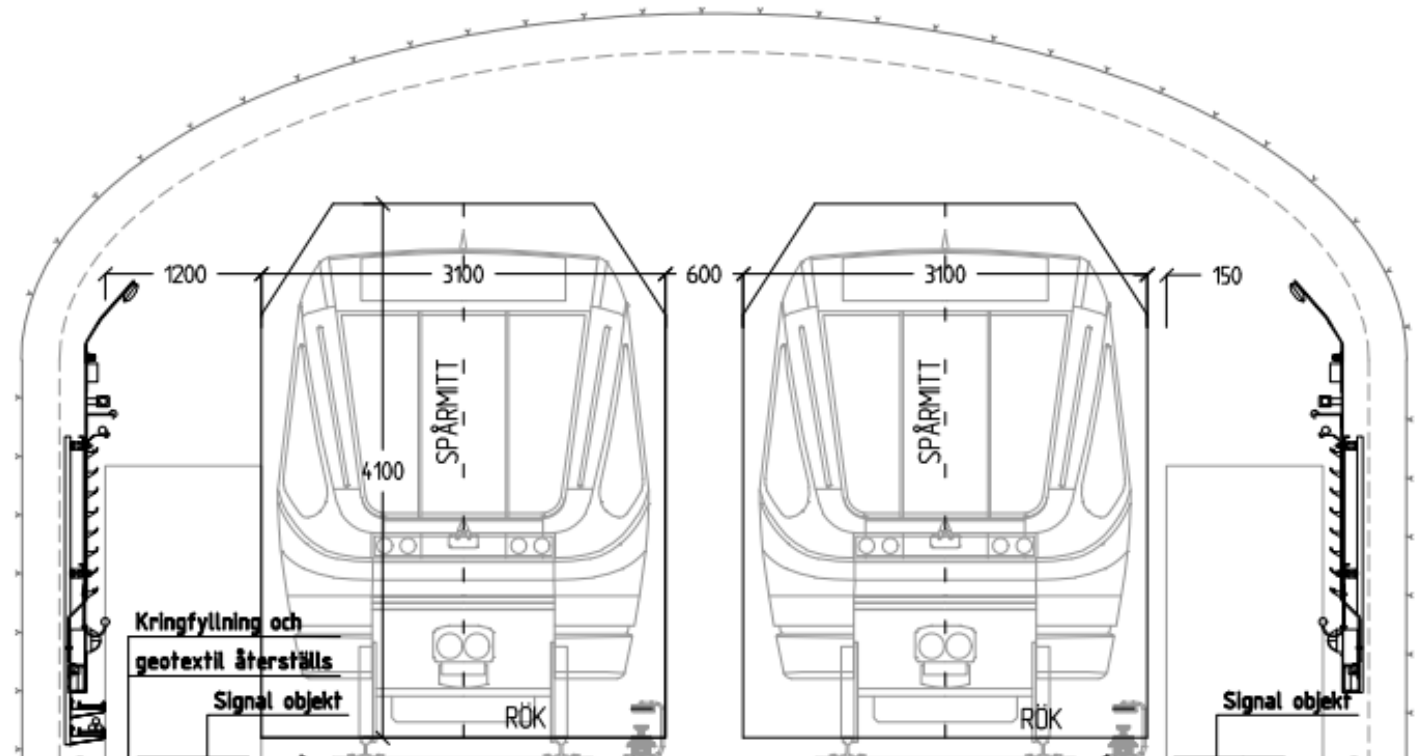
# Two tracks to Arenastaden





# Scope of works BEST

- Track
- Switches
- Sewerage/Wiring
- 750V system/busbar
- Lighting
- External signal system
- Tele
- Walking path





# Transport of rail and third rail





# Transport of ballast, sleepers, cables, etc.











**Tor Thomassen**  
Project Director, Installations and BEST









**Marcus Andersson**  
Project Manager,  
Construction



# Upcoming procurement

**Construction of stations ID:2651**





# 7 stations

- Architecture
- Structures
- Art
- Coordination

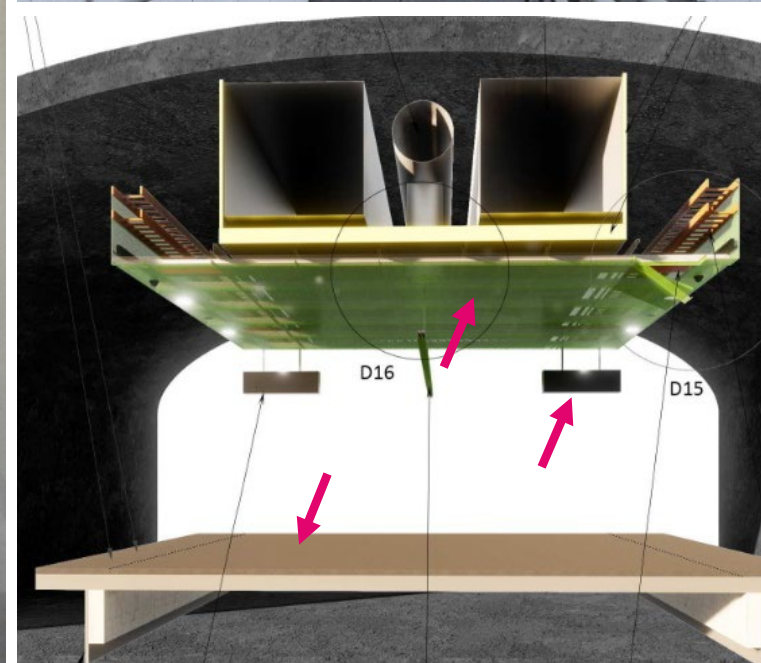
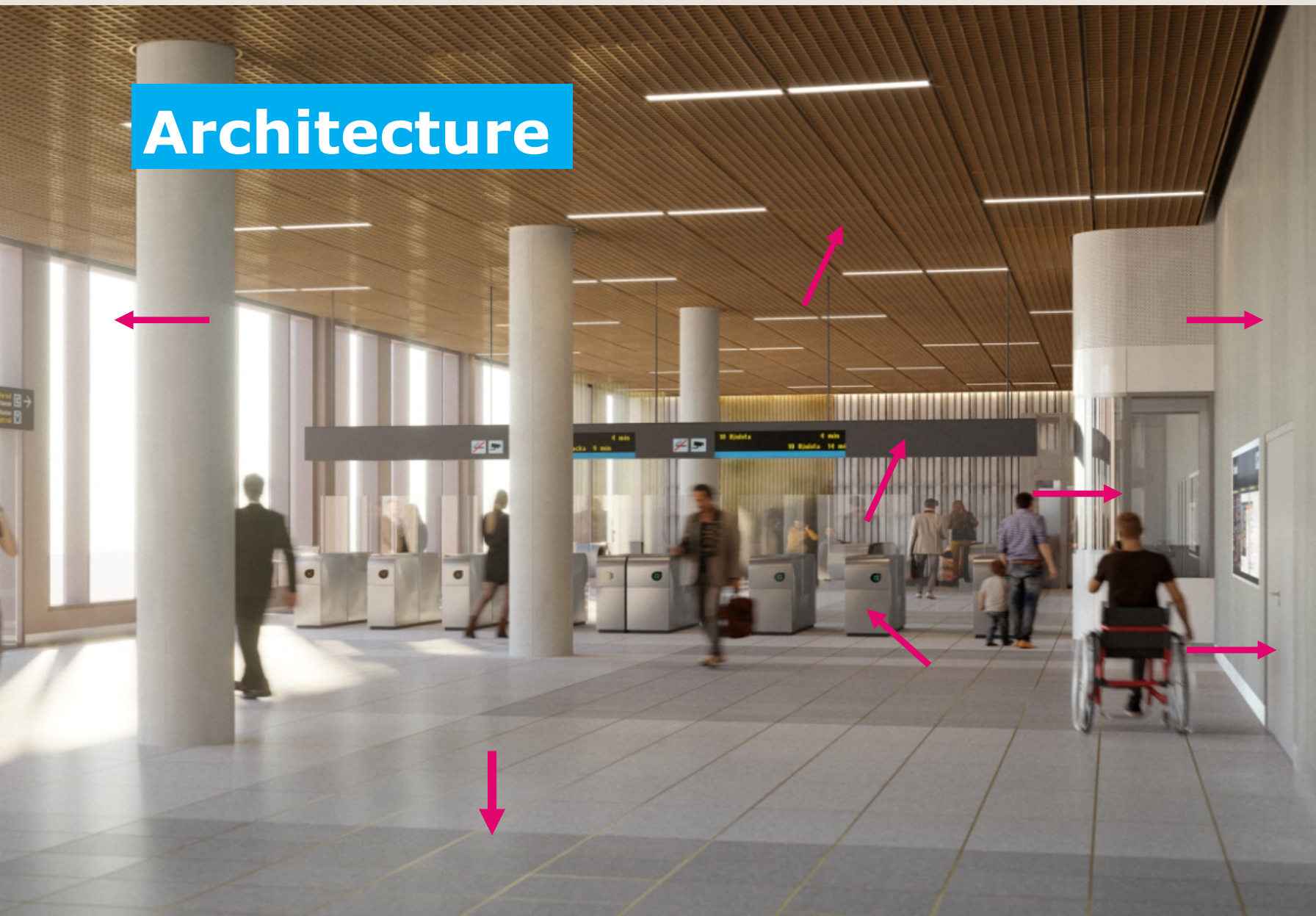
## Also included:

- Kungsträdgården
- Residual and restoration work



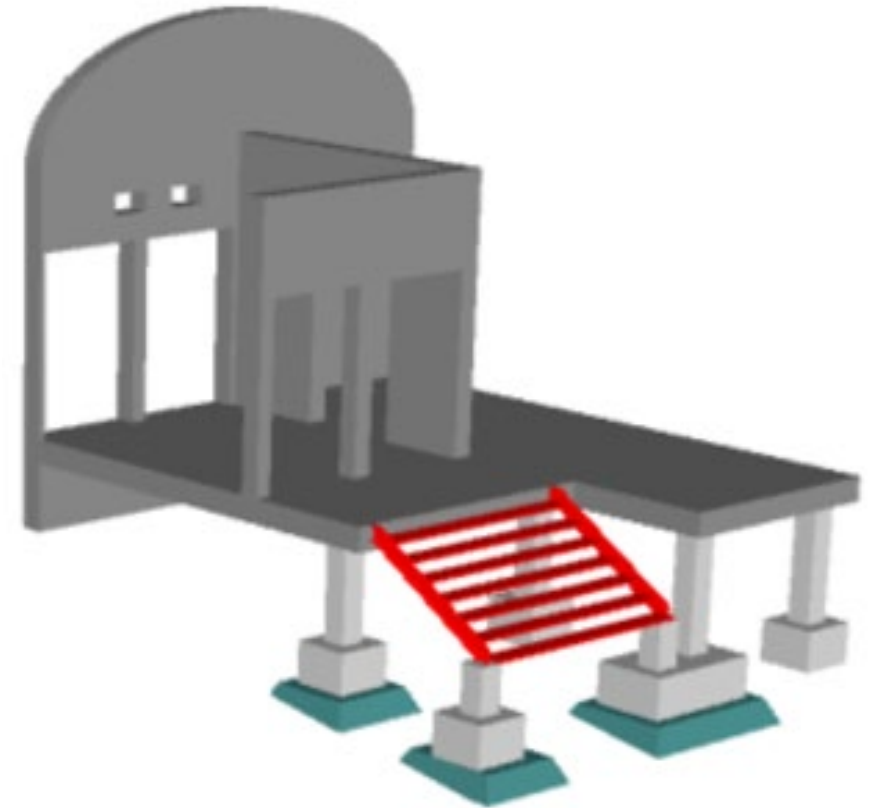
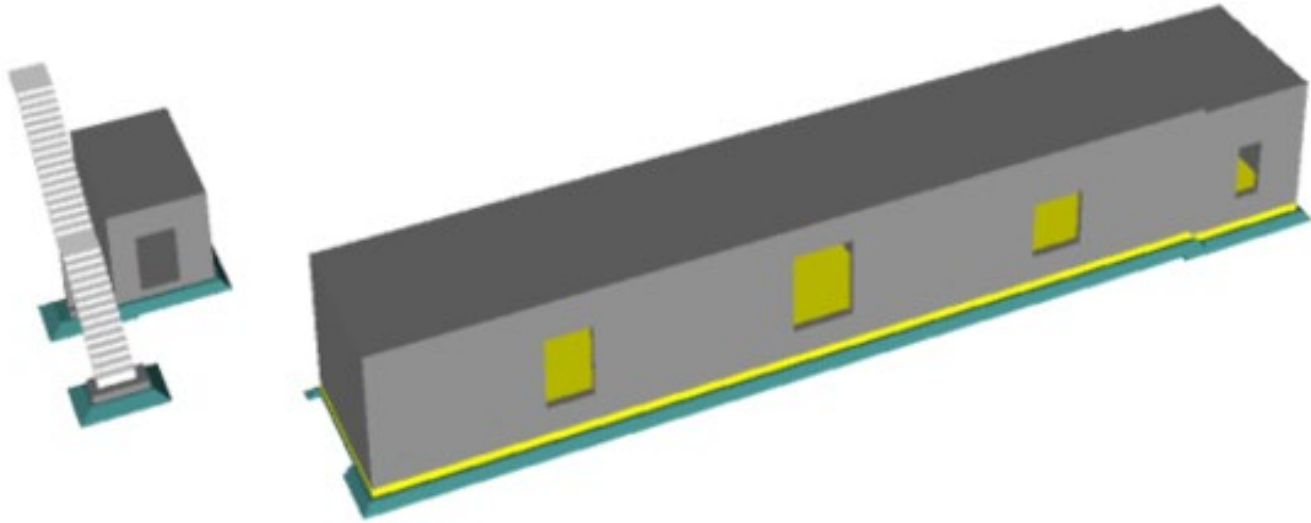


# Architecture

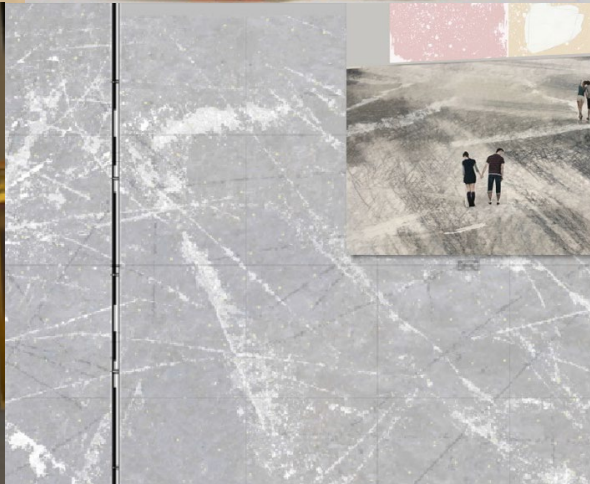
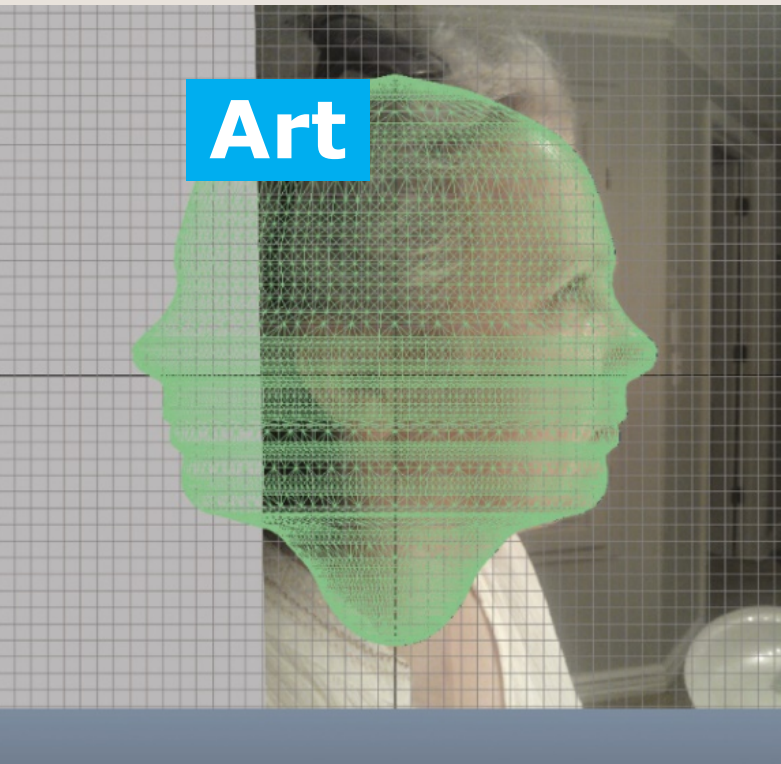




# Structures



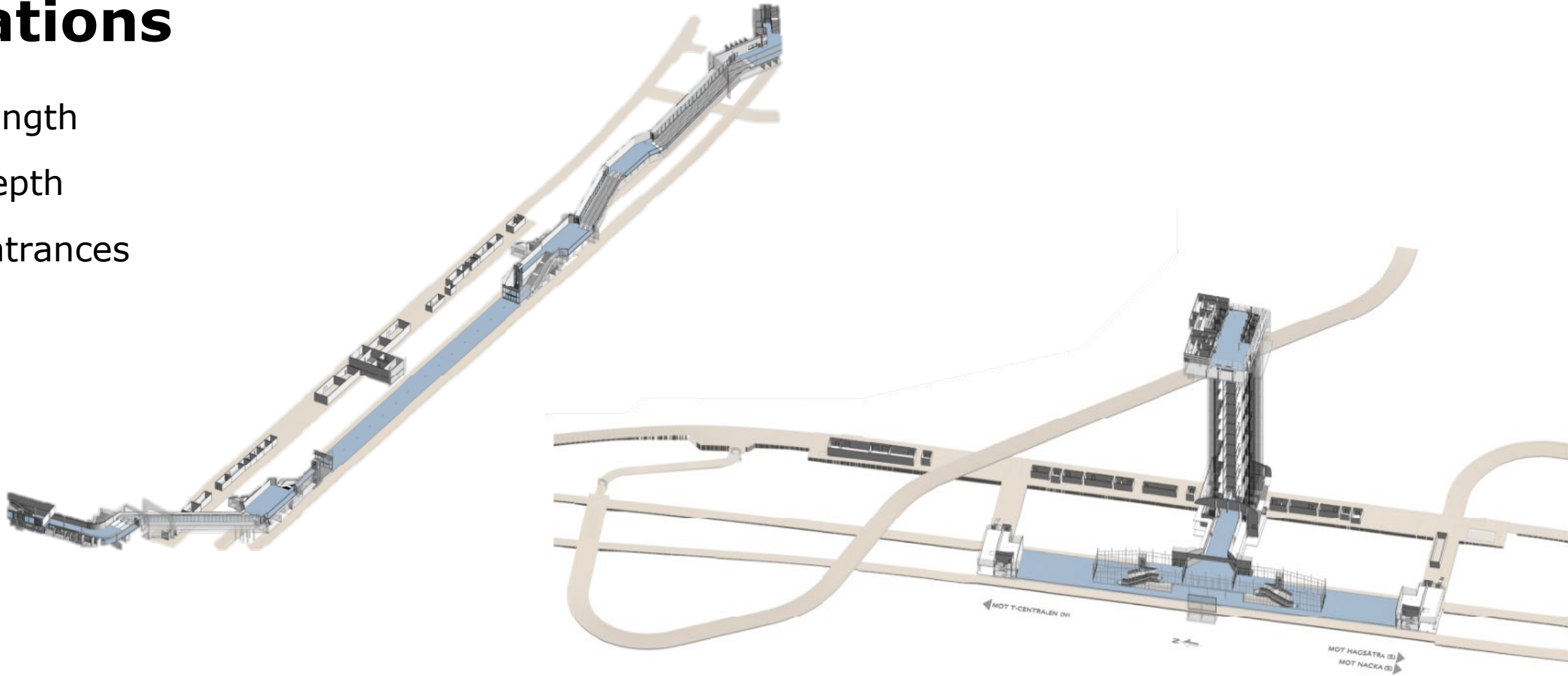






# Stations

- Length
- Depth
- Entrances





# Challenges building construction

- Logistics
  - Material
  - Personnel
- Coordination
  - External Parties
  - Other Contractors











**Allan Lindfors**  
Project Manager,  
Installations



# Upcoming procurements

**Escalators <30m** ID:26723

**Escalators >30m** ID:26724

**Escalators Nacka, Sickla** ID:26721

**Inclining elevators** ID:26722

**Lifts and high capacity elevators** ID:26611

**Electricity, telecom and control** ID:26726

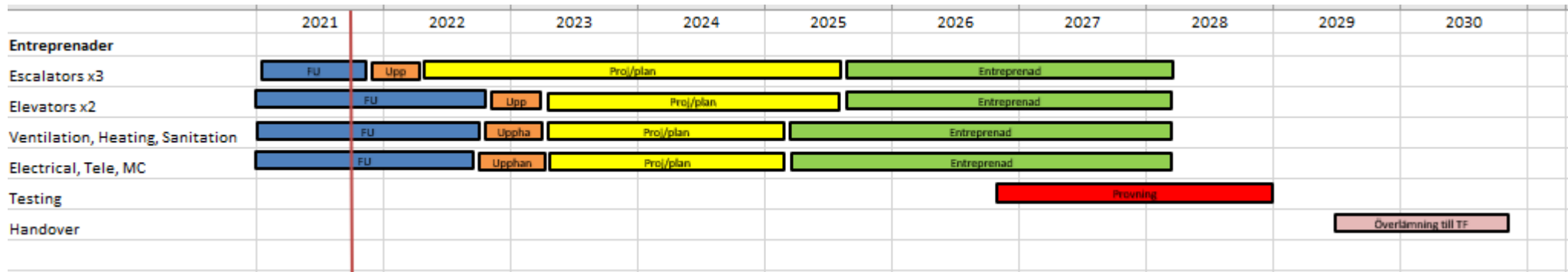
**HVAC including tunnel ventilation** ID:26727







Name	Contract form	Tender out	Production
<b>Escalators &lt;30m</b> ID:26723	ABT	2022-02	2025-06 / 2027-06
<b>Escalators Nacka, Sickla</b> ID:26721	ABT	2022-02	2025-06 / 2027-06
<b>Escalators &gt;30m</b> ID:26724	ABT	2022-02	2025-06 / 2027-06
<b>Inclining elevators</b> ID:26722	ABT	2022-10	2025-06 / 2026-08
<b>Elevators and high capacity elevators</b> ID:26611	ABT	2022-10	2025-06 / 2027-06
<b>Electricity, telecom and control</b> ID:26726	ABT	2022-08	2025-02 / 2027-05
<b>HVAC including tunnel ventilation</b> ID:26727	ABT	2022-09	2025-02 / 2027-05



# Time schedule



-  Tender documents
-  Procurement
-  Design/planning
-  Production



# Ventilation, plumbing, heating, water and sanitation

- Water and sewage systems
- Heating system
- Sprinkler system
- Firesystem (Water and ventilation)
- Cooling system (DX-system)
- Ventilation (Public)
- Tunnel ventilation





# Electricity, telecom and control

- Power supply 400/230V
- UPS
- Lighting
- Ducting
- Radio and mobile system
- Firealarm system
- Security system
- CCTV
- Dynamic signs





# Example of telesystem

- Timesystem
- Distress signal system
- Access control system
- Speakersystem
- Information system for travellers



# Number of escalators

**Total:** 66

**<30m:** 52

**>30m:** 14





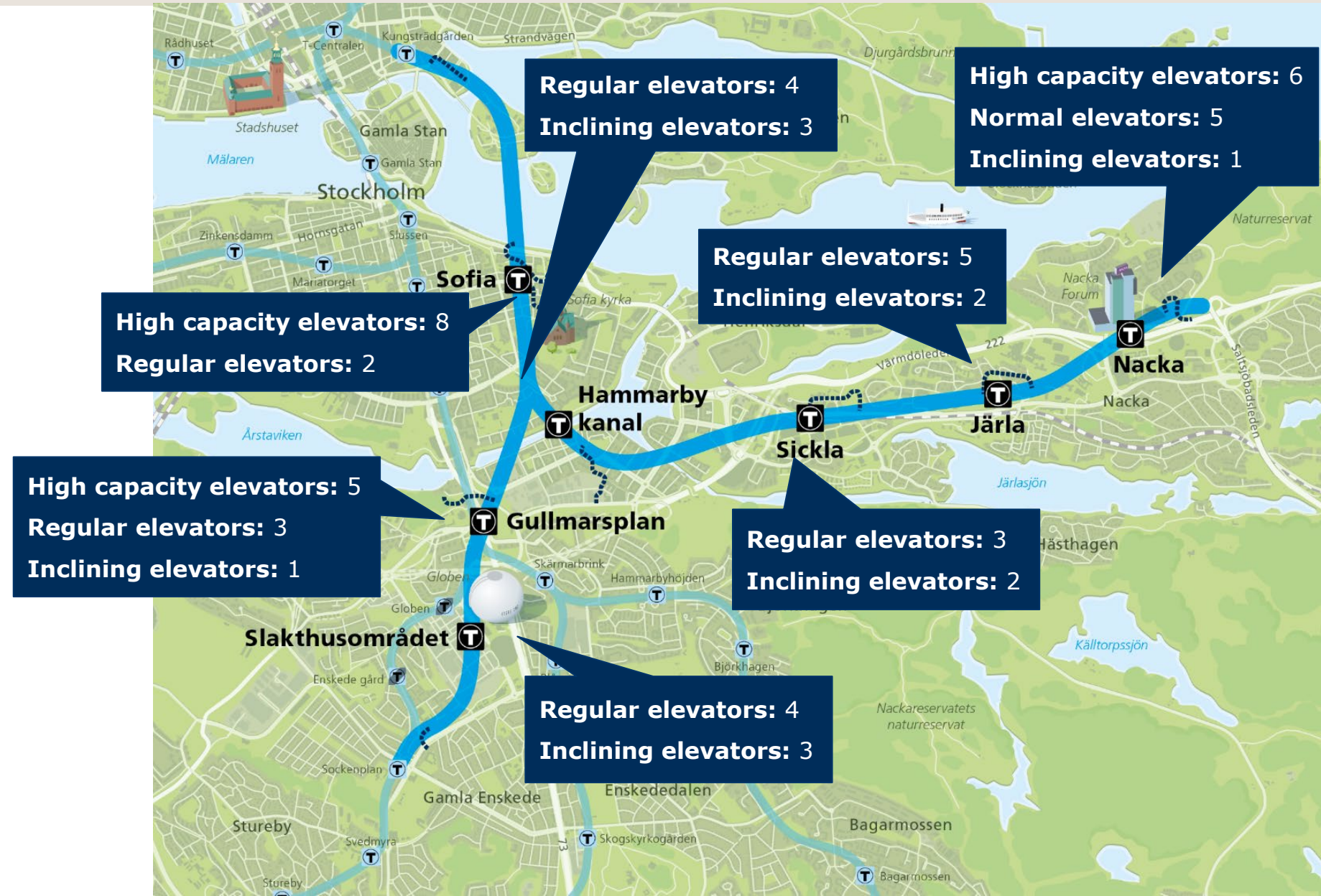
# Number of elevators

**Total: 54**

**High capacity elevators: 19**

**Regular elevators: 23**

**Inclining elevators: 12**











**Ann-Christin Zander Holwaster**  
Project Manager, BEST  
(Track, electricity, signal, telecom)







# Upcoming procurements

**Track, walking path, third rail.  
Kungsträdgården–Hammarby kanal +  
Sofia–Sockenplan ID:267110**

**Track, walking path, third rail.  
Hammarby kanal–Nacka ID:267120**

**Electricity 400 V and telecom ID:267200**

**Signalling ID:267310**

**Mounting ducting and cable laying  
ID:267400**



# Track, walking path and third rail

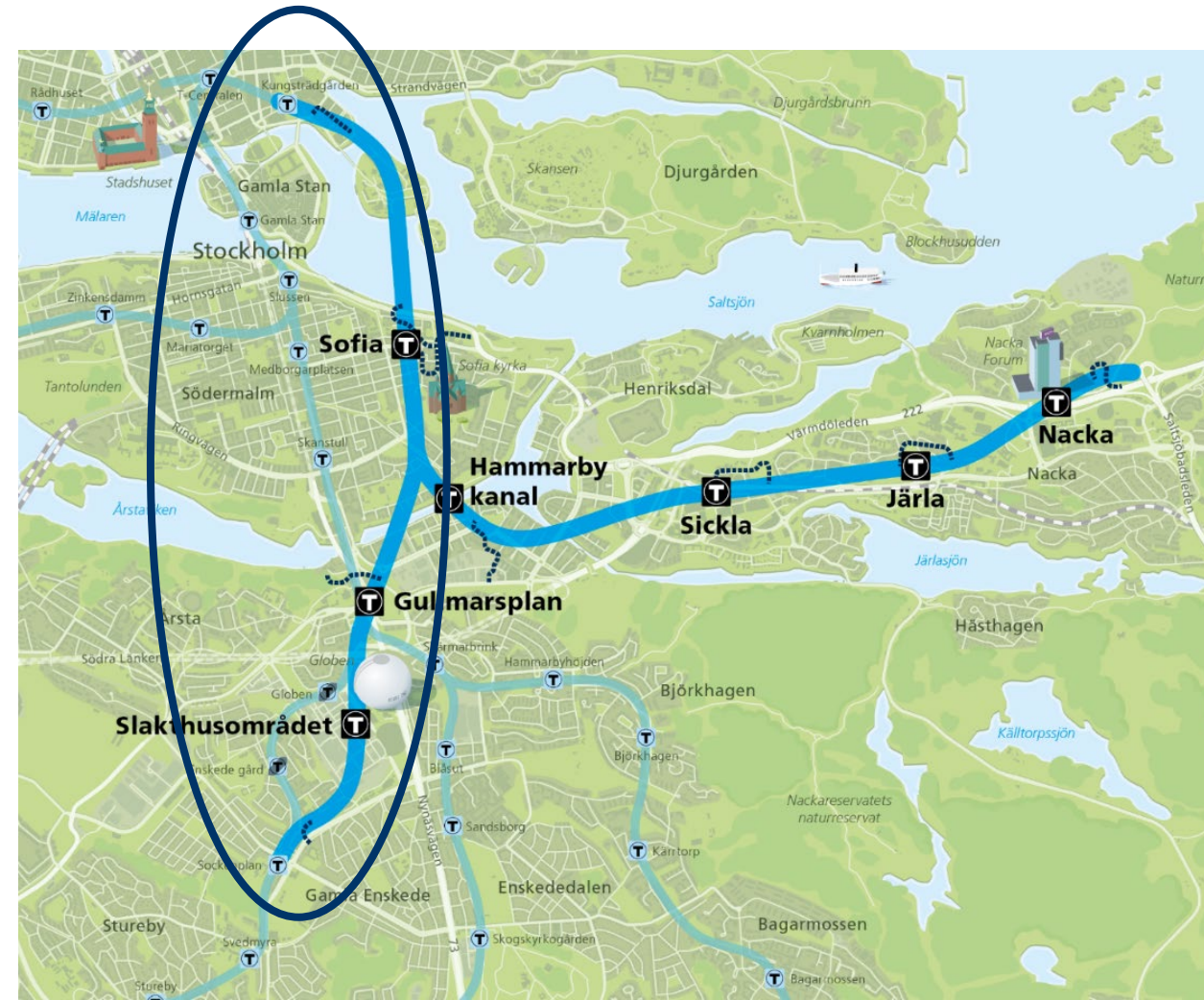
- 2 geographically different contracts





# Track, walking path and third rail ID:267110

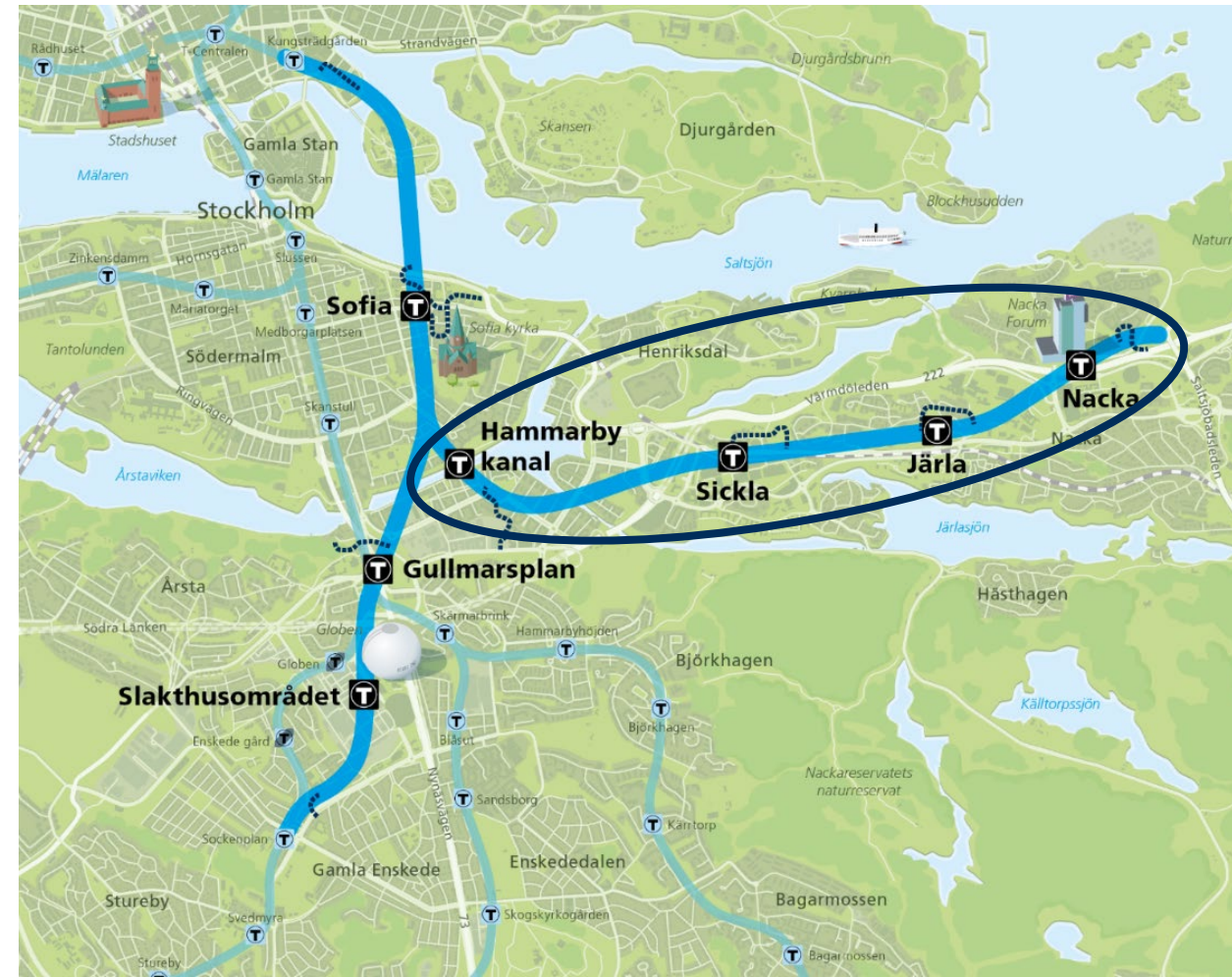
- Approx 13 km track
- 16 points
- Third rail -mechanical and electrical
- Cable ducts
- Walking paths





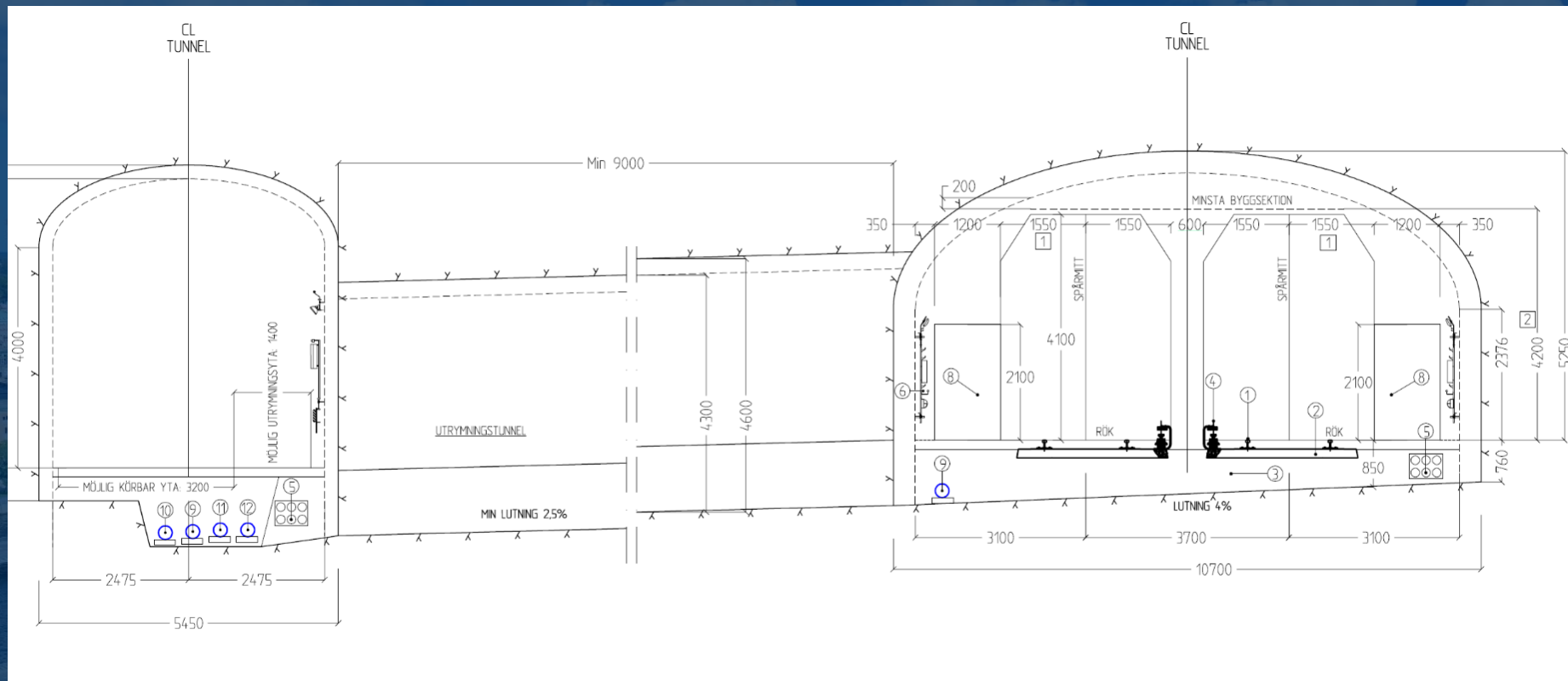
# Track, walking path and third rail ID:267120

- Approx 11 km track
- 16 points
- Third rail - mechanical and electrical
- Cable ducts
- Walking paths





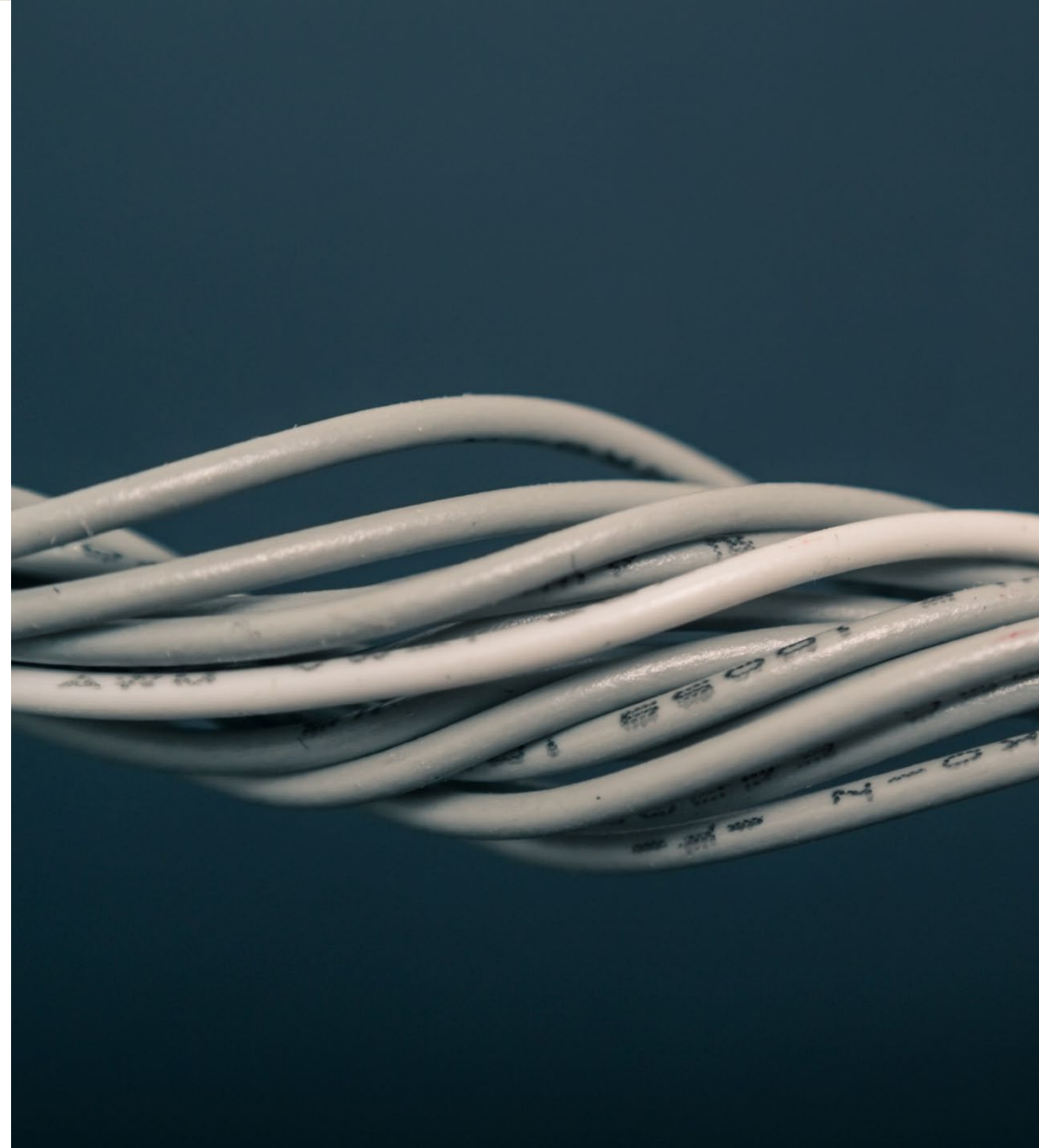
# Normal section





# Electricity 400V and telecom ID:267200

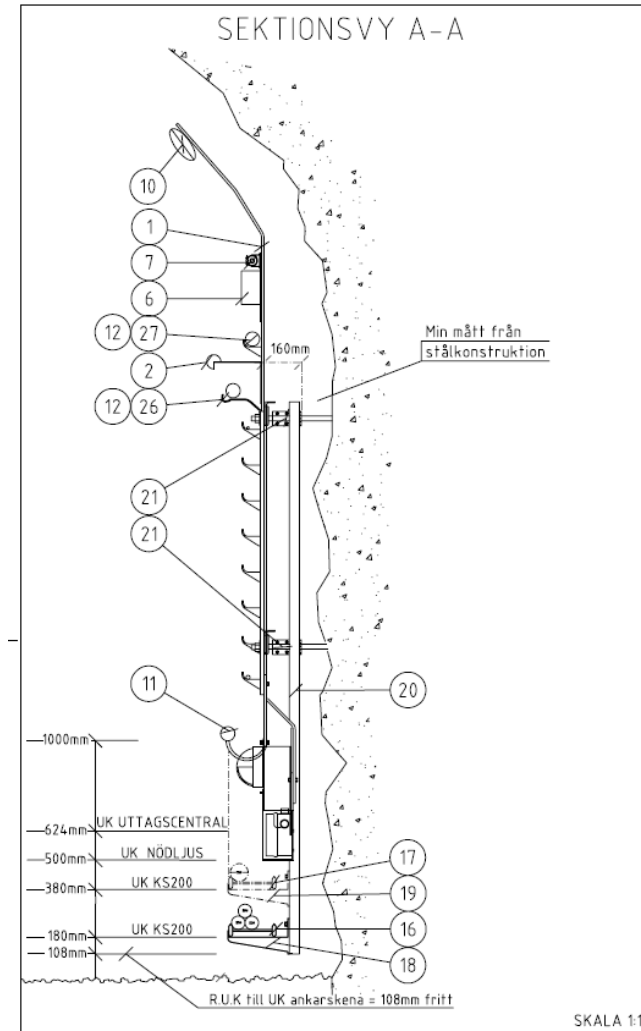
- Electricity
  - Lighting in all tunnels
  - Power supply in the tunnels
  - 1 kV system in the service tunnel
- Telecom
  - Optical fiber infrastructure
  - Cameras in the tunnels
  - Radio- and antenna system
- Prefabricated technical houses





# Mounting ducting and cabling ID:267400

- Cable ladders in all tunnels
- Cable consoles in the track tunnels
- EST-cables in the tunnels





# Signalling system

ID:267310

- Extension of existing relay-based system for blue line
- Prebuild and install 9 signalling installations houses
- Small part of outdoor installation of the signalling system for green line





Name	Contract form	Start procurement	Planned contract	Preliminary start production on site
<b>Track, walking path and third rail</b> ID:267110	Client design	Q2 2022	Q4 2022	Q4 2024
<b>Track, walking path and third rail</b> ID:267120	Client design	Q2 2022	Q4 2022	Q1 2025
<b>Electricity 400V and telecom</b> ID:267200	Client design	<i>Q4 2022</i>	<i>Q3 2023</i>	Q4 2024
<b>Mounting ducting and cabling</b> ID:267400	Client design	<i>Q1 2023</i>	<i>Q4 2023</i>	Q4 2024
<b>Signalling</b> ID:267310	Client design	<i>Q2 2023</i>	<i>Q1 2024</i>	Q1 2025









**Mats Vornanen**  
Project Manager,  
Coordination and  
logistics



# Upcoming procurement

**Coordination and logistics ID: 26310**



# Coordination and logistics ID:26310

- Design and build (ABT)
- Fixed price with adjustable quantities
- Procurement start: Q4 2022
- Construction: 2024–2030
- ~500–700 million SEK



# Serve other contracts with:

- Logistics
- Establishing sites
- Temporary Installations
- Machines and equipment
- Building work environment coordinator BAS-U

\*Other contracts estimated value: ~4,5 billion SEK





## On work sites:



Machines & Equipment



Office and Crew Sheds



Waste management



Safety and Shell Protection

## Common features:



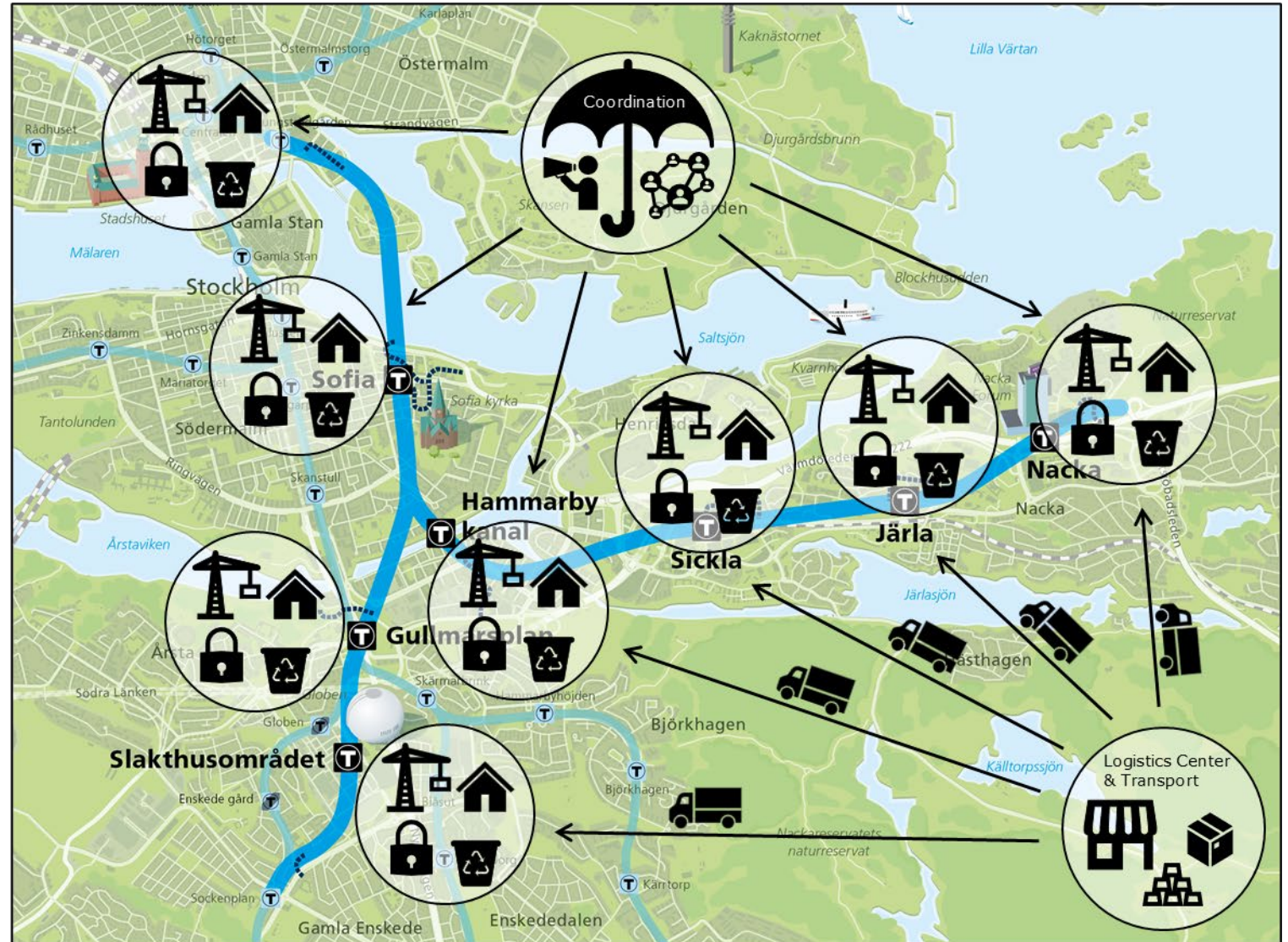
Warehouse/Logistics Center for Building and Installation Materials



Transport to establishing area  
- Materials and Personnel



Coordination responsibilities,  
BAS-U Work environment  
- Overall and Local





# Logistics center

- Material handling, arriving and departure material's
- Transport of material and equipment from logistics center to the tunnels, 8 main sites





# Logistics

- Personnel transports to/from tunnels
- Traffic planning
- Loading/unloading services





# Establishing sites

- Sheds for offices, changing rooms and break rooms
- Administration of establishing areas
- Work disposition plan's
- Cleaning, waste management and snow removal
- Security





# Temporary installations

- HVAC
- Electrical installations
- Lighting
- Water and waste water
- Leakage water
- Environment control program for water





# Machines and equipment

- Lift pool
- Scaffolding
- Edge protection's





# Work environment

- Building work environment coordinator, BAS-U
- ID06 electronic personnel ledger
  - Hardware
  - Software
  - Administration





# Challenges

- Narrow tunnel's
- Small establishing sites
- Large material flow's
- Coordination of all 15 contracts
- Sites spread over a large area









**Niklas Bergman**  
Director of Administration  
for Extended Metro



# A reminder...

- Read our procurement document carefully.
- Submit tender exactly according to our instructions.
- We are very strict during our evaluation. It would be a shame to be forced to exclude you due to a simple mistake!



## Be part of extending the Stockholm Metro!



Do you want to become a supplier to the Administration for Extended Metro? Here you will find all the information you need!

Our assignment is to extend the Metro to shorten the distances as Stockholm grows.

We plan to begin construction soon and it will take 6 to 8 years to complete. Now

### Procurement

[Procurement procedure](#)

[Consultants](#)

[Current procurements](#)

[Awarded contracts](#)

[Newsletter for contractors](#)

[Supplier Day October 26, 2021](#)



### Contact

**Iveta Sandström**

Head of Procurement, Administration  
for Extended Metro  
[iveta.sandstrom@sll.se](mailto:iveta.sandstrom@sll.se)

### Newsletter

[Subscribe to our newsletter for contractors.](#)

Keep track  
on our  
website





**Everyone has the right to  
return home after an injury-  
free working day. Every day.**





**I hope to see you  
work with us!**



# Next up:

## **10:45–11:45 Presentation 2**

Upcoming procurements for planning and design project:  
Metro to Älvsjö

## **11:00–13:30 Lunch with exhibitions and mingle**

## **13:30–15:00 Exhibitions and mingle**





# Come and talk with us!

