Business Plan 2022-2023

(§ 10 Plan)

We link Norway together – and Norway to the world through sustainable aviation

1. Introduction

In accordance with § 10 of Avinor's Articles of Association, the Board hereby submits its business plan for the 2022-2023 year (§ 10 plan). The last § 10 plan was submitted to the Norwegian Ministry of Transport in October 2020, and was a plan clearly influenced by the COVID-19 pandemic and the deep crisis aviation found itself in. By agreement with the Ministry of Transport, a § 10 plan was not submitted in 2021 in anticipation of Avinor's new corporate strategy for 2022-2025. This was approved by the Board in March 2022.

Like the entire international aviation industry, Norwegian aviation was hit hard by the pandemic. Airports, airlines and other operators in the value chain were placed in a very challenging situation. In early April 2020, Norway saw just 8% of its regular domestic traffic and 1% of its regular international traffic. The state introduced several support measures to help the industry including airport operating subsidies, underwriting select routes to maintain minimum levels of service, tax breaks and access to credit for airlines. These were important contributions to help Norwegian aviation through the worst crisis in the history of the industry. Interaction between Avinor, airlines, health authorities, police, customs, military, and other involved parties during the pandemic shows clearly how critical a well-functioning aviation system is for Norway.

Robust and sustainable financing of the business is the backbone of Avinor's operations, not only for the operation and development of existing infrastructure, but also to actively contribute to the green transition and the development of sustainable air transport in the future. For Avinor, re-establishing the company's financial solvency and ability to self-fund its activities are therefore decisive conditions for the choice of direction shown in the corporate strategy. The company's long-term vision sets out clear ambitions that technology, innovation, collaboration and partnerships must ensure that Avinor actively contributes to sustainable growth and value creation across the entire country. We will pursue our clear commitment as an active driving force when it comes to climate action with the same passion.

The Norwegian Government's intentions as laid out in its political platform are important to the company's strategic planning, even though not all issues have materialised in formal government decisions. The Government's clear confidence in the Avinor model is extremely positive. It is vital for the model's strength and robustness that this is followed up so that it receives genuine support. Furthermore, both the Ministry's work on the report to the Storting on the National Aviation Strategy and the planned study of future capacity and needs at Norway's main airport, Avinor Oslo Airport, Gardermoen as a part of the NTP 2025-2036 are important processes for Avinor's framework conditions. The significance of the main airport as the nation's hub for both domestic and international flights must be a fundamental consideration here. This will be important for both the effectiveness of the entire travel market in the country and for strengthening the contribution of the main airport to the financing of the entire airport network in the future.

Our overall strategy for the next five years is based on constantly evolving challenges. Several trends have already intensified in recent months such as an increasingly tense security situation, a major energy crisis and significant uncertainty in the international and Norwegian economies. At the same time, the climate crisis remains the greatest challenge of our time and we must not let our attention or efforts slip. Norwegian aviation is dependent on technology, markets and policies working together to achieve the goal of fossil-free aviation

by 2050. One of Avinor's main messages in this § 10 plan is therefore that the Government must set clear targets for the development and uptake of emissions-reducing technologies in Norwegian aviation. Long-term, binding, and powerful packages of measures for technology development, investment support and tax breaks should be put forward to help aviation achieve its climate goals.

Charges associated with aviation can function as a measure to influence this development, but both governmental fiscal charges and Avinor's charges for the use of infrastructure must be assessed jointly. This applies to ensuring a good geographical profile, a clear climate profile and ensuring an economically sustainable level of charges for airlines.

In Chapter 2, the social importance of aviation, Avinor's social mission and obligations carried out by Avinor on behalf of the Norwegian state are presented followed by a brief account of the results for selected target areas in 2020-2021. For broader information, please refer to Avinor's *Annual and Sustainability Report 2021*[1]. The new corporate strategy focuses on selected strategic focus areas that the company believes are the most important priorities in the run-up to 2025. This is the main theme of this § 10 plan and is presented in Chapter 3. Chapter 4 deals with the Group's organisation, Avinor's own environmental performance, work within civil security and emergency preparedness and Avinor's relationship with the Norwegian Armed Forces.

2. Aviation in Norway and Avinor's operations

2.1. The societal importance of aviation

Norway is long-winded country with scattered settlements and great distances between them and is located on the outskirts of Europe. At the same time, the Norwegian economy is open and internationally oriented. Robust transport services for people and goods are vital for business activities. In many cases, there are no alternatives to aviation due to great geographical distances, and Norway is more dependent on air transport than most other countries. An important role for aviation is therefore to provide adequate accessibility to all parts of the country and to the rest of the world. Adequate accessibility is particularly important for fulfilling the overall policy objective of making full and equal use of every part of Norway. To realise this, there must be a foundation for business activities, which requires that companies have access to their markets without excessive disadvantages due to distances and a loss of competitiveness. Furthermore, aviation is important for creating accessibility to a range of public services and other activities for residents in more isolated areas. In many regions, travel for medical reasons account for a significant portion of passengers since health services in more isolated areas rely primarily on air transport services to regional hospitals. Aviation also plays an important role for access to education, as well as cultural activities and sports. Holiday and leisure travel and visits family and friends over long distances would be difficult without access to air transport, particularly in the north. For international travel, air travel totally dominates over other modes of transport, except for short trips to Nordic countries. Aviation is therefore vital for accessibility and social cohesion and development.

The critical significance of aviation becomes clear through crises, and not least during the pandemic. The Norwegian State also purchased capacity on routes that are normally

[1] Avinor's Annual and Sustainability Report 2021

operated on commercial basis. The cooperation between the Norwegian authorities and Norwegian airline companies and the availability of Avinor's infrastructure and services has been essential during this crisis.

Norway has a total for 47 airports offering commercial flights, of which 43 are either owned by Avinor or come under its civil aviation sector responsibility. In addition to the airports, Avinor is, through Avinor Air Navigation Services (ANS), responsible for three air traffic control centres, the centre for remote towers in Bodø, the data network centre in Bergen, air traffic control services at Ørland, Rygge and Torp airports, and infrastructure for communications, navigation and surveillance across the entire country. In 2019, 56 million passengers passed through Norwegian airports. In addition to contributing to accessibility, aviation is a major and important industry in and of itself with airports and airlines being the largest stakeholders. Furthermore, there are several other activities that contribute to and support aviation, and indirect activity is created through deliveries to airlines and their employees. An analysis performed by Avinor in 2015 showed that a total of 60,000 people were employed in the aviation sector. This corresponded to 2.3% of employment in Norway. The employees were divided into 28,000 direct employees working in aviation, 3,000 resulting from Avinor's investments and 30,000 in deliveries and due to induced effects of consumption.

2.2. Avinor's social mission and obligations carried out by Avinor on behalf of the Norwegian State

Avinor's social mission relates to owning, operating, and developing a national network of airports for the civil aviation sector and a joint air navigation service for the civilian and military sectors. Operations must be carried out in a safe, efficient, and environmentally friendly manner and ensure good accessibility for all groups of travellers. The company is listed as a category 3 company[2] meaning the owner seeks the most efficient attainment of their sectoral policy objectives within a financially sound framework. The company's Articles of Association provide leeway to optimise safe, stable, and efficient operations. It is important that this leeway is restricted nor that it limits opportunities for developing future efficient operating models. Predictable framework conditions, clear governance and effective measures that support the company's contribution to the green transition are very important.

Operations shall support the overall targets for the transport sector. The National Transport Plan (NTP) sets the framework for the long-term development of the transport system in line with set targets. In collaboration with other transport entities, Avinor provides professional input to long-term planning. The guidelines for work on the NTP 2025-2036 focus closely on ensuring good capacity utilisation of existing infrastructure through the effective use of technology and optimisation of operations and maintenance. These are targets that are also reflected clearly in Avinor's corporate strategy. Avinor regards planning an important arena for collaboration and coordination across the transport sector and will contribute to strengthening the role of aviation in the long-term development of the transport system. Avinor believes that it is important to place users' needs in the centre of the development and prioritisation of the nation's future transport system.

[2]Reference is made to the new ownership report from Norwegian Ministry of Trade, Industry and Fisheries, Meld.St. 6 (2022-2023) where the categorisation was adjusted. Avinor will then become a category 2 company.

The mandate from the Ministry for Transport for work on the Whiter Paper to the Storting on the National Aviation Strategy states that Avinor's tasks and financing shall be assessed with a view to following up the intentions of continuing and strengthening the Avinor model as stated in the Government's political platform. Reference is made to an assessment of the sustainability of the current airport structure, Avinor's profitability and how the company's ability to self-fund can be re-established and strengthened. Avinor is looking forward to clear signals related to the company's social mission and the owner's intentions for how the Avinor Model can ensure the safe, professional, and future-oriented development of Norwegian aviation.

As a part of its social mission, Avinor also carries out certain non-trivial obligations on behalf of the Norwegian State within airport operations and air navigation services. The health care services and services for the Norwegian Armed Forces are among the most important of these. These obligations involve an annual cost of more the NOK 800 million. In addition, the Ministry has commissioned studies relating to the NTP with costs in the region of NOK 100 million per annum (with some fluctuations from year to year). Reference is made to previous studies of these tasks, most recently discussed in our letter to the Ministry of 3 March 2022 in relation to Arctic Securities' review of the company's forecasts, management systems and planning tools. The obligations are of great importance to the society and Avinor has both the competence and the capacity to carry them out well and in an efficient manner. In its report of June 2022 to the Ministry, Arctic provided some recommendations in relation to the obligations carried out on behalf of the Norwegian State, focussing on cost coverage.

As a self-funded enterprise, Avinor shall, without State support or subsidies, operate within a financially sound framework where all operating income, operating costs and investments are made resulting in a total profitability that maintains or develops the Group's value and which protects the balance sheet book values. Except for the extraordinary crisis caused by the COVID-19 pandemic in 2020 and 2021, Avinor has sustained the fundamental self-financing principle since its establishment in 2003. The model also forms the basis of the company's financing in capital markets.

2.3.Avinor's operations 2020-2021

According to the Articles of Association, the §10 plan must include a report detailing the financial results for the previous financial period. The company's *Annual and Sustainability Report 2021* is a comprehensive account of the company's operations. The Report includes descriptions of important conditions for the company's development in addition to the annual accounts and financial results. In line with previous §10 plans, we only highlight the most important areas below. For more in-depth information, refer to the Annual and Sustainability Report 2021.

2.3.1 Flight safety

Avinor has defined an overarching safety goal which reads as follows: "No aviation accidents or serious aviation incidents/personal injuries involving Avinor should occur." Work is being carried out systematically on incident investigation, monitoring and trends of the safety parameters, and continuous improvement of the management systems, including aviation safety management. Through this, performance and operational risk situations of air navigation services and airports are monitored and reported to the company's senior management.

Avinor has various measures to minimise the risk of unauthorised drone usage. Avinor observes and records illegal drone activity and reports all unauthorised incidents involving drones at airports.

Regular internal and external audits are carried out as one of several measures to maintain a good safety culture and a high level of flight safety. The 2021 audit programme did not reveal serious non-compliance in respect of laws, regulations, or Avinor's governing documents that reduces the level of or poses a risk to safety.

There were no aviation accidents with or without personal injury or serious aviation incidents in Norwegian aviation to which Avinor was a contributing party in 2021. Reporting in terms of flight safety has been good and maintained in relation to production levels during the pandemic. The degree of severity of aviation incidents reported has been lower.

2.3.2 Traffic

In 2021, Avinor's airports handled a total passenger traffic volume 59% lower than pre-pandemic levels (2019). A total of 22 million passengers travelled to, from, or via Avinor's airports in 2021. Air traffic through Avinor's airports in 2021 measured by passenger numbers increased by 10% compared to the corresponding period in 2020. The number of aircraft movements increased by 8.4% in 2021 compared with 2020. Domestic air transport movements fell by 10.2%, while international air transport movements increased by 3.2%. Travel restrictions were eased continuously through 2021; however, the negative impacts of the pandemic on travel activity have persisted throughout the year.

2.3.3 Climate and the environment

Aviation affects the environment both locally and globally. The local environmental impact is primarily related to aeroplane and helicopter noise, air quality, and water and ground contamination. The global impact is primarily related to greenhouse gas emissions. Water and ground contamination around airports resulting from PFAS[3] has become a particularly major challenge.

Greenhouse gas emissions from all jet fuel for domestic and international civil purposes sold at Norwegian airports in 2019 corresponded to around 5.5% of Norway's total emissions, in the order of 2.8 million tonnes of CO2 equivalents. In 2020 there was a significant reduction in the emissions from both domestic and international traffic when compared with 2019 and preceding years. The reduction can primarily be put down to reduced air traffic because of the pandemic. Greenhouse gas emissions from air traffic are expected to increase in line with the growth in traffic after the pandemic.

Future clean-up costs relating to PFAS are dependent on regulatory requirements, remedial action methods, quantities, and prices. As of 30 June 2022, Avinor has allocated an accounting provision of around NOK 1.1 billion for the clean-up. The Norwegian Environment Agency has issued a ruling for measures and action plans at some airports and has informed Avinor to expect a ruling to for similar clean-up at a number of other airports.

[3]PFAS is collective term for a large group of fluorine-based substances (including PFOS and PFOA) which were previously used as additives in firefighting foam.

2.3.4 Finances

As a result of the pandemic, the Government introduced wide-ranging travel restrictions in March 2020 that hit air traffic hard. To provide financial assistance to airlines, Avinor's aviation charges were suspended for most of 2020. Avinor's losses resulting from pandemic-related loss of revenue in 2020 and 2021 will not be recouped in future increases of charges.

In all, the number of air passengers through Avinor's airports in 2020 and 2021 was about 40% of regular activity (2019) with a total loss of revenue amounting to around NOK 13.5 billion. The loss in revenue was partially compensated for through NOK 7.4 billion from the government in operating aid. Avinor's delivery of services in accordance with its corporate social responsibility has remained unchanged over the same period except for the temporary closure of nine local airports for a limited period in 2020. Avinor did not receive an operating aid in Q3 2021. As of 2022, traffic remains well below both 2019 levels and a financially sustainable level in the long term.

Avinor is focussing heavily on cost-effective operations and has executed several programmes aimed at improving cost-effectiveness since the establishment of the company in 2003. In April 2020, the cost reduction programme *Profitable Avinor* was set up. The programme covered airport operations, air navigation services and staff and support functions. It was aimed at contributing to the overall Group target of returning as quickly as possible to financially sound operations with the Group's costs and investments being adjusted for the volume of traffic and levels of revenue that would appear after the pandemic.

From 2019 to 2021, the Group reduced its operating costs by NOK 1.3 billion in nominal figures on top of the level of investment being significantly lower than planned. Throughout 2020 and 2021, the cost base within the Group was heavily reduced. Up to NOK 400 million was removed from volume-based services such as the security checkpoint service and the passenger assistance service. The effects of temporary measures such as temporary redundancies, downscaling of operations, reductions in travel and reductions in maintenance costs were also removed.

The largest cost reductions were seen in operations and investments, both within airport operations and air navigation services. Cost-reducing measures of a more permanent nature include changes to operating concepts such as winter operations, the establishment of the

Fact box 1: Airport Operations Centre (APOC)

The APOC at Oslo Airport opened in September 2021. The establishment of the APOC means that operational units that were previously dotted around the airport were gathered into a single operational environment, located in a single control room.

The APOC has led to closer cooperation between operational units internally in Avinor and has become a more obvious contact point for other stakeholders at Oslo Airport.

The APOC forms the basis for further development of operations with data-driven production management and closer cooperation between both local stakeholders at the airport and with the potential of optimising and centralising operational tasks internally at Avinor.

The establishment of the APOC resulted in a reduction of 15 FTEs as a result of the reorganisation of multiple units.

Airport Operations Centre (APOC) at Oslo Airport (see Fact box 1), reductions in both operational positions and in staff and support services, as well as the introduction of automation and technology for remote operations. In total, the Group has reduced the number of full-time equivalents (FTEs) by around 400 in the period 2019-2022 (from 3,200 to 2,800), primarily due to volunteer arrangements and retirements. Several analyses relating to the Group's cost base have been performed and have contributed to cost reductions. The implementation of this was carried out in close dialogue with employee representatives and safety co-ordinators, both centrally and locally.

The external review of Avinor carried out by Arctic Securities (June 2022) concluded that most cost-drivers in Avinor are governed by factors beyond the company's control and that the company therefore has very little freedom to influence its own priorities on the cost side.

Even with operating subsidies, Avinor's financial solvency was significantly weakened by the Group's equity ratio being reduced from 34.6% at the end of 2019 to 26.8% at the end of 2021. The equity ratio, calculated in accordance with § 5 of the Articles of Association, in corresponding periods was reduced from 45.9% to 39.4%.

At the extraordinary general assembly, an exemption to the company's Articles of Association was given by adjusting the minimum permitted equity ratio under § 5 of the Articles of Association down from 40% to 35% for the period up to and including 31 December 2022.

2.3.5 Sustainability

Avinor must, as a category 3 company, be evaluated on how effectively it meets its sectoral political objectives. This means that the company must be able to balance financial, environmental, and social conditions in a way that contributes to sustainable development and long-term value creation.

For many years, Avinor has worked systematically on sustainability and corporate social responsibility, based in part on the OECD's Guidelines for Responsible Business Conduct, and in 2014, it joined the UN Global Compact. The company reports on corporate social responsibility in accordance with the Global Reporting Initiative (GRI) and is a member of *Transparency International Norway.* Avinor's own goals for its corporate social responsibility are largely in line with the UN's Sustainable Development Goals (SDGs).

As a member of *Ethical Trade Norway*[4], Avinor is obliged to work actively on due diligence assessments for sustainable business conduct in line with the OECD's guidelines. Avinor expect its suppliers and partners to follow the same approach. This work can also be linked to UN SDG 8: adequate work and economic growth where our responsibility involves obtaining an overview of potential risks of breaches of human rights in the supply chain, working to remove risks of breaches and remedying uncovered breaches.

Avinor has chosen to manage the company strategically through a balanced, target-oriented management system that ensures the safeguarding of social considerations, environmental perspectives and long-term healthy finances for the company. Our strategic plan sets

[4]*Ethical Trade Norway* is a membership organisation and a resource centre for sustainable trade. Its purpose is to promote responsible business practices in the supply chain so that trade contributes to protecting labour rights, society and the environment.

objectives and defines strategies and actions that are followed up through our corporate governance and long-term portfolio management.

Sustainability is entrenched in our corporate strategy and, when it comes to the climate and environment, focuses on UN SDG 13 regarding combatting climate change and SDG 9 regarding innovation and infrastructure. It is through these SDGs that Avinor's efforts will contribute to the necessary transformation towards a future-oriented and sustainable industry.

Avinor is working on a comprehensive climate risk analysis and is preparing for how the company will handle new requirements and expectations on sustainability reporting and the EU Taxonomy.

3. Plans and strategies for the development of Avinor

3.1. Trends and developments in aviation

3.1.1 Insight and collaboration

Avinor works continuously to ensure good insight into and understanding of the driving forces and trends that affect aviation. Through international engagement and cooperation, Avinor aims to safeguard the company's interests and position and, as far as possible, to safeguard Norway's aviation interests in close cooperation with the Ministry of Transport and Norwegian Civil Aviation Authority. Avinor is concentrating its international focus on developments in the EU through membership and active participation in the associations for airports *Airports Council International (ACI) EUROPE*[5] and for air navigation service providers *Civil Air Navigation Services Organisation (CANSO)*[6]. We also follow closely developments in Eurocontrol and ICAO. Furthermore, the company's contacts with stakeholders in Norwegian aviation, the financial markets, supplier industry and relevant public and private organisations and industries nationally and internationally are vital sources.

In addition to solid commercial market insight, the annual Avinor Travel Habit Survey provides data and insight into air passengers travel habits and their trips. Avinor's collaboration with other transport agencies in the NTP process provides good insight into the development of all transport system modes. The report *Analysis of driving forces, trends, and perspectives in the transport sector*[7], commissioned by transport agencies and Avinor as a part of the knowledge base for the NTP 2025-2036, is a good example of this.

3.1.2 Trends and developments in aviation

From autumn 2021 and up to March 2022, the Group carried out a comprehensive strategy process to set Avinor's strategic direction towards 2025. During the process, a great deal of emphasis was placed on establishing a solid knowledge base built on insight into and

[5]ACI EUROPE is the European division of the Airports Council International (ACI), an interest group for airport owners and operators. ACI EUROPE represents over 500 airports in 55 countries.

[6]CANSO is an interest group for providers of air traffic services. Members represent 85 per cent of global air traffic.

[7] Menon publication no. 82/2022. Assessments of trends, driving forces and perspectives in the transport sector.

understanding of the market and the entire aviation ecosystem. Many of the driving forces and trends were known before the pandemic but were exacerbated by the crisis. Through analyses of several global trends and drivers, the following five overarching market trends were assessed as having the greatest impact on the aviation industry in the years ahead:

- Uncertainty around travel demand related to the long-term consequences of the pandemic
- Changes in travel patterns and consumer behaviour
- Hub development in and around airports
- Digitalisation and technological development
- Climate and sustainability

Even though most of the restrictions introduced during the pandemic have been reduced or removed entirely in many parts of the world, aviation as an industry is still affected by the pandemic. Because traffic has still not returned to its pre-pandemic levels, the industry's ability to scale up its services has been challenging due in particular to the lack of personnel, and the uncertainty over demand going forward due to potential of new waves of infection. . It is uncertain whether changes in passengers' commercial behaviour will lead to permanent changes in demand.

The pandemic has led to bankruptcies and the need for government rescue packages and capital injections for airlines. For several airlines, the debt burden increased greatly. Reduced traffic volumes and reductions in the number of business travellers are adding to the uncertainty and make it difficult for airlines to plan their operations. Several airlines have also carried out debt restructuring or are in processes towards it. European airports have also been hit hard by the fall in traffic and increased their debt burden by around EUR 60 billion during the pandemic. Analyses from ACI EUROPE now show that the aviation ecosystem will not return to balanced finances before 2032.

The function of airports as hubs in the air transport chain for passengers and goods and as hubs in the wider transport system is becoming increasingly more important. This applies to connections to other modes of transport such as road and rail. This intermodality is an important tool for strengthening the sustainability of the transport system by utilising the connection between modes of transport in such a way that it will make it easier for passengers to choose the most sustainable alternatives for their journey. Intermodality is also central to the Trans-European Transport Network TEN-T[8]. The development of hubs provides opportunities to develop profitable commercial activities in and around airports.

Digitalisation and technological development in society in general and in aviation in particular are creating opportunities for new ways of carrying out operations. Drones and eVTOLs[9] represent a new chapter for aviation providing an opportunity for better and more sustainable mobility and may be referred to as "new air mobility". In the short and medium term, new air mobility will play an important role in establishing efficient and environmentally friendly logistics solutions for freight. In the longer term, it will also be relevant for passenger

[8] Trans-European Transport Network (TEN-T) (europa.eu)

[9] The term *Electric Vertical Take-off and Landing* (eVTOL) covers a range of different aircraft which all have the common trait of using electric power to fly and that they can take off and land vertically.

transport between hubs, particularly in urban areas. New air mobility has the potential to play an important role in the development of future mobility in Norway, particularly when it comes to hard-to-reach areas and sparsely populated areas. This is an important topic for the long-term perspectives of the NTP process.

Global warming is one the greatest challenges of our time, and all sectors, including aviation, must introduce measures to reduce their greenhouse gas emissions and adapt their operations and infrastructure to the coming climate changes. The industry will face increasing pressure and expectations from authorities, financial markets and customers and passengers for the sustainable development of the aviation industry. As stated in the chapter on *regulatory framework conditions*, this is an area that the EU will be regulating to even greater extent. The requirements of the green transition mean that airports must facilitate and cooperate with all stakeholders in the industry to support sustainable value chains.

Russia's invasion of Ukraine has impacted aviation significantly. Higher energy prices and other input factors resulting from the war have already put pressure on the industry and put the economy under further pressure. Significant impacts on global value chains are expected because of the pandemic and the war in Ukraine. It is against this background that civil security, emergency preparedness and energy stand out as areas that will be increasingly significant for Avinor's operations going forward.

3.1.3 Regulatory framework conditions

In the up-coming period, regulatory developments in the EU within the areas of climate and sustainability and air navigation services will impact Avinor's operations.

The EU's green agenda – *European Green Deal*

The European Commission's *European Green Deal* provides clear political guidance and foresees a high level of environmental and climate awareness in the aviation sector. Norway has joined this initiative through the EEA agreement. The move from an emphasis on the one-sided importance of aviation for economic growth and competitiveness in Europe towards also focusing on sustainability and the climate is a clear shift.

The EU package of regulations *Fit for 55* under the *European Green Deal* aims to reduce greenhouse gas emissions in the EU by 55% by 2030 and includes requirements that affect airlines and airports. The new requirements are a window of opportunity for those who can quickly transition to new energy carriers such as electricity, SAF[10] or hydrogen.

The green agenda also includes the EU Taxonomy[11], which is a classification system to create a shared understanding of which activities and investments can be classified as sustainable. Its purpose is to stimulate investments that contribute to the goals set out in the Paris Agreement. From 2022, the EU Taxonomy will affect Avinor's sustainability reporting. Additionally, from autumn 2022, a new EU directive, the *Corporate Sustainability Reporting Directive*[12] (CSRD), will be introduced. This will expand the current requirements on

[10] SAF – *Sustainable Aviation Fuels*. Aviation fuel produced from sustainable raw materials from various kinds of waste and by-products, including from forestry and industry, or *e-fuels* (*electrofuels*) produced from hydrogen and CO2.

[11] Act relating to the disclosure of sustainability information in the financial sector and a framework for sustainable investments – Lovdata

[12] Corporate sustainability reporting (europa.eu)

reporting non-financial information. Avinor is working to adapt the company's reporting standards to the new requirements.

Changes to air navigation services

The further development of the EU's *Single European Sky*[13] (SES) regulations are of most significance to Avinor's air navigation services. This development is being followed in close cooperation with the Ministry of Transport, the Norwegian Civil Aviation Authority and the association CANSO. There is also dialogue with the Norwegian Armed Forces relating to this development. Reference is also made here to the National Airspace Strategy (cf. item 4.5) and further follow-up of this in cooperation with the Norwegian Civil Aviation Authority and the Norwegian Armed Forces.

The Norwegian performance plan for the third reference period (RP3) under the P*erformance and charging scheme* was approved by the EU in April 2022. This has provided predictable framework conditions for en-route navigation services for the period up to the end of 2024 but will not provide satisfactory returns on the invested capital of the Avinor air navigation services.

Through the SES regulations, the EU has also provided guidance for a more seamless and sustainable handling of air traffic in European airspace. The EU's ambition is to digitalise, and to a greater degree automate, air traffic control services and is one of the primary measures for fulfilling the EU's Green Deal in the aviation sector. The regulatory requirements will impose extensive requirements on Avinor and Avinor ANS's core deliveries over the coming years. This applies to requirements for increased network capacity, efficiency improvements in airspace management, and increased digitalisation and automation. For Avinor ANS, this means extensive technological renovation and investments in the Future Air Traffic Management System (FAS).

These investments depend on user financing through the charging scheme. This will therefore lead to consequences for en-route navigation service charges. The requirements include large technological components and cannot be implemented without major changes to existing operational systems. The requirements primarily provide network effects in the European network but not necessarily efficiency improvements for services for each individual service provider. This means that it will not be possible to recover the entire investment through efficiency improvements, but instead that the requirements for technological developments contribute to an increase in future charges. Avinor ANS risks getting into a situation where the company either breaches the EU's efficiency requirements, the consequence of which would be higher taxes than expected or is unable to meet regulatory requirements for technological developments, which would also have an impact on the European network. This will be followed up on by Avinor ANS in dialogue with the Norwegian Civil Aviation Authority.

[13] SES is an EU programme that includes regulations and comprehensive grant schemes. The primary objective of SES is to bring about a more integrated and efficient use of airspace and air traffic control services at the European level.

To compel states and service providers to develop the services in line with SES, the EU has allocated funds to finance aspects of the investment portfolio. This will be done through *Connecting Europe Facility* (CEF)[14].

In addition, the EU body known as the Innovation and Networks Executive Agency (INEA) manages an increasingly large portfolio of CEF projects within SESAR to ensure the implementation of SES.

Under the EEA agreement, Norway does not have access to CEF funds. No equivalent national funds have been allocated for Norwegian service providers. Avinor ANS therefore does not have the same conditions available as its European sister organisations. All other things being equal, this will lead to higher fees in Norway than in our neighbouring countries. This may distort competition leading to airlines choosing increasingly to fly outside of Norwegian airspace.

3.1.4 Developments in traffic and finances

Traffic forecasts

In May and June 2022, the number of passengers passing through Avinor's airports was at around 90% of 2019 levels. Domestic traffic had roughly returned to its 2019 levels, while international traffic was around 20% lower than in 2019. Offshore traffic was on par with 2019. The number of aircraft movements at Avinor's airports in Q2 was only 2% lower than in 2019. Also here domestic traffic have fared better.

There is currently greater uncertainty than before relating to the development of passenger traffic. Over the coming years, this uncertainty will be particularly attributed to economic developments, aviation fuel prices and any changes in travel habits after the pandemic. In the longer term, climate issues and the effect of digitalisation on the number of work trips will be the most important factors of uncertainty.

In some contexts, digital communication is more cost and time-effective than air travel. After two years of the pandemic and travel restrictions, there has been intense focus on digital communication, and this may lead to changes in working methods and a reduction in business travel. In the Institute of Transport Economics forecast from spring 2022, an extraordinary decline in the number of work trips due to an increased use of digital communication of 5-20% between 2019 and 2023 was predicted. For international travel, the Institute of Transport Economics predicted a decline of 15%. For 2023, this means a 10% reduction in commuting and domestic services, 20% fewer other domestic work-related trips, 5% decline in the number of oil-related trips and 15% decline in international work-related trips. The Institute of Transport Economics has assumed that the effects will gradually halve over the next five years and then remain at that new level. The leisure travel segment may also be impacted, but the Institute of Transport Economics did not include this in its forecasts.

Developments in the Norwegian and global economy are being impacted by the war in Ukraine, and there are shortages in energy, certain foods and input factors for the industry. Increasing prices and interest rates are leading to rising inflation, which has led to

[14] Connecting Europe Facility (CEF) is a programme for infrastructure investments at the European level. CEF's vision is to develop and modernise the Trans-European Transport Network, energy and the digital sector. This includes Single European Sky.

expectations of reduced consumption going forward. This is expected to impact demand for air travel. Oil prices are fluctuating wildly. High oil prices directly impact airlines' fuel costs, which leads to higher ticket prices and reduced demand.

In 2022, 44.9 million passengers are expected to pass through Avinor's airports, 17% fewer than 2019. This is expected to increase to 50.3 million in 2023, which is 7% lower than 2019. Domestic traffic in 2023 is expected to fall 3% below 2019 levels, while international traffic will remain 13% below 2019. The Institute of Transport Economics' forecast for long-term passenger development shows that 2030 will see 60.5 million passengers, divided into 31.2 million domestic passengers and 28.8 million international passengers. This corresponds to an average annual increase of 2.7%.

Financial forecast

Avinor plays a critical role in the operation and management of national aviation infrastructure and is facing significant future challenges that need to be resolved. A sustainable economy is a prerequisite for this.

The Government's proposed national budget for 2023, put forward on 6 October 2022, reduces Avinor's financial capabilities due to the tightening of the tax-free scheme and increased employer taxes. Avinor has also been given signals that some of the costs related to border control measures resulting from the new regulations for entry into and exit from the Schengen Area (*EU Entry-Exit System – EES*) must be covered by Avinor. The full annual effect of the measures in the national budget is estimated to be in the region of NOK 400 million in permanently reduced operating profits. If this is not compensated in the form of increased charges or changes in other framework conditions, it is not expected that the Group will achieve the owner's required rate of return on invested capital by 2025. Due to lower earnings, this may lead to the need for a reduction of the value of the company assets resulting in lower equity. It is our assessment that Avinor does not currently have the framework conditions to realise its social mission within the requirements for financial solvency the State has defined.

In the short term and without cooperation with the Ministry, it will not be possible for Avinor to compensate for the weakened framework conditions through lowering costs and investments. A number of potential cost savings have already been realised through the Profitable Avinor program, and a high proportion of Avinor's operating costs are fixed or partially fixed, independent of passenger volume. The project portfolio has been a high priority in recent years, and maintenance investments have consciously been lower than needed. Even though cost management will be on Avinor's strategic agenda, it will be challenging to reduce the cost base further in the short term, both in terms of ordinary operations and for investments.

Given expected economic developments, Avinor will not meet its 40% equity ratio requirement as laid out in its Articles of Association for 2023 and 2024.

The Group's financial position is not robust in terms of being able to absorb major negative events of a financial nature. Important financial parameters with high levels of uncertainty include traffic developments, pension obligations, increased costs for environmental clean-up (PFAS), the development of wages and prices, duty free shopping patterns, and cost coverage for regulatory mandated investments in future airspace services.

Overall, the current economic situation does not provide any leeway to implement the Group's desired strategic efforts within, for example, the electrification of aviation and the

implementation of new technology that is necessary to streamline the existing business. Prolonged reduced maintenance investments represent an increased operational risk regarding the stability of day-to-day operations and is not advised.

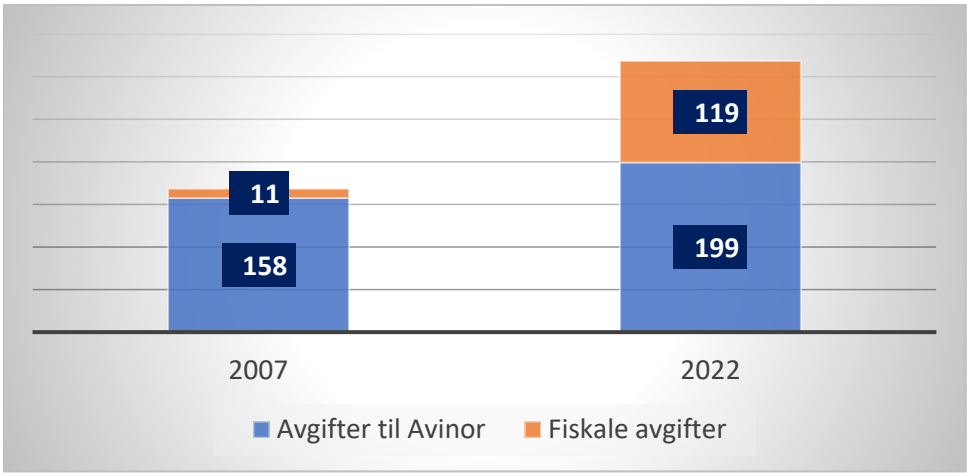
Charges

The organisation and level of aviation's total level of charges are important for being able to develop an infrastructure of the correct quality and capacity for the future and as one of several tools that can contribute to a sustainable transition in aviation. Today, there are three main forms of charges that are specifically targeted at airlines: The special carbon and NOx charges, air passenger charges and Avinor's own charges (air navigation service charges and airport charges for the use of Avinor's infrastructure). Fact box 2 provides an example of the total charges for a domestic flight. Furthermore, aviation is covered by the EU Emissions Trading System (EU ETS).

Fact box 2: Developments in aviation charges

Air passengers pay two types of charges. These are charges to Avinor for the use its infrastructure at and between airports and fiscal fees related to the climate, but which are not used as climate measures for aviation.

The figure below shows the development of Avinor's charges and fiscal fees from 2007 to 2022. Avinor's charges consist of the air passenger charges, security charges, terminal charges and en-route services charges. The fiscal fees are the carbon tax on aviation fuel and the air passenger duty. Aviation is a part of the EU ETS and airlines must purchase carbon credits for parts of their emissions, but this is not included in the figure below. Like other sectors covered by the EU ETS, aviation has been awarded some free credits as part of a transition period. From 2027, free credits will no longer be awarded to aviation. If the purchases were included here, it would amount to NOK 12 per passenger.



Avinor's charges have increased by NOK 41, while fiscal fees have increased by NOK 108. During the period, the consumer price index increased by 48%. Corrected for this, Avinor has reduced its per passenger charge by 15%, while the fiscal fees have increased more than sixfold and this has led to the total charges per passenger increasing in real terms by 28%.

As reference, Avinor's Travel Survey shows that the average price of a domestic flight has increased from NOK 866 in 2007 to NOK 921 in 2022 (Jan.-Sept.). This is a 6% price increase. Measured in 2007 Norwegian kroner, this is a price reduction of 28%. During this period, airlines and Avinor have reduced their prices, but due to a sixfold increase of the fiscal fees, the per passenger charge have still increased by almost 30%.

The scope of the free credits for aviation will probably be reduced in the years ahead. The European Commission has proposed a 25% reduction of free credits in 2024, increasing to 50% in 2025, 75% in 2026, and after 2027, Aviation will no longer be awarded free credits. Furthermore, the Norwegian blending requirement for advanced jet biofuel of 0.5% has a cost. It is possible that requirements for blending sustainable aviation fuel will increase in the years ahead, partly because of the proposal for an EU-wide blending mandate that will start at 2% in 2025 and increase to 63% in 2050.

Through its political platform, the Government has established clear targets for the setting of taxes and charges on Norwegian aviation. It exhibits a desire for a good geographical profile, a fair carbon footprint, strong competitiveness for Norwegian airlines and that charges should be based less purely fiscal in their nature. The Government's target for charges harmonises well with Avinor's vision for the development of aviation, but also requires a comprehensive review of aviation's total charges, due in particular to the following conditions:

- Like all other sectors, aviation must implement measures to reduce greenhouse gas emissions. This will require investments in emission reducing measures for stakeholders in aviation.
- After the pandemic, stakeholders within aviation are now in a weakened financial position, and profitability in the industry is very challenging. It is therefore particularly important to look at the entire picture of aviation's total fee burden.
- Avinor is finding that the principles for setting aviation charges are not financially sustainable. This is due in part to the fact that there is no conformity between the proceeds from take-off charges and air passenger charges and necessary returns on invested capital to safeguard the amounts that are invested in the business. Furthermore, there is a risk that an increased cost framework for investments in FAS cannot be recovered by increased charges within the framework of the regulation. Moving forward, it will be necessary to view the calculation of the necessary proceeds from aviation charges in the context of the business' actual financing needs, and that changes in framework conditions as proposed in the national budget for 2023 are included in the assessment of future aviation charges.

To support the sustainable development of aviation, measures must be set forcefully and with a long-term focus with a holistic approach. Charges associated with aviation can function as one of the measures to influence this development, but the charges (including fiscal fees) must be assessed jointly. This applies to ensuring a good geographical profile, a good climate profile and ensuring an economically sustainable level of charges for airlines. Avinor wants to contribute to a comprehensive review of aviation's total charges and has already begun work on reviewing its own charges.

3.2.Avinor Corporate Strategy 2022-2025

The Avinor Corporate Strategy 2022-2025 was drawn up between autumn 2021 and March 2022. Both considering the crisis aviation found itself in and the extremely challenging financial situation Avinor was in, it was necessary to revise the company's overall strategy in a number of areas. The pandemic and the uncertainty related to its long-term consequences make long-term planning difficult.

The Corporate Strategy was quickly revised in 2020 to adjust the Group's vision to the situation the company found itself in at the time with a need for operating subsidies. The strategic adjustments were discussed in the § 10 plan for 2020-2021. Several extraordinary measures were decided on, including requiring reprioritisation in the Group's project portfolio. During this period, dialogue with the owner was naturally very intense, and the company has been subject to external financial reviews by both Oslo Economics and Arctic Securities. The processes have been challenging and resource intensive for the Group but have also contributed to a clarification of important issues, provided useful signals for the

strategy process and confirmed that the Group's continuous work on cost optimisation is of a high standard.

Based on the most important driving forces and trends that Avinor believe will impact the aviation industry the most in the years ahead, six fundamental strategic assumptions have been identified:

- **Social mission:** Aviation and Avinor's network of airports will continue to play a critical role in society.
- **Passenger situation:** The pandemic, technology and sustainability considerations will have a major effect on travel patterns, passenger mix and passenger behaviour, and will reduce and change the existing revenue base.
- **Development of the air transport chain:** The low-cost model and new business models will take up a large proportion of the market and will require more flexibility and cost effectiveness at airports.
- **Sustainable development:** Aviation is facing significant challenges. All value creation must be sustainable in order to retain its *licence to operate,* and the EU's climate and sustainability goals will be an important element in all decisions in the aviation sector.
- **Technology, innovation, and competence:** Technology, innovation and the appropriate competencies will be necessary in all internal and external processes in order to maintain robust operations and to create commercial opportunities and long-lasting cost reductions.
- **New air mobility:** Traditional aviation will change significantly due to new aircraft technology (such as drones and eVTOLs) and requires more automated airspace management and a decentralised network of landing sites.

The latest developments within the transport sector in general and in aviation in particular support these assessments. At the same time, the focus on civil security and emergency preparedness and the energy crisis will increase going forward. This reinforces the need to support the robustness of all aspects of Avinor's operations, including continuity of supply for the operation of the business and as an input factor for sustainable development.

The company's vision was changed in relation to the strategy process to more clearly communicate both its social mission and the responsibility Avinor has for contributing to sustainable aviation:

"We link Norway together – and Norway to the world through sustainable aviation."

This vision will motivate employees and create pride internally while also communicating externally the important role Avinor plays in Norway and our ambition of contributing to sustainable value creation through being a clear driving force on climate. The company's values have not changed. They clearly signal how we should appear externally and how we should work together internally: Open, responsible, dynamic and customer oriented.

The six stated ambitions show the strategic direction and thus what will govern Avinor's priorities going forward:

- We shall prioritise safe and stable operations using a risk-based approach

- We shall be an active driving force for sustainable aviation
- We shall be technology-driven and efficient in all parts of the organisation
- We shall be customer-driven and innovative through partnerships with others
- Avinor shall be an attractive workplace with the right competence and a good work environment
- The Group shall be financially robust with the right cost base in the future

In all and viewed in the light of trends and various scenarios, the Group's fundamental strategic assumptions and ambitions are supported by the Group's strategic vision, and strategic initiatives and projects, which will ensure that we achieve our goals. The strategy describes which direction the company wants to move in and what needs to be prioritised to achieve this. Sustainable development, development of revenue streams and optimisation of costs are clear and necessary focus areas. Initiatives within technology, organisation, competence, and culture are the most important measures for ensuring that the strategy is realised.

The strategy thus does not set targets for all areas of responsibility. The ambition that *safe and stable operations using a risk-based approach* should be prioritised is a foundational and integral aspect of the business that the strategy does not as such identify specific measures for. The same goes for the ambition of being *customer-driven and innovative through partnerships with others*, an ambition that will continue Avinor's strong customer focus in all aspects of the value chain and a strong belief that collaboration and binding partnerships with businesses, regions and national and international research and development and innovation communities are vital for success. The figure below provides an overall view of the Group's strategic vision for the next five years (lage engelsk utgave av figuren?). This is broken down into concrete targets, measures and initiatives and further operationalisation of the strategy at unit level.

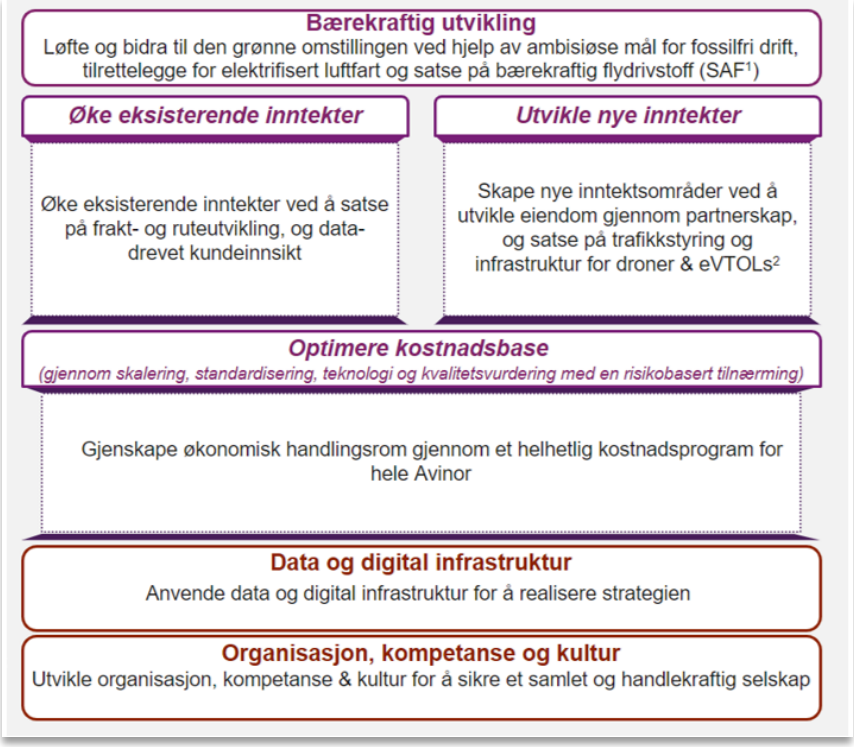


Figure 1: Avinor's strategic vision 2022-2025

The strategic vision reflects several initiatives that have already been put into motion. This is particularly clear as regards sustainability and within cost optimisation, where the cost programme Profitable Avinor is being continued with a more long-term strategic perspective. The Group has also sequenced the initiatives in short, medium and long-term perspectives. The primary focus for 2022-2023 is therefore on the company's financial sustainability through clear objectives for revenue streams and for measures for cost optimisation and streamlining placing the use of new technology at the centre. At the same time, the developments in sustainability require that the initiatives are given a high priority. This applies in particular to the goal of fossil-free operations by 2030.

The implementation of the strategy and the management of achieving the objectives of the various strategic initiatives and projects will be through a newly established programme office. Avinor's total portfolio management and risk management are also organised through this office. This shall ensure comprehensive and continuous strategic corporate governance and contribute to the ability to adjust targets and execute strategic management in line with the challenges facing the company.

Alongside Avinor's strategy process and development of this § 10 plan, there are also important processes going on within the Ministry of Transport. Of particular importance are the Ministry's work on the Whitepaper to the Storting on the National Aviation Strategy and the establishment of an independent committee for assessing a the need for a future third runway at Oslo Airport – processes that will be of great importance for the company's future framework conditions.

Furthermore, the NTP 2025-2036 is also important, particularly the political objectives and guidelines that are currently used as the basis, with greater weight put on the development and implementation of measures for achieving transport policy objectives and for solving common challenges in the transport system. Civil security, transition risks and access to energy, changes in demand and financial leeway are common challenges that stakeholders face individually and as a part of the transport system. In light of the challenges we are facing at the moment, the NTP is a vitally important arena for intersectoral cooperation and coordination. Avinor participates actively in the NTP process, and the Ministry's mandating of sub-tasks to facilitate development of infrastructure for zero and low-emission aircraft is a task that fits well with Avinor's strategic goals in the areas of climate and sustainability.

The new ownership report from the Ministry of Trade, Industry and Fisheries continues and strengthens the focus on climate and sustainability in corporate governance. This is in line with how Avinor has focused its sustainability work and the targets we have set for helping to achieve national emissions targets.

As separate reports to the Storting on Avinor's operations are no longer drawn up, the importance of political processes mentioned above will increase. Avinor has analysis and assessment resources at many levels in the company and sees the importance of developing these competencies so that the Group can provide professional assessments and analyses of a high quality to the Ministry of Transport.

3.2.1 Active driving force for sustainable aviation

There is broad consensus that Norway is dependent on aviation. At the same time, global warming is one of the greatest challenges of our time. Like all other sectors, aviation must

implement measures to reduce greenhouse gas emissions, while also adapting operations and infrastructure to the coming climate changes. Reducing greenhouse gas emissions has therefore been given specific priority in the Corporate Strategy, including emissions from its own operations as well as from air traffic. Avinor's efforts to reduce its own emissions are included in the focus area of fossil-free operations, while reducing emissions from aviation as a whole is included in the focus area of new energy carriers and sustainable aviation fuel (SAF).

Avinor is also concerned about safeguarding local environmental conditions. Our activities in these areas are explained in more detail in chapter 4.3.

Fossil-free operations in Avinor

By the end of 2022, Avinor aims to halve its total controllable greenhouse gas emissions as compared with 2012 and contribute to reduce emissions from airport surface access and air traffic. Furthermore, Avinor's goal is to ensure that airport operations are fossil-free by 2030.

In 2021, Avinor's own verifiable greenhouse gas emissions from airport operations totalled approximately 9,000 tonnes of CO2 equivalents. This means that Avinor's 2021 greenhouse gas emissions have been reduced by approximately 43 per cent compared with those for 2012. Avinor's biggest source of emissions is the consumption of fuel for its own vehicles, followed by energy consumption and employee business travel. Svalbard Airport stands out in Avinor's climate accounts since the airport's heating and electricity are both provided by a coal-fired power plant in Longyearbyen. Other sources of emissions include the discharge of chemicals for runway de-icing and from burning of fuel in firefighting exercises.

Climate and energy measures, including a new energy solution for Svalbard Airport and electrification of the fleet of vehicles in the heavier segment will lead to a significant increase in investment costs for vehicles and infrastructure. Furthermore, it will not be possible to electrify all Avinor's heavy vehicles, so uptake of biodiesel is completely necessary for Avinor being able to achieve its target of fossil-free operations by 2030. In 2021, 45% of all diesel used at Avinor's airports was advanced biodiesel. If the proposed biofuel blending mandate for non-road machinery proposed in January 2022 is adopted, it will probably be impossible to achieve the target of fossil-free airport operations by 2030.

Airports have large open areas that can be used to produce electricity (solar panels). Avinor has already gained experience through the solar power plants set up at Svalbard Airport and Stavanger Airport. These experiences, along with a broad market dialogue, are used in a strategic initiative that has the objective of establishing energy production at Avinor's airports.

Reducing emissions from air traffic

Avinor has together with Norwegian, SAS, Widerøe, the Federation of Norwegian Aviation Industries (NHO Luftfart) and the Norwegian Confederation of Trade Unions (LO), set a target that all air traffic within and from Norway should be fossil-free by 2050.

The most important emissions-reducing measures for aviation are related to fleet renewal, airspace efficiency improvements, sustainable aviation fuel, and the introduction of electrified aircraft. Additionally, hydrogen as an energy carrier in aviation is now receiving increased attention.

Airlines are primarily responsible for fleet renewal and planning. Avinor works continuously to improve the efficiency of Norwegian airspace and will intensify this work through a

separate initiative in the new Corporate Strategy. The strategic initiative includes the optimisation of Norwegian airspace, more efficient approaches, departures and taxiing. This will contribute to reducing fuel consumption and greenhouse gas emissions from air traffic.

Norway is in a unique position to utilise electrified aircraft, thanks to its established shorthaul market using small aircraft, considerable experience, great interest in transport electrification, and a high production of renewable electricity. Based on the information Avinor has obtained from airlines and aircraft manufacturers, it is a realistic expectation that the first electrified aircraft could enter the testing and development phase in the short-runway network in Norway around 2025 and that the first flights could be electrified from 2026-2027 before entering wider scheduled service around 2030. Awareness of hydrogen as an energy carrier in aviation has been increasing in recent years. Among other things, Airbus has initiated a very comprehensive project aimed at offering hydrogen-powered aircraft into the market from 2035.

A transition to electrified aircraft and aircraft that burn hydrogen directly in gas turbines requires a broad transition of the entire aviation ecosystem. An important strategic measure for Avinor is to lay the groundwork for the energy carriers of tomorrow's fleet of aircraft. Avinor takes a particular responsibility for organising the infrastructure at airports and has, for several years, been a driving force for increased use and production of sustainable aviation fuels. Avinor is continuously assessing future charging capacity and has begun work on assessing the logistics of hydrogen fuels at the Group's airports. Avinor's ambition is to develop its airports to be able to offer access to new energy carriers that cover the needs of operators, service providers, the travelling public and for its own operations at airports. This will be done in the most efficient way possible that will ensure standardised solutions, the lowest possible costs for Avinor and its customers, the equal treatment of users within the same segment, robust supply solutions and efficient use of energy.

Sustainable aviation fuel has the great advantage of being able to be used in the current fleet of aircraft and does not need new infrastructure at airports. In addition to being the only fossil-free option available at the moment, and the only solution for longer flights, sustainable aviation fuel will also play a key role for many years in reducing emissions from the existing fleet before zero and low-emission technologies are widely rolled out.

Sustainable aviation fuels can either be produced with biomass (for jet biofuel) or from hydrogen and CO2 as input factors, which requires significant amounts of electricity (hence the name electrofuels or e-fuels). Current production of sustainable aviation fuels is very low. This is related to the costs compared to conventional fuels being high. For many years, Avinor has focused heavily on sustainable aviation fuel through international fora, with Norwegian stakeholders and in close cooperation with the industry. In 2021, Avinor led the work on a programme to increase production and uptake of sustainable aviation fuels in close cooperation with airlines and partners in the labour market. Avinor is also increasing its involvement with research communities and industry regarding future production of sustainable aviation fuels.

Norwegian aviation has been in the forefront when it comes to the uptake of sustainable aviation fuel, and this has been noticed on the international level. As an example, Oslo Airport was the first international airport in the world to blend sustainable fuel into the jet fuel infrastructure in 2016, and Norwegian authorities were the first in the world to set a blending mandate for aviation in 2020. By leading the way, smaller and larger steps forward by Norway can have a big impact and change what others view as possible. Norway can play a

central role in establishing large-scale production of the next generation of sustainable aviation fuels. Norway has a strong starting position: by-products from forestry provide good opportunities to produce biofuel. Just as important is the fact that Norway has a high share of renewable energy in its power grid and thus good conditions to produce green hydrogen. CCUS[15] infrastructure is also an important resource to produce sustainable aviation fuel.

Climate initiatives in aviation have high abatement costs and aviation is an industry with low margins and tough international competition. The entire aviation ecosystem will be impacted, and the processes have a long lead time. Because of the pandemic, the entire industry in the short and medium term will be affected by extremely poor financial conditions and thus have insufficient financial capacity to work in a future-oriented manner. There is therefore a need for a partnership with public authorities to realise the transition to fossil-free aviation. An example of a country that is about to build such a partnership is Denmark, where the government has recently proposed financing the uptake of sustainable aviation fuel by way of a passenger duty.

The expected investment needs are high and political means and measures will be crucial for its success. Today, aviation is covered by a carbon tax, the EU ETS, air passenger duty and the ICAO's international emissions trading system CORSIA. The Norwegian State's total annual revenues from climate-related fees are significant (in excess of NOK 2.5 billion in 2019). There are also the fees for Avinor's operation of ground-based and airspace infrastructure. The taxes associated with aviation can act as incentives to influence developments but must be assessed as a whole, which includes investment support, Public Service Obligation (PSO) routes and other measures.

Avinor believes that the Government must set clear targets for the development and uptake of emissions-reducing technologies in Norwegian aviation. Long-term, binding, and powerful packages of measures for technology development, investment support and tax breaks should be put forward to help aviation achieve its climate goals. Avinor wants to contribute expertise and insight into aviation's ecosystem to get this established. Furthermore, Avinor will, in response to the Ministry of Transport's study in relation to the NTP 2025-2036 on the adaptation of airports to future zero and low-emission aircraft and new air mobility, provide a more detailed account of the technological developments within aviation, the infrastructural needs this brings with it, and highlight the need for actions and tools to support these developments.

3.2.2 Financially robust with the right cost base in the future

Through an ambitious revenue-generation agenda and the continuation and further development of a clear cost focus through quantifiable measures, the Group's financial robustness will be restored, and its future financial latitude will be secured. It is crucial to recoup revenues within existing business areas while also focusing on new areas that have shown commercial potential. Avinor will work in a customer-driven and innovative way through partnerships with others to achieve this target. For the Group, this means that we are looking for partnerships with stakeholders that can help us to fulfil our social mission in the most efficient manner possible and meet Avinor's strategic ambitions.

[15] Carbon capture, utilisation, and storage (CCUS)

Development of the revenue base

Avinor is self-funded through two primary revenue sources: traffic revenues through user charges and commercial revenues from activities at airports. The Corporate Strategy shall ensure the recovery and further development of the company's revenue base to support the sustainable financing of its social mission.

A large proportion of Avinor's traffic revenues are affected by conditions beyond the control of the Group such as changes in geopolitical conditions, airline route networks and demand for air travel. The strategic ambition in this area is therefore to support the more long-term development of the revenue base through areas such as route development, use of data and new technologies, as well as creating new revenue streams through hub development and positioning through the development new air mobility (drones and eVTOLs).

Increase existing revenues

Route development and logistics operations

Avinor works closely with airlines and various stakeholders to develop a well-adapted route network from all of the company's airports in accordance with the needs of society. A well-adapted route network that opens up accessibility to the entire country is the cornerstone of the Group's social mission and a prerequisite for a robust revenue base that makes it possible to fulfil the Group's social mission in an effective and future-oriented manner. In a sparsely populated country with many airports, several have a weak market basis. For these airports, good accessibility is therefore linked largely to good connections to Oslo Airport and the potential to travel further from there to the desired final destination. For all regions, a good route network at Oslo Airport will be an important prerequisite for good accessibility. It is important that there is enough capacity for more domestic routes and to develop a strong international route network from the country's main airport.

Large volumes of incoming air cargo to the Nordic region currently avoid Avinor airports. One reason for this is that Norway lacks the infrastructure at its airports that allows for the consolidation of the incoming flow of goods, which would help to balance our significant export volumes. However, during the pandemic, Oslo Airport positioned itself as a leading airport for air cargo in Northern Europe. Based on its investigations, Avinor believes that this is an unexploited potential revenue stream in the freight segment, and, as part of the Group Strategy, our ambition is to further develop the segment as part of route development work. Freight is a key part of airlines' route profitability, especially for intercontinental routes, and contributes to new routes being able to be established with a lower passenger volumes. By allowing the combination of freight and passengers, good resource utilisation for airlines is secured. For Avinor, air cargo therefore concerns three conditions:

- Facilitating air cargo becoming an attractive transport service for Norwegian industry
- Ensuring access to air cargo as a mode of transport for the country in general in a situation with a vulnerable global supply of goods
- Stimulating increased route networks in international competition between airports by transporting goods in the cargo holds of passenger aircraft or in dedicated cargo aircraft to increase the country's accessibility to global markets

Data-driven customer insight

Airlines, commercial operators at airports and Avinor collect large amounts of valuable data. These data create the potential for more data-driven customer insight that will benefit Avinor, airlines and commercial operators at airports, and Avinor shall realise this potential.

Avinor believes strongly that data-driven operations and development will provide the foundation for insight and predictions about customers that can be used for better decision-making operationally and commercially, both within the business itself and for stakeholders in the airports' ecosystem. Deeper customer insights make it possible to improve the customer experience and basis for increased commercial revenues in the long term.

A platform for predictions has been established that already showed results in summer 2022 in the form of better predictions in terms of dimensioning work schedules. Furthermore, a platform for new computer products is under development.

Development of new revenue streams

Active hub development of existing property and areas through partnerships

Airports are hubs in the air transport chain for passengers, goods, and hubs in the transport system with links to road and railway connections. The hub function creates activity and provides opportunities to develop profitable commercial offers in and around airports. Avinor's property and areas are also an important source of revenue for the Group in addition to being a fundamental basis for operations. Revenue arises from the leasing of commercial areas in airport terminals as well as leasing hotel and car parking properties. In accordance with the Group's financing model, Avinor regards these revenue streams as critical for airport operations, and the profits contribute to the financing of unprofitable airports.

As part of the Corporate Strategy, Avinor will develop the hub function and areas around airports to support a robust revenue base for the Group.

For Avinor as an owner and manager of critical infrastructure, it is strategically vital to have control over areas close to airports to manage the long-term development of airports, both with regard to capacity needs, new energy carriers and new air mobility, and to meet society's need for a well-adapted route network. The long-term development of hubs therefore requires that Avinor takes full responsibility for the planning and development of common infrastructure in partnership with public and private stakeholders that can contribute to realising the Group's strategic objectives.

New air mobility

Airports are hubs that connect mobility markets at different levels. New air mobility will have different infrastructure requirements compared to traditional aviation, particularly due to new energy carriers, but also due to fewer vehicles and new operating patterns. The growth of landing sites connected to cities, airports and other hubs is therefore expected. Regardless of where landing sites are located, Avinor will play a role in the establishment or operation of these. Avinor will, in partnership with relevant stakeholders, assess options for establishing landing sites, known as "Vertiports", for eVTOLs in connection with existing airport structures for example as part of a hub development.

Up to now, the use of drones in Norway has been associated first and foremost with amateur use and for simple inspections. Technical, operational, and regulatory developments related to drones and eVTOLs are moving quickly, and the use of smaller drones by commercial

operators is now a reality. Demand for more advanced operations using drones in Norwegian airspace is growing rapidly. In Avinor, the use of drones will be useful for improving operational efficiency at airports.

Avinor's infrastructure and services are currently tailored to traditional forms of aviation. New air mobility challenges the established systems and will require changes in infrastructure and services to achieve its potential as a mode of transport. This will entail a separate organisation of airspace and other air navigation services in order operate safely in relation to traditional aircraft.

The increasing use of drones, including unauthorised uses, can pose a security risk and cause operational disruption for traditional aviation. Avinor will procure, implement and operate systems that detect drones in the vicinity of airports. Avinor participates in international efforts to develop systems to handle unauthorised drone use. To ensure safety and unlock the potential of new air mobility, traffic management for airspace must be established. Avinor will develop and implement a system for airspace management and, in the long term, for integration with current airspace management for manned aviation.

EU rules have been created for a digital Common Information System (CIS) that will cover all drone activity in a defined airspace. This system should be regarded as national infrastructure provided by an operator safeguarding national interests. The Ministry of Transport will appoint the national service provider for this area. Avinor has the necessary experience and competence to take responsibility for the provision of the CIS in Norwegian airspace and should be appointed as the national service provider.

Avinor assumes that the service provision and its associated investments and operating costs will need to be covered by users in the form of fees and/or commercial terms. Regulations must be established to support sustainable business models and ensure rapid developments and innovation.

Avinor is in contact with international operators that are interested in setting up operations in Norway based on our technological infrastructure and our ability to provide the conditions for the operationalisation of new concepts and technology. Similarly, Norway is regarded as a highly important market for new air mobility due to its geographically scattered communities, topographical conditions, and expensive transport services.

Based on the company's social mission and the responsibility it has for the operation and development of ground-based infrastructure for civil aviation and air navigation services, including airspace management for the civil and military sectors, Avinor will hold a key role in facilitating new air mobility. The revenue potential is limited in the initial phase, but we expect that this market will be able to generate both revenues from fees and commercial revenues in the future.

Optimisation of the cost base

Avinor shall be self-funded and provide the owner an acceptable return on its invested capital while also maintaining charges at a competitive level. As a part of the Group Strategy, a programme has been set up to realise permanent cost reductions going forward to ensure the financial robustness of Avinor with the right cost base in the future. A prerequisite of the programme is that ongoing work that was initiated through Profitable Avinor during the pandemic be expanded further, while also surveying further measures. The aim here is to optimise the cost base to support Avinor's financial sustainability, as well as to provide latitude for the implementation of new strategic measures.

The cost programme consists of three focus areas:

1. Optimisation of operations using economies of scale and the establishment of uniform best practices across airports, technology and quality assessment with a risk-based approach
2. Realisation of potential procurement savings through targeted category management and improved processes
3. Making efficiency improvements in staff, support, and matrix services in order to optimise the work force and competence where it is needed

Making efficiency improvements in operations has been high on Avinor's agenda for the past 5-10 years, and cost reductions have been realised through continuous improvements and efficiency improvements. The analysis work on optimising operations shows so far that there is potential to make efficiency improvements of up to NOK 100 million through major and minor measures at airports, within air navigation services, within purchase and procurement and within human resources, support and matrix functions. Avinor sees a particular potential for cost efficiency improvements within digitalisation and automation. Fact box 3 below shows a selection of examples of measures where Avinor uses digitalisation and automation as tools to support more efficient operations.

Experience from *Profitable Avinor* in 2020 and 2021 show that the Group's can reduce costs significantly over a short period of time, but a number of these reductions are of a temporary nature as they are related to traffic volumes, or will have consequences in terms of, for example, maintenance backlogs if they are maintained over time.

Avinor refers to the fact that, in its report to the Ministry of Transport of 2022, Arctic Securities confirmed that Avinor works consciously on efficient operations and that the Group has implemented several comprehensive measures to improve profitability in the company in recent years. It is their assessment that Avinor is far ahead of other companies

Fact box 3: Digitalisation and automation as means for cost efficiency improvements

Over the past decade, Avinor has digitalised and automated large parts of the passenger process, but several core processes at airports continue to be resolved manually. Going forward, the potential of areas such as remote control, automation, and autonomy, particularly airside, will therefore be explored further.

In combination with sensors, biometrics, artificial intelligence (AI) and related technologies, this will have the effect of providing efficiency improvements in operations and of increasing customer satisfaction. Technologies are at various stages of maturity, and work is ongoing on both the implementation of solutions, as well as early phase piloting and testing.

Measures implemented include the introduction of remote towers (RT), use of autonomous snow clearing vehicles at Oslo Airport, testing of drones for inspections at Kristiansand Airport, automation of airside baggage handling at OSL, piloting of autonomous robots for inspections and bird and wildlife control at Sola Airport, in addition to collecting data to improve the decision making when using chemicals during winter operations.

Through the implementation of remote tower technology and the use of expertise in new ways, the concept is expected to provide better accessibility for airspace users, greater expertise in air traffic control services and, in the long term, lower operating costs than traditional technologies. It is also expected that the projects will contribute to more efficient operations. For example, savings of up to NOK 30 million per annum are expected upon the introduction of autonomous snow clearance operations in addition to contributing to increased sustainability through reduced chemical discharges.

All projects are performed in close collaboration with partners and suppliers, and some through support from both the Research Council of Norway and Innovation Norway.

of similar sizes and complexity in this area. Avinor's analyses show that the measures that will be most effective going forward, in addition to the above-mentioned NOK 100 million, will depend on more structural measures and technological developments. These are more time consuming and complicated to implement. Decisions on several measures are also beyond Avinor's control. Avinor has, among other things, a high proportion of fixed costs that vary to a limited extent with changes in traffic volume and capacity utilisation because of licence provisions and regulatory conditions.

In addition, the Group has identified a window of opportunity for three selected areas where there is a need for more structural changes to realise this potential. Insight and analysis work is underway focusing on potentials, opportunities and barriers for these areas, and new areas will be continuously assessed. Further cost reductions will require investments and cooperation with the Ministry of Transport as the owner and regulator in relation to assessments of the Group's current framework conditions. The following three areas are being analysed:

1. Development of new operating models and/or new partnerships – driven by technology

Digitalisation and automation make it possible to perform tasks and functions in more resource-efficient manners. One of the measures the Group has identified and initiated based on these analyses is the collaborative project the Future Short-Runway Network in partnership with Widerøe Flyveselskap. The project began in August 2022 and will run throughout all of 2023.

The project will test new and future-oriented ways of delivering services and processes for aviation via the short-runway network. Current operations at Avinor's smaller airports involve manual processes and have seen only limited development since the establishment of the short-runway network. The current operating model covers several stakeholders, each of which has a relatively limited scope depending on the number of aircraft movements and passengers. There are three primary stakeholders that deliver services for airlines, a) airport operators, b) suppliers of ground services and c) suppliers of security control services. Finally, airports consist of extensive infrastructure, and each has a wide range of equipment and vehicles, where their use is seasonal and dependent on traffic.

Our future vision highlights new opportunities and processes that will ensure sustainability and clarify how we will utilise our unique network of competence and capacity.

The purpose of the collaborative project is to carry out a pilot project testing new and adjusted operating concepts for the short-runway network using technology and innovative processes in line with future needs across current processes and stakeholders.

The project covers three main process areas at airports: passenger services, airside services and air traffic control services. The project will, through insight and pilot testing, ensure comprehensive, efficient, and sustainable processes for aviation. The utilisation of technological solutions is key and will be explored and utilised in remote control, automation, and autonomy.

This collaboration will not remove Avinor's responsibility to safeguard:

- The principle of equal treatment towards stakeholders as stated in licences, Avinor's Articles of Association, procurement regulations, etc.
- Ownership of centralised infrastructures (cf. Sections 2-1 and 3-8 in the Ground handling directive)

The project may involve structural changes relating to external stakeholders. Participation from stakeholders on the short-runway network and concrete cooperation with an airline are assessed as being critical factors for success in gaining insight, testing new opportunities,

and creating a basis for necessary structural changes going forward. Future business and operating models will contribute to positive effects and results from the project and provide lower total costs for aviation and the short-runway network.

2. Service level, criticality, and definition of basic deliveries

Work is ongoing on defining service levels per airport concept (grouping of comparable airports), including criticality and infrastructure availability criteria.

3. Risk-based approach to regulations

Dialogue between the Norwegian Civil Aviation Authority and Avinor has been established to gain better insight into how quantitative risk models and methods can be used in the assessment of how the regulations can be fulfilled and potential alternative ways of regulatory compliance.

3.2.3 Technology-driven and efficient in all aspects of the organisation

Avinor has IT services and technology that support all business areas in addition to common systems for office support and administrative functions. Historically, Avinor's systems have developed in line with the business and the needs that have arisen. In addition, various forms of technology are being procured for major infrastructure projects.

Significant differences in size, organisation and staffing at Avinor's airports demand deep insight and understanding of the differences to realise effective digital solutions across the airport network. Technology plays an important role as a driver of sustainable operations at Avinor and for solving tasks in the most efficient way possible. Even though Avinor is recognised as being at the forefront of technology in certain areas, there is still significant potential for further automation, digitalisation and efficiency improvements.

To set the level of ambition and direction for technology as a strategic component and an enabler for the business strategy, a common technological vision for the company has been developed. The vision is built on three focus areas supported by digital building blocks that will form a tool for supporting operations and the strategic focus areas of the company:

1. Smart airports and airport networks

Using data, automation and emerging technologies, Avinor will operate its airports more efficiently and develop the revenue base. Smart Airport Operations has several use areas and use cases that increase the efficiency of processes during airport operations. Smart Airport Operations focuses on establishing standardised data collection in managed processes from start to finish to create a digital foundation. This foundation is applied to various use areas, such as increasing the level of intelligent operations and maintenance of buildings and infrastructure. This will also make it possible to integrate remote operations, autonomous units, and data sharing/cooperation with external partners. As shown in Fact box 3, autonomous vehicles, sensors and drones are among the technological solutions that can support more cost-effective operations through network effects and economies of scale.

2. Future Airspace Control

As regards Future Airspace Control, we are in the middle of a major digitalisation effort because of the Single European Sky programme. Avinor has several work streams to replace the core system for en-route services, approach control services and tower services. Norway is contributing to efficiency improvements in the European network through an

increased scope of data sharing. Through the partnerships in the iTEC[16] Alliance, we have ensured an increased pace in the uptake of new technology as a result of research and development in SESAR JU[17].

In the future, we will have more automated support to perform air traffic control services. Data sharing between the ground and air and systems on the ground will lay the foundation of this digitalisation. Avinor is focussing on integrating new users, such as drones, into the airspace, and technology is vital to make this happen.

3. Efficient Group services

More efficient and scalable Group services will be developed to simplify tasks and facilitate more user-oriented decision processes. Avinor can make greater use of standardised solutions and interfaces in defined areas. It will require an active approach to data integration, service orientation and digital processes. Further development of Avinor's digital capabilities is therefore important for creating new digital solutions across processes. A data platform has been established covering most current business areas and will facilitate the efficient utilisation of data across Avinor.

Data security is part of the Group's overall security and is based on knowledge and understanding of the risk factors that the company may face at any given moment. Avinor works actively with various suppliers, external authorities, and other businesses with critical infrastructure for the purpose of being as well-prepared as possible when faced with complex threats.

3.2.4 Attractive workplace with the right competence and a good work environment

Aviation is in a state of constant change, and Avinor must evolve alongside it. The Group's goal attainment is dependent on good leadership and competent employees. This sets high demands on personal and organisational development. Avinor shall build a flexible organisation that can solve complex issues across the organisation. The organisation shall be characterised by highly committed employees in a good and safe work environment. Great emphasis is put on good, constructive cooperation between trade unions and the employer.

The Corporate Strategy emphasises the development and strengthening of the organisation with a focus on culture, capacity, competence building and performance-based management. Broad commitments on strategic competence development, management and employee development and performance-based management have been planned. We have clarified our expectations of managers and employees and will follow this up with a programme for targeted management development.

Avinor shall be an attractive employer for both those already working for us and for those who we want to employ. We will strive to provide development opportunities for all our employees through clear career paths and predictable performance goals.

[16] Avinor cooperates with a number of other providers of air traffic control services in Europe such as NATS in the United Kingdom, ENAIRE in Spain and DFS in Germany through what is called the iTEC Alliance

[17] Single European Sky ATM Research (SESAR) Joint Undertaking (JU). Research and development programme under SES.

In general, Avinor has a low staff turnover, particularly within professional operational groups. On the other hand, within technology and other more competitive professional groups, we see a significantly higher turnover, especially among young academics. Within these professional groups, it is difficult to attract and retain the necessary competencies. This is due to strong competition in the labour market and high expectations of employers related to total compensation, competence, and career development. We must therefore work in a long-term and systematic manner to be able to offer this and thus ensure our future competence needs are met. The focus on strategic competence mapping and planning are among the measures being worked on. Highlighting Avinor as an attractive employer is essential for this.

Avinor employees have an average age of nearly fifty years. Within 10 years, more than 40% of our employees will reach the state pension age. This gives us a unique opportunity to work on competence development and competence transfer through concrete action plans and goals for each area. The fact that Avinor will need many new employees within the next decade gives us good conditions for working purposefully with a long-term agenda for increased diversity.

3.2.5 Strategic risk

Avinor continuously assesses the overall risks the company faces. These are both external factors related to developments in the market and policies nationally and internationally, as well as internal factors such as the ability of the organisation to adapt and implement changes. The following risks have been identified as the most important during the plan period:

- The fall in revenue resulting from the sustained effects of the pandemic, increased climate awareness, changed consumer behaviour and price increases
- Additional costs resulting from new airports, the takeover of facilities from the Norwegian Armed Forces, PFAS cleanup, etc.
- Not allocating land reserved for the third runway may lead to Avinor being ”built in” at Gardermoen and that future air traffic at Oslo Airport cannot be served in a satisfactory manner
- Serious cyber-attacks and acts of terror may lead to all or part of Norwegian airspace being closed as a result of critical IT support services being unavailable
- Technological transformations may need to be delayed because of a demanding labour market for technology and IT

The recovery of regular operations after the pandemic may be particularly challenging in the economic and geopolitical climate we are currently in. High price increases in building materials and construction may lead to significant additional costs beyond those calculated in feasibility studies. In the already strained financial situation Avinor is in, this may lead to postponing new projects and infrastructure maintenance.

3.3. Portfolio management and larger investments

For a long time, Avinor has been working on developing its portfolio and project management. The purpose of portfolio management is to ensure that the Group prioritises the projects that best support Avinor’s objectives and social mission and that efficient project implementation and a high level of benefit realisation are facilitated. As a part of the

Corporate Strategy and cost programme, the work on portfolio management is being strengthened with the aim of reducing capital and operating expenses and of optimising the portfolio within Avinor's available financial headroom.

Avinor has been commissioned to build a new airport in Bodø and in Mo i Rana. These two projects are discussed in more detail below.

3.3.1 Avinor's portfolio

The Group's portfolio is highly diversified with regard to the rationale for implementation, project size and complexity. In all, the current project portfolio is worth approximately NOK 15 billion. Investments are being made to safeguard operations in the business (reinvestments), comply with regulatory requirements from public authorities. Finally, it contributes to realising the Group's strategic ambitions and cover future need within the core business.

The investment portfolio is a high priority, and the project needs for 2022 are approximately NOK 3.5 billion. Through ongoing portfolio management, delays, or adjustments to the scope of investment projects are assessed to reduce the risk of project operations in 2022 exceeding the Group framework. This also includes maintenance investments in critical infrastructure.

Maintenance investments in 2022 will be reduced to approximately 50% of their historical levels for the third year in a row, totalling approximately NOK 650 million. Avinor is a major infrastructure owner with 1.2 million sqm of buildings, 8 million sqm of operational runway facilities in addition to operations-critical equipment within groups such as vehicular equipment, electrical equipment, water and sewerage facilities, safety equipment and IT facilities. The plan for 2022 represents postponed maintenance in the region of NOK 800 million across sub-portfolios/disciplines. Avinor is therefore building up a steadily increasing maintenance backlog, posing a risk of operational disruption, inadequate regularity, and punctuality. In a worst-case scenario, this may lead reduced traffic or closing an airport.

As a part of the Corporate Strategy, Avinor has established a technology portfolio, which is part of the company's total project portfolio. The background to this is that technology as a strategic enabler is a part of a steadily increasing part of the Group's total projects. Comprehensive and overall portfolio management of technology will ensure that projects requiring technology is assessed early in the needs and prioritisation process to thereby ensure that alternative technological, future-oriented opportunities are assessed.

3.3.2 Urban development and the new airport in Bodø

In the 2022 national budget, the Storting approved the cost framework, as well as the basis for the financing frameworks in relation to the project (the distribution between the Government, Bodø Municipality and Avinor). Avinor will make its own, significant financial contribution to the funding of the new airport. The principle for the calculation of this share is that it is set at the level that Avinor would have invested in the current airport over a 20-year period if the new airport had not been built.

Through the Storting's discussions over the national budget, the State will adopt its share of the funding. The Revised National Budget (RNB) for 2022 increased the State's share of funding by NOK 390 million and reduced Avinor's share accordingly. Furthermore, the project risk between P50 and P85 was equally divided between Avinor and the Government.

The Board of Directors of the Avinor Group shall take the final decision to execute the project. This presupposes that agreements have been concluded between Bodø Municipality and the Norwegian Defence Estates Agency that are acceptable to the Board of Directors of the Avinor Group.

Work is ongoing on concluding agreements with the aim of taking a decision in Q4 2022 so that preparatory work can begin in summer 2023. This would potentially lead to completion by 2029.

There is considerable risk to progress related both to clarifications from Ministries being available on time and that they contribute sufficiently to finalising the agreements. Clarifications are related to the following conditions:

- Legal assessments of the funding model regarding replacement compensation, state support and the relationship with the Local Government Act
- Principles for index regulation of cost target (P50) and cost governance target (P85) at the correct price level at the time of the conclusion of the agreements (decision date) as well as principles for annual price adjustments
- The Norwegian Armed Forces' future needs for areas and infrastructure, including regulation of this in agreements

3.3.3 New airport in Mo i Rana

In spring 2020, Avinor was commissioned to build a new airport in Mo i Rana. The Storting allocated a cost framework of NOK 3.3 billion (in 2020 Norwegian kroner) to implement the project. Principles must be established for the index regulation costs and management frameworks to be set at the correct price level. A cooperation agreement between Rana Municipality, the Arctic Circle Airport development and Avinor was concluded ensuring a local contribution to the financing of the project. Governmental financial support for the project was approved by the ESA[18] in June 2022. A Group Strategy has been set up requiring Avinor to enter into a turnkey contract for the main assignment, which will be performed collaboratively. Avinor has entered into a contract with the contractor for the main assignment. The collaborative phase will begin in autumn 2022. Preparatory work in the field began in August 2022 and includes the construction of discharge pipe to the Ranaelva river. The project aims to be completed by the end of 2025, followed by a period of trial operations.

3.4. Research and Development and innovation

Research, development and innovation are important tools for many of Avinor's strategic projects. Avinor participates in both national and European arenas in collaboration with start-up companies, academia, research and educational institutions and public and private businesses. Innovation is not merely about creating new technology, but also building value creation. We are focussed on utilising resources in the best manner possible, finding good and efficient solutions that contribute to safe, stable, and efficient operations.

For Avinor to be a driving force in climate and sustainability, this type of strategic collaboration and partnership is vital. Based on the cooperation agreement the Group has

[18] EFTA Surveillance Authority (ESA) is EFTA's monitoring authority for the EEA agreement

concluded with SINTEF, Avinor is now a partner in the EU funded TULIPS[19] project, which will demonstrate low-emission technologies at European airports. Furthermore, Avinor has, together with the Norwegian Civil Aviation Authority, SINTEF and the Federation of Norwegian Industries, established the Green Aviation Programme. The Programme will contribute to the development and safe integration of zero and low-emission technology and to assure compliance with regulatory conditions from an early stage[20]. An agreement with *Startuplab*[21] provides the opportunity for entrepreneurs to test new, innovative solutions. Avinor also participates in networks associated with the Faculty of Information Technology and Electrical Engineering at NTNU.

Avinor has been part of the EU's research and development programme SESAR under Single European Sky since 2009 for both air navigation and airport projects.

4. Organisation of the business and important priorities

4.1. New organisation

To optimise and make efficiency improvement in operations, an organisational change across the Group was carried out in Q1 2022. The organisational changes will support the Corporate Strategy and are therefore an important tool for achieving the business' objectives. The following principles were used as a basis for the new organisation:

- Cultivate safe, stable, and efficient operations
- Gather commercial activities under a common leadership
- To reduce costs, the rate of improvements and gains from economies of scale through centralised and uniform processes should be increased
- Stronger focus on technology and competence development across the Group
- A more unified Group with a clear direction to further develop the ability of units to interact with each other
- A more streamlined Group Management with a strengthened strategic agenda, fewer overlapping areas, clear management principles and defined roles and responsibilities
- Strengthened focus on selected strategic topics, including sustainability

As a part of the organisational changes, the composition of the Group Management has changed. The number of people in Group Management has been reduced, and there are now fewer overlapping areas and clear management principles. The Group Management consists of Executive Vice Presidents within the Regional Airports Division, Sustainability & Concept for Infrastructure Development, Avinor Air Navigation Services, Large Airports, Technology Services, Commercial Management, Organisation and Group Support, Strategy and Corporate Governance and Communications.

[19] DemonsTrating lower pollUting soLutions for sustaInable airPorts acrosS Europe | The TULIPS Project is a project that is part of the EU's Horizon 2020 programme

[20] https://gronnluftfart.no/

[21] Startuplab is a start-up environment focused on Norwegian technology start-ups.

The operations organisation now consists of two airport divisions and Avinor ANS. Oslo, Bergen, Stavanger, and Trondheim airports are organised within the Large Airports Division, led by the Large Airports Executive Vice President. All other airports are organised in the Regional Airports Division. Air navigation services consist of Avinor ANS, which is responsible for managing operations of air traffic control services at towers and control centres in Norway.

Three divisions have been established that are responsible for supporting the operations organisation and developing the business:

- The Technology Services Division shall help set the direction of Avinor's future technology investments. The technology areas for IT and air navigation have been gathered into one unit. The focus of the next period will be on establishing the new division with coordination of cultures and work processes and a decision on the technological vision.
- Sustainability, concept, and infrastructure development gathers the Group's activities related to sustainability, concept and infrastructure development, standardisation, and process improvement. The objective is to facilitate better cooperation and more efficient resource utilisation across the Group and strengthen the focus on sustainability within both the climate and external environment.
- Commercial management gathers commercial activities under a common leadership so that commercial work is comprehensive, efficient and has implementation power. The change gathers, optimises and clarifies the Group's revenue agenda. The changes will lead to clearer roles, better cooperation, more efficient resource utilisation, comprehensive solutions, and concepts.

Airport and air navigation staff have been gathered into three sets of staffs: Communications, Organisation and Group Support and Strategy and Corporate

Governance.

4.2.Avinor Air Navigation Services

During the process of designing a new Corporate Strategy where technology and digitalisation are at the centre, it was clear that this would also require a greater integration between airport operations and air navigation services. Experiences from competition,

technological development and the needs of the Norwegian Armed Forces led to a decision to link Avinor ANS more closely with its parent company. The entire business area of Technology Services in Avinor ANS was therefore transferred to the new Technology Services Division (approximately 200 employees, equipment, and agreements), with the exception of Technical Operations in Røyken responsible for facility operations at the area control centre (ownership of the facility remains with Avinor ANS). Air navigation services at Oslo Airport have also been transferred to the Technology Services Division. Staffing resources within finance, procurement and legal have been transferred to the Group. The purpose of this integration is to strengthen the focus on technology in the company through gathering technological expertise together and developing this comprehensively to deliver better and more efficient services.

Avinor ANS remains a separate limited company with responsibility for the operation of tower and approach services and en-route navigation services. This includes the operation of the Remote Tower Control Center (RTC) in Bodø.

After the pandemic, air traffic controller staffing levels are thought to be at the correct level. At the same time, higher growth in traffic and increased needs from the Norwegian Armed Forces pose challenges to individual units, and an increase in the admission of air traffic controller students was approved for 2023 and 2024.

To strengthen the operational professional environment with AFIS through synergies with other air navigation environments in Avinor, AFIS was transferred from Regional Airport Operations to Avinor ANS. Due to the transfer of employees from airports to the Remote Tower Centre in Bodø, the overall staffing situation in the AFIS service is under review. A decision has been taken to take on a new class of AFIS officers.

4.3.Avinor's environmental performance

Aviation affects the environment both locally and globally. Greenhouse gas emissions were discussed previously, but Avinor is also concerned with safeguarding local and regional environmental conditions. Discharges to water and the ground as well as noise pollution from aircraft and helicopters are discussed below. Other environmental aspects and climate adaptations are discussed in Avinor's Annual and Sustainability Report.

The risk of water and ground contamination from current operations at Avinor's airports is primarily related to aircraft de-icing, runway de-icing, firefighting training, and the risk of fuel leaks. In addition, there are contaminated sites at Avinor's airports from historical activities, including PFAS contaminated areas. PFAS refers to fluorine-based substances (including PFOS and PFOA) which were previously used as additives in firefighting foam.

Avinor shall operate and develop airports in a manner that ensures that water resources around airports are not negatively impacted. Environmental monitoring is being carried out at around half of all airports where the state of water resources is being documented. The results are reported to the respective County Governors and the Norwegian Environment Agency. In cases where an impact on local bodies of water were documented, remedial actions were put in place to ensure that the impacts were only temporary.

PFAS pollutants have been mapped at all Avinor airports, and action plans have been developed with a view to cleaning up multiple airports. Clean-up operations have been carried out at Harstad/Narvik Airport, and water purification operations have been carried out at Oslo Airport and Fagernes Airport. Avinor will begin the implementation of remedial

actions at Rørvik and Bergen Airports in autumn 2022. The Norwegian Environment Agency expects Avinor to implement remedial actions at PFAS contaminated sites at 14 airports over the next seven years. Avinor is working continuously with alternative methods of digging up and removing contaminated materials and will intensify this work going forward. Avinor has allocated an accounting provision for the clean-up of PFAS contamination of around NOK 1.1 billion. The provision will be adjusted continuously as the clean-up measures become more concrete. In Sweden, the Swedish state is covering all costs for PFAS clean-up operations at airports.

Noise pollution from aircraft and helicopters is an extremely important issue for Avinor and for neighbours of our airports. As with other transport agencies and the Norwegian Defence Estates Agency, Avinor regularly carries out noise pollution surveys. The number of people exposed to noise pollution at Norwegian airports has decreased since 1999. However, were it not for increased housing construction in areas vulnerable to noise pollution, a significantly greater reduction in aircraft-related noise exposure (SPI) would have been achieved. The liberal use of regulations in some airport municipalities undermines the goal achievement for noise pollution from aircraft and helicopters.

The phasing out of older aircraft largely makes up for a significant increase in traffic. The introduction of the Sikorsky S-92 type helicopter for offshore transport has resulted in a significant increase in the impact of aircraft noise at some airports since 2006. The airports with the smallest reduction or greatest increase in the number of residents with outdoor noise above LAeq 50 dBA, all have regular offshore traffic involving the Sikorsky S-92. At Harstad/Narvik Airport, Evenes, there are challenges relating to the Norwegian Armed Forces phasing in of F-35s.

4.4. Civil security and emergency preparedness

Avinor is responsible for critical infrastructure for airports and air navigation services and plays an important role in general defence. Awareness of terrorist incidents, cyber attacks, international unrest and pandemics has increased, and climate change increases natural risks and physical impacts on infrastructure. By securing physical infrastructure, Avinor can help to solve the challenges related to security and emergency preparedness.

The pandemic and the war in Ukraine have shown that aviation is vulnerable, but also that it plays a crucial role in guaranteeing important societal functions. Considering these conditions and based on the updated threat assessments, Avinor has reviewed its own plans for ensuring a continued high level of handling capacity and proper level of emergency preparedness.

The threat picture related to the security situation means that Avinor has a strong focus on data protection. This is part of the work on preventive security and maintaining our contribution to the total defence.

In connection with the changes in the security policy landscape, assessments of Avinor's services are carried out and spare parts stocks for critical infrastructure are adapted appropriately to current challenges. Avinor participates in efforts together with the Norwegian Armed Forces and other social actors within transport to ensure coordinated plans that safeguard civil security efforts within the transport sector.

4.5. Relationship with the Norwegian Armed Forces

Avinor's social mission includes operating combined air navigation services for the civil and military sectors. In addition, civilian and military aircraft need largely the same infrastructure and services. Common utilisation and use of infrastructure and services has potential cost benefits and the potential for reduced investments for both parties. It is therefore important to have good cooperation and agreements that regulate the cooperation and ensure proper service deliveries in times of peace, crisis, and war. Collaboration with the Norwegian Armed Forces take place through a cooperation forum. There is a need to update and complement the agreement structure between the Norwegian Armed Forces and Avinor. Avinor has taken the initiative on this.

In 2016, the Storting decided to base fighter jets and maritime patrols at Harstad/Narvik Airport, Evenes. In January 2022, the Norwegian Armed Forces transferred F-35 fighter jets from Bodø to Evenes.

F-35 fighter jet activity poses major noise pollution challenges that could lead to serious hearing damage. Avinor believes that the noise situation at Evenes triggers the need for permanent measures to be put in place to the order of NOK 500 million. Additionally, there are costs related to the handling of contaminated surface water and new de-icing platforms of just under NOK 300 million. Avinor believes that these measures must be funded through the defence sector's budget.

The Storting decided in 2016 that Andøya airbase should be decommissioned once P-3 Orion is phased out. As a part of that decision, the Storting decided that Avinor should take over airport operations from the Norwegian Armed Forces. During autumn 2022, the Ministry of Transport and the Ministry of Defence will clarify the premises for Avinor to take over operational responsibility only in the first phase (phase 1). Avinor is awaiting the Ministry to clarify the premises for a full takeover (phase 2) and the associated financial relationship between Avinor and the Norwegian Armed Forces by the first half of 2023.

In June 2021, the Solberg Government adopted the Norwegian Airspace Strategy and decided that certain recommendations from that strategy should be operationalised and followed up. This applies in particular to the needs of the Norwegian Armed Forces. It is important that in this additional work that emphasis be placed on solutions that are financially sustainable and take sufficient account of civil aviation. An assessment must therefore be carried out examining the consequences for air navigation services in civil airspace before any future solution regarding the needs of the Norwegian Armed Forces is adopted. Avinor will actively contribute to the follow-up of the Airspace Strategy.