Pareto
Securities Corporate Finance

AVINOR OSLO AIRPORT

SEAFOOD CENTER

Avinor seeks to establish new seafood air cargo center Oslo Airport

- Avinor, the Norwegian airport management authority, seeks to establish new seafood export infrastructure at Oslo Airport Gardermoen to promote a key Norwegian business sector and to facilitate enhanced aircargo contribution to route economics

- *Seafood export by Air from Norway in 2016/2017:*
  - *220.000 tons - 600 tons daily*
  - *55.000 4t ULD's – 150 ULD's daily*
  - *Oslo Airport +32% airfreight*

- *Largest freighter Airport in Northern Europe*

- *Larges air cargo market in the Nordics*

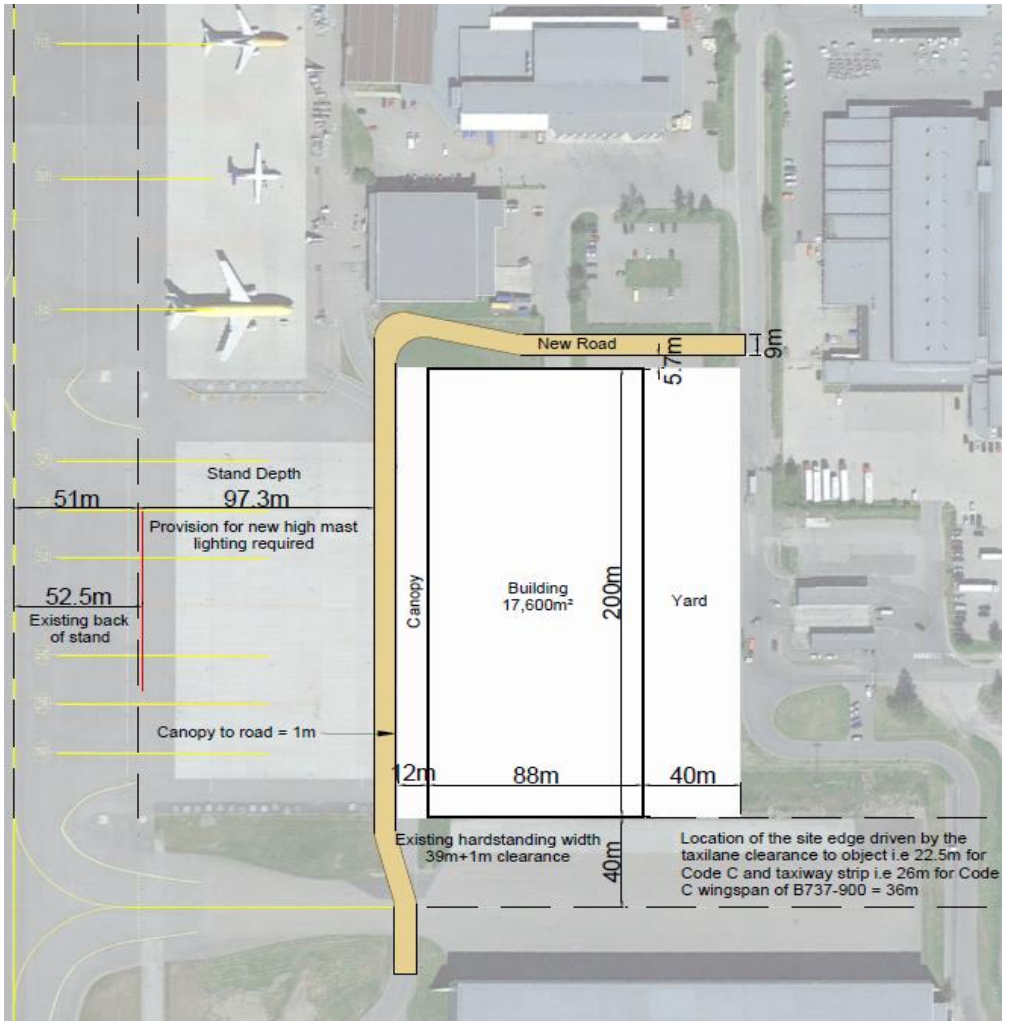
- *Seafood export as airfreight from Norway expected to 5 double within 20-30 years*

- *9 freighter airlines operating 19 weekly Seafood freighters*

«Birds eye view»

Avinor seeks to establish new seafood air cargo center Oslo Airport

- Export terminal with annual capacity of 250,000 tons
- Appx. 1,400 ton storage capacity
- A 17,600 sqm facility to be constructed
  - 200m long by 88m wide and 18m high
- Whole terminal to be cooled (appx 2.5°C)
- Facility to be highly automated and “state-of-the-art”
- Will construct airfreight pallets (ULDs) to be docked directly into airplanes, or trucked from the facility to other airports
- Total project cost estimated to NOK 500 – NOK 700 mill.
- Estimated completion: 2020



«Birds eye view»

The new seafood air cargo center will have direct airside access

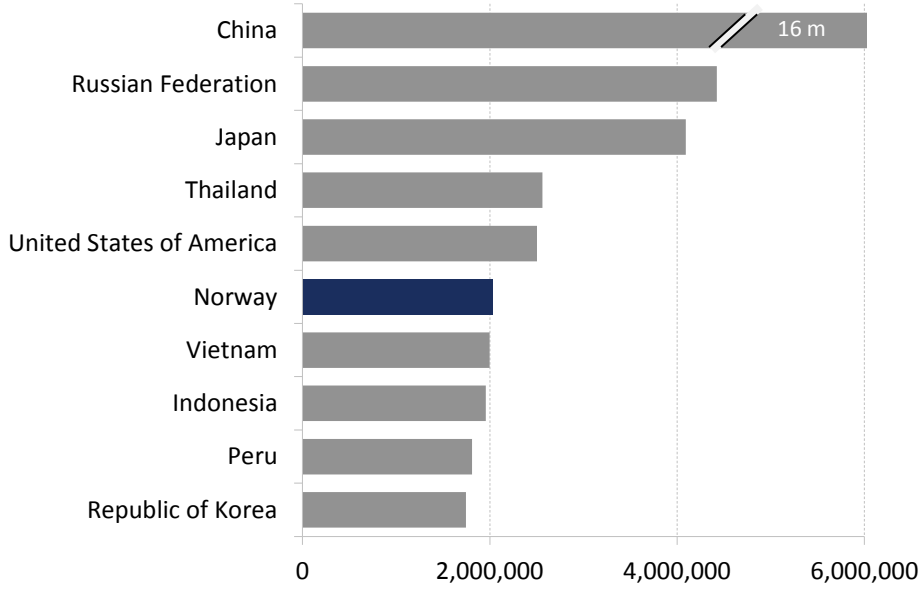
Source: Google Maps

Background

Norway – a key seafood nation, and the worlds largest salmon exporter

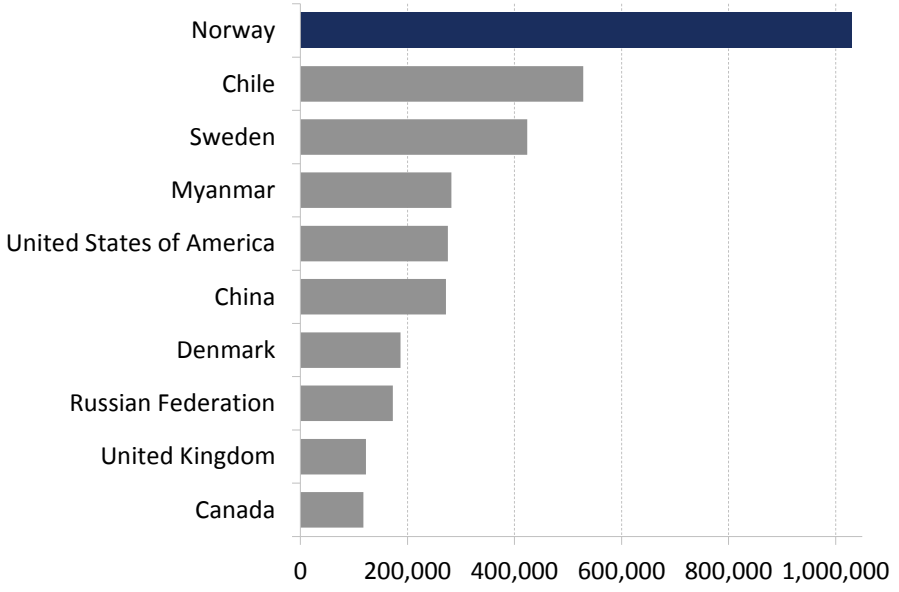
Capture production by principal producers

Annual production (tons) of fish, mollusks, crustaceans and aquatic invertebrates



Top ten diadromous fish exporting countries

Annual export (tons) of diadromous fish (all FAO categories)



- Norway is the worlds sixth largest producer of seafood
- Annual seafood production in 2013 (latest available FAO data) topped 2 million tons
- Annual production has increased by appx. 240,000 tons since 2000

- Norway is the worlds largest salmon exporter
- 2013 export volumes were almost twice that of the second largest producer, Chile

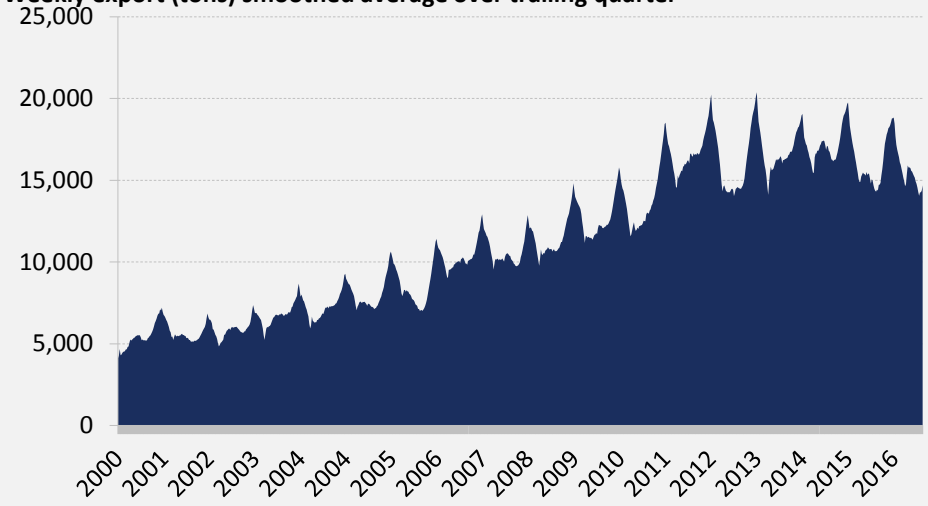
Source: FAO 2016, data as of 2013

Background

Norwegian farmed salmon – steady volume growth, continued high prices

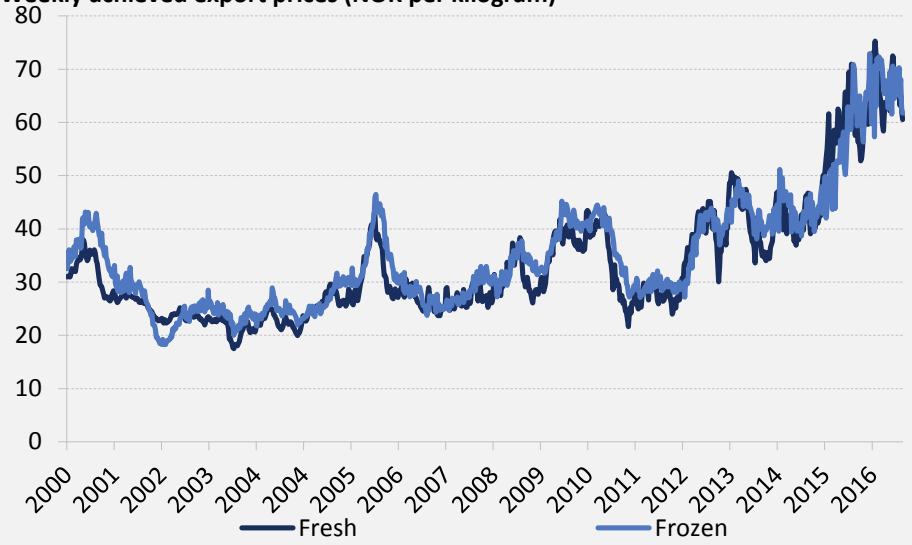
Farmed salmon exports

Weekly export (tons) smoothed average over trailing quarter

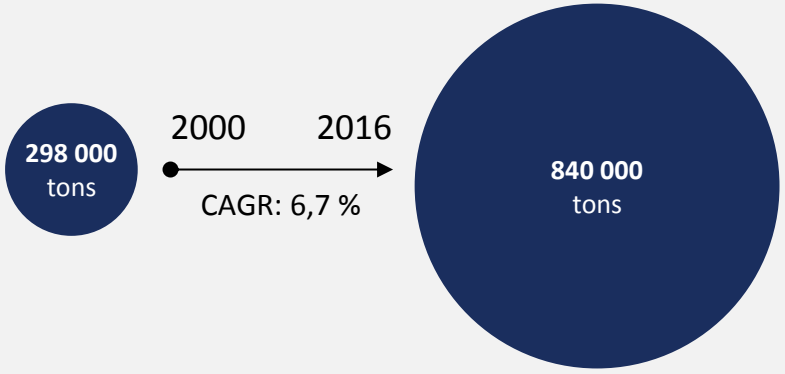


Farmed salmon prices and export value

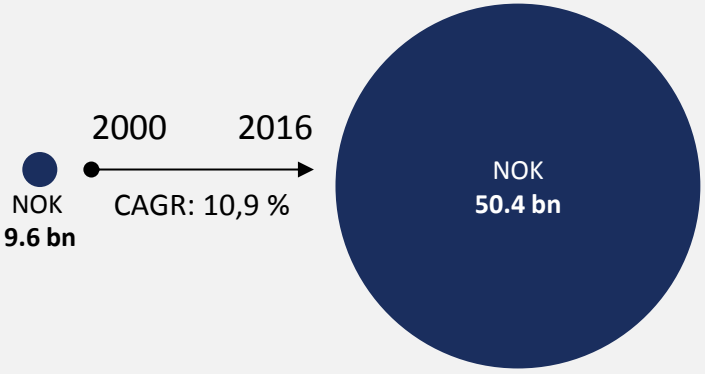
Weekly achieved export prices (NOK per kilogram)



Weight



Value



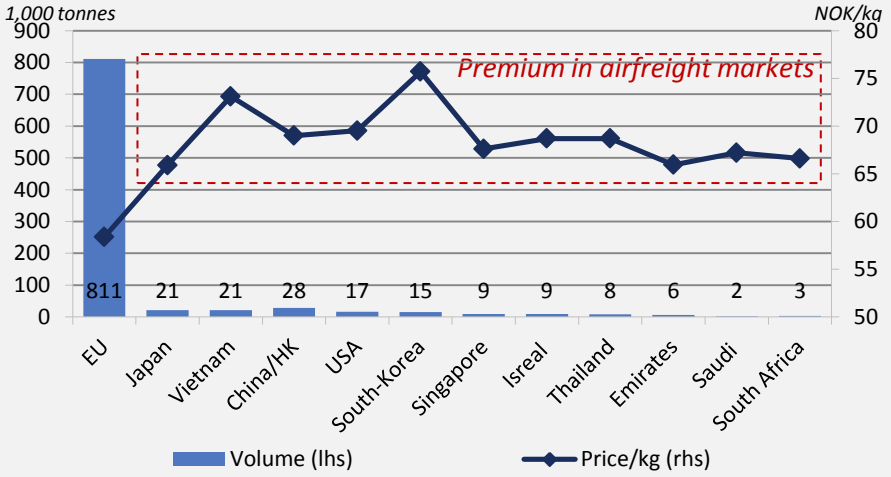
Source: Statistics Norway

Background

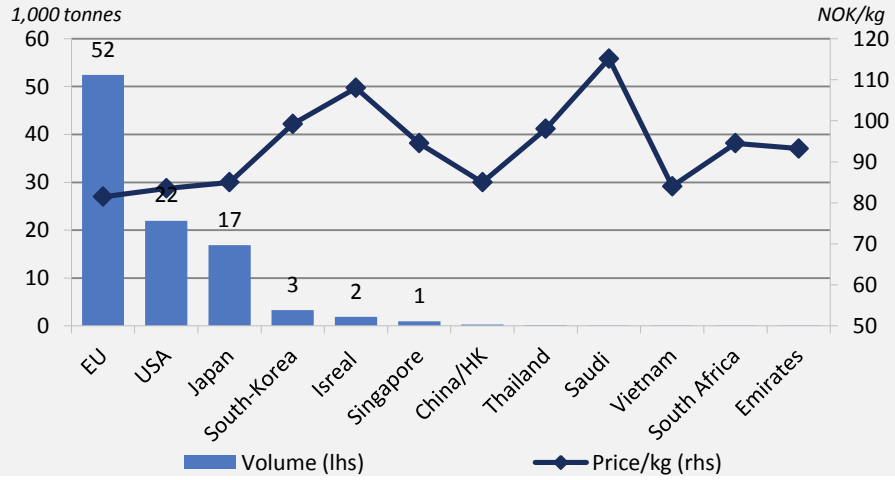
Premium pricing in international markets – and high volume growth expectations

Achieved fresh salmon prices and volumes by destination

Head on, gutted, volumes and prices (2016) (estimate including packaging)

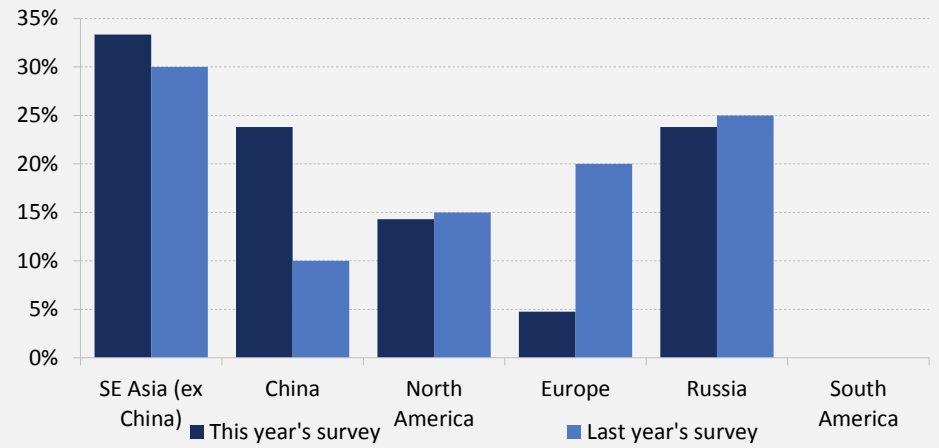


Filet, volumes and prices (2016) (estimate including packaging)



Pareto's seafood CEO survey - 'where do you expect growth?"

Expected highest demand increase over the next five years



- EU is by far the largest export market for Norwegian salmon, but long-haul destinations offer pricing premiums
- Consumption patterns vary – product development of filet vs. HOG may yield significant export growth
- Seafood CEOs expect largest demand growths in long-haul airfreight regions, particularly SE Asia and China
- Airfreight demand expected to grow significantly

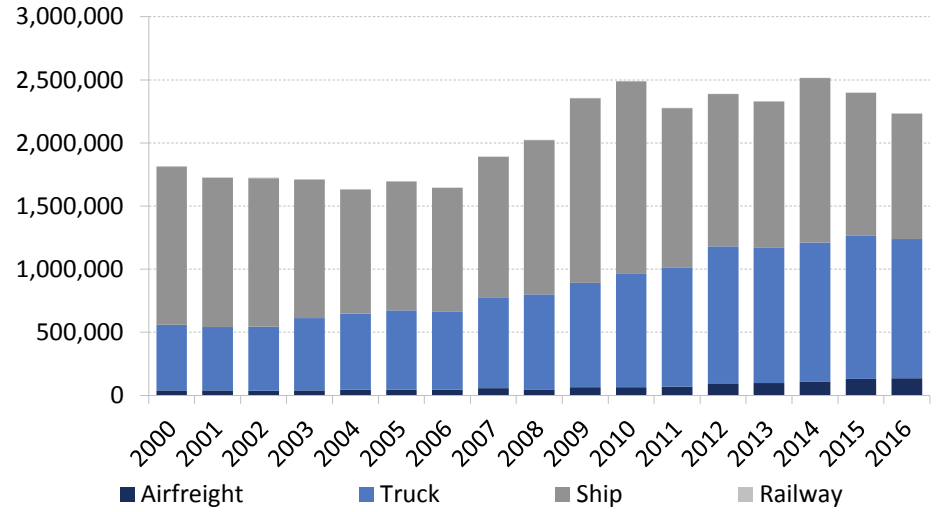
Source: Pareto Securities Equity Research, Norwegian Seafood Council

Background

Norwegian seafood export – transport methods and destinations

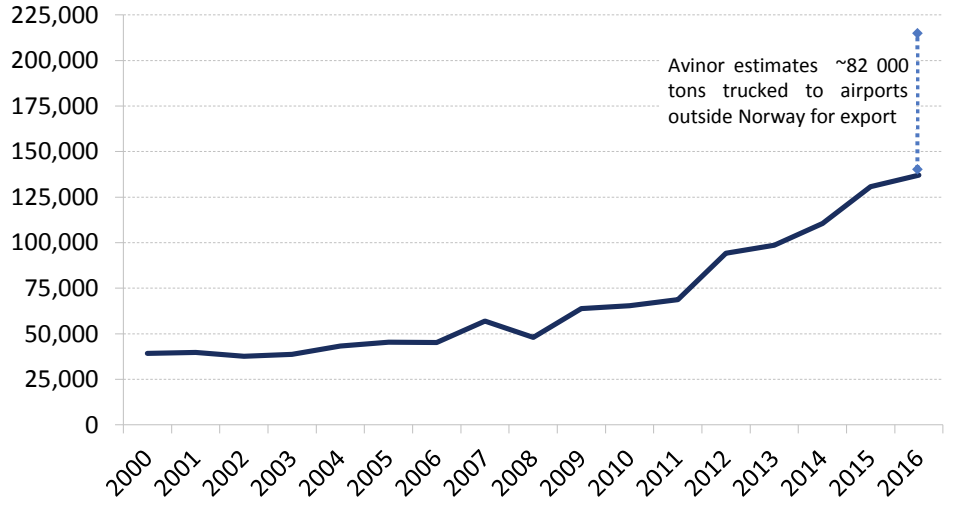
Norwegian seafood primarily trucked and shipped abroad

Annual export by transport method at customs (tons)

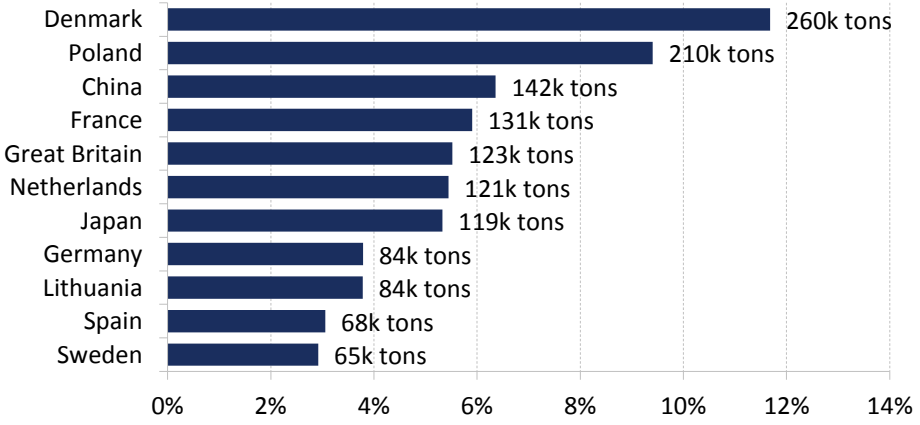


… but seafood airfreight is showing significant growth

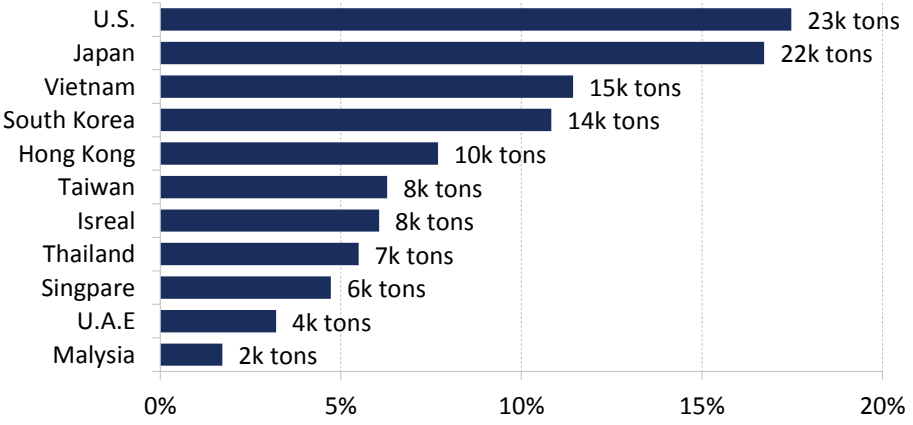
Annual airfreight export from Norwegian airports (Statistics Norway data)



Largest export destinations



Largest airfreight export destinations



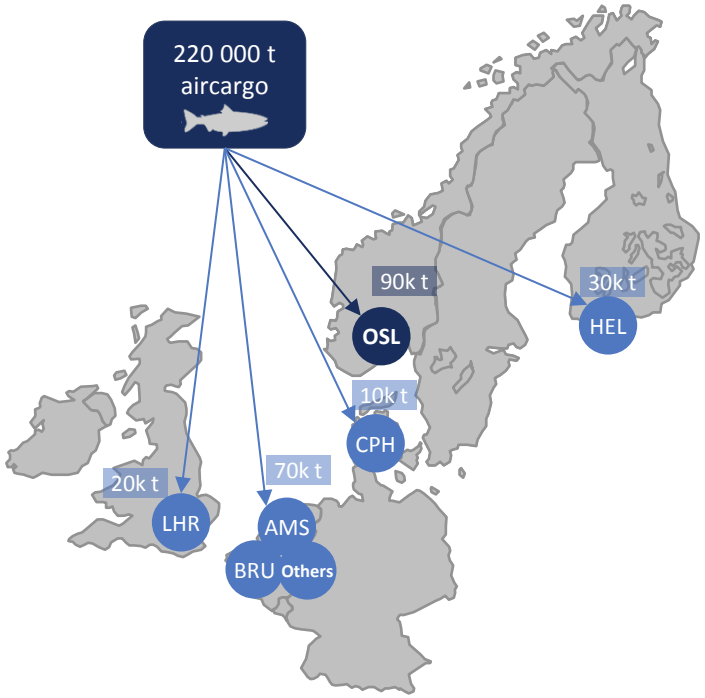
Source: Statistics Norway

Background

Large growth expected in aircargo – and more volume potential at Oslo Airport

Significant volumes flown from foreign airports

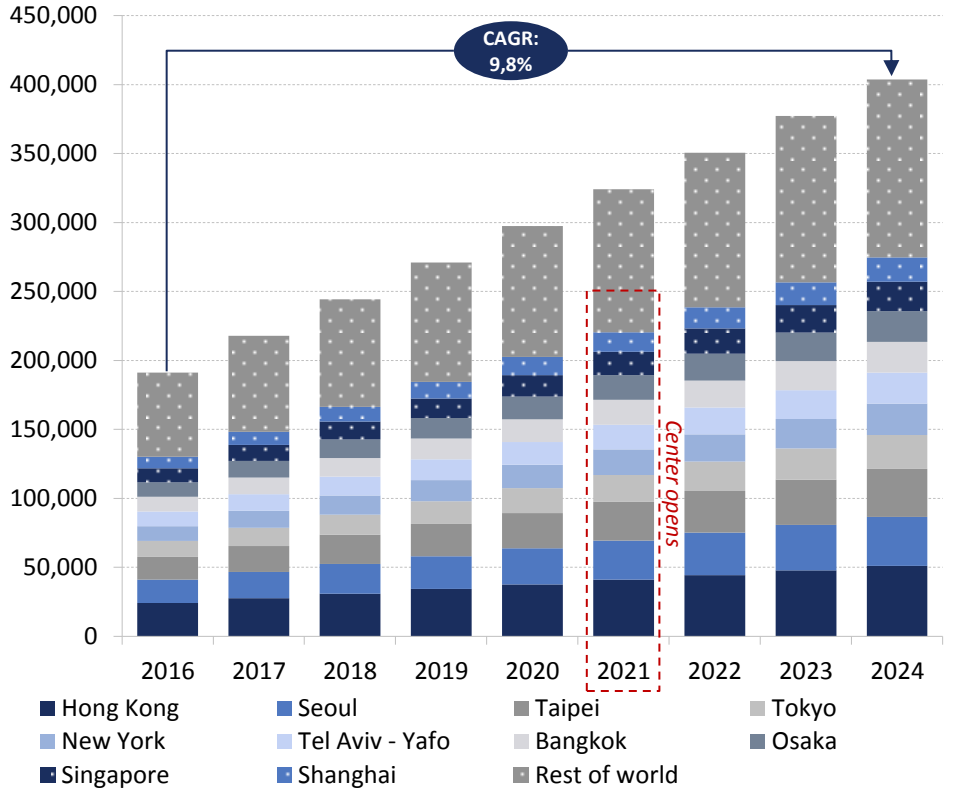
Avinor-estimated volumes trucked to be airfreighted from European airports



- Appx. 60 % of Norwegian seafood airfreight currently being trucked to other airports before shipping to destination
- Appx. 30 % of OSL-volumes shipped on widebody passenger planes; 70 % by cargo planes
- Avinor currently in dialogue regarding adding more cargo-routes to OSL; focus on far east destinations

Avinor expects seafood aircargo to existing markets to double

Annual airfreight (tons*) by destination ***(*weight estimate ex. packaging, ice, etc.)***



- Avinor volume estimate does not include mainland China – a market that has been effectively closed due to market access issues

Potential to ship more of current volume from Oslo Airport – and volumes to double in 8 years

Source: Avinor estimates

The new Seafood Air Cargo Center

Design concept by world leading aviation consulting group Avia Solutions

Avia in brief

- Avia Solutions is a leading aviation consulting group, owned by General Electric
- Provides core advisory services for the aviation industry within several broad categories:
  - Transaction Support & Business Planning
  - Traffic Forecasting
  - Route Development
  - Commercial & Retail Enhancement
  - Infrastructure Planning & Development
  - Policy, Planning & Consultation
  - Regulation
  - Airline Support and Business Planning

Scope of work: Avia Solutions has been consulting with Avinor since late 2015 to develop potential solutions, including high level costing and schematics for the new Seafood Air Cargo Center at Oslo Airport

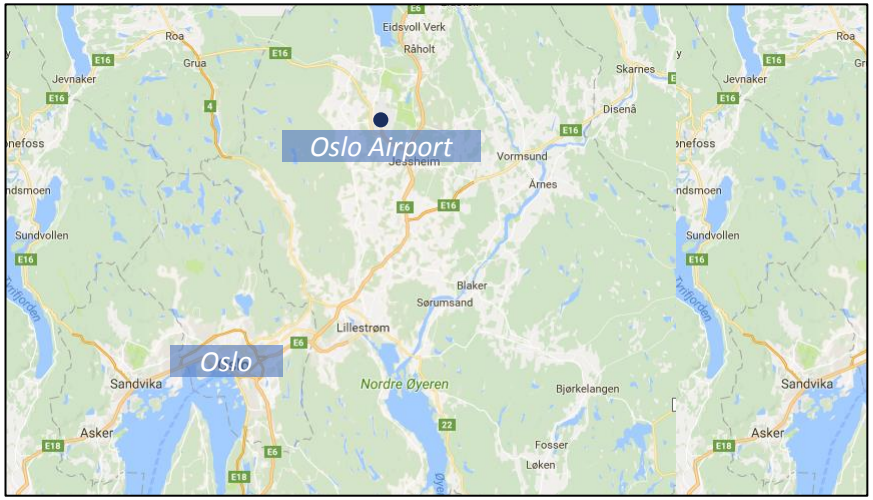
Source: Avia Solutions

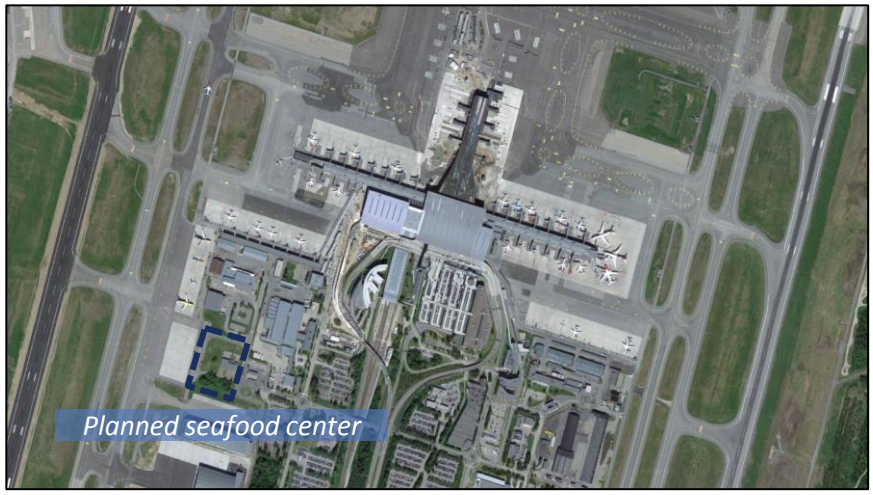
References by business area

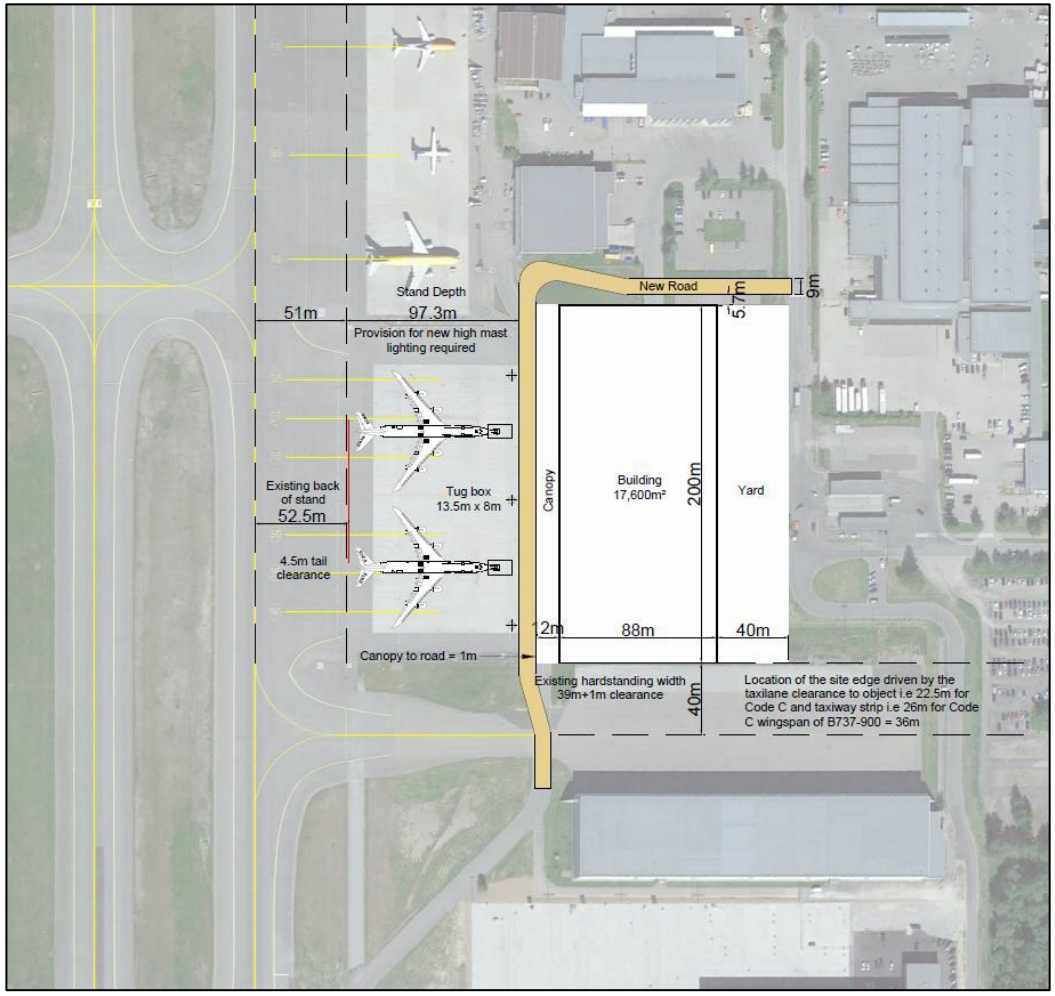
Transaction Support & Business Planning	Traffic Forecasting
• Vendor Due Diligence supporting the sale of equity in BAA, London Gatwick and Birmingham airports. • Development of aeronautical pricing models for hub airports in Europe and the Middle East.	• Country level national traffic forecasts (e.g. Mexico). Forecasts for major airports (e.g. Berlin Brandenburg). • Forecasts for specific infrastructure developments (e.g. Runway 3 at London Heathrow, 2nd Runway at Stansted and T2 Abu Dhabi)
Route Development	**Commercial & Retail Enhancement**
• Detailed market analysis and engagement with airlines on behalf of City of Chicago. A significant number of new routes and additional frequencies to key long-haul markets have been secured.	• Working with a major airport investor/operator to estimate the sales impact of a proposed landside shopping and entertainment mall on the incumbent retail and F&B operators in the airport
Infrastructure Planning & Development	**Policy, Planning & Consultation**
• A long-term masterplan for Bahrain Airport, including traffic forecasting, capital development and business planning. • Capital investment reviews for a number of major airports including London Gatwick (as part of the sale process).	• Supported several major UK airports with the preparation of planning applications for airport development. • Advised the Mexican Government on the development of a national aviation policy framework.
Regulation	**Airline Support and Business Planning**
• Manchester Airport Group (MAG) – developed analysis to inform its submission to the Office of Fair Trading's market study into UK airports. This enabled MAG to make a successful case for de-designation.	• Detailed review of all aspects of the 6 airports in BAA for Ferrovial Aeropuertos. • Development of detailed VDD report; assessment of traffic forecasts, regulation, aeronautical revenue, non-aeronautical revenue, operating expenditure and capital expenditure for each airport.

The new Seafood Air Cargo Center

Overview







The new seafood air cargo center will have direct airside access

Source: Avia Solutions

The new Seafood Air Cargo Center

Design requirements and overall costing

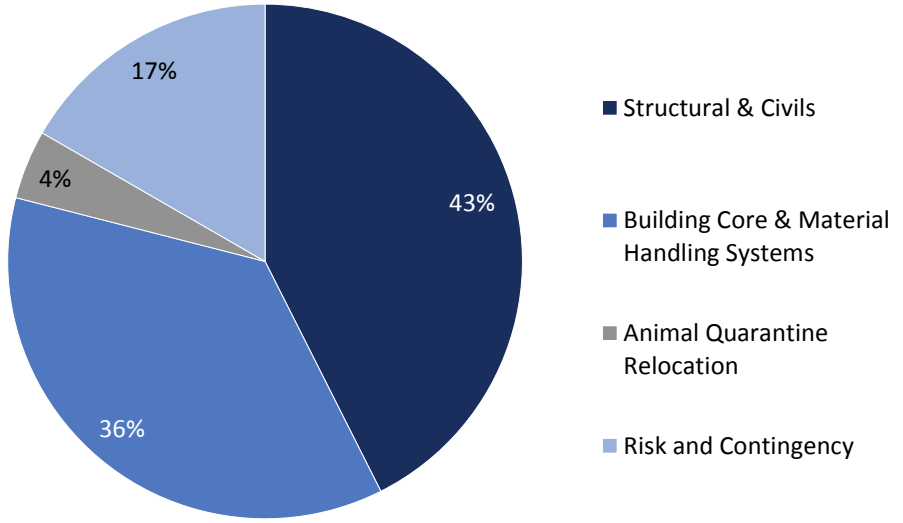
Key requirements

- The target date for opening is 2020.
- The facility shall be located to the east of the current freighter apron space (stands 205-208).
- During the construction of the facility one current building shall be demolished, and the animal quarantine building shall be relocated north next to the customs facility.
- The remaining buildings in the vicinity shall remain in place and be fully operational.
- On opening, the facility shall have the ability to handle 250,000 tons of fish with no perishables contingent.
- The facility be 'world-class' with a high level of automation.
- The facility shall be fully equipped to handle fish exports, maintaining the cool-chain throughout its processes.
- Input demand shall peak at 88 trucks per day (full equivalents), with demand peaking from 02:00–06:00.
- Output demand shall peak at two B777 freighters within one hour. (Appx. 8 widebody PAX per hour)
- Airside delivery shall be between one and two hours prior to flight departure.
- The facility shall cater for 80% of shipments tendered loose and 20% tendered as intact ULDs.
- The buildings design shall be such that it permits expansion of both the fish and perishable throughput during future construction phases.

Summarized preliminary cost estimate

Figures in NOK

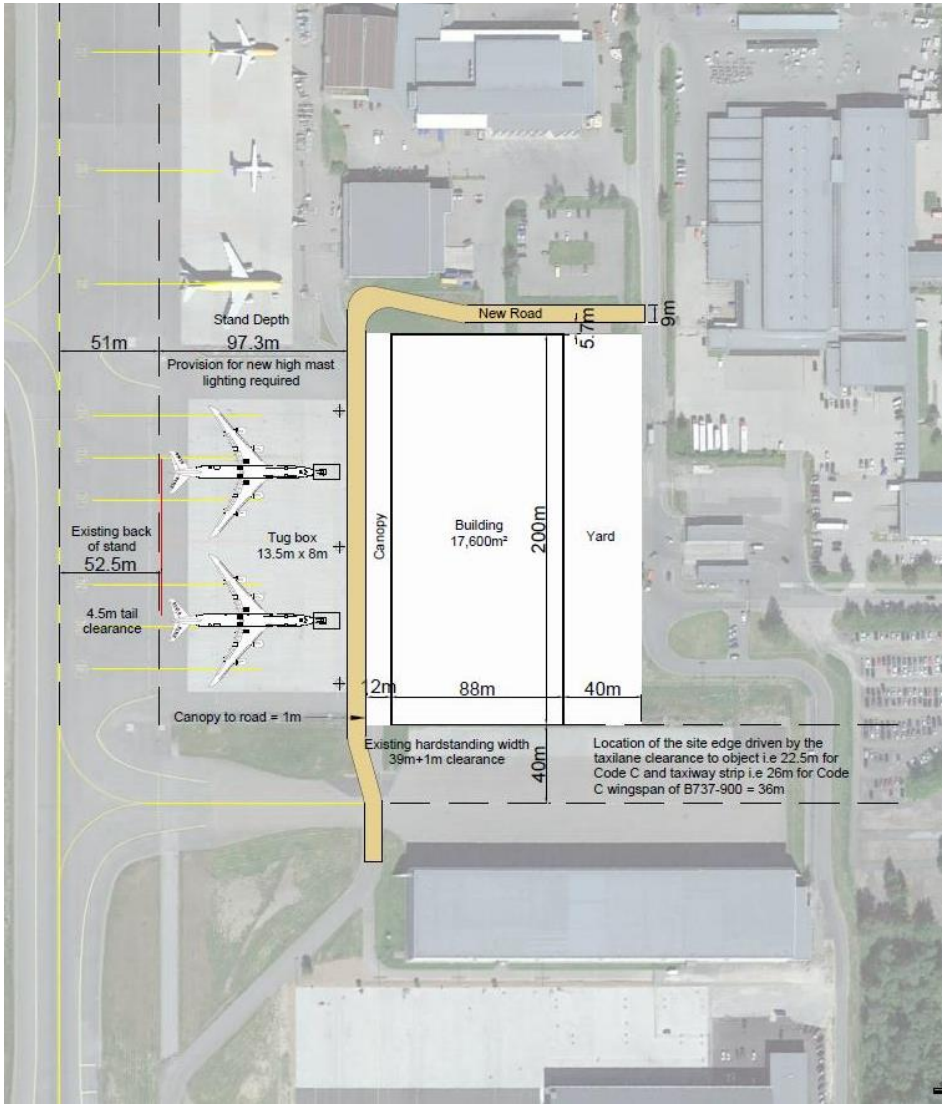
CAPEX estimate	NOK	Pr. sqm
Structural & Civils	249 800 000	14 102
Building Core & Material Handling Systems	212 300 000	12 063
Animal Quarantine Relocation	25 500 000	1 438
Project Sub-Total	**487 600 000**	**27 602**
Risk and Contingency (20%)	97 520 000	5 523
Total Project	**585 120 000**	**33 119**



Source: Avia Solutions

The new Seafood Air Cargo Center

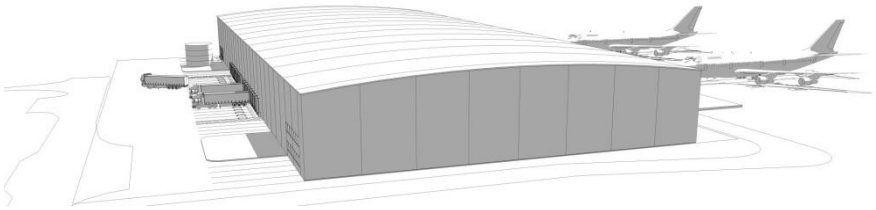
Structural and civils



Preliminary cost estimate

Figures in NOK

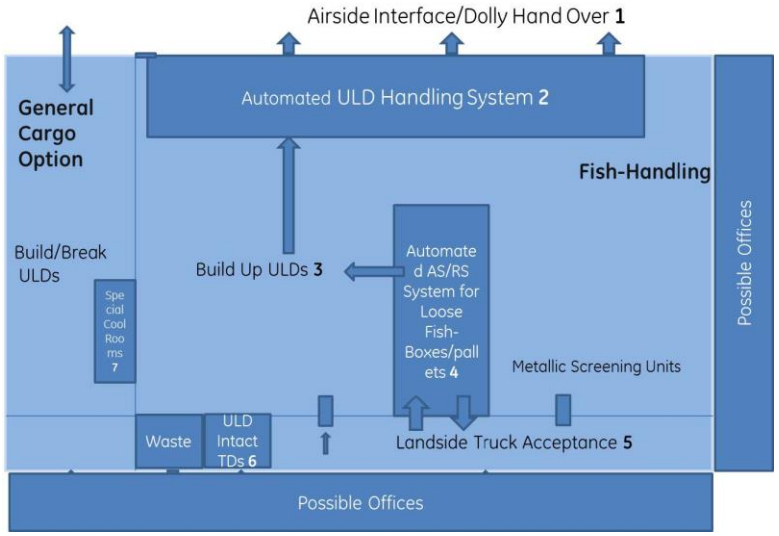
CAPEX estimate	NOK	Pr. sqm
Building Costs	94,300,000	5,358
Fit-out (Refrigeration)	50,300,000	2,858
Building and Fit-Out (Offices)	9,700,000	551
External Yard	37,400,000	2,125
Site Works	5,800,000	330
Drainage (no attenuation)	3,000,000	170
Vehicle Processing	6,600,000	375
Service Diversions / Protections	7,900,000	449
Building Systems	6,300,000	358
Fire Suppression	15,400,000	875
Sub Total – Construction Costs	**236,700,000**	**13,449**
Architectural Fees	7,900,000	449
Engineering Fees	5,200,000	295
Total Project – Construction Costs	**249,800,000**	**14,193**
Animal Handling Facility	25,500,000	1,449
Total project - inc. relocation	**275,300,000**	**15,642**

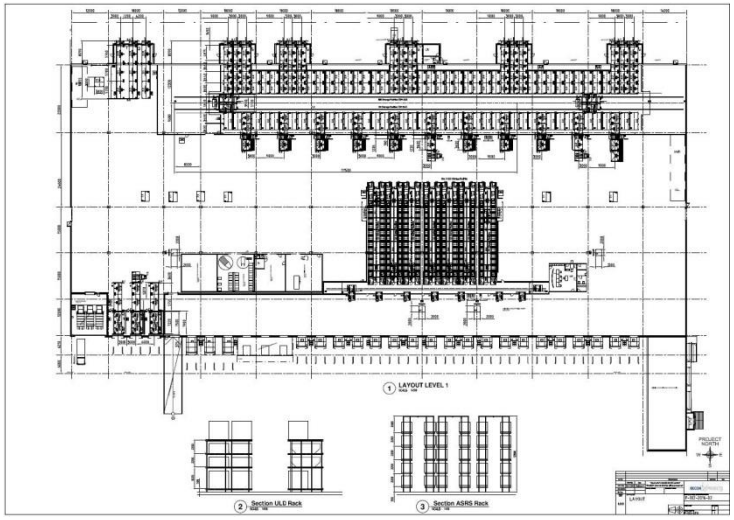


Source: Avia Solutions

The new Seafood Air Cargo Center

Building core and material handling systems





Preliminary cost estimate

Figures in NOK

CAPEX estimate	NOK	Pr. sqm
Material Handling System (including project management, I.T., cargo control system, training and run-in)	149,000,000	8,466
Security systems including X-Ray and Metal detection	7,400 000	420
Consultant and Design Costs including MHS detailed design, tender and project management , coordinating with Building design aspects	9,300,000	528
Radio Frequency Identification System including antenna infrastructure and I.T. (excl. RFID labels)	14,000,000	795
Document Carrier System	2,800,000	159
MHS contract and legal advise (FIDIC)	1,900,000	108
Cargo Management System (estimate dependent on system functionality, alternatively may choose a hosted / rented solution)	27,900,000	1,585
Total Project – Material Handling System	**212,300,000**	**12,063**

Source: Avia Solutions

Current step in the process

Surveying the stakeholder interests and key concerns

Avinor

- Mandate
- Scope of work
- Key parameters
  - Leasehold
  - Accessibility requirements
- Data and info
  - Estimated export volumes
  - Future route plans
  - Future airport plans

Seafood producers

- State of current export infrastructure
- Thoughts about salmon logistics in future
- Export plans – destinations, volumes, product development
- Interest in participating in a joint-industry structure in owning and/or operating the terminal
- Interest in committing volumes for freight
- Desire to co-locate own logistics department near the seafood air cargo center

SALMAR

marineharvest

LERØY

Real estate investors

Developers and financial investors

- Key challenges in developing the property
- Ideas regarding scaling, costing and project management optimization
- "Sanity check" of construction cost vis-à-vis attainable lease contract (rent level and duration)
- Interest in developing, constructing and owning the real estate
- Openness to invest in material handling system
- Terms of ground-lease; length, return, usage limitations

Handlers

- Interest in participating in an operator of the seafood air cargo center
- Potential lease terms (duration and rent level)
- Possibility of investing in material handling system
- Solidity and balance for taking on a long term lease and / or an annuity rent for the material handling system

?

Current work focus

To potential handlers…

Initial scope of work

- Team up with the world largest seafood exporters to create world class seafood airfreight facilities
- Unique opportunity to enter one of the largest air freight commodities and fastest growing airfreight markets in Europe
- Processing and storing of seafood as air cargo (automatic)
- Superior perusable handling in temperature controlled environment
- We are seeking handling partners to run the hub of one of the most important export industries of Norway
- Close cooperation with airlines actively seeking involment in the seafood center

Options

Operate terminal

Operate and own material system

Key outstanding issues

- Committed volume from fish farmers
- Spot market for volume booking or long term contracts with larger players
- Final property cost and material handling system cost to be agreed
- Handlers to invest in building and handling systems

Contact details

Avinor:

Martin Langaas
post@avinor.no
Tlf.: +47 930 57 051

Pareto Securities:

Iselin Tenfjord
Iselin.tenfjord@paretosec.com
Tlf.: +47 47 65 30 56

Henrik Sømme
Henrik.sømme@paretosec.com
Tlf.: +47 92 08 18 68

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