MEDITERRANEAN BUSINESS PLAN

Win23, Pillar C
Content

- Overview Mediterranean business unit
- Political, economic and competitive landscape
- Integration and synergies
- Business development
Strong Mediterranean ferry route network and port infrastructure

DFDS Mediterranean Activities

Key numbers

- 10 ferry lines
- 13 train lines
- 11 terminals
- 16 vessels
- 750 employees
- 3.5m lane meters

Map showing ferry and train lines, terminals, vessels, and employee numbers for DFDS Mediterranean Activities.
2018: June acquisition followed by currency headwind

DFDS Mediterranean in 2018 after acquisition (June – December)

Market share of 32%

- After acquisition in June, Turkey faced significant depreciation of Turkish Lira, impacting trade directly.
2019: Transitional year of expansion and recession headwind

DFDS Mediterranean in 2019

Market share increase to 44%

- EKOL partnership
- New routes to Greece, France and Italy
- Intermodal expansion
- Turkey goes into recession
2020: All set to optimise operations and cost structure

DFDS Mediterranean in 2020

- Due to market conditions and completion of scrubbers, two ferries will exit Mediterranean
- Consolidation of France – Turkey routes
- Positive impact from scrubber investments
- Possible re-bound in the economy
DFDS entry to growth market, albeit with political and economic volatility

Turkish political, economic and competitive landscape

- **Foreign policy volatility but close ties to Europe**
  - General elections and constitutional changes have stabilized the political situation
  - Increased tension between Turkey and especially the US in recent years
  - Turkey and Europe will continue close collaboration on especially trade

- **High growth market with currency volatility**
  - Economic growth rates in Turkey have averaged ~7% since 2010, comparatively 1.7% in Europe¹
  - Despite economic volatility, Turkish trade has shown positive growth

- **DFDS key part of infrastructure for Turkey-Europe trade flows**
  - U.N. Ro-Ro largest Ro-Ro operator in Turkey
  - DFDS is now on par with land transport in connecting Turkey and Europe in terms of market share

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¹ Average growth rates in the period 2010-2018
European and Turkish growth rates are currently stagnating. +6% average Turkish growth between 2012 and 2018.

- High Turkish growth rates at almost 6% on average since 2012
- European growth rates moderate, averaging around 1.6% since 2012
- Turkish economic growth slowed in 2018, GDP growth of 2.6%
- Further slow down in 2019, GDP expected to contract -2.5%
- According to IMF, 2020 growth rates are again expected to exceed Europe

Source: International Monetary Fund (IMF)
Turkish imports and exports show resilience when facing depreciating currency

Turkish imports and exports against the EUR to TL exchange rate, 2000 to 2018

Crisis 1
- Banking led crisis, Nov 2000
- 5.7% drop in GDP in 2001
- EUR/TRY depreciated 91% in 2001

Crisis 2
- Global financial crisis
- EUR/TRY depreciated 7% in 2008 and 13% in 2009

Crisis 3
- Political unrest 2013-14
- EUR/TRY depreciated 25% from 2012 to 2014

Crisis 4
- TRY depreciation sparked by the pressure on interest rates

Source: Drewry and Turkish Central Bank
Turkey and Europe interdependent on both imports and exports

Europe is the main trading partner for Turkey

- Commodity trade with Europe accounts for 54% of total Turkish trade
- Trade dependency between Europe and Turkey ensures demand for infrastructure

Turkey is the 5th largest trade partner to EU28

Source: UN Comtrade
*Trade with un-classified regions
Benefits still to come from commercial, platform and support integration

Commercial
Utilize network strength to cross-sell and take advantage of new business development opportunities

Platform
Ensure operational, technical and IT competencies of both are shared across and used to combine networks

Support
Make use of the increased scale to lower costs and share support function competencies
3 key development initiatives: Merge with DFDS network, increase cargo flow and further strengthen route network

A. Merge with DFDS networks and gain further scale
B. Increase flow of business by upgrading infrastructure
C. Further strengthen network
Commercial and operational merger with DFDS networks to gain scale

- Cross selling on Ghent – Gothenburg route
- Cross selling on Channel routes (Turkish customers)
- Intermodal connections from Trieste and Le Bolou to the rest of Europe
- Further connections to provide passage to DFDS routes e.g. in Baltics
- Agencies and terminals in both France and Italy can potentially be consolidated
## Terminal improvements to increase flow of business

<table>
<thead>
<tr>
<th>Italian terminal expansion</th>
<th>Turkish terminal expansion</th>
<th>French terminal set up</th>
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<tbody>
<tr>
<td>Migrate terminal train operations</td>
<td>Additional capacity from adjacent area secured</td>
<td>Further capacity through operations from Sete terminal</td>
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<tr>
<td>Additional capacity added from adjacent terminal</td>
<td>Investigate Mersin development options</td>
<td>Long term solution for French port operations to be developed</td>
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<tr>
<td>Investigate inland terminal expansion options</td>
<td>Explore way call services in İzmir and Antalya to increase coverage</td>
<td></td>
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Focus on intermodal infrastructure provides platform for growth

Intermodal benefits

Infrastructure
- Increased flow of cargo with intermodal infrastructure
- Increased accessibility to Mediterranean network through intermodal infrastructure

Regulatory
- Turkish customers use intermodal solutions to by-pass permit problems
- Environmental concerns

Efficiency
- Cost and capital expenditure efficient
- Less trucks and drivers needed
We are expanding intermodal network

Taking over intermodal lines operated by single customers

Opening new intermodal connections from hubs connecting networks

Strategic partnership with local railway companies

Existing lines

[Map showing existing lines with cities such as Ghent, Toulon, Marseille, Barcelona, Kiel, Ostrava, Fredericia, Kiel, Cuxhaven, Kiel, and others.]
Mediterranean business plan intact heading to 2023!

Turkey has seen economic crises before - strong track record of rebounding

- Volumes consists of diversified trade flows across numerous industries
- Ferry business model cost efficient for hauliers and logistics providers
- IMF forecast of 2-3% GDP growth supports business case
- Positive effect from larger vessels with lower per unit cost
- Strong port infrastructure in trade between Turkey and Europe
- Potential for market share growth as well as inorganic growth
CAPACITY, FERRY MARKET AND PORT TERMINALS

Win23, Pillar C

18 June 2019
Content

• DFDS new building program – Pillar C

• Freight ferry supply side – total market

• Port terminals
A ferry is not just a ferry

• Ferries are increasingly purpose built by operators for deployment in own route network
• This trend and the financial crisis have resulted in the demise of independent tonnage providers
• Standard vessel concept not applicable in ferry sector

Freight ferry
• Length and width
• Lane metre capacity
• No. of decks and height
• Load strength of decks
• Hanging decks for cars
• Ramp dimensions
• Speed
• Ice class

Freight and passenger ferry
• Same as freight ferry, plus:
  • Passenger and car capacity
  • No. of cabins (none for day ferries)
  • Car decks
  • On board facilities
Ephesus - DFDS’ first new mega ferry

- 450 trailers
- 6 hours turnaround time
- 3 stern ramps
- Double ramps to upper deck
- Shore power
- LED lights
- Can use bio-degradeable lube oil
DFDS’ new building program

- New buildings ordered at favourable point in cycle
- Similar new building price today for new ro-ros vs last generation ro-ros and around 80% more capacity
- Freight capacity increase of 12% expected between 2019 and 2023 equal to CAGR of 2.9%
- Allocation between routes not finalised, also contingent on market development

![DFDS ferries delivered/ordered 2019-23 chart](chart-image-url)

- No. of ships
- Lanemtres, '000
- 3ro-ro 3ro-ro 2ro-pax 1ro-pax
- 2019 2020 2021 2022 2023

25 20 15 10 5 0
2 ro-paxes to lift capacity and offering in Baltic network

1. Individual Cabins

2. # of Drivers

3. Cabin Utilization

<table>
<thead>
<tr>
<th>Year</th>
<th>Free</th>
<th>Occupied</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014</td>
<td>54,000</td>
<td>+12,000</td>
</tr>
<tr>
<td>2017</td>
<td>66,000</td>
<td></td>
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</tbody>
</table>

'12-'15: 32% Free, 68% Occupied
'16-'19: 81% Free, 19% Occupied
DFDS’ new building program – strong contribution to Pillar C

• Forecast of 12% capacity increase includes 2% fewer departures and fewer ferries in fleet

• Unit cost lowered by size and operating costs close to current large ferries (crew, bunker)

• Some cost increase in port terminals mitigated by environmental rebates

• Ro-paxes improves service levels to drivers and passengers

• Reliability of fleet strengthened
Content

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- Port terminals
New building deliveries – ro-ro and ro-pax

Freight ferry lane metre capacity from new buildings

- Freight ferries, Ro-Ro
- Freight & passenger ferries, Ro-Pax
New building deliveries – ro-ro and ro-pax

Capacity growth from deliveries following upturn in economy, some speculation orders*

Slump in new buildings following financial crisis

New generation of mega ferries ordered

*I.a. Epic and Pacific Basin
Growth of global freight ferry capacity* - ro-ro

- LM CAGR 2009-2018: -1.7%
- Forecast for LM CAGR 2019-2023: +1.4%
- No. of freight ferries forecast to be halved in 2023 vs 2009
- Forecast assumes ferries above 30 years scrapped

* Above 500 lm, min. 4.5 m free height on main deck, straight stern ramp and SOLAS compliant
New building deliveries per operator

**Freight ferries, ro-ro, on order 2019-23**

- Grimaldi: 12
- DFDS: 4
- Cobelfret: 3
- SOL/Wallenius: 2
- Siem: 2

**Freight and passenger ferries, ro-pax, on order 2019-23**

- Stena: 8
- Brittany: 4
- TT-Line: 2
- ICG: 2
- Tasmania: 1
- Polferries: 1
- Armas: 1
- Color Line: 1
- Baleària: 1
- EMT/ Gotland: 1
No race to the bottom in sight in the ferry market

- European ferry sector consists of a limited number of companies

- Almost all with a focused regional strategy

- Most ferries are purpose built – but versatile as different types of freight can be carried

- Roll-trailers enable freight to become ‘rolling’ e.g. containers, steel, paper, RDF, other heavy cargo + vehicles

- Meeting customer demand for capacity prerequisite for stability
Scrapping dynamics

• Scrapping held back due to volume growth and lack of capacity

• Scrapping expected to resume larger scale during 2020 as new and more efficiency capacity is delivered

• New regulations will drive this process as investments to meet sulphur limits and ballast water will not be feasible on ferries that are 30+ years

• In addition, older ferries with no scrubbers and high consumption per nautical mile will from 2020 use more expensive MGO

88 freight ferries, ro-ro, built 1990 or before. 109k lane metres

47 freight & pass ferries, ro-pax, built 1990 or before. 69k lane metres
Dynamics of deployment of new ferries

- Very few of total orderbook of 46 ro-ro and ro-pax ferries ordered on speculation
- Ferries in general ordered by operators to renew fleets and add capacity to existing routes to accommodate growth
- Opening of new routes by independent tonnage owners requires port access, sales organisation and long term financial resilience
- Ferries replaced by new buildings will in turn replace scrappings and can also transfer to defence or industrial use, for example paper industry, aircraft manufacturers
- Also deployment options in new development areas
Content

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Port terminals

- Freight ferry port terminals require large space to park trailers & other rolling units
- Plus connection to transport infrastructure that can cope with large volumes
- Also rail connections required for some customer solutions
- New mega ferries will lead to expansion of existing ports
DFDS port terminal strategy

- Cost-efficient services, flexibility – customer front line
- Mix of non-dedicated and dedicated terminals contingent on market situation
- Ability to provide value-adding logistics services – support for Pillar A strategy
General port terminal trends

• Focus on development of existing port terminal infrastructure

• Existing hubs expected to increase in size

• No major new port terminals for ferry services planned or expected to be built in strategy period

• Automation of port operations
Positive Pillar C impact and stable supply side expected

- New building program contributes to Pillar C through lower unit, capacity growth and changing market dynamics
- Capacity entering market in next five years predominantly ordered by operators for own routes
- Mature ferry sector focused on developing efficiency of existing infrastructure and routes to strengthen proposition to customers
- New regulations and large old fleet expected to accelerate scrapping that will underpin balance in tonnage market
- Overall, limited supply side risk expected next five years – some transitional risk in 2020-21
Trends and Sustainability
The Transport & Logistics industry is behind other sectors, but at the brink of major disruptive waves.

Disruption occurred
- Fully digitalized players own market

Disruptive moves ongoing
- Online players on the rise, incumbents partially leverage digital

Disruptive changes to be seen
- Very few disruptive digital players or improvements of value chain

Media
- Telecom, Insurance, and Banking
- Retail
- Automotive

T&L sector on the brink of major disruptive waves
- Energy
- Healthcare

Source: BCG analysis
We have assessed the most important technologies for DFDS

Timing for material impact

- **High Impact**
  - AI
  - IoT
  - Autonomous terminals
  - Autonomous trucks
  - Energy 2.0
  - Autonomous vessels
  - Autonomous cars
  - Autonomous terminals

- **Low Impact**
  - Blockchain

Source: BCG analysis, Victoria Transport Institute & International Transport Forum; press releases; news clippings; various DFDS projects; discussions with suppliers and customers
Autonomous trucks: Multiple players are conducting tests on public roads
Autonomous trucks: Majority of tasks related to trucks and driver can be automated

Today
- DFDS check for and book truck capacity
- DFDS plan routes
- Based on booking and driver reports
- Truck driver performs load, unload and secures cargo, and connects trailer
- Drivers needed in trucks at all times
- Experience with roads
- Drivers call DFDS for a mechanic
- Maintenance coordinated by local office
- Driver update team via Truckcom
- DFDS books via velocity
- Driver just have to turn up

Ease of automating task:
Cooperation with Volvo Trucks on autonomous trucking
Autonomous terminals: Container terminals have long been undergoing automation, but no one has done full RoRo terminal automation.
Autonomous terminals: Ghent terminal is constructing an autonomous gate

Fundamentals of the “Ghent gate” project

Background
• Project initiated to enable higher throughput of trailers, to ensure Jinlings can be handled (would increase peak pressure)
• Ghent gate would enable more trucks to pass through in a short time period as well as reduce staff cost

Solution
• This happens through an automation reading of license plate, hazardous label and damage recognition

Timeline and project economics
• Gate to be completed in 2019
Autonomous vessels: A number of autonomous ship projects, primarily in Norway

- **Birkeland**
  - [Image of Birkeland ship]

- **ASKO**
  - [Image of ASKO ship]

- **Sea Shuttle**
  - [Image of Sea Shuttle ship]

- **NYK Line**
  - [Image of NYK Line ship]
Energy 2.0: Switch in propulsion is slowly underway, partly driven by regulatory developments
MASH Biotech: DFDS has invested in MASH Biotech – a start-up company producing biofuel

Develop a sustainable and commercially viable marine biofuel to reduce the environmental impact from shipping

Scale up the production of marine biofuel making it a serious alternative to fossil fuels

Replace fossil fuels on DFDS fleet and become CO2 neutral without changes to engines and equipment
Sustainability: We have a new CSR strategy
Sustainability: 63 initiatives already ongoing across all of DFDS
WIN23: WRAP UP AND FINAL Q&A

DFDS GROUP
2019-2023

18 June 2019
WIN23 - strategic and financial ambitions for next 5 years

- Resilient combination of ferry route infrastructure and logistics solutions

- Balanced impact from organic initiatives, Mediterranean business plan and acquisitions

- High share of initiatives contingent on own ability to perform

- 10% uncertainty related to primarily macro elements
THANK YOU

DFDS CAPITAL MARKETS DAY 2019