

Action plan to increase the proportion of green public procurements and green innovation



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The public sector is a considerable contracting authority, consumer, and investor. Central government, municipalities and counties authorities are buying products, services as well as building and construction for around NOK 595 billion per year. Public demand for climate friendly and environmentally friendly solutions can contribute to strengthen the markets for sustainable products and services, promote a more circular economy and green innovation.

The new public procurement act, in force from 2017, places obligations on central government, municipality and county authorities to «organise their procurement practice such that it helps reduce harmful impact on the environment and encourages climate friendly solutions when relevant». The Norwegian government has opened and simplified the procurement legislation to make life easier for green contracting authorities. But in the end, it is up to contracting authorities to make use of this regulatory space.

The potential for climate and environmentally friendly procurement and green innovation is considerable as compared to what is taken out today. However, it can be challenging for contracting authorities to have the full oversight of climate and environmental policies and knowing how to prioritise and plan for the right choices. Furthermore, it is important to focus on green requirements and criteria where they are relevant and where they will make a difference. We have seen that there is a need for clearer directions and guidance about the different choices at

hand. This is the background for the White paper on public procurement where the government establishes that it would develop an action plan to increase the proportion of green public procurement and green innovation. The action plan will be of help in finding the way and making wise decisions.

The action plan shall also contribute to green and innovative requirements and criteria being more predictable for the market. The aim is also that the action plan will make it easier for contracting authorities to organise their green procurement practice in manner enabling the public sector to drive the market development in desired direction. This will help Norway achieve important societal goals, while also strengthening the competitiveness of Norwegian businesses.

Being the agency responsible for public procurement, The Norwegian Agency for Public and Financial Management, DFØ, will be responsible for the follow-up and updating of the action plan. DFØ works with building competence, management development, developing statistics and a range of other areas, has a broad network and drives continuous improvement throughout the whole country. These kinds of initiatives will be key to build competence and professionalize green public procurements, and they are therefore an important part of this action plan. Sincere thank you to DFØ, the Environment Agency and a range of other agencies involved in developing a thorough and groundbreaking work with the action plan.



**Klima- og miljøminister
Sveinung Rotevatn (V)**

A handwritten signature in blue ink, reading "Sveinung Rotevatn".



**Næringsminister
Iselin Nybø (V)**

A handwritten signature in black ink, reading "Iselin Nybø".

1. Summary and conclusions

Objectives and priority areas

- Minimising harmful environmental impact
- Promoting climate friendly solutions and a circular economy
- Influencing national and global supply chains

The following procurement categories are prioritised: transport, construction, building and property, food and catering services, plastic products, ICT/electrical and electronic equipment, batteries, furniture and textiles. The action plan is valid for the period 2021–2030, with revisions scheduled in 2024 and 2027.

Key actions

1. Public contracting authorities¹ shall, through their public procurement, seek to promote solutions for **zero or low emissions and a circular economy**, and endeavour to **avoid using chemicals that are hazardous to human health and the environment**, particularly in the priority categories: transport, construction, building and property, food and catering services,² plastic products and products containing plastics, ICT/ electrical and electronic equipment, batteries, furniture and textiles.
2. **Key central government agencies**, including Statsbygg (the Norwegian government's building commissioner, property manager and developer), the road construction organisation Nye Veier,³ the Norwegian Hospital Procurement Trust,⁴ the Norwegian Defence Estates Agency, the Norwegian Defence Logistics Organization, the Norwegian purchasing body and the Norwegian Agency for Public and Financial Management (DFØ) lead the way to increase the proportion of green public procurement in key market segments, through their competence, size and marketposition.
3. DFØ will implement a program for a **green competence boost** for procurements in Norway during the period **2021-2030**.
4. DFØ will continue and strengthen **management development** programs with a focus on green procurement and innovation culture.
5. DFØ will continue to improve access to **statistics and data** on green and innovative public procurement. Consider establishing targets for green and innovative public procurement for the transport, building and food sectors.
6. DFØ and LUP develops their role to facilitate **increased collaboration between contracting authorities** to develop and adopt environmental technology and circular solutions.
7. **Program to include green technology start-ups in the procurement process**, run by DFØ, the Norwegian Digitalisation Directorate and LUP in cooperation with market actors.
8. Collaboration between DFØ and **research and innovation communities** on climate and environmentally friendly procurement.
9. DFØ is in **charge of testing measures for improved follow-up and compliance** within green and innovative procurement.
10. DFØ develops its role as a **catalyst and guide to end users regarding available financial support schemes** to help cover additional costs, risk relief and capacity building.

¹ "Contracting authorities" is the term applied in laws and regulations relating to public procurement. The term contracting authority comprises the entire public entity that conducts procurements.

² As regards the category food and catering services, it is, however, less relevant to endeavour to avoid chemicals that are hazardous to health and the environment, except to ensure that the entities of course purchase products from manufacturers and suppliers that adhere to the regulations, so that the food is manufactured, packed, labelled and sold safely.

³ Nye Veier is a wholly state-owned limited liability company, organised under the Ministry of Transport and Communications.

⁴ The Norwegian Hospital Procurement Trust is a health organisation owned by the four regional health authorities in Norway. Subject to the Act and Regulations relating to public procurement.

2. Why is it important to increase the proportion of green and innovative public procurement?

2.1. Introduction

Public procurement will help Norway deliver on its climate and environment targets. The objective of this action plan is to increase the proportion of climate friendly and environmentally friendly procurement and green innovation. The action plan will contribute to this by specifying the measures necessary to increase the proportion of green and innovative public procurement, thus ensuring that public procurement becomes an effective environmental policy instrument. This means encouraging the public sector as a client to ask for, implement and develop new green and climate friendly technology, products and solutions as an integral part of its green shift policy and to ensure that Norway will achieve its climate and environment targets. The action plan will specify in which procurements, and in what way, it will generally be relevant for the contracting authorities to seek green and innovative procurements. The action plan introduces ten key actions for the further work on green and innovative procurements.

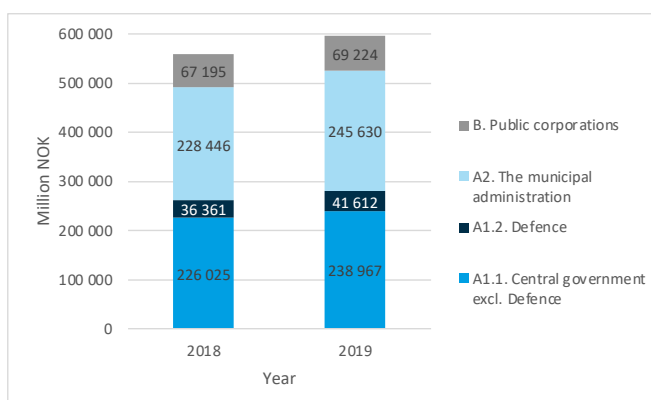
The ambition level of the action plan will reflect the ambition level of the climate and environment targets.

The Norwegian Agency for Public and Financial Management (DFØ)⁵ has prepared the action plan in close collaboration with the Norwegian Environment Agency.⁶ The Norwegian Environment Agency has provided environmental analysis and helped identify and describe pressing environmental challenges, targets and topics. In order to incorporate developments in technology, regulations and policies, as well as climate and environmental developments, the action plan is scheduled for revision in 2024 and 2027. DFØ will conduct the revision in close collaboration with the Norwegian Environment Agency.

2.2. Action plan background and limitations

Each year, the public sector procures goods and services for more than NOK 595 billion, amounting to about 17 per cent of the gross domestic product (GDP).⁷ During the period 2018–2019, public procurement increased by 7 percent.

Figure 1: Public procurement figures from Statistics Norway for 2018 and 2019



Public procurement legislation was revised in 2016–2017. A new act on public procurement stipulates that the overall objective of the act is to promote efficient use of society's resources. Furthermore, section 5 of the act stipulates that state, municipal and county authorities and central government agencies shall organise their procurement practice such that it helps reduce their harmful impact on the environment and encourages climate friendly solutions where relevant. This will be ensured, e.g. by the contracting authorities taking life-cycle costs into consideration. The current procurement regulations have incorporated EU revised procurement directives from 2014 into Norwegian law. The directives are more transparent and flexible than previously, making it easier to promote climate and environment considerations and innovation through public procurement.

Section 5 of the Public procurement act does not require contracting authorities to include environmental requirements in each and every procurement, but puts obligations

⁵ DFØ is an agency under the Norwegian Ministry of Finance, in charge of sound financial management and good decision-making support for government initiatives, organisation and management in the state administration and public procurement.

⁶ The Norwegian Environment Agency is a government agency under the Ministry of Climate and Environment. Its primary tasks are to reduce greenhouse gas emissions, manage Norwegian nature, and prevent pollution

⁷ Figures from Statistics Norway for 2019.

What climate and environmental requirements are laid down in the public procurement legislation?

Section 5, first subsection, first and second sentence of the Act of 17 June 2016 No 73 relating to public procurements: central government, municipal and county authorities and central government bodies shall organise their procurement practice such that it helps reduce their harmful impact on the environment and encourages climate friendly solutions where relevant. This will be ensured, e.g. by the contracting authorities taking life-cycle costs into consideration. Section 5, second subsection: Contracting authorities may lay down appropriate requirements and criteria related to the various steps in the procurement process, ensuring that public contracts are performed in a way that promotes considerations for the environment, innovation, and society, provided that such requirements and criteria relate to the delivery. The regulations facilitate reduced harmful environmental impact and promote climate friendly solutions throughout the life cycle of a service. If the environment is used as a contract award criterion, it should, as a general rule, have a weighting of at least 30 percent.

on contracting authorities at aggregate level in terms of how they organise their overall procurement portfolio. This means that there is considerable flexibility when it comes to implementation. It can often, however, be challenging for contracting authorities to find the right balance, for instance to decide when it «is relevant» to include environmental requirements or criteria in their procurement, and deciding what would be the right level of ambition. It is not expected of all contracting authorities to be equally ambitious in all their procurements. There can also be special concerns related to the nature of some contracting authorities. Particular sectors like the defence sector often operates in markets outside central areas where special considerations apply. Consequently, it is necessary to adapt the environmental requirements for this sector. This means that some of the recommendations in the action plan must be adapted to the special nature of the markets for defence materiel, existing technology and available national/international logistics support.

The purpose of this action plan is to provide guidance and increase the competence regarding what is considered key climate and environmental concerns and relevant procurement topics. Furthermore, providing practical and concrete guidance when the contracting authorities bound by this

White paper No 13 (2020-2021) Climate Plan

for 2021-2030 was presented to the Norwegian Parliament on 8 January 2021. In the white paper, the government announces a new policy for reducing ETS (Emissions Trading System) and non-ETS greenhouse gas emissions, increasing carbon capture and reducing emissions from forestry and other land use. A key element of the plan is to introduce a specific policy for speedier reduction of non-ETS greenhouse gas emissions. This applies to emissions from transport, agriculture and certain other sources. A key initiative in the report is the Norwegian government's gradual increase in the CO₂ tax in the period leading up to 2030. Other measures are also announced, such as increased use of biofuel in new sectors such as shipping and construction machinery, etc. The government has also indicated its intention to pose climate requirements for a broader range of public procurements. This will e.g. include procurements of construction work in the transport sector and public procurements of vehicles and public transport such as buses, ferries and high-speed vessels, as well as other types of procurement such as food and catering services. The climate plan applies the following definitions for the government policy:

Zero emissions: A zero emission technology or solution produces no direct greenhouse gas emissions or exhaust emissions when in use. This means, for example, using electric engines combined with batteries, direct use of electricity, or fuel cells that use a carbon-free energy carrier, such as hydrogen.

Low emissions: A technology or solution which significantly reduces emissions, compared with conventional technology.

Fossil free: Fossil free means that no fossil fuels are used for operation.

For more definitions, see the Climate Plan glossary.

procurement legislation shall organise their procurement practice such that fulfill their obligations according to the legislation. The action plan provides recommendations, but does not present legally binding obligations. It is the responsibility of the contracting authorities to organise their procurement practice such that it helps reduce their harmful impact on the environment and encourage climate friendly solutions where relevant. The action plan also includes initiatives from DFØ to boost competence, improve strategic management, improve statistics and other support functions which aim at increasing the proportion of green public procurement and green innovation.

The government wants the public sector, as a customer, to contribute to adopt and develop new climate and environmental technologies, products and solutions. This is laid down in the White paper on smarter purchasing which was presented in 2019.⁸ This is also emphasised in the White paper Climate Plan for 2021-2030 (hereinafter referred to as the "Climate Plan") which states that climate and environment requirements for public procurement are necessary instruments for reducing Norway's greenhouse gas emissions, promoting green business developments and stimulating the demand for low and zero emission solutions. This will be ensured e.g. by contracting authorities taking life-cycle costs into consideration and ensuring that their procurement practices have minimal environmental impact.

Public procurement is a key policy instrument for achieving the green shift, and for Norway to meet its climate and environment targets. It means that contracting authorities may, through their procurements, influence market developments in a desirable direction, which will contribute to Norway achieving important goals for society whilst strengthening competitiveness in Norwegian business and industry. The White paper relating to innovation in the public sector⁹ points out that the public sector may, through increased use of innovative procurement, become a stronger driver for innovation in society. Innovative procurement has a positive impact on the public sector as a contracting authority, on business and industry as suppliers, as well as on the general population.

As a signatory to the Paris Agreement on Climate Change, Norway is committed to reducing its greenhouse gas emissions by 50-55 per cent by 2030, compared to 1990 levels. The aim is to be a low emission country by 2050, as defined in the Norwegian Climate Change Act.¹⁰ The public sector must help ensure that we meet these targets. Public procurement is estimated to make up 16 per cent of Norway's carbon footprint. This is equivalent to more than the direct emissions from all road traffic in Norway.¹¹ In the climate report Klimakur 2030 (Climate Cure),¹² the Norwegian agencies responsible for this report (Norwegian Environment Agency, the Norwegian Water Resources and Energy Directorate (NVE), Enova, the Norwegian Coastal Administration, the Norwegian Public Roads Administra-

tion and the Ministry of Agriculture and Food) point to acquisition of emission-free public transport and other transport services, emission-free construction machinery and a climate-smart menu as important drivers for meeting the climate targets by 2030. The government's proposed climate plan for the period leading up to 2030, White paper No 13 to the Norwegian Parliament (2020-2021), Climate Plan for 2021-2030, identifies areas where public procurement is a particularly suitable instrument to meet Norway's climate and environment targets: transport, construction, building and property, circular economy, food and food waste, plastics and chemicals that are hazardous to human health and the environment. These areas will be prioritised by the Norwegian government.

Both nationally and internationally we have seen that procurement is more frequently being applied as an instrument for achieving important goals for society. The EU aims to use public procurements as a strategic policy instrument to achieve such goals. This is reflected in the current Directive 2014/24/EU on public procurement¹³ and new regulations in Norway.¹⁴ The efforts on green procurement are based on the European 2020 strategy and are now part of the EU's growth strategy Green Deal for the period leading up to 2030. The strategies form the framework for the drafting of new regulations aimed at emission reductions and a more circular economy.

The new 2017 procurement regulations include new environmental provisions and allow more latitude to promote innovation. Reducing harmful environmental impact pursuant to the regulations includes reducing greenhouse gas emissions, pollutants, substances hazardous to human health and the environment, dispersion of microplastics, loss of species and biodiversity, unsustainable consumption of non-renewable resources and noise pollution, preventing deforestation associated with the production of commodities, ensuring sustainable spatial management, sustainable products, increased resource efficiency and addressing climate adaptation problems.¹⁵ Sometimes promoting climate friendly and environmentally friendly solutions is about choosing solutions that are new to the market and facilitating innovation. The act also allows an opportunity to stipulate requirements regarding the production process for goods and services.¹⁶ There is

8 White paper No 22 to the Norwegian Parliament (2018-2019): "Smartere innkjøp – effektive og profesjonelle offentlige anskaffelser" (Smarter purchasing – efficient and professional public procurements), p. 78. The government focus on public procurement as a climate and environment policy instrument is also evident in White paper No 27 to the Norwegian Parliament. (2016-2017) "Industrien – grønnere, smartere og mer nyskapende. (A greener, smarter and more innovative industry). White paper No 41 to the Norwegian Parliament (2016-2017) Norway's Climate Strategy for 2030 – a transformational approach within a European cooperation framework, page 40, the Norwegian Government's strategy for green competitiveness (2017). Better growth, lower emissions and White paper 45 to the Norwegian Parliament (2016-2017) "Avfall som ressurs – avfallspolitikken og sirkulær økonomi (Waste as a resource – regarding waste policy and the circular economy.)"

9 White paper No 30 to the Norwegian Parliament (2019-2020) "En innovativ offentlig sektor – kultur, ledelse og kompetanse" (An innovative public sector – culture, management and competence)

10 The Norwegian Climate Change Act. Act of 16 June 2017 no. 60 relating to Norway's climate targets.

11 Asplan Viak (2019) Project Report. The carbon footprint of public procurement.

12 The Norwegian Environment Agency, the Norwegian Water Resources and Energy Directorate (NVE), Enova, the Norwegian Coastal Administration, the Norwegian Agriculture Agency and the Norwegian Public Roads Administration (2020): Climate Cure 2030.

13 Directive 2014/24/EU of the European Parliament and of the Council on public procurement

14 Act relating to public procurement, cf. <https://lovdata.no/dokument/NL/lov/2016-06-17-73> (in Norwegian).

15 This list is not exhaustive, but it illustrates the wide range of issues that may have a harmful environmental impact.

16 Cf. Section 5 of the Procurement Act, which stipulates that contracting authorities may stipulate appropriate requirements and criteria relating to the various steps in the procurement process. This includes the production process, cf. Section 15-1 of the Regulations relating to procurement (FOA). Section 15-1 (2) of FOA "Reference can be made to all aspects and steps in the life cycle of goods, services or construction, building and property work comprised by the contract, including factors in the production process..."

increasingly a significantly higher focus on supply chains, for example with regard to batteries, and requirements relating to social responsibility when extracting minerals.

Based on this, one could say that green and innovative procurement is defined by a threefold purpose to:

1. reduce harmful environmental impact¹⁷
2. promote climate friendly and environmentally friendly solutions, including zero and low emission solutions, a circular economy and green competitiveness¹⁸ and
3. promote more sustainable supply chains and green jobs nationally and globally¹⁹

The government wants Norway to become a pioneering nation in developing a green, circular economy that makes better use of its resources.²⁰ In 2021, the government presented its first National Strategy for a Green, Circular Economy, ("Nasjonal strategi for ein grøn, sirkulær økonomi") Norway is committed to reducing food waste by 50 per cent by 2030, in line with UN sustainable development goal 12.3. Moreover, the government has presented an action plan for a 'non-toxic everyday life' 2021-2030 and an overall strategy on plastics comprising a proactive strategy to prevent plastic pollution, focusing on marine pollution and the dispersion of microplastics both nationally and internationally. Strict requirements will be introduced for material recycling of many different types of waste. The UN's sustainable development goals provide the framework and the main policy direction for addressing the greatest challenges of our times, including the environment and climate challenges.²¹ In 2021, the government presented a White paper on Norway's sustainable development goals²². Innovation and digitalisation is a prerequisite for achieving the targets by 2030. To succeed, collaboration between the public sector, the business sector, academia and civil society is crucial.



Above, we have highlighted the UN sustainable development goals that this plan will contribute to.

17 Cf. Section 5 of the Procurement Act stipulates that harmful environmental impact shall be reduced.

18 Cf. Section 5 of the Procurement Act stipulates that climate friendly solutions shall be promoted when relevant. The "Smartere innkjøp" (smarter procurement) report to the Storting (2018-2019) states that low and zero emission solutions and a circular economy are priority areas for green and innovative public procurement. The government's strategy for green competitiveness (2017) linked green and innovative procurements closely to the promotion of green competitiveness in the business sector.

19 Cf. Section 5 of the Procurement Act stipulates that harmful environmental impact shall be reduced. Harmful environmental impact can be caused by various parties in the supply chain. The contracting authority may stipulate appropriate requirements and criteria relating to the various steps in the procurement process.

20 The Granavolden platform (2019), p. 86 and Report No 13 to the Storting (2020-2021) Climate Plan for 2021-2030 section 6.6 Circular economy and digitalisation. See also Report No 45 to the Storting (2016-2017) Waste as a resource - waste policy and the circular economy, p. 40: "The government will make use of the procurement expertise available in the Agency for Public Management and eGovernment (Difi) relating to the environment, to guide and develop a professional procurement methodology and practice that will support the waste policy and the principles of a circular economy."

21 White paper No 30 to the Norwegian Parliament (2019-2020) The Ministry of Local Government and Modernisation (2019) National expectations regarding regional and municipal planning 2019-2023.

22 White paper No 40 to the Norwegian Parliament (2020-2021) "Mål med mening" (meaningful targets)

The objective of the action plan is to increase the proportion of green public procurement and green innovation during the period leading up to 2030. The action plan will help achieve this objective by clarifying governing priorities for contracting authorities and by identifying measures that may be implemented to increase the proportion of green and innovative procurement. This involves helping the public sector as a customer to adopt and develop new climate friendly and environmentally friendly technology, products and solutions, and to avoid purchasing and procuring raw materials and products that lead to increased harmful impact on the environment and greenhouse gas emissions. According to the Norwegian government's 2021-2030 Climate Plan, the action plan will help make public procurement simpler, more efficient, more professional and more targeted as a policy instrument to achieve the government's climate and environment targets and support the green shift.²³

Norwegian strategy for a green and circular economy, 2021

The Norwegian government presented Norway's first national strategy for a circular economy in June 2021. It is the ambition of the Norwegian government to be a pioneering nation in the development of a green and circular economy which is more resource efficient.

The strategy is closely connected to the policy of the EU action plan for a circular economy from 2020. The action plan is considered by the EU as one of the key deliveries under the broad and comprehensive construction of the European Green Deal. The EU's action plan contains new legislation for more sustainable products, higher ambitions for making use of waste resources and continuation of high standards to avoid substances that are hazardous to the environment. The government's strategy for circular economy positions Norwegian policy in this framework and sets out what implications this will have for national politics, and for Norwegian positions in the EU-cooperation, as well as for increased green competitiveness. The areas identified as having the greatest potential for green competitiveness in a more circular economy in Norway, are bioeconomy, process industry, construction and building, as well as trade in products and services.

A reinforced framework for sustainable products is the most considerable new action of the EU action plan. It includes regulations to develop products fit for a more circular economy, with expansion of the ecodesign directive to other product groups as well as a broader range of product characteristics, and higher requirements to products in what EU characterises as "key value chains". Electronics and ICT-products, batteries and vehicles, packaging, plastics, textiles, construction and buildings as well as food, water and nutrients. Furthermore, waste policy is reinforced to preserve more of the material resources previously considered as waste, in circulation within the borders of Europe. Reinforcing consumer rights and reinforced requirements for green public procurement plays an important part in strengthening the demand-side of the material cycle. In parallel to this, the EU is also reinforcing its policy regarding harmful substances. More resource efficient use of waste resources and residual raw materials must not increase the risk of dispersion of substances that are harmful to health and environment.

²³ White paper No 13 to the Norwegian Parliament (2020-2021) Climate Plan 2021-2030, p. 62.

The ambition level of the action plan will thus reflect the ambition level of the climate and environment goals. The White paper for smarter procurement and the 2021-2030 Climate Plan identify some priority areas where green and innovative procurement may be particularly important for achieving the climate and environment targets. The action plan will clarify which priorities contracting authorities should make in this regard. The following two overall topics are highlighted:

- Zero and low emission solutions
- Circular economy, including substances that are hazardous to health and the environment ²⁴

The following procurement categories are highlighted:

- Transport
- Construction, building and property
- Food and catering services
- Plastic products and products containing plastics

The action plan also discussed another overall topic: raw materials and processed products that may pose a risk of deforestation, as well as four other procurement categories that are important for public procurement and for the transition to a circular economy:

- ICT/electrical and electronic products
- Batteries
- Furniture
- Textiles

Issues relating to a further reduction in the use of substances hazardous to health and the environment and requirements for increased waste material recycling, are included in most of the procurement categories mentioned above. The risk of procuring raw materials that contribute to deforestation is particularly high for the categories construction, building and property, food and furniture.

The 2018 and 2020 maturity surveys show that the state, county and local authorities increasingly reply that they have a plan in place for adapting their procurement practice to help reduce their negative impact on the environment and promote climate friendly solutions where relevant (Figure 2). Furthermore, their answers indicate that the contracting authorities to an increasing extent have performance indicators for climate and environment as well as routines to assess their impact on the environment, and that the environment makes up an increasingly important part of their contract follow-up. At the same time, the survey indicates that the contracting authorities now to a lesser extent feel they have sufficient climate and environment expertise (Figure 3). This may be a result of greater expectations and clearer directions to consider the environment in their procurement practice, and thus an

increased need for capacity and expertise in the contracting authorities. The contracting authorities themselves reply that the greatest barriers in their efforts to achieve environmental benefits through acquisitions are 1) time and resources, 2) environmental expertise, 3) management support, focus and prioritising, 4) tools and methods and 5) financial leeway.

Figure 2: The 2018 and 2020 maturity surveys on green procurement

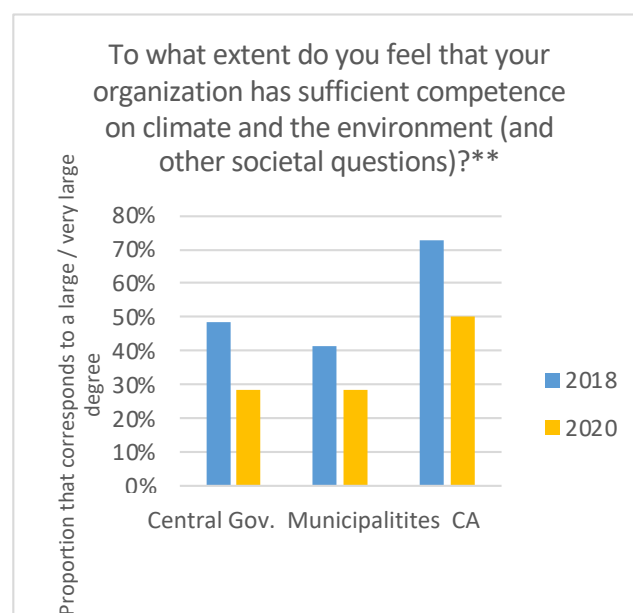
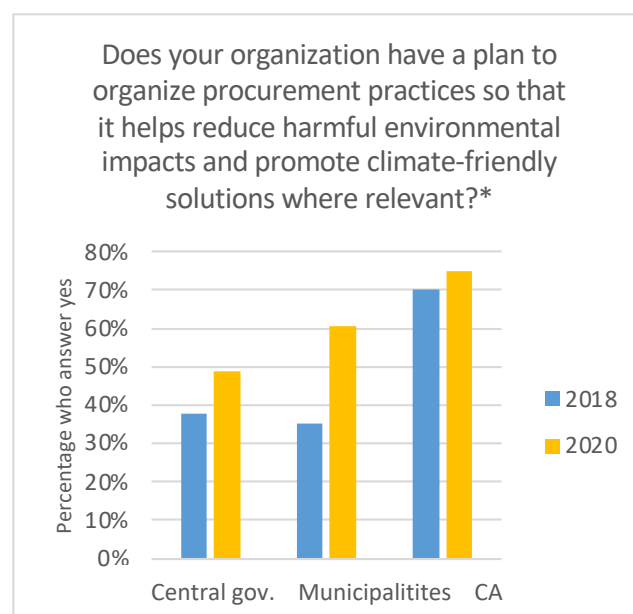


Figure 2: Results from the 2018 and 2020 maturity surveys. *The results from 2018 include those who have replied 4 (to a great extent) and 5 (to a very great extent). **The question from 2018 included "and other social responsibility", and the figure shows the proportion of respondents who have replied 4 (to a great extent) and 5 (to a very great extent).

²⁴ In the White paper referred to as environmental toxins, but substances that are hazardous to health and the environment are more relevant for public procurements.

Figure 3 shows the percentage of county authorities (CA), municipalities and central government agencies that replied that they, to a great extent or a very great extent, consider innovative procedures, use innovative procurement as a way to solve social challenges and have sufficient procurement expertise to promote innovation. Generally, the municipalities show better results than central government agencies in terms of innovation and environment, which contrasts with the other maturity survey indicators, where the state generally has better results than the municipalities.

The action plan does not detail how buyers may apply environmental requirements, criteria and contractual terms and conditions to achieve the best possible result. Nor does it discuss the use of eco-labels and environmental management systems in connection with public procurement. This is explained in the guideline "Kom i gang" (get started)²⁵ and on the website anskaffelser.no (see Appendix 1). The action plan will specify in which procurements, and, in general terms, in what way green and innovative procurement will be relevant for contracting authorities. It introduces ten key actions for the further work on green and innovative procurement.

The action plan applies for the period 2021-2030. In order to incorporate speedy developments in technology, as well as any changes in climate and environmental policies, the action plan is scheduled for revision in 2024 and 2027. In the first revision, it will be natural to look at statistics on trends in the proportion of green and innovative procurement and then consider whether there is a need for regulatory revisions or other measures to ensure compliance and follow-up of the regulations.

Figure 3: The 2020 maturity survey relating to innovative procurement

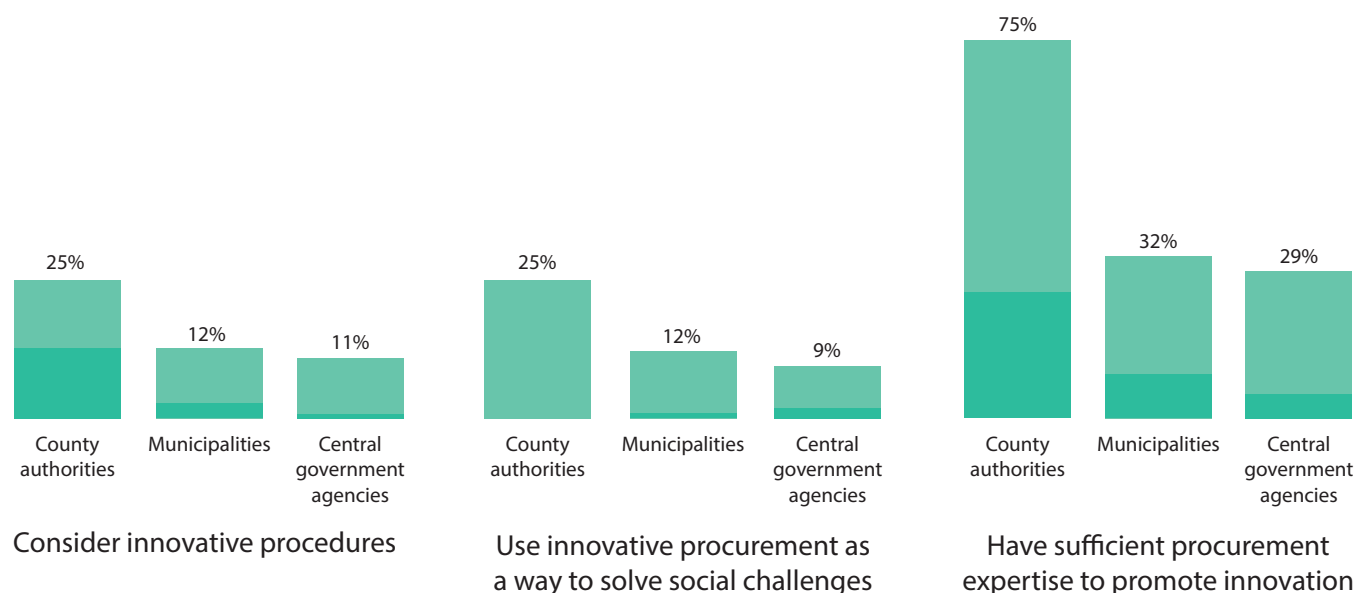


Figure 3: the percentage of respondents who replied "to a great extent" or "to a very great extent" on three of the questions relating to innovation. Results from the 2020 maturity survey, n = 337.

²⁵ <https://www.anskaffelser.no/verktoy/veiledere/kom-i-gang-med-gronne-anskaffelser>

2.3. An inclusive action plan process

In November 2019, the procurement department of the Agency for Public Management and eGovernment (Difi) was tasked with preparing this action plan in close collaboration with the Norwegian Environment Agency. The task was assigned by the Ministry of Climate and Environment in consultation with the Ministry of Trade, Industry and Fisheries and the Ministry of Local Government and Modernisation. According to its 2020 letter of allocation, the Norwegian Environment Agency is tasked with providing professional environmental assistance and proposals for an action plan to increase the proportion of green public procurements and green innovation. After a period in the Digitalisation Agency, the procurement department was transferred to the Norwegian Agency for Public and Financial Management (DFØ) on 1 September 2020, hereinafter referred to as DFØ. The Storting Report for smarter procurement²⁶ states that the former DiFi, the current DFØ, has an important expertise-enhancing and coordinating role, particularly with regard to the environment.

A prime objective in the drafting of the action plan was to pave the way for a transparent and inclusive process. DFØ has held input meetings and welcomed written input. DFØ received input from central government agencies, county and local authorities, suppliers, policy agencies, trade organisations and non-governmental organisations. In total, DFØ received 37 written suggestions. The input corresponds well with what former reports and the OECD identify as important barriers and success criteria for green and innovative procurement. In parallel with drafting the action plan, DFØ has cooperated with the Norwegian Environment Agency on preparing a knowledge base for zero emission transport in deliveries to the public sector.²⁷ Furthermore, Inventura has on assignment from DFØ prepared a report on barriers to adopting circular business models in connection with public procurement.²⁸

2.4. Barriers and key actions

Thorough assessments have been conducted and documented in White papers to the Norwegian Parliament,²⁹ other reports³⁰ and user surveys³¹ on the barriers to implementation of green and innovative public procurement. Key barriers are insufficient skills to perform green and innovative procurement, a fear of making mistakes, lack of spread and upscaling, and that green solutions may be more expensive. In the autumn of 2019, the OECD also evaluated sustainable procurement in Norway. The OECD concluded that generally Norway has a strong basis for sustainable public procurements, particularly in its statutory and legislative framework. However, we do not score as well on introducing and implementing sustainable public procurements.

The OECD has highlighted the following needs for improvement:

- stronger strategic guidelines regarding sustainability for key central government agencies
- guidance on sustainability assessments related to budgets and accounts
- strengthening DFØ's mandate and access to data on sustainable procurements
- establishing systematic monitoring and data analysis
- control and audit systems comprising sustainable procurements
- improved evaluation and allocation criteria, as well as better contract follow-up
- ensuring that small and medium size businesses participate in procurement processes.

The figure on the next page shows the barriers that the key actions will address. Some of the key actions address several barriers. For example, efforts will be made to control costs. This will be ensured by contracting authorities adhering to the action plan priorities; a green competence boost for procurements in Norway that will contribute to more predictable market requirements and criteria; increased harmonisation of demand as well as continued financial support for extra costs related to innovation.

26 White paper No 22 to the Norwegian Parliament (2018-2019): "Smartere innkjøp – effektive og profesjonelle offentlige anskaffelser" (Smarter purchasing – efficient and professional public procurements), p. 89.

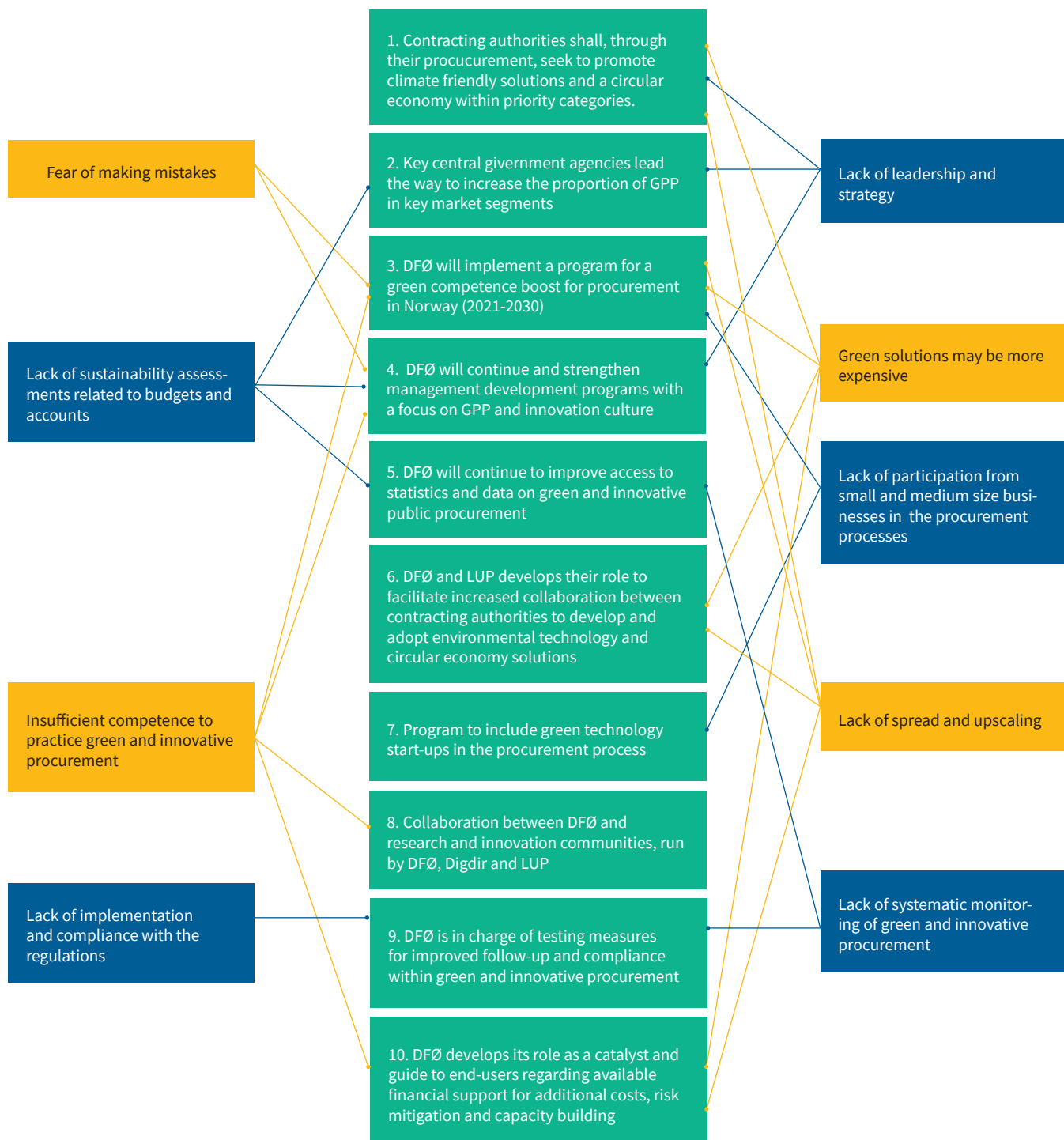
27 The Norwegian Environment Agency and the Norwegian Digitalisation Agency/DFØ (2020) Nullutslippstransport i leveranser til det offentlige (Zero emission transport in deliveries to the public sector). Knowledge base.

28 Inventura on assignment from the Norwegian Digitalisation Agency/DFØ (14 August 2020): Circular models in public procurement.

29 White paper No 22 to the Norwegian Parliament (2018-2019) "Smartere innkjøp – effektive og profesjonelle offentlige anskaffelser" (Smarter purchasing – efficient and professional public procurements), points to the need for expertise, in particular: the need for governance, management and organisation; and for better harmonisation and coordination. Rambøll and Difi (2018) "Modenhet i offentlige anskaffelser" (Maturity in public procurement). The main survey has largely confirmed these barriers. The White paper also addresses the fact that green procurements may be more expensive.

30 Menon (2016) Incentives/schemes for risk relief for innovative public procurement.

31 Among other initiatives, DFØ conducted a user survey in 2020 as part of preparations for the action plan and green competence boost.

Figure 4: Key actions that address barriers**Figure 4:** Key actions that address barriers. The key actions are shown in the green boxes. The source for barriers in the pink boxes is OECD MAPS and for barriers in the yellow boxes Report No 22 to the Storting Smarter purchasing – efficient and professional public procurements and Report No 30 An innovative public sector.

3. Ten key actions to increase the proportion of green public procurement and green innovation.

3.1. Contracting authorities shall, through their public procurements, seek to promote climate friendly solutions and a circular economy within priority categories.

Contracting authorities shall promote zero and low emission solutions and a circular economy when relevant. Particularly relevant categories are indicated in the White paper on public procurement (White paper No 22 to the Norwegian Parliament (2018-2019) Smarter purchasing – efficient and professional public procurements),³² and comprise categories such as: transport, construction, building and property, food and catering services, plastic products and products containing plastics, as well as key product groups in a more circular economy, such as ICT/electrical and electronic products, batteries, furniture and textiles. The Norwegian government's circular economy strategy from June 2021 provides more details on the strategic framework for the efforts on more sustainable products and value chains within priority product groups in Europe in the circular economy.

Norway's climate targets comprise emissions and carbon capture from Norwegian territory. To establish the impact of our carbon footprint on our climate obligations, we need to distinguish between emission reduction in ETS sectors and non-ETS sectors, and whether the reductions take place in Norway or in other countries.

In its national strategy for a circular economy (2021), the Norwegian government expresses an ambition for Norway to be a pioneering nation in the development of a green, circular economy that makes better use of its resources. In a circular economy we take a global approach to emission reductions. A circular economy considers emissions for the entire life cycle or value chain of a product. It is important to assess products and systems in relation to each other to improve their environmental qualities. Measures that increase a product's resource exploitation, such as increased product life, reuse and recycling, will reduce greenhouse gas emissions, both in Norway and in other countries.

A circular economy considers emissions for the entire life cycle or value chain of a product. It is important to benchmark product and system in order to improve the climate characteristics of the products and systems. If these analysis do not separate between the different sources of greenhouse gas reductions, they cannot be applied to evaluate their contribution to Norwegian climate targets.

Zero and low emission solutions: Contracting authorities shall as a general rule promote zero emission solutions for most means of transport. Solutions that reduce the need for transport, such as digital meetings or better logistics should also be considered. In the construction, building and property industry, contracting authorities should generally promote renewable and climate friendly solutions in buildings and zero emission solutions at construction sites, and request circular solutions and low emission materials³³ (see more details on pp. 29-31).

The Circular Economy: For circular procurements, contracting authorities should, as a general rule, follow the priorities in the waste hierarchy and try to find solutions as high up in the hierarchy as possible (see the figure below). An important first step is to reassess whether a purchase is necessary to cover the need. Is the need best covered by purchasing a new building, new computers, new furniture and disposable cutlery, or can it be met in a more resource-efficient manner? Increased reuse, repairs, refurbishing and sharing or renting instead of owning, may extend product life and prevent waste. However, if new purchases are necessary, it is important to request product qualities that promote circularity at an early stage of the procurement process (see more details on pages 30-31).

³² The action plan is not legally binding per se but renders the environmental provisions in the procurement regulations more concrete with relevance for central government agencies, county and local authorities

³³ See NIBIO and Civitas for the Ministry of Climate and the Environment (2020) Lavutslippsmaterialer i bygg. Barrierer og muligheter (Low emission buildings. Barriers and opportunities.)

Substances that are hazardous to human health and the environment: Norway has two ambitious objectives to reduce pollution from use and emission/discharge of substances that are hazardous to human health and the environment: "Pollution must not cause harm to human health or the environment" and "Emission and discharge of substances hazardous to human health and the environment must be stopped." Requirements should be introduced to ensure public procurements do not contain chemicals listed on the Norwegian Priority List of hazardous substances or the REACH candidate list of SVHC substances. The Norwegian Priority List of hazardous substances is a list of substances that Norway has a national ambition to phase out. In particular, requirements should be set for the use of such substances in public procurement of buildings, electronics/ICT, textiles, furniture and products containing plastics. Special focus should be placed on products and materials in places where children are staying, such as schools and nursery schools/kindergartens.

Exercise due diligence towards international supply chains to reduce the risk of procurement contributing to deforestation. According to the IPCC, 23 per cent of all man-made emissions come from forestry, agriculture and other alterations in land use.³⁴ Agriculture is the cause of 80 per cent of global deforestation, and it is estimated that 10 per cent of these agricultural products are imported by the EU.³⁵ It is reasonable to assume that a share of this is also imported by Norway.³⁶ Certification alone does not solve these challenges. These are particularly relevant issues within the categories construction, building and property, food and furniture. The EU Timber Regulation, to which Norway is a party, prohibits the import of timber or timber products derived from such timber unless it can be

documented that the timber has been legally produced and logged in the country of origin before being placed on the European market. Norway and eight other European parties to the Amsterdam Declaration on Deforestation have put forward an ambition to eliminate deforestation associated with raw materials from agriculture.

The list of actions below can serve as a check list for contracting authorities involved in green and innovative procurement.

Initiatives:

- Remember that the greenest procurement of all is no procurement.
- Consider virtual meetings as an alternative to travel.
- Request climate friendly solutions when old vehicles are being replaced, for delivery of goods and services and at construction, building and property sites, whenever relevant.
- Include requirements relating to reduced food waste and a climate friendly menu when purchasing catering services, food for meetings, events, etc.
- Always check if it is possible to share, maintain, repair, reuse or recycle materials used for buildings, furniture, textiles and electronic equipment.
- Consider cooperating with other contracting authorities on appropriate procurements.
- Check if there are any guidelines that can contribute to better and more efficient green procurement.
- Avoid unnecessary use of products and materials containing substances that are hazardous to human health and the environment.

Figure 5: Procurement waste hierarchy – try to find solutions as high up in the hierarchy as possible.



³⁴ Summary for Policymakers – Special Report on Climate Change and Land (ipcc.ch)

³⁵ EU Council Conclusions Communication and Deforestation 2019

³⁶ Either via EU countries or directly from primary producing countries.

City of Oslo zero emission construction site –

The 2019 upgrade of Olav Vs gate organised by the City of Oslo, Agency for City Environment, became the world's first emission free construction site. Since 2017, the City of Oslo has required that the City's own construction projects be fossil-free. It was important to engage in a broad dialogue with the market players in the early phase. Dialogue conferences were held where several contracting authorities challenged the market together. For the Olav Vs gate project the City replaced the planned type of contract with a licence agreement. The City also decided that suppliers must only use zero emission construction machinery, and not replace it with other similar machinery without prior agreement with the construction client.

A survey conducted by EBA (Contractors Association - Construction, building and property, 2019) showed that only one in five municipalities has requirements for fossil-free construction sites. There are no corresponding figures or status overviews for central government agencies. The Cities of Oslo and Gjøvik were pioneers in this field. There are also some regional initiatives that want to coordinate the demand for zero emission construction machinery, such as the Oslo Region Alliance and "fellesinitiativet for utslippsfrie bygge- og anleggsplasser" (the joint initiative for zero emission construction, building and property sites) where Statsbygg is one of the participants.

The 2030 Climate Cure report examined measures to increase the proportion of new sales of electric machinery from one per cent in 2020 to 70 per cent in 2030. For the period 2021-2030, the emission reduction is estimated at 1.75 million tonnes CO₂ equivalents. Climate and environment requirements for public procurement were considered a key instrument to implement the measure. A key condition for phasing in zero emission machinery in the 2030 Climate Cure, is that many market players on the supply and demand side choose these solutions.

Economic and administrative costs could possibly increase if the technology is immature. Additional costs related to low and zero emission solutions in the transportation sector varies widely between different vehicles and within the vehicle segment.



Photo: Klimaetaten, Oslo municipality

3.2. Key central government agencies lead the way

Public sector policies and practices have a powerful signal effect in society. Contradictory policies and practices may contribute to undermining goal achievement and the desired effect. Consequently, it is essential for central government agencies that procure goods and services in high-volume categories with a major impact on the environment, to assume a leading role. In such cases, it is essential to have clearer guidelines and procedures for incorporating environmentally friendly procurement.

The OECD recommends strengthening the mandate of Norwegian key central government agencies to reflect a stronger commitment to sustainability. Key central government agencies are agencies that purchase high volumes of goods and services with a major environmental impact, and where a potential exists for developing the market in a more environmentally friendly direction.³⁷ Much of the written feedback to this action plan calls for the state to provide state enterprises and central government agencies with clearer policy guidelines on green procurement.³⁸ Results from the maturity surveys (2018 and 2020) show that fewer central government bodies as compared to municipal and county municipalities have environmental objectives in their governing documents. Increased collaboration between ministries is required to establish clear policy guidelines. One way of doing this is for the state to promote environmental concerns and innovation in its property portfolio. In autumn of 2021, the Norwegian government will present a uniform strategy for construction, building and property in the state civil sector. The strategy will present new ambitions and actions in several fields, including climate and environment, energy, localisation and development of the construction and property industry.

³⁷ Not all key central government agencies are included in the state legal entity. Nye Veier and the Norwegian Hospital Procurement Trust are organised outside the state and are thus not central government agencies.

³⁸ Including input from the Federation of Norwegian Professional Associations (Akademikerne), Hedmark county authority, the Norwegian Labour and Welfare Administration, the Electrician and IT Workers Union, the Federation of Norwegian Industries, the National Suppliers Development Program, Celsa and Friends of the Earth Norway.

Examples of key central government agencies that will assume a leading role within green and innovative procurement are DFØ and the Government Procurement Centre. In 2020, DFØ assumed professional responsibility for public procurement and will, in that connection, take on a leading role by establishing special environmental targets and objectives for its own public procurements. The Norwegian central purchasing body is part of DFØ and will enter into joint agreements for around 190 central government bodies for contract areas with common needs and large-scale procurement. As a major market player, the Norwegian central purchasing body will be able to develop the supplier market in the right direction to increase the proportion of green and innovative public procurement and help address social challenges relating to climate and the environment. Several of the categories for which the Norwegian central purchasing body establishes purchase agreements are important for achieving zero and low emission solutions and a more circular economy, including travel and ICT. However, the central purchasing body's agreements must be supported by a policy or specific targets and policy guidelines in each enterprise. The Norwegian Tax Administration and Norad are examples of organisations that have established specific targets to reduce travel.

Other key central government agencies that have assumed a clear leadership role for green and innovative procurement are Statsbygg, the Norwegian Public Roads Administration and Nye Veier.

The Norwegian Public Roads Administration is a key state actor which has contributed significantly to developing environmental technology in shipping. In 2010, after purchasing the lowest price ferry services for many years, the Administration identified a significant undeveloped potential to make ferry operations more environmentally friendly. The Public Roads Administration established a target to develop, build and operate a greener ferry (energy and environment improvement of 15-20 per cent) as part of its tender to operate the Lavik-Oppedal state highway ferry connection. This was the first time the Norwegian Public Roads Administration procured a ferry using the procurement procedure Competitive Dialogue, which ensures technology development through the actual procurement. To stimulate market development, the selected suppliers were awarded a compensation of NOK 3 million. The result was the world's first fully electric car ferry, the **MF Ampere**, which entered operation in February 2015 in the Sognefjord. Ampere is an example that a key state actor can engage in green and innovative procurement which impacts an entire industry as well as technological and industrial developments. The Norwegian Public Roads Administration continues to lead the way and is currently realising its first hydrogen ferry which will operate on the Hjelmeland-Skipavik section in Rogaland, in 2021.



Photo: Norled

The Norwegian government's building commissioner, property manager and developer, **Statsbygg**, is committed to reducing and providing guidance on the carbon footprint of construction projects in the state civil sector. Statsbygg analyses the emission-reducing potential for each project. The analysis looks at the various levels of energy-efficiency, the potential for reducing construction site emissions and emissions related to the choice of materials for the new building. Based on this analysis, contract requirements are specified for an emission reduction percentage, which is then compared to the project's reference building. A reference building shows the emission level of the project without any green procurement requirements. Statsbygg follows up contracts actively to ensure that the contractor or project manager meets the set requirements. A greenhouse gas report is prepared, showing the carbon footprint of the building as it is designed. This is done by using life cycle analysis software for buildings constructed pursuant to the standard for greenhouse gas calculations for buildings. At a later stage, this is repeated by the contractor applying new calculations for the construction phase. During the construction phase, changes may arise that will affect the carbon footprint of the building – more materials than originally estimated may be purchased, more waste may be generated, or construction site machinery may use more energy than originally planned. All this must be presented in a GHG inventory for the completed building. The inventory will be used as final documentation to prove fulfilment of the contract requirement for a reduced carbon footprint for the building.

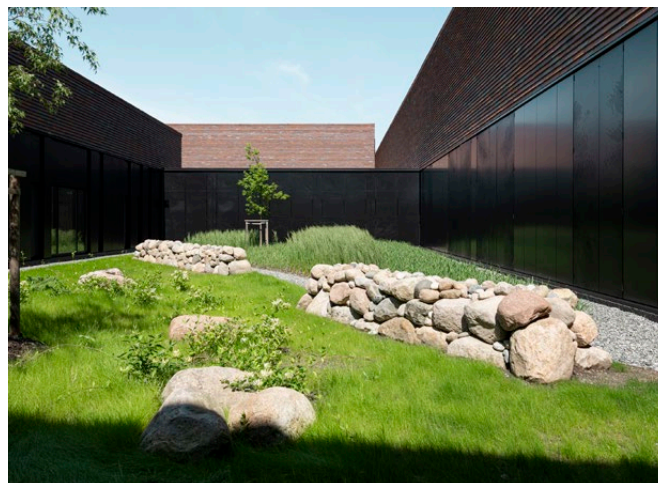


Photo: Campus Ås, Statsbygg

promoting zero emission solutions for its own vehicles, including the potential for green development and innovation during the contract period, making active use of GHG inventories (for new contracts above NOK 51 million), demanding CEEQUAL certification, as well as pioneering other GHG-reducing measures including identifying opportunities for fossil-free construction sites. Furthermore, the Norwegian Public Roads Administration has for the second time used the procurement Innovation Partnership Procedure and will cooperate with Statsbygg and BaneNor on reducing greenhouse gas emission during ground stabilisation work. The Administration has set a target of reducing its greenhouse gas emissions from development, operation and maintenance by 50 per cent by 2030.

The list below provides some examples of how central government agencies lead the way

- **Statsbygg** assumes a leading role by supplying sustainable solutions, including acting as a catalyst for the transition to a circular economy, working innovatively with the market, using existing buildings more efficiently and thus reducing the need for newbuilds, demanding zero emission construction sites and establishing digital roadmaps. In particular, Statsbygg has focused on setting requirements for a reduced carbon footprint for buildings, and the company has played a key role in developing a methodology and tools for imposing obligations for the building's total carbon footprint when requisitioning new buildings.
- **The Norwegian Public Roads Administration** assumes a leading role by e.g. requesting zero emission ferries including hydrogen ferries on its highway sections,
- **The Norwegian Maritime Authority (NMA)** is a key central government driver for green maritime transport. NMA is the regulatory authority for Norwegian vessels and foreign vessels in Norwegian waters. NMA is actively engaged in facilitating a more environmentally friendly shipping industry, both nationally and internationally. NMA was one of the first to authorise new green solutions such as the use of LNG, batteries and methanol, and is now working to introduce ammonia and hydrogen as fuels. NMA aims to become the Maritime Directorate of choice, particularly for sustainability and new technology. To achieve this, it is important that both its employees and the industry are aware of the NMA's sustainability role. Thus, NMA has prepared a comprehensive report to clarify its role in terms of the UN's sustainable development goals. This is described in the report "Sustainability in the Norwegian Maritime Authority". The report describes NMA's current role in ensuring a sustainable development. Furthermore, it identifies which sustainable development goals we can impact and which sustainable development goals NMA will prioritise going forward. The report identified 100 specific sustainability initiatives with both an internal and external impact. Some of the

The Norwegian central purchasing body is a key central government agency that will assume a prominent green procurement leader role. The Norwegian central purchasing body enters into joint agreements for around 190 central government agencies, relating to contract areas with common needs and large-scale procurement. As a major market player, the Norwegian central purchasing body will be able to develop the supplier market in the right direction to increase the proportion of green and innovative public procurement. All agreements entered by the central purchasing body have an option to choose environmentally friendly products and services. One example is the travel agreement, which makes it easy to choose train travel instead of air transport. However, the green products and services in the central purchasing body's agreements need to be adopted by each enterprise. The Norwegian Tax Administration and Norad are examples of central government agencies that aim to reduce their travelling. During the Covid 19 pandemic, virtual meetings became much more common. This has shown a potential for reducing travel expenses and greenhouse gas emissions related to travel in many organisations, also in the long term.

initiatives were linked to internal procurement, whereas several of the external initiatives were associated with encouraging the maritime industry to choose green sustainable solutions. Moreover, we provide other government bodies with information to make it easier for them to choose green sustainable solutions through their procurements.

- **Nye Veier** prioritises selected sustainable development goals as part of its corporate social responsibility. These include greenhouse gas emissions, biodiversity and protection of cultivated soil and has set out ambitious climate targets for the organisations' activities. As of 2020, Nye Veier will use Ceequal for all its projects to certify the company's sustainability efforts. Ceequal is a certification tool that sets high requirements for goal achievement.
- **The Norwegian Hospital Procurement Trust** assumes a leading role by engaging actively with the supplier market through market dialogue and contract follow-up in order to phase out and substitute chemicals that are hazardous to human health and the environment, promoting circular and innovative business models for plastics, requesting zero and low emission solutions for transport of patients and implementing measures for a green shift for buildings. The Norwegian Hospital Procurement Trust also makes active use of eco-labels



Photo: Judith Dalsgård/UiB

to safeguard environmental considerations in categories where this is relevant.

- **The Norwegian Defence Estates Agency** contributes to a sustainable society by incorporating considerations for the environment and society in all its procurements. Sustainable procurement is embedded as a requirement in governing documents, routines and procedures. This includes requirements for a circular economy where resources are used prudently, no use of tropical timber, diminished use of resources, reuse and increased recycling of materials, both during development and operation. Furthermore, it includes combating work-related crime and the use of unprofessional suppliers by setting strict procurement requirements. The Norwegian Defence Estates Agency has entered into a new innovative partnership to develop flexible and mobile construction concepts for the future for the defence sector. Compared to more conventional construction solutions, this will reduce greenhouse gas emissions and the use of materials and resources.
- **The Norwegian Defence Logistics Organization Strategic Procurement (FLO SA)** conducts operational procurements for the defence sector. FLO SA aims to become a public sector leader in posing climate and environment requirements in procurement by 2022. We will achieve this by:
 - integrating an environment management system in the organisation's management system,
 - boosting employee expertise on environment and climate requirements in procurements, and
 - contributing to a continuous improvement in the environmental performance of our contractors by setting requirements for products and services.
- Since the environmental strategy came into force in 2019, there has e.g. been a strong focus on having efficient zero emission vehicles available for administrative use through leasing and framework agreements for rental cars; a framework agreement for

consumables emphasised eco-labelled products in the product range; and a new shipping agreement focused on reducing packaging, certified palm oil, animal welfare and minimising food waste at all stages.

- **The Norwegian central purchasing body** assumes a leading role by including environmental concerns in its agreements, preparing a recommended travel policy, providing advice and launching an awareness campaign describing how to purchase green products and services in the agreements, and facilitating procurement of second-hand ICT equipment through exemptions in the agreement for ICT – and a potential future agreement facilitating procurement of second-hand furniture.
- **DFØ** will pioneer greenhouse gas inventories or environmental spending analysis ("Miljøspend")³⁹ in its own enterprise, introducing its own environmental targets and targets for its own procurements. DFØ will e.g. move into a new and environmentally efficient office building in Økern (Breeam rating excellent and energy classification A). DFØ will also help put key central government agencies at the forefront by providing support, guidance and examples and publishing statistics on green and innovative procurement.

3.3. DFØs program for a green competence boost for procurements in Norway, 2021–2030

According to the White paper for smarter procurement, DFØ plays an important expertise-enhancing role, particularly in terms of green procurement expertise.⁴⁰ The government would like DFØ to develop into a national centre of expertise for green and innovative public procurement. Based on this, DFØ will launch a green competence boost for procurements in Norway during the period 2021–2030. The objective of the competence boost is to help public contracting authorities develop and share zero and low emission solutions and promote a circular economy based on guidelines, various criteria and tools. The competence boost will systematically build up expertise in the procurement sector in Norway. The scheme will include targeted training for climate advisors, a DFØ helpdesk ("Sparretelefonen"), webinars on specific topics, networks for sharing experiences and a strategic plan for sustainable procurement certification (SOA) as well as a response team that will cooperate with regional resources. As an important foundation for the competence boost, DFØ's ongoing

work in preparing guidelines and templates will be continued and strengthened. The new DFØ helpline will provide buyers with guidance on how to stipulate environmental requirements for specific procurements, including advice on how the DFØ guidelines and templates can be used for the procurement in question. As part of its efforts, DFØ will help coordinate, establish networks and strengthen local and regional players engaged in sustainability work in counties and municipalities, including Climate Partners.

Continued collaboration with the Norwegian Environment Agency and the Norwegian Association of Local and Regional Authorities (KS) is essential. The Norwegian Environment Agency's expertise and support for local authorities through the provision of tools, competence development and other support schemes, such as the financial support scheme Klimasats, will be crucial for the green competence boost. Throughout the autumn of 2021, DFØ will expand its certification scheme for public procurement (SOA) to include social responsibility. The new certification scheme will make it easier for public contracting authorities to stipulate requirements for and follow up on social responsibility, including climate and environment considerations, in public procurements. The KS Certification Course in public procurement is just one of several contributions that will help enhance general competence related to public procurement in the local government sector. The course will provide instruction in the three phases of the procurement process: preparations, implementation and contract follow-up. The environment and innovation in public procurement are key course topics and lectures will be held on each of these topics. The European Commission is also preparing guidelines directed at public purchasers. DFØ participates in the work of the EU working group on green procurement and actively applies the EU criteria to its own work on establishing criteria for Norwegian contracting authorities.

Strengthening expertise on climate friendly, environmentally friendly and innovative public procurement is a recurrent theme in a majority of the written feedback DFØ received in connection with its work on the action plan.⁴¹ A medium-size municipality with about 50,000 inhabitants has, for example, three buyers and conducted about 160 procurements in 2019. This means there is limited time to study effects on the climate and environment⁴². This key action addresses the barriers to competence and coordination. The competence boost will also enable DFØ to contribute to more efficient procurement and to ensure that expenses are not disproportionate but directed to where they have the most benefit for society and the

³⁹ See explanation of "Miljøspend" (environmental spending analysis) in section 5.2

⁴⁰ White paper No 22 to the Parliament (2018–2019) Smarter purchasing – efficient and professional public procurements, p 89; Oslo Economics and Inventura. Prepared for the Ministry of Trade, Industry and Fisheries (2018) Virkninger av nye samfunnshensyn i offentlige anskaffelser (Impact of new social considerations in public procurements).

⁴¹ Including input from the Norwegian Public Roads Administration, Accounting Norway, Federation of Norwegian Professional Associations, LO Norway, Trøndelag county authority, Asker municipality, the Norwegian Labour and Welfare Administration, the Norwegian Hospital Procurement Trust, Industry Norway, Hamar municipality, the Norwegian waste management association Avfall Norge, Mid-Norway Chamber of Commerce and Industry, Celsa, Circular Norway, Restarters Norway, IKT Norway, the Norwegian Solar Energy Cluster, the Norwegian Wood Industry Federation.

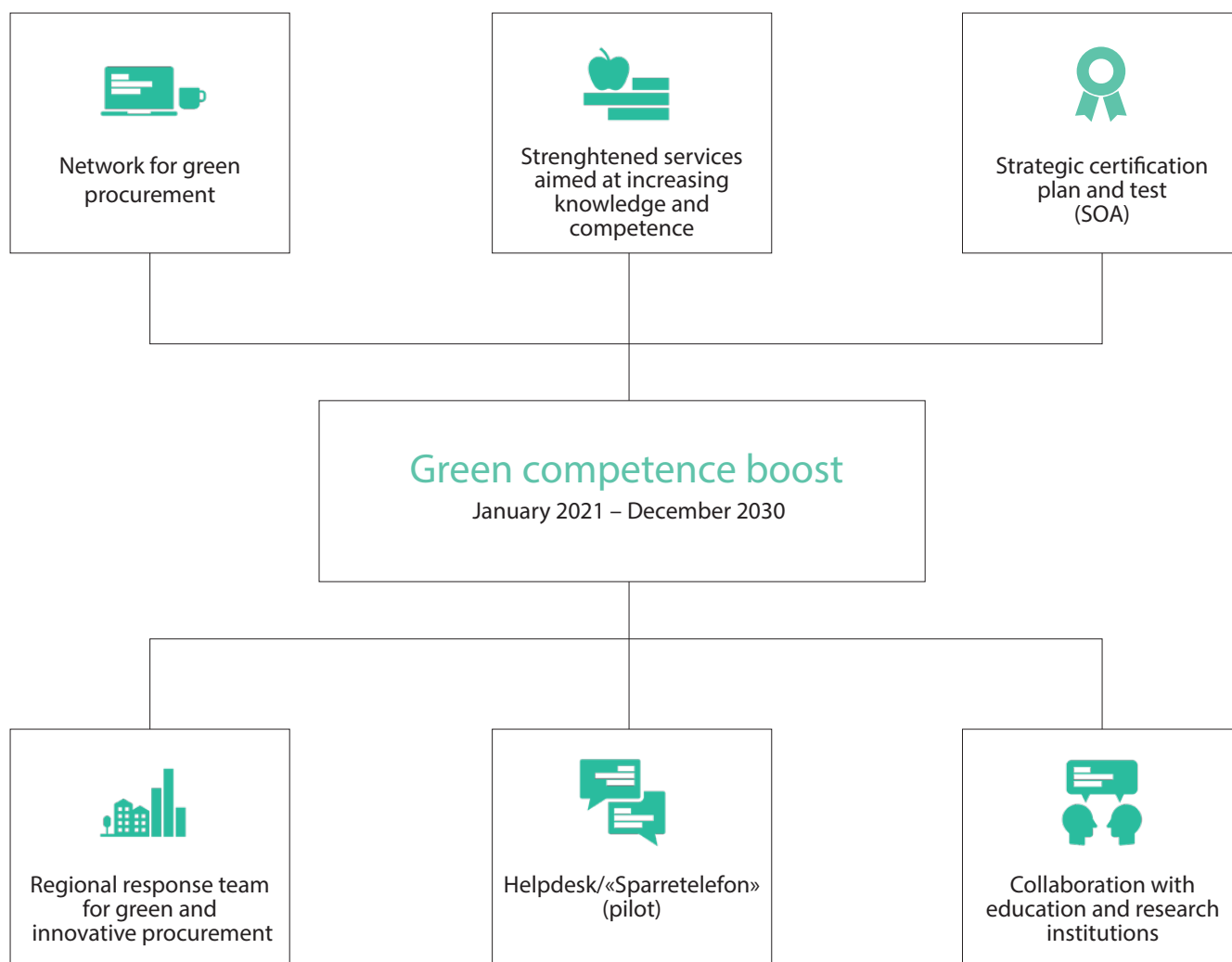
⁴² Based on conversations, meetings and in-depth interviews with 20 buyers in the spring of 2020.

environment. Furthermore, an innovative procurement methodology will also help contracting authorities manage risks associated with the projects. The initiative will help meet climate targets and circular economy objectives, including reducing food waste by 50 per cent by 2030 and support government actions on micro-plastics and marine pollution. The competence boost focus areas are described in the figure below.

Initiatives:

- DFØ will be a driver and centre of expertise for national and international collaboration on green and innovative procurement, function as a link between national market players and take part in collaborative efforts between the Nordic countries, in the EU and OECD.
- DFØ will implement a green competence boost for the 2021-2030 period, in collaboration with the Norwegian Environment Agency, the Norwegian Association of Local Regional Authorities (KS), Climate Partner and local environmental advisors.
- DFØ will update, further develop and communicate guidelines, a set of criteria and examples, tools and a strategic certification plan and test (SOA) which in public procurement will promote zero and low emission solutions and a circular economy and prevent the use of substances that are hazardous to human health and the environment as well as raw materials that pose a deforestation risk.
- KS and the Norwegian Environment Agency offer support to local authorities relating to the environment and procurement, including certification courses, tools and competence-building.

Figure 6: Green competence boost for procurements in Norway, 2021-2030



There are a number of good examples of green and innovative procurement in practice throughout Norway. DFØ is committed to communicate good examples and provide guidance on how to implement green and innovative procurement.

The City of Oslo has incorporated standard climate and environmental requirements for transport in its procurement strategy. The strategy is updated regularly (Municipal Executive City Government proposition 1123/19). As of 1 January 2025, all deliveries/assignments for the City of Oslo where transport is included, must take place using zero emission technology (i.e. battery-electric energy or hydrogen) or biogas technology which, as a minimum, satisfies the 6/VI standard. As of 1 January 2025, all construction, building and property sites in the City of Oslo must be zero emissions sites, and transport of required/excess material must take place without emissions or by using biogas technology. Until 2025, the City will apply award criteria to reward zero emission solutions. The City will

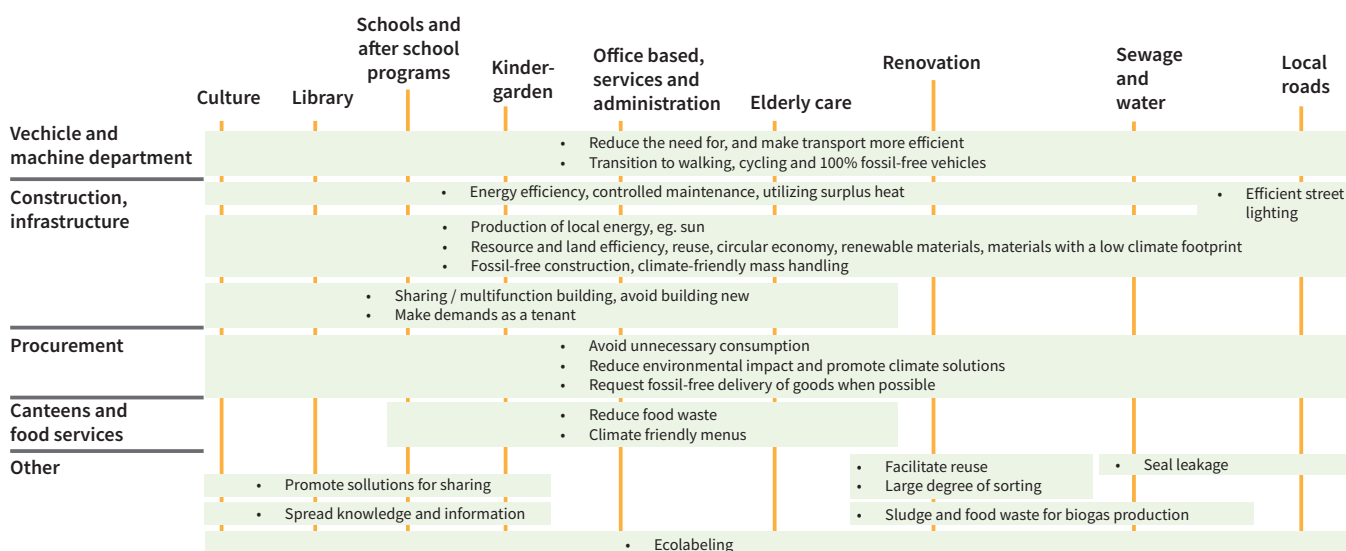
also make requirements mandatory if market surveys show that three or more suppliers are able to deliver such solutions. This will send clear signals to the market that a zero-emission development is preferable.

Hamar municipality cooperates with neighbouring municipalities to coordinate environmental requirements and criteria. The municipality also rewards environmental improvements during the contract period for tenders where suppliers have stated in their market dialogue that they cannot deliver on environmental requirements.

Viken county authority, supported by the Klimasats financial scheme, is working to establish a team of climate advisors who will provide assistance for specific green procurements for all municipalities in Viken county.

Illustration: Klima Østfold, *What can local authorities do for the climate?*

Services:



3.4 DFØ will continue and strengthen management development programs with a focus on green procurement and innovation culture

Contracting authorities that continue to order the same as yesterday, restrict innovation in the public sector and limit the scope for new ideas that may save resources or result in tenders and services that contribute to the green shift and reduced environmental impact. Green and innovative public procurement is a powerful policy instrument which in years to come will be key to realization of the strategic goals of contracting authorities and the green shift in society. Managers should therefore have strategic ownership of procurements in their organisations. Moreover, pursuant to Norwegian procurement regulations and the Norwegian Environmental Information Act, public contracting authorities have a duty to hold environmental information relevant to the enterprise and make it accessible to the public.

Section 8 of the Norwegian Environmental Information Act reads:

Administrative agencies shall hold general environmental information relevant to their areas of responsibility and functions and make this information accessible to the public.

Section 9 reads: Any undertaking shall hold information about factors relating to the undertaking's operations, including factor inputs and products, which may have an appreciable effect on the environment.

Several surveys have identified weak ownership and management as key barriers to making procurement functions more efficient and conducting green and innovative public procurements.⁴³ This key action addresses the need for expertise among managers to enable them to apply governing environment and innovation information as a decision basis for priorities in their own undertakings. Relevant tools may include GHG inventories or environmental spending analyses (see 5.2).

The White paper "A greener, smarter and more innovative industry" emphasises that to be a leader on innovation, it is essential to have a culture that promotes innovation, including the right skills, attitudes and values.⁴⁴ There is no single recipe for how an enterprise can build a culture of innovation. State and local government sector innovation barometers show that managers are the main drivers in implementing innovation.⁴⁵ During its work on this action plan, DFØ will integrate the field of environmentally

friendly and innovative procurement in its current management development programmes, including the senior manager programme. The programme looks at promoting a culture and a change capacity for innovation and environmental considerations. An integral part of this is cooperation and organisation. One approach could be programs for short-term exchange of employees between organisations and introduce mentor schemes.

Public procurement as a strategic instrument

Ruter is a company that has worked with procurement as a strategic policy instrument to achieve its goals and has broad management support for this strategy. *"As a purchaser, we must take responsibility for demanding the technology of the future now, or the future will come too late"*, says Bernt Reitan, CEO of Ruter.

KS Landsting (convention of local and county authorities) (2020) set political priorities for 2020-23, which e.g. outline expectations for local and county authorities to make use of the latitude afforded by public procurement to actively promote innovation, a green shift and a professional and inclusive working life.

Several local and county authorities, including Ålesund municipality, have in recent years largely based its procurement strategy on the UN sustainable development goals. **Ålesund municipality** has decided to make the environment and sustainability perspective a guiding priority for all major initiatives in the new municipality. Requirements for innovation in procurement are also being implemented in contracts for municipal executives and chiefs of staff.



Photo: Ruter

⁴³ Menon Business Economics (2016) Report on incentives/schemes for risk relief for innovative public procurement. Report 12/2016; Rambøll and Difi (2018): Maturity in public procurement Main survey.

⁴⁴ White paper No 22 to the Norwegian parliament (2018-19) Smarter purchasing – efficient and professional public procurements), p 122 <https://www.regjeringen.no/no/tema/klima-og-miljo/forurensning/innsiktsartikler-forurensning/sirkular-okonomi/ber-om-innspill/id2701038/>

⁴⁵ White paper No 30 to the Norwegian parliament (2019-20) An innovative public sector. Culture, management and competence, pp. 47-53

KS has introduced a plan for continuing and professional development (Samplan), community planning courses for staff with planning and development responsibilities in their municipalities, and a Samplan for chief municipal executives. This is a community planning course for senior executives in county and local government. The KS elected officials training programme is offered to all municipalities and county authorities. The programme aims to strengthen the motivation, understanding of roles, and confidence of the elected officials as they handle challenges and create opportunities. The target group is the elected officials in the municipal and county authorities and the district councils in Oslo, as well as the chief municipal executive and his/her leader team. The pilot project "Ledergalopp" is a tailored programme for municipal senior executives concerning change management within innovation and digitalisation. The aim of the project is to support the chief municipal executive and the leader team in their efforts to manage and strengthen innovative power and to take active leadership of the digital transformation in their local governments.

Initiatives:

- Incorporate the green competence boost for managers in existing DFØ management development initiatives that connect public procurement with strategic environment and innovation objectives, including initiatives for senior management, training and mentor schemes.
- Incorporate the green competence boost for environmentally friendly and innovative procurement in relevant KS programmes, including continuing professional development in Samplan, training for elected officials and Ledergalopp.

3.5. DFØ will continue to improve access to statistics and data on green and innovative public procurement

The White paper for smarter procurement showed a need for improved access to statistics and data on public procurement, and that the government consequently will ensure improved retrieval and access to data from the Doffin database that can be used to prepare statistics for public procurement. A prerequisite for advancing the knowledge on public procurement is to have access to procurement data for state and local authorities at both category and product level. To be able to collate data for analysing the impact of green and innovative procurement, access to several types of data is necessary, including tender documentation and the content of invoices, as well as accounting data, vehicle data and data on environmental impact.

Furthermore, it is essential that state, county and local authorities and decision-makers work according to the same indicators. At present, there are no agreed or recommended sets of indicators for undertakings and decision-makers to make use of. DFØ will develop indicators for green and innovative procurement, including indicators for developing and implementing new zero and low emission solutions. The indicators will also be based on European and international indicator developments. It is desirable to measure both the dissemination and new developments of green solutions. DFØ is one of the expert bodies responsible for reporting on the UN's sustainable development targets. DFØ will report on SDG target 12.7 "Promote public procurement practices that are sustainable, in accordance with national policies and priorities".⁴⁶ Reporting on 12.7.1 entails coordinating national and municipal reporting relating to sustainable public procurement, including green and innovative procurement.

In line with the White paper for smarter procurement, DFØ and other agencies are working to develop and make available tools to identify the impact and costs of establishing environmental requirements for public procurement. Several local authorities and central government agencies have developed tools that can also be useful for others. These tools should be made available to all contracting authorities. DFØ realises that it can be challenging for most contracting authorities to initiate such work independently, and that this may result in solutions that provide non-comparable data. Consequently, it is important that DFØ help collect, coordinate, develop and make available templates, guidelines, tools and data sets for analysing the negative impact of procurement on the climate and environment. DFØ will continue to develop tools, including impact calculators, that will make contracting authorities' efforts on climate friendly, environmentally friendly and innovative procurement easier. DFØ has developed an impact calculator for private cars⁴⁷ and a fuel matrix for heavy vehicles.⁴⁸ In collaboration with Asplan Viak, DFØ has also developed a similar calculator for buildings which will enable the contracting authority to estimate the impact of environmental requirements relating to e.g. the use of materials in newbuilds. Moreover, DFØ is planning to develop a calculator for food procurement, which the contracting authority can use to, for instance, estimate the climate benefit of reduced meat consumption. In the long term, DFØ also aims to develop tools to calculate and credit reduced indirect greenhouse gas emissions in addition to direct emissions. This will help to make the impact of stricter environmental requirements more visible and thus contribute to a more circular economy. It can also be used to distinguish between emissions that are directly relevant for the national GHG inventory, and emissions taking place outside Norway.

⁴⁶ The DFØ public procurement division has been assigned as the official focal point for SDG 12.7 format reporting.

⁴⁷ Impact calculator for private cars | Anskaffelser.no

⁴⁸ Fuel matrix for heavy vehicles - for revision | Anskaffelser.no

To make available information that has been collected about public procurement in general, and green and innovative procurement in particular, it has been proposed that DFØ should establish a web portal with data, statistics and analyses related to this. Where possible, data will also be made available in the national data catalogue Data.norge.no. Initially, indicators and tools should be developed for the priority categories construction, transport and food. However, the number of procurement categories will be expanded as new knowledge, technological developments, political signals etc. emerge.



Photo: klimaoslo.no

Work is ongoing to increase the proportion of green and innovative public procurement internationally, both in individual countries and international institutions. Several countries have made great steps forward both in terms of regulations, implementation and measuring of green and innovative public procurement. The EU was an early adopter of a voluntary target of at least 50 per cent public procurement with associated environmental requirements or criteria. A number of EU countries have set their own targets for green procurement at a state/federal level, including Poland (25 per cent), Denmark, Lithuania, Croatia (50 per cent) and the Netherlands (100 per cent). Most EU countries envisage a voluntary implementation of green public procurement. However some countries, such as Austria, Great Britain, the Netherlands and France, have introduced mandatory green public procurement for central governments. In France, this only applies to certain product groups.⁴⁹ Denmark is also considering introducing mandatory requirements or quality criteria for some product groups. Discussions are ongoing in the EU on

whether to introduce mandatory minimum criteria for green public procurement for some product groups. These are likely to form the basis for member countries' and Norway's Green Deal reporting. DFØ is paying close attention to these developments and is a participant in the EU working group on green procurement.

Initiatives:

- DFØ is continuing to develop its role as an acquirer of knowledge and disseminator of key figures for measuring and analysing developments within climate friendly, environmentally friendly procurement and green innovation, including reporting on the UN target 12.7.1.
- In line with the section "The government wants" in the White paper for smarter procurement,⁵⁰ the DFØ will develop and make available tools to identify costs and effects of climate friendly and environmentally friendly public procurement and green innovation, including life-cycle assessments and piloting of GHG inventories or environmental spending analyses.⁵¹
- Increased digitalisation of procurements, sharing and making data from DFØ available⁵² as well as preparation of statistics in collaboration between DFØ and other public market players, such as Statistics Norway, the Norwegian Environment Agency and the Norwegian Public Roads Administration, as a basis for better statistics, particularly for procurement and a circular economy.

49 200311_GPP_NAPs_March_2020.pdf (europa.eu) and <https://www.climateworks.org/wp-content/uploads/2019/09/Green-Public-Procurement-Final-28Aug2019.pdf>

50 White paper No 22 to the Parliament (2018-2019): "Smartere innkjøp – effektive og profesjonelle offentlige anskaffelser" (Smarter purchasing – efficient and professional public procurements), p. 89.

51 As part of the work on further developing reporting on how the national budget impacts greenhouse gas emissions in each section, pursuant to the Norwegian Climate Change Act, cf. the OECD recommendation and the section "The government wants" in White paper No 22 to the Norwegian Parliament, p 84.

52 See also chapter 3.9

In the spring of 2021, **the City of Oslo's Climate Agency and Hamar and Trondheim municipalities**, will finish their work on a guideline that will help other municipalities prepare their own GHG inventories. The project has received support from Klimasats to prepare a national guideline. Several Norwegian municipalities have prepared GHG inventories as climate policy management tools. The inventories show how much greenhouse gas emissions must be cut year by year to meet the municipality's climate targets. The guideline, which is being prepared by the City of Oslo and Hamar and Trondheim municipalities, mainly covers direct emissions within local government borders, as this is where there is currently most available information. The guidelines are available on ks.no/klimabudsnett

Public procurement makes up a significant share of the local governments' financial budgets. Thus, it is important to link public procurement to overall climate and environment targets.

The National Agency for Public Procurement in Sweden has prepared and issued a guideline on how to apply an Environmental Spend Analysis (ESA) ("Miljöspend"). A spending analysis is a tool that can be used to improve and develop an organisation's strategic procurement work. The method enables preparation of overall analyses of purchased volumes as well as analyses of specific categories. An ESA integrates environmental impact into a regular spending analysis. Environmental impact information in an ESA may e.g. come from LCA databases and be expressed as environmental impact per NOK.

DFØ aims to prepare a guideline similar to the one prepared by the Swedish National Agency for Public Procurement, with central government agencies as its target group. Furthermore, DFØ will cooperate with the City of Oslo and KS to ensure that the City of Oslo's guideline is made available to all municipalities in Norway.

Source: oslo.kommune.no og opphandlingsmyndigheten.no

3.6. DFØ and LUP develops their role to facilitate increased collaboration between contracting authorities - to develop and adopt environmental technology and circular economy solutions

A lack of coordination and harmonisation has been identified as a barrier to dissemination of innovative procurement.⁵³ Although new zero emission solutions have been developed through innovative procurement, the solution developed will not necessarily be adopted by others. This means that there is a need for initiatives to increase dissemination of new environmental technology. Increased standardisation of requirements and criteria, e.g. through the use of the Criteria Wizard for Sustainable Public Procurement, and enhanced public procurement coordination, may provide consistent signals to suppliers. Increased visibility and availability of recently developed solutions may also contribute to increased dissemination. This may, for instance, take place in a digital market linked to Doffin. It will also be necessary to develop and increase expertise in supplier companies and cooperate with the supplier industry.

A sound understanding of the market and an efficient supplier market dialogue are key to establishing targeted requirements. When public sector agencies unite and enter into dialogue with market players, it may also reduce the cost of new green solutions. Moreover, a greater market potential often encourages suppliers to make their own investments. This is particularly important for fields still considered frontier markets, e.g. zero emission construction sites and high-speed vessels as well as new circular economy solutions. Green procurement can, for the private and public sector alike, be considered an investment in a technology, a market and knowledge that may have cost-effective environmental impact⁵⁴ in the longer term. Skift, Business Climate Leaders, recently launched the website gronneinnkjop.no presenting their "10 principles for green purchasing" for enterprise purchases. Their recommendations include using established standards and systems, such as the DFØ criteria. If a supplier is met by the same ambitious environmental requirements from public as well as private purchasers, it may create more predictability for the market.

The National Suppliers Development Program (LUP) plays a key role in connecting service providers with suppliers. The Supplier Development Program aims to spread new solutions by bringing together contracting authorities with similar needs. This will enable them to challenge the market in the same way as public building owners Omsorgsbygg, Undervisningsbygg (a municipal undertaking for educational buildings and property), Statsbygg

⁵³ Menon (2016) Incentives/schemes for risk relief for innovative public procurement. Report 12/2016

⁵⁴ Oslo Economics, CICERO and Inventura. Prepared for Difi and the Norwegian Environment Agency (2017) *Gevinstanalyser av grønne anskaffelser*, (Benefit analysis of green procurement), p.11.

and others did when they sought to challenge the market to develop zero emission construction sites. Another approach has been for contracting authorities to follow an innovative procurement process, without taking an active part in the dialogue or development. This was done when Trøndelag county authority commissioned "Fremtidens hurtigbåt" (express boat of the future), challenging the market to develop zero emission express boats that were not available on the market at the time

In 2017, Trøndelag county authority launched a project for developing an **express boat for the future**. At that time, no one knew of zero emission technology tested on high-speed vessels that could travel long distances at a minimum speed of 30 knots. A total of 10 county authorities from Finnmark in the north to Rogaland in the south, joined the project as partners. In January 2018, a supplier conference was held with assistance from the National Programme for Supplier Development. The procurement was conducted as a pre-commercial procurement. Five consortia took part and received funding of NOK 1.5 million each for development. The objective was to launch the world's first zero emission express vessel in the early 2020s. As project follow-up, Trøndelag, as well as Vestland, Nordland and Troms and Finnmark county authorities, received funding in 2020 to realise their "ready-to-build" designs. The aim is to build more pilot vessels that can enter regular service. Klimasats has provided funding for both these projects, as well as for other green express boat projects throughout Norway.



Photo: Teknisk Ukeblad

In collaboration with DFØ and other relevant market players, the Supplier Development Program can be expanded to not just cover innovative procurement of brand-new technology, but also to encourage contracting authorities to come together to promote existing technology that should be used more widely. This would mean that the Supplier Development Program would help scale up and disseminate such technology. Having engaged in dialogue with the municipalities, DFØ has found that there is a lot of uncertainty as to how new solutions can be procured, whether such solutions can be delivered throughout the country and whether they will be much more expensive than conventional solutions. One example is zero emission construction machinery. This may require innovative thinking. Such solutions could, for instance, be purchased by one undertaking and subsequently shared with others. If the various market players come together and receive active assistance from the Supplier Development Program, it could reduce green procurement transaction costs. Extensive interaction between the Supplier Development Program and the professional expertise in DFØ is essential for green procurement. The Supplier Development Program will also be able to help disseminate new technology by organising supplier conferences where suppliers will be able to present their new environment technologies and encourage the trade associations to train new suppliers in the field.

Nordic market dialogue on zero emission delivery of goods

In collaboration with the Supplier Development Program, DFØ is heading a Nordic market dialogue project on zero emission delivery of goods. The project was launched in the autumn of 2019 and will be concluded in 2021. Four Norwegian municipalities and the Government Procurement Centre participate in the project, together with municipalities from Sweden, Denmark and Finland. Bringing together buyers with similar needs and then together challenging the market, is an efficient method for creating a larger market for newly developed solutions. The project aims to provide the Nordic cities with knowledge on how they in future, too, can collaborate with other contracting authorities to challenge the market together. The project also seeks to achieve procurement of new green solutions and to strengthen competitiveness in Nordic business and industry.

DFØ participates actively in international initiatives launched by the Nordic Council of Ministers and the EU/EEA. Several local authorities also participate independently in European collaborative initiatives to promote green solutions. Two examples are the City of Oslo's participation in the EU's Big Buyers Initiative, which promotes e.g. zero emission construction sites, and Gjesdal municipality's involvement in a pre-commercial procurement process during Horizon 2020.

Initiatives:

- The Supplier Development Program will step up its efforts:
 - to bring together municipalities with similar needs for procurement of environmental technology where there is a need to disseminate solutions or mobilise to challenge the market together.
 - to organise supplier conferences to present new green solutions to contracting authorities.
- The Supplier Development Program will continue its role in projects headed by DFØ under the Nordic Council of Ministers with the pilot the Nordic market dialogue on zero emission delivery of goods, in other fields.
- DFØ will help quality-assure, support and disseminate knowledge about the work of the various market players who contribute to the dissemination and new development of green solutions, including LUP, central government agencies, county authorities and municipalities, Climate Partners (trade organisations and suppliers).
- Together with other relevant market players, DFØ will consider various alternatives for how to establish a digital marketplace for green solutions for reuse and new environmental technology within e.g. ICT/electrical and electronic products, construction, building and property and/or furniture – on the same platform as the marketplace for cloud services and a new Doffin.

Eco-labelled playground equipment

Bergen municipality is one of several purchasers who announced to market players that they wanted to procure eco-labelled playground equipment in the future. This has contributed to an innovative project between the Norwegian playground manufacturer Søve and Norsk Hydro. They manufacture eco-labelled equipment for playgrounds and parks. The products contain 100 per cent recycled aluminium, and a large proportion of recycled steel. Recycling metal is less energy-intensive than producing new metal and contributes to a circular economy.



Photo: Kjersti Moxness, the Norwegian Environment Agency and Harald Aas, the Supplier Development Program



Photo: Ecolabelling Norway

3.7. Program to include green technology start-ups in the procurement process

The climate and environment supplier market is developing and new market players are rapidly emerging, who in some cases may transform entire industries.⁵⁵ Digital solutions facilitate new zero and low emission solutions and a more circular economy through e.g. the use of apps that make it possible to share city bicycles and scooters, as well as digital tools for reusing furniture and building materials. Start-ups have played a key role in the development of such tools, and in the technology for driverless buses and ferries, sustainability mapping and smart buildings. Several big companies and public enterprises, such as Atea and Ruter, have found that cooperation with start-ups is essential to be at the forefront of innovation in their fields. Ruter has, for instance, used development contracts to establish solutions for driverless buses in collaboration with start-ups. OECD has recommended initiatives that will contribute to ensuring that small and medium size businesses participate in procurement processes.⁵⁶

Figure 7 shows that the number of start-ups that were established in Norway increased in the period 2000 to 2016. However, the figure shows that the number fell from 2016 to 2019. This can largely be attributed to a decline in and lower activity level in the oil industry from 2015. The decline was greatest in regions dependent on traditional industrial activities, including Rogaland, Møre og Romsdal and Trøndelag counties. During the same period, there was an increase in the number of start-ups in regions with more diverse business activities including Oslo, Vestland, Viken and Agder. It should, however, be factored in that data may be incomplete for 2018 and 2019, as it takes time from a company is registered until it is classified as a start-up.⁵⁷ Asker municipality's reuse project for furniture is one example of public authorities cooperating with start-ups to establish new green solutions (see 4.6.2.).

Strict supplier requirements, highly detailed solution specifications and a long procurement period make it difficult to purchase solutions from start-ups and social contractors. Buying solutions from start-up companies may be associated with increased risk, e.g. related to whether such companies have the necessary implementation capacity to supply the solution. Procuring solutions from such companies consequently requires closer supplier follow-up and efficient risk management. Many contracting authorities lack information about what start-ups and social contractors can offer, how they work and what is required to include them in procurement processes. Consequently, it is necessary to increase competence on this type of companies in the public sector.

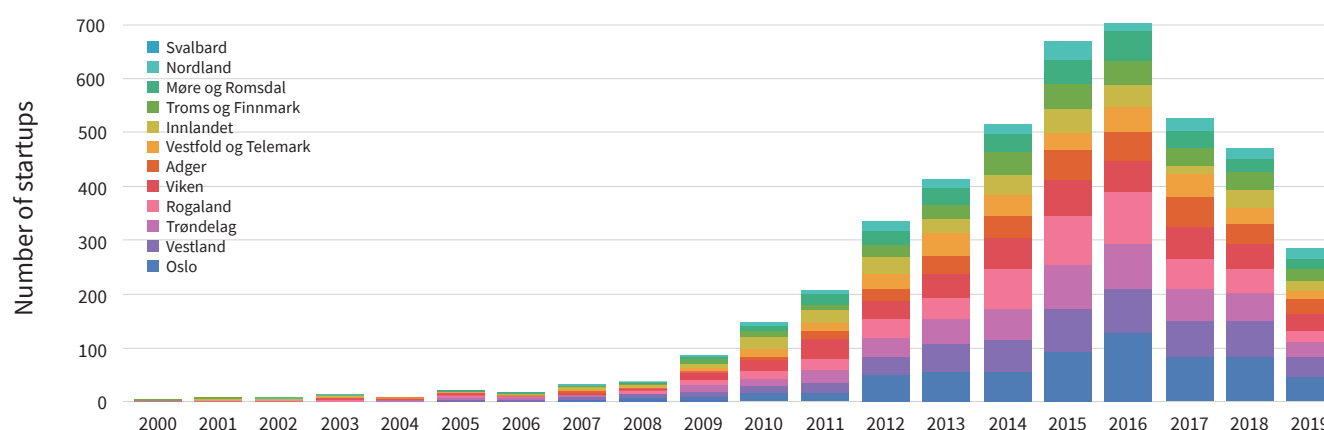
The Norwegian government has responded by initiating a programme called StartOff which will help the public sector make better use of the opportunities that start-ups can offer. The programme was launched on 1 January 2021 and is run by DFØ in cooperation with the Norwegian Digitalisation Agency and the Supplier Development Program. To help accelerate green and innovative procurement, the government will expand StartOff's mandate to include environmental technology as a priority area. The organisation and development of the programme must be seen in connection with other policy instruments for innovative procurement. The initiative will help promote green industrial and commercial development, competitiveness and green jobs. Thus, it will also contribute to meeting climate and environment objectives.

Initiatives:

- Expand StartOff's mandate to include measures for increased interaction between the public sector and start-ups within environmental technology, including launching two pilot environmental technology programmes during 2021.

Figure 7 shows the increase in the number of start-ups established in Norway year by year, for the period 2000-2018.

Source: Kartlegging av økosystemet for oppstartselskaper i Norge, mars 2020, Startup Norway (Mapping the ecosystem of start-ups in Norway, March 2020, Startup Norway)



⁵⁵ Examples of such disruptive transformation are apparent within IT and digitalisation which have caused market changes in a number of traditional industries, such as the newspaper industry, book publishing, music industry and conventional shops.

⁵⁶ OECD (2020) Sustainable Public Procurement in Norway. Testing the MAPS Module on Sustainable Public Procurement (SPP).

⁵⁷ Cf. Startup Norway.

3.8. Collaboration between DFØ and research and innovation communities in the field of climate friendly, environmentally friendly and innovative public procurement

The Norwegian government encourages increased collaboration between the public sector and research institutions.⁵⁸ There is a need to further develop the competence and knowledge base related to public procurement in general and green and innovative public procurement in particular. The OECD review of sustainable procurement in Norway⁵⁹ recommends that sustainable public procurement be included in training programmes for managers and purchasers, as well as in academia in general.

The sector principle for research in Norway means that each government ministry is responsible for research within their own areas of responsibility. The research required in society, including green and innovative public procurement, often cuts across conventional sector divisions.

«Missions», introduced by the EU as part of Horizon Europe - the Commission's next framework programme for research and innovation, enables an extensive cross-section approach to challenges. The programme aims to facilitate Mission-oriented funding of innovative initiatives. A Mission approach entails that a superior authority identifies a social mission which many sectors need to cooperate on to deliver. Horizon Europe work programmes use innovative procurement to achieve this.

Grønn plattform (Green Platform Initiative) is a new government initiative for a coordinated, reinforced and targeted approach to the green transition. The Green Platform Initiative is a dedicated entry to public funding agencies for green projects and a common competition arena for green projects in Innovation Norway, the Research Council of Norway and Siva. The collaboration also includes Enova. The platform is based on existing schemes with well-defined funding criteria. Examples of relevant programmes are Innovation Norway's Environmental Technology Scheme, Norwegian Innovation Clusters and Innovation Contracts, the Research Council of Norway's innovation projects for the industrial sector and Siva's Catapult Programme. Participants can apply for funding for green research and innovation projects, from fundamental research to solutions ready to be marketed. The platform target group is business and industry and institutions. NOK 1 billion has been allocated for the scheme. In addition, NOK 125 million was allocated to Green Platform in the 2021 revised national budget, of which NOK 25 million has been set aside for circular economy projects. It will be relevant to look at how Green Platform can be used for green and innovative public procurement projects.



Photo: Innovation Norway

DFØ has entered into a number of collaborative partnerships with research institutions on green public procurement. In addition to the Procurement Academy and certification in the pipeline for green procurement, DFØ has established cooperation with the UN Centre for Sustainable Urban Development in Trondheim; Cicero on tools that prevent food waste; Oslo Met, Kristiania University College on impact measuring methods and the Norwegian University of Science and Technology's (NTNU) Centre on Sport Facilities and Technology on more environmentally friendly artificial turf fields. DFØ also contributes by teaching and guiding students from various academic disciplines. Moreover, DFØ will cooperate with innovation communities and green business clusters on zero and low emission solutions and a circular economy.

Initiatives:

- The Research Council of Norway's innovative procurement schemes, including pre-commercial procurement, contribute to green innovation.
- Innovation Norway's innovative procurement schemes, including Innovation Partnership, contribute to green innovation.
- DFØ collaborates with the research and education sector, including competence enhancement initiatives and proposals for master's degrees for the university and university college sector, including the board of the Procurement Academy.
- DFØ takes an active part in relevant research collaboration partnerships relating to green and innovative public procurement.
- Norway's participation in EU innovative procurement programmes through Horizon Europe will contribute to green innovation in Norway.

⁵⁸ White paper No 30 to the Norwegian Parliament (2019-20) An innovative public sector. Culture, management and competence, p. 92.

⁵⁹ OECD MAPS (2020): Sustainable Public Procurement in Norway. Testing the MAPS Module on Sustainable Public Procurement (SPP).

In 2020, **Trøndelag county authority** received funding from **Innovation Norway's innovation partnership scheme and Klimasats** to develop a digital platform for reusing construction materials. Production of construction materials is a major source of greenhouse gas emissions and resource consumption, as well as waste. There is a major potential for increased reuse and recycling of construction materials. Currently, there is a great deal of interest in a circular economy in the construction industry. However, only a little of this potential is realised due to a limited overview of materials, regulatory matters and a poor connection between supply and demand. Trøndelag county authority aims to help establish a digital marketplace incorporating considerations relating to documentation and quality. Trondheim municipality, NTNU Property, Undervisningsbygg and Omsorgsbygg are therefore also partners in the project.

3.9. DFØ is in charge of testing measures for improved follow-up and compliance within green and innovative procurement

To ensure that public procurement is an effective environmental policy instrument⁶⁰ and that the requirements in the Act and Regulations relating to public procurement are met, regular follow-up will be required at several levels to support the above-mentioned key actions. It may, for instance, be necessary to check whether contracting authorities comply with procurement regulations or whether a supplier complies with the contractual terms and conditions. The Offices of the Auditor General and the City Auditor are among those that can audit contracting authorities' compliance with regulations and their own environmental goals. The Office of the City Auditor will, e.g. assess whether local authorities have implemented routines and measures for ensuring that the environmental requirements in their own climate and environment plans are applied to procurements.



Photo: Gjesdal municipality

Gjesdal municipality received funding of NOK 11.4 million to develop driverless buses as part of the FABULOS project (2018-2020) under Horizon 2020. Together with six other European collaboration partners, the municipality conducted a pre-commercial procurement of driverless buses, including purchasing, demonstration, and integration into the public transport system. The project partners acquired valuable knowledge on how these types of vehicles can be integrated into the public transport system, and this is expected to result in better services and lower local government costs.

In connection with the White paper for smarter procurement, it was pointed out that several supplier representatives have argued that "insufficient knowledge about the rules and regulations combined with the lack of a regulatory authority means that there is insufficient control of regulatory compliance (...). In their input to the White paper, they have consequently proposed that a public authority be established to ensure compliance with procurement regulations. Such a supervisory responsibility may, e.g. be assigned to the Norwegian Competition Authority." The government does not believe this is the way forward. They consider the current procurement supervision to be efficient, and that there is no need to establish new supervisory authorities. However, in its review of sustainable public procurement, the OECD (2020) points to the need to strengthen contract follow-up as well as the control and audit of regulatory compliance.

Contract follow-up: The OECD has identified a need to strengthen contract follow-up associated with sustainability and the environment and points out that contract follow-up related to sustainable procurement is only partly covered in laws and regulations. As regards the contracting authorities' follow-up of whether the current environmental requirements are being met,⁶¹ the 2018 Maturity Survey indicates that few contracting authorities actually follow up their suppliers and engage in active contract follow-up. Only 26 per cent of the contracting authorities state that they have sufficient time and resources to sufficiently follow up their contracts and suppliers. To achieve more systematic follow up, it will be necessary to improve the contracting authorities' expertise. DFØ will prepare a guideline and conduct pilots for a separate contract follow-up function related to the environmental requirements posed for public procurement.

⁶⁰ White paper No 22 to the Norwegian Parliament (2018-2019): Smarter purchasing – efficient and professional public procurements), p 77.

⁶¹ Rambøll and Difi (2018): Maturity in public procurement Main survey.

A fully digitalised procurement process will provide a foundation for improved follow-up of procurement in general and for priority areas such as innovation and the environment in particular. For example, better access to information about consumer trends, combined with other data sources on factors that impact demand, can form a better basis for needs assessments. The tender documentation and information on Doffin describe what environmental requirements are in place and how innovation is facilitated. When tenders are increasingly presented as structured data instead of free text, the evaluation is made easier and contracting authorities have access to centrally developed and tested evaluation models. If users enter into framework agreements where they can choose between products, they can be encouraged to select the products with the best environmental profile and the lowest life cycle costs. To achieve the desired effect, it is also important to provide guidelines on the use of framework agreements in general. Overviews of orders and what is in fact delivered and invoiced, will provide contracting authorities with a complete overview of consumption and reveal any tender deviations. All agreements are followed up in contract administration tools and contact registers on the new Doffin. This provides contracting authorities with an overview of their own agreements and how these are applied, and provides the public with better insight into the quality of each contracting authority's procurement practice with regard to the environment, innovation and other factors.

As already mentioned, the Norwegian central purchasing body includes environmental considerations in its agreements and contracts. In the further work, in which the Norwegian central purchasing body will play a key role in demonstrating a leading practice, data will be published relating to follow up of environmental requirements in the contracts. This will be a part of the work to increase visibility of the efforts to promote green and innovative public procurement.

Regulatory implementation and compliance OECD (2020) points to lack of implementation and compliance with the regulations for sustainable public procurement. According to the OECD, there is a need for improvement in the form of control and revision systems that comprise sustainable public procurement. The Office of the Auditor General has started looking into how the authorities conduct their procurements in order to reduce their harmful environmental impact and promote climate friendly solutions. We also know that it can be challenging for buyers to keep abreast of current regulatory requirements for e.g. transport or environmental toxins.

To contribute to better regulatory implementation and compliance, DFØ will pilot a guidance function in Doffin for some transport procurements. This is described in *Kunnskapsgrunnlag om nullutslipp i leveranser til det offentlige (2020) (technical report for zero emissions in deliveries to the public sector (2020))*. Buyers often have limited time and expertise to engage in green and innovative procurement. Keeping an overview of all current environmental provisions laid down in special acts and regulations and for all their various procurements, is in itself a challenge for buyers. Furthermore, not all buyers have the time or capacity to make use of guidelines and criteria wizards to establish accurate requirements and criteria. In this connection, it should also be taken into account that several EU countries have introduced mandatory requirements for certain categories, and that the EU Commission considers introducing mandatory requirement for some categories at EU level. The intention is therefore to link the guidance function to relevant regulations, recommended national minimum requirements and/or guidelines for these selected transport categories. Furthermore, DFØ will establish a database of the most ambitious environmental requirements related to transport, buildings and food for inspiration and reuse. The database will be updated regularly.

Several reports, including Nullutslippsutredningen (2020) (zero emission report),⁶² Deloitte (2020)⁶³ and Inventura (2020) have shown that there are still significant barriers to a circular economy, as well as to zero and low emission solutions. Going forward, DFØ will consequently look into opportunities that arise in the transition to zero and low emission solutions and more circular procurements. In that connection, it will be natural to address legal issues and technical issues related to procurement. In the autumn of 2020, DFØ initiated a project to look at the potential for product resale in the state and municipalities. In the first revision of the action plan, it will be natural to look at statistics on trends in the proportion of climate friendly and environmentally friendly procurement and green innovation and then consider whether there is a need for regulatory revisions or other measures to ensure compliance and follow-up of the regulations.

62 The Norwegian Environment Agency and the Norwegian Digitalisation Agency (2020): Nullutslippstransport i leveranser til det offentlige. Kunnskapsgrunnlag (Zero emission transport in deliveries to the public sector. Knowledge base) pp. 24-25.

63 Deloitte (2020) commissioned by the Ministry of Climate and the Environment, Kunnskapsgrunnlag for nasjonal strategi for sirkulær økonomi. Oppsummerende rapport (Knowledge base for a national strategy for a circular economy. Summary report)

Initiatives:

- The Norwegian central purchasing body and other key central government agencies publish results from contract follow-up for green and innovative procurement.
- DFØ includes giving access to improved environment and innovation data in public procurement as an objective in its efforts to fully digitalise public procurement by the end of 2024. As part of this effort, DFØ will test a guidance function in Doffin combined with other relevant channels. This function will provide information about relevant regulations, recommendations on minimum requirements and/or guidance on how to make zero emission requirements for deliveries to the public sector.
- DFØ will establish a database with good examples of tenders from agencies that spearhead ambitious climate and environmental requirements e.g. within transport, buildings and food for inspiration and reuse, which will be updated regularly.
- Together with other responsible authorities, DFØ will assess any legal issues that arise during the transition to procurement of new climate friendly solutions and a more circular economy.

3.10. DFØ develops its role as a catalyst and guide to end users regarding available financial support schemes to help cover additional costs, risk mitigation and capacity building

Climate and environment requirements imposed by the public sector may drive up supplier costs associated with investment or operation. This applies in particular to areas where the technology is not yet mature, and the requested solutions need to be developed. Without financial support schemes in place, e.g. direct funding of suppliers or contracting authorities, excess costs may create obstacles to tender submissions, drive up costs to such an extent that the competitive bidding is cancelled, or result in, for instance, fossil solutions being chosen instead of zero or low emission solutions.

With regard to climate requirements relating to procurement, funding from Enova and the Norwegian Environment Agency's Klimasats scheme are currently relevant options for covering excess costs. This applies in particular to excess costs related to zero emission transport. Enova has introduced support schemes directed at both the private and the public sector, whereas the Klimasats scheme only offers funding to municipalities and county authorities. Innovation Norway has a support scheme offering NOK 100 million per year for "Innovation Partnerships", awarded to 5-8 public-private collaboration projects. Funding from this scheme is mainly meant to cover the costs of an innovative procurement process where new solutions are developed.

Some regulatory opportunities have been identified that could pave the way for allocation of direct funding to cover excess costs from investing in zero emission vehicles in connection with public procurement. These opportunities and challenges are discussed in the report "Nullutslippstransport i leveranser til det offentlige. Kunnskapsgrunnlag" (Zero emission transport in public sector deliveries. Knowledge base) (DFØ and the Norwegian Environment Agency). Other economic instruments than direct funding may also be considered in order to cover any excess costs of phasing in new zero emission technology. An increase in the county revenue framework seems e.g. to be a more predictable solution than seeking to achieve direct funding for each project. Pursuant to the Norwegian Climate Report, the government will compensate the municipal sector for any excess costs they incur as a result of the new requirements relating to zero emission solutions for public procurement of cars and light vans from 2022 and for city buses from 2025, provided this can be covered by the budget.

Klimasats is a financial support scheme for local and county authorities that aim to cut greenhouse gas emissions and contribute to the transition to a low emission society. The scheme is run by the Norwegian Environment Agency. During the period 2016 to 2021, Klimasats received more than 2500 applications for a total of NOK 2.47 billion for municipal and county authority climate projects. The scheme has provided funding for about 1500 projects and allocated about NOK 1.13 billion. A great proportion of the 1500 projects are related to green procurement, such as procurement of electric transport for local authority operation, zero emission construction sites, zero emission machinery not comprised by Enova schemes, low emission operation of roads, zero emission public transport services, reduced food waste in municipal catering, green local authority buildings, etc. 53 projects have received funding for their systematic work on the formulation of efficient requirements for green local authority procurements. In total, two of three Norwegian municipalities have received funding from the scheme, in different parts of Norway and in all counties. As of 2021, Longyearbyen Community Council in Svalbard is also eligible to apply for funding.

A follow-up evaluation, conducted by Menon Economics 2017-2019, shows that Klimasats has a high trigger effect of approximately 70 per cent. This means that Klimasats contributes to climate actions that would not have taken place otherwise. Project implementation is also high; between 87 and 92 per cent of recipients implement their projects as planned. For about half of the projects, the action has resulted in the local authorities introducing further climate actions. Feedback from local authorities shows that they find the scheme useful, flexible (funding for many different types of projects) and easy to handle for applicants (apply/report). An impact assessment conducted by Civitas et al. (2020) assessed the climate impact of participating projects in the long and short term. The follow-up evaluation and the impact assessment show that Klimasats contributes

directly to GHG cuts and helps promote the use of green technology, such as electric company cars, zero emission construction machinery and climate friendly materials for local authority buildings.

Since the scheme's inception, the amount of funding and number of applications have increased significantly. In 2020, municipalities in Norway applied for funding of more than NOK 660 million. In 2021, NOK 100 million has been allocated to the scheme. The Norwegian Environment Agency has found that the level of ambition in the applications has increased over time and that the local authorities increasingly cooperate with other market players on climate actions, e.g. business and industry, other municipalities and residents. The scheme is now even more specifically directed at climate considerations in procurement, e.g. by having several application deadlines throughout the year, as requested by local authorities. Several application deadlines throughout the year means that local authorities that make a procurement during the year, can apply for funding near the time of the procurement, instead of waiting until the annual application date, which in many cases is too late for the procurement in question. Furthermore, the announcement and requirements relating to funding for excess costs for green procurement solutions and local authorities' systematic efforts to impose climate requirements in procurements, were further clarified in 2021. This will help increase predictability when applications are assessed. Climate Cure 2030 has shown a major potential for triggering climate actions by using public procurement, and local and county authorities play a key role in this. However, it is still important to maintain a close link between funding and other policy instruments in the green procurement toolbox. Combined with guidance, tools and inspiration, providing funding where climate considerations incur excess costs, can thus help achieve the goals in the action plan.

Enova supports technological development and early market introduction of green solutions and will help achieve permanent market changes, so that solutions that favour a low emission society will be preferred in the longer term, even without special funding. At a superior level, Enova is governed by four-year management agreements. Through the new agreement for the 2021-2024 period, Enova is fronted as a technology and climate instrument. Enova's objective is to contribute to reducing non-ETS greenhouse gas emissions towards 2030 and to technological development and innovation that will help reduce emissions towards the low emission society of 2050. Within the framework of the agreement, Enova will draw up its own programmes and support schemes.

Initiatives:

- DFØ will provide guidance related to support schemes relevant for green and innovative public procurement.

Green procurement and green funding

Several public funding agencies provide funding to contracting authorities and suppliers for technological developments that will help us achieve our climate targets, including Enova, the Norwegian Environment Agency's financial support scheme Klimasats and the Norwegian Agency for Local Governments (KBN).

KBN, the state-owned financial institution that finances the local and county government sector, recently included climate risk as a criterion for green loans and has launched a web portal to provide insight into climate risk in the local government sector. www.klimarisiko.kommunalbanken.com

In a climate risk perspective, we do not look at how our business activities affect the climate, but how climate change and climate policies affect our own business activities. The government-appointed Climate Risk Commission has pointed out that insufficient focus on climate risk in the public sector can result in community resources being squandered, e.g. by spending large sums on repairs following damage instead of investing in climate adaptation.

Climate risk is often divided into two types:

- **Physical climate risk:** risk that is a consequence of climate change, such as a greater risk of flooding, landslides, decay problems, extended droughts, and rising sea levels.
- **Transition risk:** risk associated with the transition to a low-carbon society, such as the financial risk of carbon pricing, ban on fossil fuel, more stringent recycling, and circular economy requirements etc.



Photo: Kommunalbanken

4. Priority procurement categories

The White paper for smarter procurement points to some priority areas that will be discussed in this action plan to help contracting authorities prepare overall priorities for climate friendly and environmentally friendly procurement and green innovation.⁶⁴ In the procurements of contracting authorities the recommendations regarding specific measures must be balanced against the main purpose of the procurement act regarding efficient use of resources as well as the instructions for the Preparation of Central Government Measures (“utredningsinstruks”) for those bound by it.

Priority procurement categories where the contracting authorities should generally include environmental requirements or criteria to help minimise environmental impact and promote zero and low emission solutions and a circular economy include:

- transport
- construction, building and property (BAE)
- food and catering services
- plastic products and products containing plastics
- ICT/electrical and electronic products
- batteries
- furniture
- textiles

Public contracting authorities are subject to national policy guidelines to promote zero or low emission solutions in public procurement when relevant. Referring to the national strategy for a circular economy from 2021, which clarifies the role of public procurement in a more circular economy.

Contracting authorities must as a general rule promote zero emission solutions for most means of transport. Solutions that reduce the need for transport, such as digital meetings or better logistics should also be considered. In the area of construction, building and property, contracting authorities should generally promote renewable and climate friendly solutions in buildings and zero emission solutions at construction sites, and request circular solutions and low emission materials.⁶⁵

According to the European Commission, **circular procurement** is a key policy instrument for a sustainable, resource-efficient and competitive low emission economy.⁶⁶ The essence of a circular economy is that one tries to maintain the value of a product in the product chain for as long as possible, thus minimising the need for new materials and energy. It is also essential to avoid substances that are hazardous to human health and the environment. The EU 2020 action plan for a circular economy states that as much as 80 per cent of a product's environmental impact is decided in the design phase. In the plan, the EU lists a number of sustainability criteria that they will continue to build on in their further work on sustainable design. These are good principles for a circular economy, which DFØ also emphasises in their guidelines for public procurement. They include expanding product life through quality, possibility of repairs and upgrades and reduced use of disposable products. Other important contributions include minimising substances that are hazardous to health and the environment, increasing the proportion of recycled raw materials in new products and increasing material recycling of discarded products. Selling products as a service represents another opportunity. The overall climate and carbon footprint of products must be reduced.

The construction, building and property industry (BAE) has a very high potential for circularity,⁶⁷ and is an industry that is crucial to employment in Norway. In the intersection between building/construction and transport, there is a significant potential for GHG emission reductions by transitioning to zero and low emission technologies at building and construction sites. The table below shows that for public procurement, the construction, building and property industry has the largest carbon footprint⁶⁸ (approx. 3 million tonnes CO₂e; Figure 1). Other major carbon footprint sources are procurement of services, production and consumption of food and other commodities as well as procurement of transport services. Transport is also a significant category, and if we include transport associated with procurement and delivery of products and services to the public sector (indirect transport, see Figure 5), this category exceeds even construction in total.

⁶⁴ White paper No 22 to the Norwegian parliament (2018-2019) Smarter purchasing – efficient and professional public procurements), p 82.

⁶⁵ See NIBIO and Civitas for the Ministry of Climate and the Environment (2020) Lavutslippsmaterialer i bygg. Barrierer og muligheter (Low emission buildings. Barriers and opportunities).

⁶⁶ Cf. The European Commission (2017) Public procurement for a circular economy. Good practice and guidance, p. 5

⁶⁷ Deloitte (2020) commissioned by the Ministry of Climate and the Environment, Kunnskapsgrunnlag for nasjonal strategi for sirkulær økonomi, (Knowledge base for a national strategy for a circular economy) p. 14.

⁶⁸ This includes greenhouse gas emissions abroad.

Figure 8: Carbon footprint of public procurement according to key categories

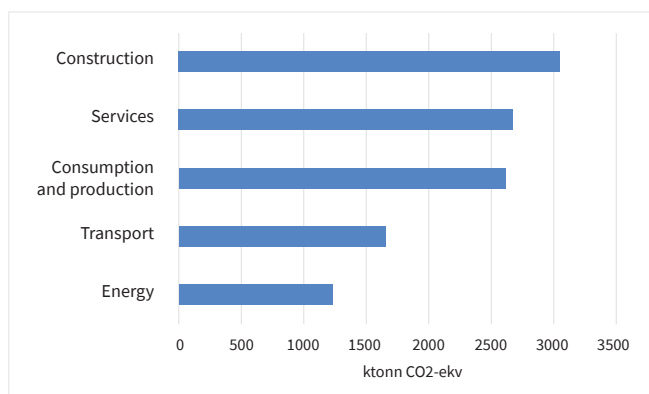


Figure 8: The carbon footprint of public procurement according to key categories in 2016 (kt CO2e) This includes both direct and indirect lifecycle emissions from goods and services, both in Norway and abroad⁶⁹

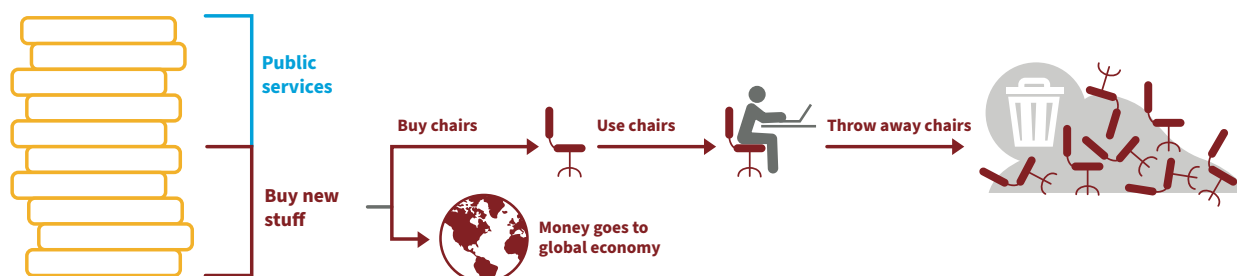
Green and innovative public procurement is a common denominator for industrial and commercial development, climate and environment targets and an efficient public sector.⁷⁰ Norway can, in several fields, become a pioneer for technological development and solutions for the green

shift. We have already seen examples of how public procurement has contributed to the development of electric ferries in Norway.

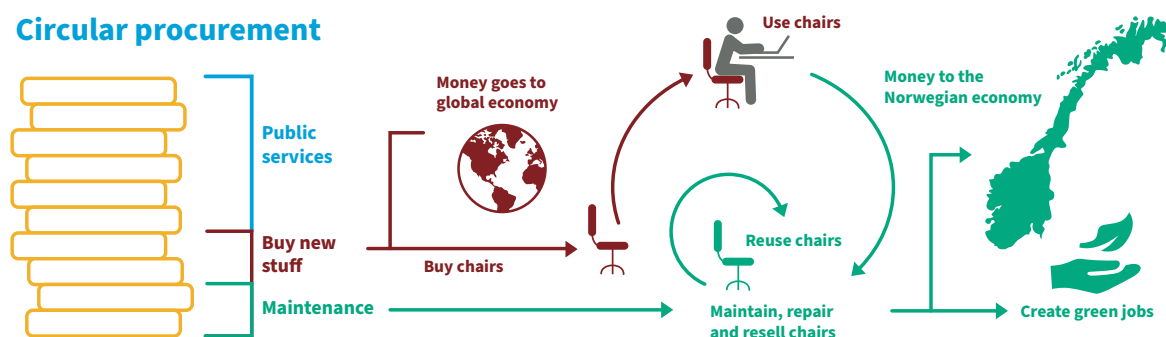
There is scope for Norway to become competitive within green technologies and solutions. In Denmark, increased circularity in the construction, building and property industry has been estimated to have a great value creation potential.⁷¹ Deloitte (2020)⁷² has conducted a study based on the Norwegian business and industry structure and resource base. The study found that the construction, building and property, processing, forestry and fishing industries as well as agriculture are key industries for Norway's transition to a more circular economy. Deloitte also identifies a more circular battery and furniture production as a considerable commercial development potential for Norwegian business and industry. Figure 9 illustrates how a more circular economy – where product life is expanded by repairs, sharing, reuse and resale – increases value and creates jobs nationally, compared to the "take, make and dispose" approach of a linear economy, which primarily contributes to global value creation.

Figure 9: Circular versus linear procurement of furniture.⁷³

Linear procurement



Circular procurement



69 https://www.anskaffelser.no/sites/anskaffelser2/files/klimafotavtrykk_for_offentlig_virksomhet.pdf

70 The ministries (2017) Better growth, lower emissions – the Norwegian Government's strategy for green competitiveness, p. 21

71 Ellen MacArthur Foundation et al. (2015): Delivering the circular economy: A toolkit for policymakers.

72 Deloitte (2020) commissioned by the Ministry of Climate and the Environment, Kunnskapsgrunnlag for nasjonal strategi for sirkulær økonomi (knowledge base for a national strategy for a circular economy).

73 Based on a figure developed by Zero Waste Scotland.

4.1. Transport

The Norwegian government aims to reduce greenhouse gas emissions from the transport sector by 50 per cent by 2030.⁷⁴ The transport sector is responsible for 30 per cent of greenhouse gas emissions in Norway, making it a significant emission source. The transport sector also generates noise, air pollution and microplastics pollution from tyres. It also occupies large areas. In its 2021-2030 Climate Plan (White paper No 13 to the Norwegian Parliament 2020-2021) the government announced that it will increase the carbon tax to NOK 2000/tonne CO₂ in 2030. The plan provides a number of recommendations for the transport sector. These are also relevant for public procurement in the transport sector. The government initiatives include:

- using public procurement strategically to ensure that zero and low emission solutions are developed and adopted in the transport sector.
- using target figures for zero emission vehicles from the 2018-2029 National Transport Plan (NTP) as a basis for drawing up policy instruments. This involves
 - continuing to use public procurement to help ensure that zero emission solutions are developed and adopted. This policy instrument is particularly relevant for targets relating to city buses and goods transport in the cities.
 - aiming to introduce zero emission requirements for procurement of new city buses from 2025. An assessment will be conducted of how to include biogas in the requirement.
 - aiming to introduce zero emission requirements for public procurement of cars and small vans from 2022.⁷⁵
 - investigating the introduction of zero emission requirements for public procurement of large vans, long-distance coaches and trucks.
- central government agencies emphasising the environmental benefits of reusing existing built areas and buildings and of being located close to city centres, densely populated areas and public transport hubs in line with the guidelines relating to coordinated housing, land and transport planning
- reducing greenhouse gas emissions, tailbacks, air pollution and noise in urban areas through efficient land use and ensuring that the increase in passenger transport takes place on public transport or by cycling or walking
- investigating climate requirements for public procurement of maritime transport services with a view to implement them in 2023

- introducing zero and low emission criteria in new tenders for ferry communication where this is feasible by 2023
- introducing zero and low emission criteria in new tenders for express boats where this is feasible by 2025
- continuing to support county authorities so that it is feasible to choose zero and low emission solutions for ferries and express boats
- investigating climate requirements for public procurement of maritime goods transport
- aiming to introduce a turnover requirement for industrial diesel as of 2022, which will increase to match the road transport level in the period leading up to 2030.
- aiming to introduce a turnover requirement for biofuels in shipping as of 2022
- aiming to merge the turnover requirements for road transport and industrial diesel into one turnover requirement for both and examining whether a joint turnover requirement could also be applied to shipping

Recommended key priorities for procurement of transport

Based on the policy guidelines above, DFØ and the Norwegian Environment Agency recommend the following key priorities for procurement of transport by contracting authorities.⁷⁶

⁷⁴ White paper No 13 to the Norwegian Parliament (2020-2021). 2021-2030 Climate Plan

⁷⁵ The Ministry of Transport has asked the Norwegian Public Roads Administration to conduct a consultation on new regulations relating to energy and environmental requirements in public procurement of vehicles for road transport. The Ministry proposes to introduce zero emission requirements for public procurement of vehicles. The current regulations of 11 December 2017 no. 1995 relating to energy and environmental requirements for procurement of vehicles for road transport are proposed replaced by new regulations relating to zero emission requirements, including new provisions on threshold values and exemptions from the zero-emission requirement. The provisions on purpose, scope and the general exemption from the regulations are proposed maintained more or less in their current form in the new regulations. The proposed amendments are scheduled to enter into force on 1 January 2022.

⁷⁶ A number of the measures build on analyses in the DFØ and the Norwegian Environment Agency report (2020) Nullutslippstransport i leveranser til det offentlige (zero emission transport in public sector deliveries) <https://www.miljodirektoratet.no/globalassets/publikasjoner/m1783/m1783.pdf>

Recommended key priorities for procurement of transport by contracting authorities

When procuring transport services, contracting authorities shall ensure that the procurement contributes to:

- Promoting zero emission solutions as the default option for all vehicle groups.
- If zero emissions are not feasible, biogas can be used
- Reducing company transport, e.g. through digitalisation.
- Increasing transport pooling and encouraging cycling, walking and new types of mobility solutions when they are more efficient.
- Promoting efficient logistics solutions.

Type of transport procurement

Specific measures for transport contracting authorities

Own transport

Transport of public enterprises' own staff

- Reducing the number of personal journeys by having meetings online.
- When replacing company vehicles, zero emission alternatives should in general be chosen.
- Increased sharing/pooling of means of transport internally in public organisations and between agencies/undertakings.
- Offering electric bicycles or other solutions to staff as company transport.
- Requesting zero emission taxis for company travel.

Transport for the community

Transport purchased by the public sector to cover public needs.

- As a general rule, zero emission solutions shall be chosen when procuring new public transport services, buses or renovation services (electric/hydrogen/or ammonia solutions). If zero emissions are not feasible, the use of biogas can be prioritised.
- As a general rule, zero or low emission solutions shall be chosen when procuring ferry and express boat services.
- Zero emission transport shall be prioritised when procuring specially adapted public transport services, such as the use of taxis to transport patients.
- County authorities have a special responsibility for promoting zero emission express boats and ferries, most often through service procurement. It is important to coordinate requests directed at the shipping industry, e.g. with funding from the Supplier Development Program.
- Promoting mobility-based booking and information services that enable seamless integration of bus, boat and rail services and/or cycling and reducing the need for private cars, such as the HjemJobbHjem (home-work-home commute) scheme offered by the public transport company Kolumbus.
- Applying requirements and criteria that promote phasing-in of zero emission technology during the contract period. One example is Ruter's procurement of bus services for Asker and Bærum, as described in the example below.

Transport as a part of goods and service deliveries

- Request zero emission transport in public sector deliveries or choose biogas if zero emissions are not feasible or disproportionately expensive. This includes delivery of goods and transport related to services (e.g., tradesmen, cleaners, consultants, etc.).
- Reducing transport by requesting efficient logistics solutions and booking routines and, if relevant, bonus schemes in contracts.
- Requesting that goods should be transported by ship or rail rather than road when feasible. When possible, maritime transport should be chosen for mass transfer related to construction projects (see also construction, building and property (BAE) for transport and logistics measures in this industry).

4.1.2. New technology and innovation in the transport sector

The White paper for smarter procurement and the government strategy for Green Competitiveness⁷⁷ identify transport as a category with a particularly high potential for green and innovative public procurement.

New technological developments offer significant greenhouse gas reductions in the transport sector:

- Electric machinery, vessels and vehicles are quickly emerging in the market
- Intelligent charging systems equalise the grid load.
- Digital interaction solutions reduce the need for physical travel
- Intelligent booking solutions optimise logistics for both people (e.g. "Hent meg" (pick me up) public transport service) and goods
- Better access to advanced liquid biofuels and biogas

Most of these innovations have the potential to lower long-term operating costs. However, they do require investment in infrastructure (such as charging stations), organisational changes (e.g. business models) and expertise (e.g. service design and data system integration). To support the key priorities, several innovation areas should be prioritised:

- ICT: booking solutions for better and more dynamic alignment of passenger transport to the demand, including using artificial intelligence to predict needs
- Business models that integrate passenger transport suppliers in an integrated market for flexible public services.
- Electricity suppliers, financing sources etc. for business models and technologies for charging infrastructure and power control
- Maritime sector for zero emission express boats.

Ruter – procurement of electric buses with increasing phase-in during the contract period

Ruter's procurement of buses for Asker and Bærum for the period 2020-2031, allows zero emission technology to be phased in during the contract period, and to be weighted based on the period the vehicles are in operation. At start-up at the end of June 2020, 15 per cent of the buses will be electric. As of 2025, 60 per cent of buses will be electric.

By rewarding zero emission solutions even when they are phased in during the contract period, suppliers will have the opportunity to gradually acquire experience with the solutions (e.g. route planning and charging needs, etc.). The price of electric buses is projected to fall in the time ahead due to increasingly lower battery costs. This may reduce the cost of transport services and simultaneously increase the environmental benefits of the procurement.



Photo: Ruter

⁷⁷ The ministries (2017) Better growth, lower emissions – the Norwegian Government's strategy for green competitiveness 21

4.1.3. More on the key priorities

Promoting zero emission solutions

Public procurement is an important policy instrument for faster phase-in of zero emission solutions. Norway is a pioneering nation in the field of electric transport, and transition to electric transport and other zero emission solutions is a key initiative to cut emissions in the transport sector. In its Climate Plan, the Norwegian government has announced its intention to introduce requirements that will ensure zero emissions for public procurement in various vehicle segments: cars and small vans as of 2022, city buses as of 2025 and large vans, long-distance coaches and trucks when the technology is mature. This will be assessed in more detail. Moreover, the government will consider how biogas can be included in the city bus requirement. Such requirements will be crucial to help halve the transport sector emissions in the period leading up to 2030 and help us achieve the NTP target figures for phase-in of zero emission transport.

In its report "Nullutslippstransport i leveranser til det offentlige" (zero emission transport in public sector deliveries), the Norwegian Environment Agency and DFØ point out that "a key advantage of electric transport solutions is that they are scalable. This means that the solution can be replicated on a large scale. Electrification of the transport sector is thus a key initiative for reducing emissions in Norway and the rest of the world".⁷⁸ The possibility of introducing electric solutions on a grand scale is also linked to the expectation that they in the long term may become competitive with fossil-based solutions without major subsidies. Technological maturity improvements that make zero emission solutions competitive with fossil transport solutions, are crucial for our ability to phase-in zero emission solutions in all parts of the transport sector.

For all types of transport procurement, battery-electric propulsion is currently the most advanced zero emission technology on the market. However, in the long term, hydrogen may become an alternative for the most energy-intensive means of transport, such as trucks, semitrailer motor vehicles and long-distance coaches.⁷⁹ Ammonia may also be used as a marine fuel. The use of biogas is a technologically mature alternative for most transport segments, and the availability of biogas is expected to increase in the future. Prioritising biogas in public procurement when zero emission solutions are not readily available or disproportionately expensive, and in sectors where biogas is not subject to turnover requirements, will have a positive impact on the environment and be important for increasing the resource utilisation of organic waste in Norway. Electrifica-

tion requires installation of charging infrastructure, which in turn requires investment, business development and space. Enova and the Norwegian Environment Agency's Klimasats scheme may be relevant financial support schemes for various transport sector climate initiatives.⁸⁰ To meet the targets for phase-in of zero emission solutions in the transport sector, it may be advantageous to coordinate between a number of buyers (state, local and municipal authorities) in a given geographic area. It is also important to factor in the future need for charging facilities when planning new road projects, also for charging heavy trucks and coaches.⁸¹

Biofuels that are used to satisfy environment requirements in public procurement and reported as part of turnover requirements, do not contribute to further environmental impact beyond the volume in the turnover requirement. As turnover requirements secure significant use of biofuels in Norway, the Norwegian Environment Agency recommends that public procurement is primarily directed at technologies and solutions that are not comprised by such requirements in the various sectors, such as zero emission technology and biogas. Public procurement in the road transport sector has e.g. been essential for biogas development in Norway. To ensure further development, this should continue to be a priority.

Reducing company travel, e.g. through digitalisation

The Norwegian central purchasing body's conservative estimate of emissions related to state sector air travel totalled 144,000 tonnes of CO₂ in 2019. The Covid-19 pandemic showed that staff got used to online meetings relatively quickly and that it is possible to combine efficient interaction with a significant reduction in physical travel.

Contracting authorities should establish environmental targets for their undertakings. Contracting authorities should have a travel policy that challenges the need for physical travel, particularly car and air travel. This will reduce costs and negative environmental impact and may also promote increased interaction between urban and rural areas. However, digital interaction requires appropriate ICT infrastructures, expertise and organisation development. Public procurement has a key role to play in facilitating a reduction in the need for transport, e.g. through digitalisation. This could for instance be done by the contracting authorities assessing their need for ICT equipment and operation in the context of their internal travel policies.

⁷⁸ The Norwegian Environment Agency and DFØ (2020) Zero emission transport in deliveries to the public sector (2020). <https://www.miljodirektoratet.no/globalassets/publikasjoner/m1783/m1783.pdf>

⁷⁹ https://www.miljodirektoratet.no/globalassets/publikasjoner/m1625/m1625_sammendrag.pdf

⁸⁰ Read more about the interconnection between public procurement in the transport sector and these support schemes in the Norwegian Environment Agency and DFØ report Zero emission transport in deliveries to the public sector (2020). <https://www.miljodirektoratet.no/globalassets/publikasjoner/m1783/m1783.pdf>

⁸¹ See White paper No 20 to the Norwegian Parliament (2020-2021) National Transport Plan 2022-2033 Chap. 6; the government will look at the establishment of alternative fuel infrastructure and the transport infrastructure together, for instance by facilitating establishment of charging infrastructure in service/ picnic areas and truck stops.

Increased sharing, cycling, walking and new types of mobility solutions when they are more efficient

Various rental companies and mobility sharing solutions are examples of a circular economy where product reuse and sharing allows for more value creation from the investment, both financial and environmental. However, sharing requires coordination and new routines. Some municipalities are looking into the possibility of agencies sharing vehicles. Others have shown that it is possible to hire out zero emission vehicles outside working hours. This is cost-efficient and provides a service to the local population. Some challenges for the buyer related to such procurement may include promoting a change of attitude in their own undertaking, preparing new business models and renegotiating insurance contracts. Sufficient access to charging stations is also important. In municipalities with a high number of holiday homes such as the Hafjell area where people want to share mobility solutions, new types of mobility solutions are being tested through innovative procurement.⁸² These projects support circular economy objectives by changing consumption patterns from purchasing one's own vehicles to joint solutions based on sharing.

However, new types of mobility solutions may have unintended consequences as we have seen in the case of electric scooters, for example. Conflicts with other road users as well as a risk of accidents and injuries, may consequently trigger needs for new requirements in the procurement process, including for scooter rental companies to provide parking and docking facilities, as well as rules for use and access, etc.

The public transport companies' traditional organisation and procurement are also being challenged by new

business models and mobility solutions, including city bikes, electric scooters and driverless buses. Moreover, new rules and technologies provide for more dynamic facilities and distribution of the traffic between conventional public transport companies, taxi companies and new market players. This may reduce costs and benefit travellers and the environment by reducing the use of private cars and relieving the public transport system. This development can be accelerated by introducing coordinated requirements from public purchasers adapted to the geographic and demographic realities in the region. New green solutions and green start-ups can also be included, e.g. by using a dynamic procurement process.

The Halden model for sharing fossil-free cars and electric bicycles:

Halden municipality has received funding from Klimasats for a project where they procured a service for the lease of 20-40 fossil-free cars during office hours for official staff travel. Twenty electric bicycles have also been procured based on the same lease model. The cars and bicycles are used by staff for official travel instead of private cars. In the afternoons and evenings, the cars are rented to residents at a reasonable rate. An app is used as a booking system and as a key. The sharing scheme is supplied by a private provider and is the result of two public procurements. In 2019, the scheme only included electric cars, but the municipality is also able to lease biogas and hydrogen cars should they wish to do so. The sharing scheme has a positive climate and environment impact in the municipality, as well as a positive social impact, making car rental available for residents with limited economic resources. Other municipalities such as Bodø and Fredrikstad have engaged in similar procurements.



Photo: Halden municipality

82 <https://innovativeanskaffelser.no/sirkulaer-mobilitet-i-hyttkommuner/>

Promoting efficient logistics solutions

According to the Climate Cure 2030 report, improved logistics and more efficient deliveries of goods and services may cut emissions significantly.⁸³ To achieve this, a change in behaviour and culture is required in public organisations. For some suppliers it may entail a new organisational approach and investment in new digital solutions.

A key measure for central government agencies will be to optimise ordering procedures through better planning and coordination of internal orders in their own agency. The Norwegian central purchasing body found that the number of small orders decreased following the introduction of a NOK 250 fee on all orders for consumables of below NOK 1000, excluding VAT. They see a considerable improvement potential in optimising their ordering procedures.

Suppliers can in turn look at the needs of their customers in a wider context. Digital solutions have the potential to improve utilisation of the load capacity and route scheduling and in total reduce carbon emissions related to the supply of goods and services. Contracting authorities can demand that digital solutions for route and load optimisation should be applied for public procurements and, moreover, impose contractual obligations to ensure that the contracting parties make a continuous effort to improve their ordering routines and route and load optimisation.

Another example of a more efficient logistics solution is to request that goods are transported by sea or rail instead of by road whenever possible. Transport of goods by ship or rail has lower per tonne kilometre GHG emissions than current road transport solutions. This means that transferring cargo from road to ships and rail can reduce greenhouse gas emissions and improve the local environment by reducing noise and air pollution.

Transport of rock and soil material (transport of rocks, sand, soil etc. during infrastructure construction) may have a major potential to improve logistics. In addition to having rock and soil material transported by ship whenever possible, requirements could be set for developers in the same area to cooperate and enter into contracts for instance related to the need for backfill materials during the relevant period. Efficient planning of how to handle rock and soil material will also reduce the need for transport.

⁸³ The Norwegian Environment Agency, the Norwegian Public Roads Administration, the Norwegian Coastal Administration, the Norwegian Agriculture Agency, the Norwegian Water Resources and Energy Directorate (NVE) and Enova (2020) Climate Cure 2030, p. XV <https://www.miljodirektoratet.no/klimakur>

Zero emission transport in deliveries to the public sector (2020):

The Norwegian Environment Agency and DFØ have been commissioned by the Ministry of Climate and the Environment to assess where it will be beneficial to impose requirements for zero emission transport in deliveries to the public sector, including deliveries of goods and services. The assessment looked at six sectors where the public sector is a major buyer:

1. Taxis (patient travel, TT services (disabled persons) and school transport))
2. Tradesmen and service providers.
3. Deliveries of goods
4. Waste collection
5. Building and construction – Construction site activities
6. Building and construction – Transport of rock and soil material to/from construction sites

Main findings:

- For the average buyer and in the short term, public procurement has the greatest potential for contributing to increased phase-in of zero emission transport within the category **cars and vans**. The cost situation for investment and operation here is already similar to or competitive with that of conventional fuels, taking into account the current financial support schemes (e.g. Enova's Zero Emission Fund), toll road exemptions, priority parking etc. For taxis and vans (including tradesmen and service providers) most zero emission solutions are mature and profitable. However, it will be necessary to coordinate procurement, i.e. ensure that investments in charging infrastructure and replacement of the vehicle fleet take place in parallel. In 2019, less than two per cent of taxis and vans in Norway were electric. Public procurement can play a key role in increasing demand.
- For **trucks, renovation vehicles and construction machinery**, costs remain significantly higher for zero emission vehicles, and at present it will be difficult to motivate suppliers to cover such costs without funding. By requesting zero emissions in the more technologically immature segments, public procurement may in the longer term help to break down technology and cost barriers through increased demand. This is particularly relevant for construction machinery, where the public sector is a major customer. This can contribute to suppliers such as contractors and rental firms purchasing zero emission vehicles, which in turn will put pressure on vehicle and machinery manufacturers.
- Of the segments that were assessed, transport emissions from the public sector were greatest for **building and construction sites and transport of rock and soil material**, but they were also significant for other segments. We estimate that the emission reduction potential directly related to public procurement requirements is greatest for the building and construction sites segment (approx. 1.1 million tonnes CO₂ for the period 2021-2030) and transport of rock and soil material (0.5 million tonnes CO₂), followed by tradesmen and service providers (0.3 million tonnes CO₂), general goods deliveries (0.2 million tonnes CO₂), taxis (0.1 million tonnes CO₂) and waste collection (approx. 0.07 million tonnes CO₂).
- This is in addition to emission reductions from any indirect effects in business and industry generally. Emissions will be further reduced if the publicly procured zero emission vehicles are used for deliveries to private customers or private driving by the owner. The estimates are contingent on sufficient charging infrastructure being in place.
- Financial support schemes (such as Enova, Klimasats) may be necessary to cover excess costs, such as more expensive vehicles or charging infrastructure. When new solutions need to be developed or adopted, innovation-directed funding for the procurement may also be required to cover excess costs and reduce risk. The report identifies some regulatory opportunities that could pave the way for allocation of direct funding to cover excess costs from investing in zero emission vehicles in connection with public procurement. Other economic instruments than direct funding may also be considered to cover any excess costs related to phase-in of new zero emission technology.

Maritime transport can reduce emissions from road transport

Transferring goods from road to seaway have been a political priority for several decades, and it is a political priority in the National Transport Plan. The transfer of goods and mass on seaways reduces CO₂-emissions, the risk of traffic accidents, air pollution, dispersion of microplastics from tires and reduces the strain on the road- infrastructure. According to DNV GL, maritime transport has proven economically profitable even though the distance of transport can be up to 25 times the distance of road transport. Additionally, increase in maritime transport would have trade-enhancing effects for renewal of the short sea fleet, value creation and exports, and is easily combined with electric transportation by large vans, long-distance coach, and trucks.

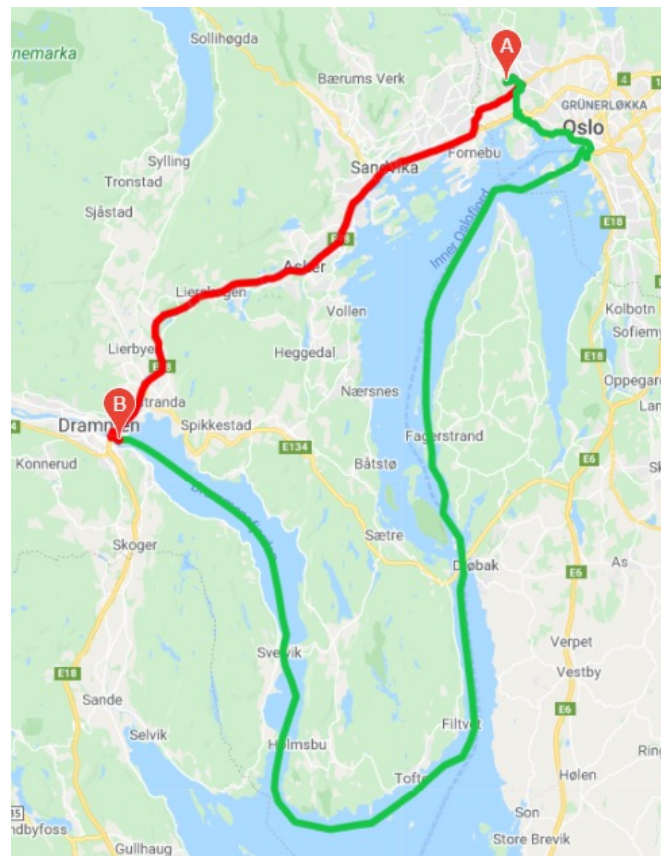
There are still barriers in terms of the regulation of the handling of mass and shipping which could make it difficult for contracting authorities and entrepreneurs to choose maritime transport.

One example of this can be found in Oslo municipality's choice of transport related to the development of reserve water supply with a water treatment plant at Huseby. The project will produce excess masses in the period from 2020 to 2023. Three and a half million tonnes will be transported to the port of Drammen, filling in to build harbour facilities. This equals around 130 000* truckloads, which equals 120 loads every day.

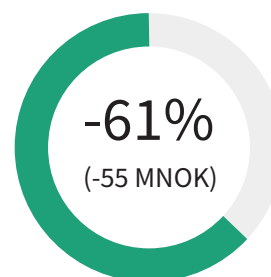
The Coastal Administration's calculator for transfer of goods could be applied to calculate reductions in green house gas emissions and the societal benefits that could be achieved by using maritime transport for this project, if possible. By transfer of transport from road to sea the calculator predicts a 52 percent reduction of CO₂-emissions, which equals a green house gass reduction achieved by substituting 1500 fossil cars** with electrical cars over the same period.

*Presumption: 25-30 tonn per truckload

**According to DNV GL

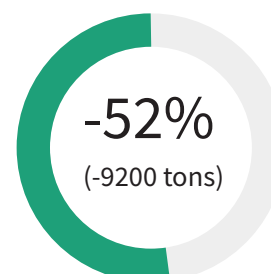


Maritime transport gives the following results, compared to road transport:



External social costs

The external costs incurred by society include local pollution, queues, accidents, etc.



CO₂-utslipp

This corresponds to the emission reduction achieved by replacing 1500 passenger cars with electric cars, over the same period

4.2. Construction, building and property

The construction, building and property industry (BAE industry) generates annual value of NOK 350 billion and employs 358,000 people.⁸⁴ Sixty per cent of the industry's turnover is linked to public sector customers.⁸⁵ The White paper for smarter procurement and the government strategy for Green Competitiveness⁸⁶ point to the building and construction sector as a sector with great potential for green and innovative procurement.

Norway has low direct greenhouse gas emissions from heating in buildings. However, the BAE industry contributes to direct greenhouse gas emissions from construction activities associated with construction, rebuilding and refurbishment of buildings and construction of infrastructure. Direct greenhouse gas emissions from the building and construction industry are estimated at NOK 2 million tonnes CO₂ equivalents, including emissions from temporary construction heat and construction machinery.⁸⁷ In addition, significant indirect emissions take place from raw material extraction and transport and production and transport of building materials. Major environmental challenges are also linked to alterations in land use, waste generation, noise, air pollution and substances that are hazardous to human health and the environment. At the same time, public procurements of buildings and infrastructure must ensure that society is better prepared for climate change, including increased flooding, precipitation, etc.

4.2.1. Contracting authority priorities for construction, buildings and property

The construction, building and property industry (BAE industry) generates a fairly small amount of direct greenhouse gas emissions, but significant indirect emissions through e.g. its use of building materials. The industry also generates large quantities of waste. The most important step the industry can take to increase circularity and reduce emissions is to take proper care of and extend the life of buildings and facilities. Concurrently, it is important that more building materials find their way back into the loop through reuse.

The Climate Plan contains some relevant guidance for public procurement in the BAE industry. The government will e.g. cooperate with the industry to facilitate fossil-free building and construction sites by 2025 and has presented an action plan for fossil-free construction sites in the public transport sector.⁸⁸ The government has also drawn up common climate and environment ambitions for buildings and properties in the civil sector. The ambitions will apply to the state civil sector as a construction client, as a property manager and a tenant.

Bygg 21

Bygg21 was a partnership between the government and the Norwegian construction and real estate industry. The objective of the partnership was to realise the building and real estate industry's potential for improved productivity and sustainability. As part of Bygg21, a number of guidelines were prepared showing how buyers can play a role in promoting more sustainable buildings and reducing greenhouse gas emissions. So far more than 400 signatories support the Bygg21 principles for best practice for a more sustainable, productive and cost-efficient industry. The Consulting Engineers' Association (RIF) manages the material that was prepared for Bygg21 and works to collect even more signatures, particularly from local and county authorities.

One example is Møre og Romsdal county authorities that use Bygg21 and byggelig.no actively in their project implementation. By ensuring broad and early user involvement, they identify the potential of each project before they draw up the project objectives. With regard to climate and the environment, this is specified in performance targets for the completed buildings in the form of CO₂-emissions per m² and kWh per m² per year and compared to a reference project. The projects use the phase standard "Neste Steg" (Next Step) defined by Bygg21.

- The central government will make use of existing buildings and ensure that vacated property is reused.
- The central government will reuse building materials and make it possible for others also to reuse materials from central government buildings.
- The central government will cooperate with the industry to promote the use of climate friendly materials.
- The central government will establish a common methodology for measuring the total climate and environmental impact from building, construction and property in the central civil sector, with a view to make improvements in the future and establish common targets.
- Central government agencies will emphasise the environmental benefits of reusing existing built-up areas and buildings and of being located close to city centres, densely populated areas and public transport hubs, in line with the central government guidelines relating to coordinated dwelling, area and transport planning. This will apply when agencies build, purchase or rent premises.

⁸⁴ <https://www.bi.no/globalassets/forskning/senter-for-byggenaringen/bibliotek/forskningsrapport-2-2019.pdf>

⁸⁵ https://www.bnl.no/siteassets/dokumenter/brev/korona---krisepakke-bygg--og-anleggsnaringen_-endelig-002.pdf

⁸⁶ The ministries (2017) Better growth, lower emissions – the Norwegian Government's strategy for green competitiveness, p. 21

⁸⁷ <https://www.regjeringen.no/contentassets/a78ecf5ad2344fa5ae4a394412ef8975/nn-no/pdfs/stm202020210013000dddpdfs.pdf>

⁸⁸ The Ministry of Transport (2021) Action Plan for Fossil-free Construction Sites in the Transport Sector.

In connection with the Climate Plan, the government also presented an action plan for fossil-free construction sites in the transport sector on 12 January 2021.⁸⁹ The action plan points to increasing the CO₂ tax as a main initiative for reducing greenhouse gas emissions in non-ETS sectors. This will also be important for achieving emission reductions at construction sites in the transport sector. Moreover, the action plan states that the government will reduce greenhouse gas emissions from construction sites in the transport sector by launching pilot projects, applying requirements in public procurement, initiating an assessment of requirements and targets for fossil-free construction sites and introducing a turnover requirement for biofuels in industrial diesel as of 2022.⁹⁰

In the action plan, the government states that procurement is a key instrument and will be used to promote new solutions for construction sites. However, the introduction of requirements as an instrument does not mean that absolute requirements will be set, but that, for instance, providers of new green solutions will be rewarded. It should be up to the contracting authorities to assess what environmental requirements should be imposed, and where in the process, to achieve the best and most cost-efficient result for each procurement. The use of innovative public procurements, where requirements are stipulated in accordance with the procurement rules, will stimulate a desirable technological development or innovation in the industry. Such procurements will contribute to making new solutions more available.

In autumn 2021, the Norwegian government will present an overall strategy for construction, building and property in the central authority civil sector. The strategy will present new ambitions and actions in several fields, including climate and environment, energy, localisation and development of the construction and property industry. These will among others be based on White paper No 13 to the Norwegian Parliament (2020–2021) *Climate Plan for 2021–2030 and National strategy for a green, circular economy*. The strategy will apply to the leasing of premises in the market, property management and construction projects.

Bygg21 was a partnership between the government and the Norwegian construction and real estate industry. The objective of the partnership was to realise the building and real estate industry's potential for improved productivity and sustainability. As part of Bygg21, a number of guidelines were prepared showing how buyers can play a role in promoting more sustainable buildings and reducing greenhouse gas emissions. More than 400 signatories now support the Bygg21 principles for best practice for a more sustainable, productive and cost-efficient industry. The Consulting Engineers' Association (RIF) manages the material that

was prepared for Bygg21 and works to collect even more signatures, particularly from local and county authorities.

Procurements in the construction, building and property industry play a key role for a circular economy

The BAE industry makes up the largest single source of waste in Norway and generated 3.2 million tonnes of waste in 2019. The BAE industry has a high consumption of primary materials and a relatively low percentage of reuse and recyclable materials recovered from waste. In summary, this makes BAE procurements an important tool for accelerating the transition to a circular economy and a green shift in Norway and for achieving both national and international obligations and targets. Building and construction is also one of the seven key value chains in the EU's action plan for a circular economy. The Norwegian Building Authority has prepared a guideline for reusing construction materials. The authority will also examine and propose changes to the national rules for documentation of building materials to encourage reuse of construction materials.⁹¹

Most of the buildings that will be used in 50 years' time have already been built. This means there will be a greater need for maintenance and energy efficiency. Maintenance prevents buildings from deteriorating and will help extend the lifetime of buildings, thus reducing the need for new builds. Energy efficiency and local renewable energy generation will reduce the grid load and thus the need for new production facilities and associated disruptions to the landscape.

When central government agencies are procuring office spaces it most often involve renting property on the market. Central government new builds are much less common. Climate and environment requirements should also be set for property rentals. The easiest measure is to make sure that property is rented in existing buildings. Renting to a state enterprise in the market should not trigger a new building project. Even when renting, the state may impose demands relating to energy efficiency. Usually, rented premises must be adapted to meet the requirements of tenants, enabling the state to stipulate requirements relating to materials, reuse, waste segregation, etc.

Norway has three national targets for safeguarding biodiversity. These are: (1) The ecosystems must be of a high standard and deliver ecosystem services; (2) No species or habitat types will become extinct, and the trends for endangered and near-endangered species and habitat types will be improved; (3) A representative selection of

⁸⁹ Handlingsplan for fossilfrie anleggsplasser innen transportsektoren (regjeringen.no) (Action plan for fossil-free construction sites in the transport sector)

⁹⁰ The Climate Plan also states that when the government imposes requirements as an instrument in public procurement, this does not mean that absolute requirements will be set, but, for instance, that providers of new green solutions will be rewarded.

⁹¹ Nå blir det enklere å bruke brukte byggematerialer om igjen (Now it will be easier to reuse used materials) - regjeringen.no and Regjeringen gjør ombruk av byggematerialer lettere – fjerner krav om CE-merking (The government makes it easier to reuse construction materials and removes the CE labelling requirement)

Norwegian nature will be maintained for future generations. The White paper "Nature for life" (2015-2016) identifies land-use and land conversion for e.g. road and residential construction and business and industry, as the factor with the greatest impact on biodiversity on land. A focus on biodiversity considerations in public procurement of buildings, industrial facilities and property will help Norway deliver on its biodiversity targets.

Recommended key priorities for procurement in the building, construction and property industry

Based on the policy guidelines above, DFØ and the Norwegian Environment Agency recommend the following key priorities for BAE procurement for contracting authorities

Recommended key priorities for BAE procurement for contracting authorities

When procuring BAE services, contracting authorities shall ensure that the procurement contributes to:

- Promoting zero and low emission solutions, including renewable energy solutions in, for or in the immediate vicinity of the building, zero emission solutions at building and construction sites, low emission materials, climate adaptation and risk assessment. For building and construction sites, a turnover requirement for biofuels in industrial diesel (as of 2022) has been introduced as the policy instrument to promote the use of liquid biofuels.
- Promoting a circular economy, including life-cycle calculations, improved land use, more joint use, better maintenance, reuse of existing buildings, use of materials that can be repaired, reused or recycled, waste segregation and recovery of waste material as well as less use of substances hazardous to human health and the environment
- Ensuring the optimal lifespan, both in terms of technical quality and flexibility in use.
- Smart environmentally friendly building and construction including smart operation and digitalised documentation.
- Promoting sustainable suppliers and supply chains, including preventing dispersion of substances that are hazardous to human health and the environment and avoiding timber that cannot be documented to have been legally produced and logged in the country of origin.

Type of BAE procurement

Specific measures for BAE contracting authorities

Existing buildings

- Minimise demolition and increase refurbishment and joint use.
- Assess the condition and maintenance needs of existing buildings and assess materials and products for re-use.
- Reduce energy consumption and phase out fossil energy.
- Upgrade to a high energy efficiency standard.
- Ensure efficient use of land to free up space for more undertakings.

Recommended key priorities for BAE procurement for contracting authorities

New buildings

- Reduce the number of newbuilds – assess environmental impact and costs in a life-cycle perspective (linked to established standards such as NS 3454 Life cycle costs for construction works).
- When newbuilds are necessary, they should be built in accordance with the circularity priorities in the waste hierarchy. This should include designing the building for flexible use and re-use, area efficiency, resource-efficient maintenance and replacement, energy-efficiency and smart buildings.
- Build on developed land and avoid unnecessary disruptions to the landscape.
- As a general principle, low and zero emission materials should be used – where materials can be recovered without dispersion of substances hazardous to human health and the environment.
- Avoid the use of tropical timber with a risk of deforestation and forest deterioration (this is also relevant for existing buildings and property rental).
- Promote zero emission building and construction machinery and equipment, or if this is not feasible, use low emission machinery.

Leasing property

- Choose to rent existing property instead of building new. As a general rule, renting to a state enterprise should not trigger a new building project. Enter into contracts that ensure that the existing property is upgraded to be energy efficient.
- Impose requirements for e.g. energy efficiency, energy use (energy labelling) and energy sources, easy access and location near public transport, flexible use, area efficiency, low and zero emission materials, design for re-use, resource-efficient maintenance and replacement.
- If the premises need to be modified, requirements should be set for materials, re-use, waste segregation, etc.
- Impose requirements for an indoor climate with good lighting and air quality as well as energy-efficient ventilation and lighting.

Building and construction sites

- Promote zero emission construction machinery and equipment, or if this is not feasible, low emission machinery.
- Ensure circularity in building construction, energy efficiency and smart buildings using zero or low emission materials that do not cause dispersion of substances that are hazardous to human health and the environment.
- Promote emission-free temporary heating and drying at building and construction sites (the use of mineral oil for construction heating is prohibited as of 1 January 2022).⁹²
- Reduce any negative environmental impact related to the handling of soil and rock and reduce the need to extract new rock material⁹³ through good planning and the use of surplus rock material.
- Seek to reduce the total land take for transport and building projects through re-use and optimisation, and by considering the most carbon-rich areas.
- Plan building and construction work to ensure efficient transport of rock and soil.
- Impose requirements for zero and low transport emissions whenever possible.
- Promote logistics solutions that reduce the need for transport and energy and associated greenhouse gas emissions, for instance by coordinating orders and deliveries of goods.

⁹² <https://lovdata.no/dokument/SF/forskrift/2018-06-28-1060>

⁹³ An inter-ministry group headed by the Ministry of Local Government and Modernisation has asked relevant agencies and state enterprises to examine challenges and the need for measures to ensure better handling of surplus rock material.

4.2.2. More on the key priorities

Both nationally and internationally, four development trends have emerged for how to reduce negative environmental impact from activities in the BAE industry:

1. adoption of zero and low emission solutions, including renewable energy solutions in buildings and at construction sites, combined with using materials with low greenhouse gas emissions (low emission materials)
2. facilitating reuse of building components and circular and flexible buildings with longer lifespans, better land use and more refurbishing and re-use instead of demolition
3. smart buildings and digitalised documentation for the whole building
4. efforts directed at sustainable supply chains to prevent deforestation and dispersion of substances hazardous to human health and the environment.

Zero emission solutions for building and construction sites

Public procurement is a key policy instrument for achieving a transition to zero emission machinery in the BAE industry. In this industry, the market for zero emission machinery is still in an early phase and access to and costs associated with such machinery are uncertain for the period leading up to 2030. A key prerequisite for phasing in zero emission machinery is that many market players on the supply and demand side choose these solutions. This requires significant investments in new emission free machinery and development of associated business models and infrastructure. A public sector that demonstrates a willingness to pay for zero emission solutions in its procurements, may contribute to contractors and rental firms purchasing zero emission machines, which in turn will put pressure on machinery manufacturers. Consequently, buyers should promote the use of zero emission machinery and equipment or low emission machinery whenever zero emissions are not feasible.

In its Climate Plan, the Norwegian government has announced that it aims to introduce a turnover requirement for biofuels in industrial diesel as of 2022. This means that the use of biofuels at building and construction sites as a result of public procurement, will not contribute to further climate impact, in the same way as the current situation for road transport. The introduction of turnover requirements will ensure that Norway uses a significant share of biofuels. The Norwegian Environment Agency consequently recommends that public procurement is primarily directed at technologies and solutions that are not comprised by such turnover requirements (see pages 40, 46-47).

Giffri förskola (Non-Toxic Preschool) is a project launched by the Swedish National Agency for Public Procurement. The Swedish National Agency for Public Procurement has prepared a guideline and criteria that will help local authorities in Sweden impose requirements for reducing the content of substances hazardous to health and the environment in preschools/kindergartens. In 2021, DFØ will launch a similar project for non-toxic and plastic-smart preschools/kindergartens to assist Norwegian local authorities.



Photo: Colourbox

Undervisningsbygg has implemented a project for green refurbishment of **Nordseter School (2017-2019)**. The school consists of a building from 1968 and an annex built in 2014. Using smart solutions, the old school building was refurbished to meet the standards of tomorrow, leaving intact the supporting steel and concrete structure. The project aimed for the Passive House standard, in line with Undervisningsbygg's environment strategy. As a source of energy, the building uses solar panels on the roof and the facade, in addition to heat pumps and 400-meter-deep geo-wells that will be used during the construction phase. The classrooms have large windows and high ceilings.



Photo: Undervisningsbygg/Finn Ståle Feldberg

The right expertise for green procurements in the construction, building and property industry

Some professional BAE purchasers have established efficient systems and procedures for BAE procurements in general and for the environment and innovation in particular. Examples include Statsbygg, Nye Veier and the largest municipalities.

Small and medium-size procurement organisations need to collaborate to maintain the right expertise for green and innovative public procurement. There is much to indicate that environmental considerations often lose out to other factors such as progress rate and price. Life cycle costs (LCC) should be used for all projects in the early phase and during the project, to establish the cost of the various alternatives throughout their lifetime. For local authorities, it is particularly important to establish clearly distinctive roles with administrative procedures for BAE projects, to clarify decision-making processes, what should be decided by politicians and what has been delegated to the administration.

Higher innovation and environmental impact

According to a report from EY (2019)⁹⁴ there is very little activity related to climate efficient design in the property sector. The decisions that are made in collaboration with architects have a major impact on a building's climate footprint. Furthermore, it is essential that the project manager gives clear directions to realise environmental benefits from the project. The BAE industry is the largest procurement category and the largest individual consumer of material resources in Norway.⁹⁵

The choice of project delivery model will impact on the environment as well as on innovation. NIBIO (2020)⁹⁶ describes project delivery models that promote dialogue and interaction with suppliers in construction projects.⁹⁷ Such project delivery models are relatively new and can be challenging both for contractors and construction clients. Both models address early supplier involvement and use of supplier expertise. Furthermore, the models address risk management in particular and facilitate use of additional values beyond the minimum requirements to meet project objectives. These elements are highly suitable for increasing the focus on the environment and innovation in procurement. It will be important for DFØ to pay close attention to these types of projects, where environmental and innovation ambitions are high.

Lørenskog municipality is one of the first municipalities in Norway to impose a requirement that all its building and construction projects must document greenhouse gas emissions. The municipality's 2017-2026 Temaplan for klima og energi (energy and climate action plan) stipulates that construction in the municipality must be climate-neutral and use environmentally friendly materials. Buildings must also have a long lifespan. Together with a consulting company, the municipality has prepared a guideline which will make it easier to achieve these targets. The guideline explains e.g. what GHG emission calculations are and how to conduct them. The purpose of calculating GHG emissions for a development project is to reduce the environmental impact of the development.
Source: Anbud365 20.10.2020



Photo: Colourbox

⁹⁴ EY (November 2019): Tempo på grønn omstilling i norsk næringsliv. Utredning av tempoet på grønn omstilling for 11 bransjer i norsk næringsliv (The pace of the green transition in Norwegian industry. An assessment of the pace of the green transition for 11 Norwegian industries).

⁹⁵ White paper No 28 to the Norwegian Parliament (2011-2012) Good buildings for a better society.

⁹⁶ NIBIO and Civitas for the Ministry of Climate and the Environment (2020): Barrierer og Lavutslippsmuligheter (Barriers and low emission buildings.)

⁹⁷ A so-called collaborative construction project and Best Value Procurement.

Trøndelag county authority took part in a Zero Emission Buildings partnership and built Heimdal upper secondary school (2016-18) as a zero-emission building. The school has 2000 square metres of solar panels on the roof and also uses geothermal energy and biogas. The ZEB project imposed high requirements for energy efficiency and the use of materials with low climate impact. The project received NOK 21.5 million in funding from Enova. The school recreational areas have been partly regulated as a park and a marketplace to make them an attractive meeting area for local residents. The school will also be used as a community centre in the neighbourhood and will have a sports hall and cultural activities in the evenings and at weekends. Throughout the planning and construction process, there was close and continuous dialogue between the construction client, architects, consultants and contractor, and this was of great benefit to the final result.



Photo: Rambøll Heimdal videregående skole – Rambøll (ramboll.com)

4.3. Food and catering services

4.3.1. Contracting authority priorities for food and food waste

The government will work towards ensuring that the public sector impose climate and environmental requirements as well as nutritional requirements for its own procurement of food and catering services. Public purchasers will be given advice and guidance based on the current procurement rules.⁹⁸ Food is a primary need, and it is important that the public sector provides good and nourishing food. This is particularly important for health and care services, but also for institutions, the Armed Forces, preschools/kindergartens, schools and work canteens. For such services, two factors in particular can reduce the adverse climate impact:

- reducing food waste and
- choosing food with a low environmental footprint – a climate-smart menu.

The public sector buys food and beverages as product procurements, or they buy a full catering service where the supplier has staff to prepare the food. Care homes and hospitals often have their own staff who prepare and serve the food, whereas canteens in the public sector have either their own staff or use catering services. Food for meetings is supplied by special suppliers or the undertaking's own canteen or kitchen.

⁹⁸ White paper No 13 to the Norwegian Parliament (2020-2021) Climate Plan 2021-2030.

Recommended key priorities for contracting authorities relating to food and food waste

Based on the policy guidelines above, DFØ and the Norwegian Environment Agency recommend the following key priorities for procurement of food by contracting authorities.

Recommended key priorities for contracting authorities relating to food and food waste

As regards food, contracting authorities shall implement procurements that:

- Contribute to reducing food waste by 50 per cent by 2030
- Promote food with a lower climate footprint, including food with a low risk of deforestation
- and food that is in line with recommended dietary guidelines, such as more plant-based food and fish

Type of procurement

Specific measures for contracting authorities

When procuring canteen services, catering services, food for meetings/conferences and food products

- Promote dietary guidelines for varied and nutritious food and shifting to a more plant-based diet and fish. This can be achieved by setting requirements for and requesting food with a lower climate footprint when purchasing canteen services, catering services and food for meetings/conferences for the public sector (the Armed Forces, preschools/kindergartens, schools, care homes, hospitals and work canteens)
- Divide up contracts to buy local products and include small and medium size businesses (SMB) that deliver food which is in season and whose production generates low greenhouse gas emissions in the value chain
- Commit to using deforestation-free supply chains
- Ensure that canteen and catering service suppliers have established procedures for identifying and implementing measures to prevent and reduce food waste, and that they are parties to the industry agreement on food waste reduction
- Request food waste reports – and various measures for cooperation
- Request that food suppliers are parties to the industry agreement on food waste reduction

4.3.2. More on the key priorities for contracting authorities

Dietary guidelines and a climate-smart menu

The Norwegian government has signed a letter of intent with the agriculture industry to reduce greenhouse gas emissions and increase carbon capture corresponding to a total of NOK 5 million tonnes CO₂ equivalents for the decade 2021-2030. To meet this target, it will be necessary to facilitate positive climate choices in the agriculture industry, whilst encouraging consumption changes, including a diet that is in line with dietary recommendations from the Norwegian Directorate of Health, and reduced food waste. In the 2021-2030 Climate Plan (White paper No 13 2020-2021) the government announced that the public sector must stipulate climate and environment requirements and apply established nutrition criteria for their own purchases of food and catering services.

The interagency 2030 Climate Cure report looked at the potential for reducing emissions in the agriculture industry. The report showed that emissions can be significantly reduced by following the Norwegian Directorate of Health's dietary guidelines and by reducing food waste. The Directorate of Health recommends eating no more than 500 grams per week of red meat and processed products containing red meat. On average, people in Norway eat the equivalent of the upper limit. However, there are large differences between the various population groups. If we achieve our objective of making all population groups follow the Norwegian Directorate of Health's dietary recommendations, we will reduce the demand for red meat and processed meat products. The agriculture industry will adapt to the demand and thus produce less of these products. This will in turn reduce greenhouse gas emissions from agriculture. If we achieve the objective of reducing food waste, the agriculture industry will not have to produce as much food and emissions will be reduced. Estimations show that by switching from red meat to plant-based food and fish ("Action Plan for a Healthier Diet") and reducing food waste, emissions from the agriculture sector will be reduced by a total of 4.4 million tonnes CO₂ equivalents in the period leading up to 2030. This corresponds to about 11 per cent of the total potential outlined in Climate Cure. The food industry encompasses production and processing of food, beverages and animal food from raw materials from the agriculture, forestry and fishing industries. In total, the food industry makes up a significant share of the industry sector in Norway, accounting for approximately 1.4 per cent of GDP and employing 50,000 people.

There is broad support among public buyers for more use of split contracts and for having contracts with several small and medium-size suppliers and manufacturers who can deliver food from local businesses. Together with Oslo Met, DFØ takes part in a four-year research project for sustainable procurement ("Kjøp bærekraftig").⁹⁹ The project looks at practical procurement solutions that will help enhance competition and sustainability and increase the number of small-scale suppliers. The project will also examine methods for requesting quality and following up contracts. Initiated by the Ministry of Agriculture and Food, Gylne Måltidsøyeblikk (Moments of Joy and Delight) is a long-term project which aims to promote enjoyment of food, health and better food for the elderly. The "Matgledekorps" (Foodie Group) initiative is an important element of this. The initiative inspires to enhance the focus on, understanding of and desire to create a positive food and meal experience for the elderly living in care homes and for those who have meals delivered to their homes. It includes procurement of high-quality food, using traditional produce and dishes, reducing food waste and encouraging users to get involved. To make sure the end consumers enjoy their food, it is important to link the procurement process to professional food expertise, consumer requests for food of a certain quality, the health of the elderly and the chefs' awareness of what food may and should be purchased. The joy of food project and the report from Grøntutvalget (a committee for promoting consumption of fruit and vegetables) on innovation, growth and a higher share of Norwegian produce in the fruit and vegetables sector, both¹⁰⁰ point out that the public sector shall take a lead role.

The Directorate of Health recently issued nutritional guidelines for procurement. The guidelines contain two types of requirements; how much of various nutrients the food contains; the Keyhole (a joint Nordic labelling scheme); and how to incorporate the Health Directorate guidelines, recommendations and advice; as well as an allergy-friendly alternative. The primary dietary guidelines that also have a positive impact on the environment include eating a maximum of 500 grammes of red and processed meat per week, consuming at least five portions of fruit, vegetables or berries a day as well as five servings of whole grain products a day. Based on these guidelines, Climate Cure 2030 calculated the climate benefit of a switch from red meat to more plant-based food and fish. The calculations assume that people follow the dietary recommendations to a greater extent. Currently, only 30 per cent of the population adheres to the dietary recommendations. Matvett/NORSUS/KuttMatsvinn (the Norwegian model for food waste reduction/the Norwegian Institute for Sustainability Research/Stop Food Waste) have worked systematically over several years to establish tools to identify food waste. The tools are applied as part of the industry agreement

⁹⁹ <https://www.oslomet.no/om/nyheter/skal-gjoere-offentlig-innkjoep-av-mat-mer-baerekraftig>

¹⁰⁰ Grøntsektoren mot 2035. Sammen for økt konkurransekraft, økt etterspørsel og mer norsk (The green sector until 2035. Joining forces for increased competitiveness, increased demand and more Norwegian fruit and vegetables). Report from "Rådgivende utvalg for innovasjon, vekst og økt norskandel i grøntsektoren" (Advisory committee on innovation, growth and increasing the proportion of Norwegian fruit and vegetables in the green sector) <https://www.landbruksdirektoratet.no/no/produksjon-og-marked/frukt-og-gront/marked-og-pris/gr%C3%B8ntsektoren-mot-2035>

on food waste reduction. DFØ would like to establish supplementary tools that connect healthy food initiatives, climate-smart menus, high quality and initiatives to reduce food waste. With assistance from Cicero, one DFØ initiative involves developing an impact calculator which will show the climate benefit of a more climate friendly diet in procurement. The tools will cover both catering services and undertakings with their own kitchens. The purpose of the climate calculator is to make it easier for buyers to choose food with a lower climate footprint. In particular, DFØ is looking into how we can facilitate the participation of small and medium size companies, including local food and catering service businesses in public tenders.

DFØ has prepared a guideline containing criteria for how buyers can help prevent deforestation of tropical forest and peat bogs in favour of palm oil used for food products and in concentrated soy cattle foods. Other raw materials such as coffee, cocoa beans and beef also pose a major risk of tropical deforestation. As part of its effort to promote a climate-smart menu, DFØ will continue its work on the deforestation risk guideline, and also assess whether further guidance is required.

Food waste

According to the Food and Agriculture Organization of the United Nations (FAO), a third of all food produced for human consumption in the world is thrown away.¹⁰¹ In many cases initiatives to reduce food waste are both easy to implement and profitable. Norway is committed to reducing food waste by 50 per cent by 2030, in line with UN sustainable development goal 12.3. On 23 June 2017, five ministries and 12 food industry organisations signed an agreement to reduce food waste across the food value chain. The objective is to reduce food waste by 50 per cent by 2030, with individual targets of achieving a 15 per cent reduction by 2020 and a 30 per cent reduction by 2025. The reduction objective applies to the entire food value chain, as well as to consumers. The parties representing the food industry must report their introduced measures and food waste reductions to the authorities. Some contracting authorities have also started to report food waste in their organisations. The Climate Plan stipulates that the government shall lead by example and make targeted efforts to reduce food waste in public procurement in order to help achieve the industry agreement objective to reduce food waste.¹⁰²

Furthermore, the government will combine its efforts to reduce food waste with efforts to make use of the entire harvested/cultivated food resource, including increased use of residual raw materials. In a recent survey report on food loss in the food industry, NORSUS/Matvett established that food loss in the grocery, wholesale and food industries (excluding the seafood industry) was reduced by 16,400 tonnes during the period 2015-2019, corresponding to a

reduction of 4.2 kg/inhabitant or 12 per cent. This is in addition to the 14 per cent reduction achieved by the industry as part of its participation in the ForMat food waste project from 2010 to 2015. Deloitte (2020) has identified the food industry as a key player in a circular economy due to its significant use of resources that generate large volumes of waste during production and distribution as well as from end users. The industry has a potential for reducing its material intensity and waste volumes by optimising the industry's production processes. Furthermore, the industry has opportunities to make use of residual raw materials, waste and by-products from the entire food value chain as input material in its production. There is also presumably a potential for the industry to increase its use of renewable fuels for transport activities in its own sector.

Environmental benefits can be achieved by reducing food waste and by developing and using more products produced in Norway. This will reduce the strain on the water supply, resources and the environment. Efforts are ongoing to facilitate an increase in the use of Norwegian animal feed resources, by for instance replacing more soy in agriculture with protein produced in Norway. We know that a systematic mapping and reduction of food waste will reduce greenhouse gas emissions from agriculture and help minimise the use of resources, which will be of major benefit for society. The industry agreement on food waste reduction has provided us with extensive experience and information about how to identify food waste and opportunities to prevent it. The Criteria Wizard for Sustainable Public Procurement contains requirements and criteria for reducing food waste for both catering services and product procurement. For catering services, buyers should request that suppliers implement procedures for identifying, preventing and reducing food waste. Suppliers should also be required to sign an accession agreement to the industry agreement on food waste reduction. Most suppliers have signed an accession agreement to the industry agreement or are willing to sign such an agreement. The term catering services also includes food for meetings, courses and conferences. DFØ will promote the application of the food waste requirements also for such procurements, and for them to be laid down in rental contracts for public buildings.

Contracting authorities with their own kitchen buy food and drink products. DFØ has prepared a contract term which will ensure that food and beverage suppliers are parties to the industry agreement and that collaboration is encouraged. However, the public sector kitchens are responsible for identifying and implementing their own measures for the kitchen and for the serving of food. A systematic mapping and adapted measures will have great impact, also for institutions that already have a focus on food waste and cost-efficiency.

¹⁰¹ FAO (2011) <http://www.fao.org/food-loss-and-food-waste/flw-data>

¹⁰² White paper No 13 to the Norwegian Parliament (2020-2021) Climate Plan 2021-2030.

The contracting authorities that have reached a more advanced level, have allocated their own internal resources for the project, for instance in Fredrikstad and Bærum municipalities. Once food loss procedures are in place, the work will not be more time-consuming, and it will save money. We have also seen that suppliers can play a major role in this regard, both as collaboration partners and in teaching courses. The food industry project KuttMatsvinn2020 provided support for municipalities that were committed to reducing food waste and it also received reports from the local authorities. In total, the KuttMatsvinn2020 participants reduced their food wastage by 15 per cent, or 390 tonnes, corresponding to NOK 24 million and 1400 tonnes CO₂-equivalents. Key market players and procurement chains are now cooperating with the food industry organisation for the prevention of food loss, Matvett, to continue their efforts after the KuttMatsvinn project. They will also follow up restaurants, cafes, pubs etc. using a well-equipped toolbox to reduce food loss during the period leading up to 2030. They are encouraging more contracting authorities to join them.

Prevention of food waste in Bærum municipality.

In February 2018, Bærum municipality adopted a new strategy and action plan which will ensure that the local authority contributes to national and international climate commitments. The municipality's food waste reduction project includes four of eleven residential care and rehabilitation centres and is the first major municipal project focusing on food waste. The stated aim of the project is to achieve a total food loss reduction of 20 per cent during the two-year project period. The initial part of the project identified food loss and established efficient methods for measuring and weighing – to gain an overview of the current situation, but also to measure progress. The project will then look into why food waste occurs and finally, appropriate actions will be taken, such as reducing portion sizes and ordering fewer portions for each ward. A 20 per cent food waste reduction in the municipality, corresponding to 7.8 tonnes of food, is estimated to reduce emissions by 24.2 tonnes of CO₂ equivalents.



Photo: Matvett/KuttMatsvinnet 2020

4.4. Plastic products and products containing plastics

4.4.1. Contracting authority priorities relating to plastic products and products containing plastics.

Plastics is high on the agenda for both Norway and the EU. Norway presented a strategy against marine plastic litter and dispersion of micro-plastics ("the Plastics Strategy") as part of the White paper "Waste as a resource – regarding waste policy and the circular economy."¹⁰³ The strategy is currently under revision. On 16 January 2018, the EU presented a plastics strategy which aims to promote a more circular economy and prevent plastic litter. The EU strategy comprises several initiatives, e.g. that packaging and products must be designed for a circular economy, more recovered raw materials must be used for new products and the use of disposable plastic products must be reduced. In 2019, the EU adopted Directive (EU) 2019/904 on certain plastic products. The directive aims to reduce marine litter by banning some single-use plastic products, reducing consumption of others and implementing some function and labelling requirements. The directive will also ensure that plastic fishing gear used in the fishing and aquaculture industry is handled appropriately. In Norway, regulations that ban some plastic products will enter into force on 3 July 2021. It is illegal to bring a number of products into circulation if they are made entirely or partly from plastic and intended for single use. Products that are banned include cotton swabs, cutlery, plates, straws, stirrers, balloon sticks and polystyrene take-away food containers and beakers (made of expanded polystyrene, EPS).¹⁰⁴

¹⁰³ White paper No 45 to the Norwegian Parliament (2016-2017) Waste as a resource - waste policy and the circular economy.

¹⁰⁴ For a complete list, see the regulations: <https://lovdata.no/dokument/LTI/forskrift/2020-12-18-3200> The ban does not include cotton swabs and straws used in medical equipment.

Recommended key priorities for contracting authorities relating to plastic products and products containing plastics

Based on the policy guidelines above, DFØ and the Norwegian Environment Agency recommend the following key priorities for procurement of plastics by contracting authorities.

Recommended key priorities for contracting authorities relating to plastic products and products containing plastics

With regard to plastics, contracting authorities shall conduct procurements that

- Reduce the use of unnecessary plastic and request circular plastic products, reusable products, products containing recycled plastic and plastic that can be recovered
- Contribute to avoiding use and dispersion of micro-plastics and reduce marine litter both nationally and internationally

Type of procurement

Specific measures for contracting authorities

Schools and preschools/ kindergartens

- Special focus on there being no substances hazardous to human health and the environment in buildings, playgrounds (including fall protection surfaces), furniture and textiles in schools and preschools/kindergartens. Consider reuse, assess alternatives to plastics and help increase the use of recovered plastics, etc.

Products containing plastics including disposable plastic products for serving food and beverages, furniture, packaging and accessories.

- Reduce the use of single-use products, particularly products for serving food and beverages and other accessories.
- Replace single-use plastic products with reusable solutions whenever possible.
- Request products containing recovered plastic and/or products that can be recovered.
- Reduce unnecessary use of packaging and ensure that used packaging is segregated and recovered.

Artificial turf

- Assess the need for artificial turf and what type of artificial turf to use, by e.g. requesting environmentally friendly alternatives with an equally high quality for players.
- If granulated rubber is used, measures must be planned that will prevent granules spreading into the environment (cf. new regulations).¹⁰⁵ Proposed EU regulations relating to micro-plastics in a number of products may also reduce the use of granulated rubber.¹⁰⁶
- Have a plan for responsible disposal and preferably for recovering the material in the artificial turf in accordance with the Pollution Control Act. Tenders shall contain details on costs as well as disposal and recovery opportunities, and this should be a significant factor in the procurement.

¹⁰⁵ In the spring of 2021, new regulations were adopted, stipulating requirements for the use of granulated rubber that may help limit the spread of granulated rubber and other loose plastic-containing fill material from sports fields. Requirements have been introduced for physical barriers around sports fields, for snow clearing and for treating snow containing granulated material. Measures have also been introduced to prevent players and referees from spreading such material when leaving the sports field. Moreover, sport field owners must also consider using replacement material and do so whenever possible. Read the full regulations here: [kap-23a-i-forurensningsforskriften.pdf \(regjeringen.no\)](https://www.regjeringen.no/en/forurensningsforskriften.pdf)

¹⁰⁶ Microplastics - ECHA ([europa.eu](https://echa.europa.eu))

4.4.2. More on the key priorities

DFØ has issued a guideline "Hvordan redusere plast i anskaffelser – og bruke plast smartere" (How to reduce plastics in procurements – and smarter use of plastics). The guideline provides advice for contracting authorities that aim to reduce or stop using plastics. For the most part, planning responsible use of plastics takes place before the procurement itself, often when an undertaking assesses the need for plastics and how this best can be met. Public contracting authorities are advised to establish action plans for their use of plastics. The Cities of Oslo and Fredrikstad have introduced action plans for plastic that can serve as inspiration to others. Furthermore, buyers should have a plan for how to dispose of the products that they buy. In this respect it is important to plan to reuse products internally, or to repair, sell or recover them in the future. It is also important to reduce purchasing of disposable products and use reusable products whenever possible, for example in canteens, kitchenettes, coffee vending machines and water coolers.

Also within plastics, there is potential for green innovation. With funding from Klimasats, Sandøy municipality has challenged a supplier to produce waste containers made of fossil-free plastics. The City of Oslo has requested waste disposal bags made partly from recovered plastic. The cities of Fredrikstad and Bergen have tested various solutions for artificial turf without granulated materials. Trøndelag county authority and Bergen have requested that artificial turf material be recovered at the end of its useful life. FutureBuilt is a collaboration between the construction industry and several local authorities. The collaboration has received funding from Klimasats for its project "Fossilfrie bygg – plast i byggsektoren" (fossil-free buildings – plastics in the construction sector) which aims to promote development of new fossil-free plastic products and implement pilot projects for fossil-free buildings.



Photo: Elisabeth Sandnes

In the autumn of 2020, **Trøndelag county authority** invited market players to a planning and design contest for the development of circular solutions for the disposal of artificial turf. There are currently few or no fully Norwegian circular solutions for disposal of artificial turf. Moreover, it has emerged that several contracting authorities do not have satisfactory routines for disposing of artificial turf in a responsible manner. A Norwegian circular solution for disposal of artificial turf will help improve resource efficiency and presents an opportunity for developing a new green business activity. The contest is organised by Trøndelag county authority but is being closely observed by 18 other contracting authorities and market players from Bodø in the north to Sandnes in the south. They all aim to challenge the market to develop new solutions.

4.5. Priorities for contracting authorities relating to electrical and electronic equipment (EEE) and batteries.

4.5.1. EEE and information and communication technology (ICT)

Waste of electrical and electronic equipment (WEEE products) is one of the fastest growing waste streams in the EU. The IT sector alone emits between 2 and 3.7 per cent of global greenhouse gas emissions. Most emissions are related to the extraction of raw materials and production of equipment such as personal computers and mobile telephones, whereas data processing centres are presumed to have the fastest growing climate footprint in the category, due to their high energy consumption. This is caused by the increasing use of cloud services and other web-based services.¹⁰⁷

¹⁰⁷ <https://ec.europa.eu/jrc/en/publication/2018-best-practice-guidelines-eu-code-conduct-data-centre-energy-efficiency-version-910>; https://theshiftproject.org/wp-content/uploads/2019/03/Lean-ICT-Report_The-Shift-Project_2019.pdf

Current regulations and guidelines relating to chemicals¹⁰⁸ and waste management¹⁰⁹ contribute to reducing EEE products' negative impact on human health and the environment. The EU has identified EEE as one of the key product sectors in its circular economy work. The EU is about to launch several initiatives directed at EEE including new requirements in the eco-design directive and amended energy labelling requirements that aim to expand product life and increase material recovery.¹¹⁰

About 50-90 per cent of life cycle greenhouse gas emissions of typical EEE and ICT products such as personal computers, tablets and mobile telephones take place in the production phase and result from the use of materials, energy and chemicals.¹¹¹ The best thing that can be done to achieve the most sustainable consumption of electronic products, is to use the equipment for as long as possible. Contracting authorities should adapt their procurement practices to minimise a negative environmental impact by promoting long product life, repairs, re-use and material recovery.



Sør-Varanger municipality buys second-hand personal computers

In the municipality of Sør-Varanger, local authorities have decided to purchase used personal computers for its administration and pupils. They buy second-hand top-of-the-range high-quality models, costing about a third of the price of a new computer. For such procurements, it is essential to formulate high-performance requirements (memory and storage capacity). One can also request no visible signs of wear and tear. Sør-Varanger is currently purchasing 90 per cent of its IT equipment second-hand and will repair its equipment whenever possible. The local authority will save approximately NOK 680,000 and 33 tonnes CO₂.



Photo: Colourbox

¹⁰⁸ Produktforskriften" (the Product Regulations), Chapter 2a (covers the RoHS directive: Directive 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment) and Chapter 4 of the Product Regulations (covers the POPs regulations): Regulation (EC) No 850/2004 on persistent organic pollutants; The REACH regulations (covers the REACH regulations: Regulation (EC) No 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals, The EU list of priority substances (Chemical substances/substance groups which are thought to pose a serious risk to human health and the environment and that are comprised by a national objective to continuously reduce use, emissions and discharges, with the intention of stopping such emissions and discharges)

¹⁰⁹ Chapter 1 of the Waste Regulations pertaining to discarded electrical and electronic products (covers the WEEE Directive (2012/19/EU))

¹¹⁰ European Commission (2020) Circular Economy Action Plan. For a cleaner and more competitive Europe. https://ec.europa.eu/environment/circular-economy/pdf/new_circular_economy_action_plan.pdf

¹¹¹ See e.g. <https://www.fujitsu.com/global/about/environment/society/lca/>

4.5.2. Batteries

Current regulations relating to chemicals¹¹² and waste management¹¹³ help reduce batteries' negative impact on human health and the environment. On 10 December 2020, the EU Commission proposed new regulations relating to batteries. The regulations will replace the Battery Directive of 2006 (Directive 2006/66/EC). The regulations will be reviewed by the Council and the European Parliament in 2021, and the Commission would like to see the regulations enter into force in the EU as of 1 January 2022. The legislative act will require amendments in Norwegian regulations, and the Norwegian Environment Agency will present the Commission's proposal for consultation.

The draft regulation will help to emphasise that social responsibility and climate and environment considerations during production, use and disposal of batteries are closely linked to the ambitions for climate friendly transport. The draft battery regulations impose a number of product requirements on batteries that will be placed on the market in the EEA:

- A due diligence check of the battery supply chain shall be performed and documented before the batteries can be sold in the EU.
- Documentation of the climate footprint in the production phase for industrial batteries and batteries for electric vehicles. Percentage of material-recovered minerals (as of 2030 it has been proposed that batteries must contain the following percentages of recovered minerals: 12 per cent cobalt, 85 per cent lead, 4 per cent lithium and 4 per nickel). Restrictions relating to hazardous substances.
- Output and battery life, labelling and safety.



Ståle Ottesen and Ida Christine Løland of Kultur og idrettsbygg, City of Oslo. Facsimile from KlimaOslo.

Old electric car batteries used to power Bislett Stadium

Bislett Stadium is the first sports stadium in Norway to store excess energy from solar panels in discarded electric car batteries. This saves money for the stadium and extends the life cycle of the batteries. The contracting authority for this procurement is Kultur- og idrettsbygg Oslo KF (the Municipal Undertaking for Culture and Sports Facilities, Oslo).

¹¹² Sections 2-16 – 2-18a of the Products Regulations pertaining to batteries

¹¹³ Chapter 3 of the Waste Regulations pertaining to discarded batteries (covers the WEEE directive (2006/66/EU))

Batteries play a key role in the transition to a low emission society. Batteries are used in everything from mobile telephones to buses. The EU's Green Deal points to the battery industry as one of the industries with the greatest potential for circular solutions.¹¹⁴ The production of batteries for electric cars and other large machines is energy intensive. Greenhouse gas emissions can therefore be extensive, depending on the type of energy that is used. Due to there being no direct emissions during use, the total life cycle emissions are still lower for electric vehicles than for fossil-fuel vehicles. However, there is potential for reducing emissions significantly by for instance using renewable energy for the production of batteries.¹¹⁵ Some manufacturers are already using renewable sources in their production. Norway was one of the first countries to introduce policies for large-scale purchasing of electric cars. The 2018-2029 National Transport Plan has set a goal for 100 per cent of new cars, light vans and city buses to be electric by 2025. The promotion of electrification means that Norway will be one of the first countries in Europe to search for markets for reuse and material recovery of batteries. Norwegian businesses are already working on this, and there is a potential for Norway to develop a competitive advantage in this field.

Public procurement should play a key role in promoting reuse and material recovery of batteries and could help accelerate the changes that will come due to amendments in legislation based on the EU battery regulations. To achieve a sustainable battery life cycle it is necessary to direct the attention to social responsibility and a circular economy in public procurement.

Strict requirements for compliance with human rights, labour rights and environment obligations in battery production

At the end of 2020/beginning of 2021, local authorities in Oslo, Bergen and Stavanger will issue invitations to tender for the purchase or leasing of cars. The authorities have set strict requirements for suppliers to ensure transparency in their supply chains. The proportion of electric cars in use by the municipalities is already high. Battery packs use minerals that are often extracted under hazardous and undignified working conditions, often with no protection for the workers.

Some of the problems that must be addressed through transparency in the supply chains include: the extraction of cobalt under sometimes undignified and mortally hazardous conditions, mainly from mines in the Congo the extraction of copper results in the release of toxic sulphides to the environment; extraction of lithium causes major disruptions to the landscape, including wetlands drying out, a decline in the groundwater table and associated damage; mining waste is dumped in nature.

Local authorities expect suppliers to comply with national and international acts and regulations, including the United Nations universal human rights, the UN Convention on the Rights of the Child and the UN Convention against Corruption as well as the ILO Core Conventions on forced labour, child labour, discrimination, freedom to organise and freedom of association.

Any requirements that are not fulfilled at the start of the contract, will become applicable during the contract period. Suppliers must continually improve their practices and be able to document it. Any companies in an assessed supplier chain that fail to meet the contract obligations will be subject to sanctions or be replaced.

¹¹⁴ https://ec.europa.eu/environment/circular-economy/pdf/new_circular_economy_action_plan.pdf

¹¹⁵ http://www3.weforum.org/docs/WEF_A_Vision_for_a_Sustainable_Battery_Value_Chain_in_2030_Report.pdf

Recommended key priorities for contracting authorities procuring EEE and batteries

Based on the policy guidelines above, DFØ and the Norwegian Environment Agency recommend the following key priorities for procurement of EEE and batteries

Recommended key priorities for contracting authorities purchasing electronic equipment and batteries

When purchasing ICT/EEE and batteries, contracting authorities shall ensure that their procurements contribute to lower consumption, extend product life and reduce the use of substances hazardous to human health and the environment.

Type of procurement	Specific measures for contracting authorities
EEE	<ul style="list-style-type: none"> • Whenever possible, delay replacements of EEE and ICT equipment. • At the end of their useful life, the products are delivered to a return scheme for waste electrical and electronic equipment (WEEE), ensuring that as much as possible is prepared for re-use or material recovery. • Consider leasing or buying second hand instead of buying new EEE. If buying new products, choose products with long lifespans. • Choose products with low environmental impact, including a low content of substances that are hazardous to human health and the environment, and that are energy efficient with long product lives. • Make procurements that protect labour rights • Impose requirements for repairability and battery life • Purchase products with sufficient storage and memory capacity to prevent them from becoming outdated • Remember eco-labelling scheme requirements such as Blaue Angel, EPEAT, Svanen and TCO Certified
Cloud services	<ul style="list-style-type: none"> • Requirements relating to the percentage of renewable energy in the portfolio of data processing centres used to supply the cloud service. • Requirements relating to the use of coolants in the portfolio of data processing centres used to supply the cloud service.
Batteries	<ul style="list-style-type: none"> • Request that sustainable batteries are used and accelerate the changes that will come due to the amendments in legislation based on the EU battery regulations. • Promote reuse and material recovery of batteries

4.6. Priorities for contracting authorities in the furniture and textile industries

4.6.1. Furniture

Procurement of furniture for the public sector, such as offices, institutions, schools and preschools/kindergartens, can contribute to sustainable consumption and a more circular economy locally, nationally and globally.

Every year around 10 million tonnes of furniture is discarded in the EU. It is estimated that only 10 per cent of this is recycled.¹¹⁶ A 2017 study has shown that it is possible to realise 157 000 new jobs in the EU and to save approximately 6 million tonnes of CO₂ equivalents by promoting furniture repair and refurbishment services.¹¹⁷ Although Norway is not included in these statistics, they illustrate the potential benefit of prioritising repair and refurbishment instead of disposal and new purchases.

¹¹⁶ https://ec.europa.eu/environment/circular-economy/pdf/sustainable_products_circular_economy.pdf

¹¹⁷ <https://eeb.org/cutting-waste-could-boost-furniture-industry/>

Furniture production consists of energy and material intensive processes, and 80-90 per cent of the harmful environmental impact related to a piece of furniture's life cycle takes place in the production phase due to the use of materials, energy and chemicals.¹¹⁸ The furniture industry is a relatively small industry in Norway.

Deloitte's knowledge base for its circular economy strategy (2020) shows that the furniture industry makes up 0.3 per cent of GDP and provided employment for about 20,000 people in 2019. They produce a number of brands with a strong international presence and the industry aims to double its share of Norwegian exports by 2030. The industry has a major potential for reducing its material intensity and increasing the use of circular materials. It may also facilitate a major reduction in the amount of generated waste and increase material recovery in its own business and with the end user. Such changes may for instance take place by transitioning to new business models based on increased product rental, repair and remanufacturing. Such a transition may be important to maintain the industry's competitive advantage in the international market.¹¹⁹

To achieve sustainable use of furniture in the public sector, we need to reduce the adverse impact on the climate and the environment associated with meeting the long-term

demand for furniture. This means we need to ensure a long lifespan for furniture by maintaining its value for as long as possible. We recommend that public contracting authorities adapt their furniture purchases to promote a circular economy, including a long product life, re-use and material recovery. This will help minimise the adverse effects on the climate and environment throughout the furniture's life cycle. They should also avoid purchasing products containing or consisting of endangered species (including wood).

Asker municipality's furniture reuse project

In connection with the merger between Røyken and Hurum municipalities, a digital database was used to provide an overview of the existing stock of furniture and its condition. The database has been used to ensure that as much as possible of the furniture is reused. A re-use percentage of 80 per cent would save NOK 13.3 million compared with buying new furniture, and 130 tonnes of CO2 equivalents. The project has also contributed to job creation through an associated repair and refurbishment project organised by NAV.



Photo: Asker municipality

¹¹⁸ https://ec.europa.eu/environment/gpp/pdf/toolkit/furniture_GPP_background_report.pdf

¹¹⁹ Deloitte (17 June 2020) Kunnskapsgrunnlag for nasjonal strategi for sirkulær økonomi Delutredning 1 – Potensial for økt sirkularitet. (Knowledge base for a national circular economy strategy. Sub-study 1 – increased circularity potential).

4.6.2. Textiles

The textile industry consumes large quantities of primary raw materials, water, land areas and chemicals and is responsible for approx. 8 per cent of the world's total greenhouse gas emissions according to an analysis from 2018, referred to by the UN.¹²⁰ In terms of the environmental impact from our consumption, the textile industry has the fourth largest footprint after housing, transport and food. Fast fashion and linear consumption systems contribute to an increasing number of new products making the environmental impact from the textile sector higher than it needs to be. In only a few decades, the number of clothes purchased in the EU has increased by 40 per cent. This is largely due to clothes becoming cheaper. It is estimated that only 1 per cent of all textiles in the world are recycled into new textiles, i.e. fibre to fibre recycling.¹²¹ Of all used textiles that were collected in Norway in 2018, 72 per cent was reused and 21 per cent was recovered and mainly used for industrial cloths, furniture coverings, insulation and non-woven blankets.¹²² More than half of all used textiles are presumably disposed of with household waste and subsequently incinerated. Discussions are currently ongoing in the EU on how to establish more sustainable business models for textiles. In 2021, the EU will launch a strategy for ensuring that textiles are included in the circular economy.

The public sector is a major joint purchaser of work clothes and other textile products. The sector buys textiles directly for its functions in society e.g. health, police, national defence and fire-fighting services, but also indirectly as part of building and construction turn-key contracts. This means there is a major potential for increasing demand for circular and environmentally friendly solutions. This may entail purchasing high-quality long-life products, purchasing and supplying used products, requesting textiles containing recovered raw materials and rental services. In 2021, DFØ will prepare a guideline and/or a set of criteria for procurement of textiles.

Recommended key priorities for contracting authorities in the furniture and textile industries

Based on the policy guidelines above, DFØ and the Norwegian Environment Agency recommend the following key priorities for furniture and textile procurement by contracting authorities

Recommended key priorities for contracting authorities in the furniture and textile industries

Contracting authorities in the furniture and textile industries shall conduct procurements that contribute to a long product life, avoid the use of environmental toxins and illegal import of timber or timber products derived from such timber unless it can be documented that the timber has been legally produced and logged in the country of origin

Type of procurement

Specific contracting authority measures

Furniture

- Implement procedures and policies for ensuring that existing equipment lasts for a long time
- Improve existing equipment by purchasing repair and refurbishment services
- Promote reuse and long product life when more products are required
- Deliver existing furniture that is no longer needed in the undertaking to reuse and material recovery services
- Request furniture as a service: rent new or used equipment
- Avoid furniture from timber that cannot be documented to have been legally produced and logged in the country of origin

Textiles

- Promote durability and long product life for textiles
- Impose requirements for low harmful environmental impact, including water and energy consumption, use of chemicals and climate footprint.
- Request circular business models, including rental services.

¹²⁰ MANGLER

¹²¹ <https://www.ellenmacarthurfoundation.org/publications/a-new-textiles-economy-redesigning-fashions-future>

¹²² PlanMiljø og Østfoldforskning (2020) Kartlegging av brukte tekstiler og tekstilavfall i Norge (Mapping of used textiles and textile waste in Norway)

Appendix 1: List of relevant pages with guidelines

General guideline on green and innovative procurement

Samfunnsansvar i offentlige anskaffingar | Anskaffelser.no
Klima og miljø i offentlige anskaffingar | Anskaffelser.no
Innovative anskaffelser | Anskaffelser.no
Sirkulære anskaffelser | Anskaffelser.no

Transport

Offentlige anskaffelser av transport | Anskaffelser.no
Velg produktgruppe | Kriterieveviseren (difi.no)
Drivstoffmatrise for tunge kjøretøy - til revisjon | Anskaffelser.no
Skipsfart | Anskaffelser.no

BAE

Bygg, anlegg og eiendom (BAE) | Anskaffelser.no
Velg produktgruppe | Kriterieveviseren (difi.no)

Food and food waste

Mat og måltidstenester | Anskaffelser.no
Velg produktgruppe | Kriterieveviseren (difi.no)

Plastic products

Hvordan redusere plast i anskaffelser - og bruke plast smartere | Anskaffelser.no

ICT/electronics

Velg produktgruppe | Kriterieveviseren (difi.no)
Innkjøp av brukt PC-utstyr i Sør-Varanger kommune | Anskaffelser.no

Batteries

Bærekraftige batterier | Anskaffelser.no

Furniture

Møbler | Anskaffelser.no
Velg produktområde | Kriterieveviseren (difi.no)

Textiles – coming in 2021

List of references

National political documents:

White paper No 20 to the Norwegian Parliament (2020-2021): National Transport Plan 2021- 2030

White paper No 13 to the Norwegian Parliament (2020-2021): 2021-2030 Climate Plan

White paper No 40 to the Norwegian Parliament (2020-2021): Meaningful targets

White paper No 22 to the Norwegian Parliament (2018-2019): Smarter purchasing – efficient and professional public procurements.

White paper No 30 to the Norwegian Parliament (2019-2020): An innovative public sector – culture, management and expertise

White paper No 33 to the Norwegian Parliament (2016-2017): National Transport Plan (NTP) 2018-2029. Presented in 2017.

White paper No 10 to the Norwegian Parliament (2020-2021): Greener and smarter – the maritime industry of the future.

White paper No 27 to the Norwegian Parliament (2016-2017): Industry – greener, smarter and more innovative.

White paper No 41 to the Norwegian Parliament (2016-2017): Norway's Climate Strategy for 2030: a transformational approach.

White paper No 45 to the Norwegian Parliament (2016-2017): Waste as a resource – Norway's waste policy and a circular economy.

The ministries (2021:) National strategy for a green circular economy.

The ministries (2017): Better growth, lower emissions – the Norwegian Government's strategy for green competitiveness.

The Granavolden platform (2019): A political government platform formed by the Conservative Party, the Progress Party, the Liberal Party and the Christian Democratic Party

The Ministry of Local Government and Modernisation (2019) National expectations regarding regional and municipal planning 2019-2023

The Ministry of Petroleum and Energy and the Ministry of Climate and the Environment (2020) The Norwegian government's hydrogen strategy.

The Ministry of Climate and the Environment (2021) Handlingsplan for ein giftfri kvardag (Action plan for a toxin-free daily life)

The Ministry of Climate and the Environment, the Office of the Prime Minister, the Ministry of Foreign Affairs (2021) Noregs plaststrategi (Norway's strategy on plastic)

The Ministry of Transport (2021) Handlingsplan for fossilfrie anleggsplasser innen transportsektoren (Action plan for fossil-free construction sites in the transport sector).

The ministries (2019) Regjeringens handlingsplan for grønn skipsfart. (The government action plan for a green shipping industry).

The Ministry of Transport(2017) Handlingsplan for kollektivtransporten (Action plan for public transport)

EU documents

European Commission (2017) Public procurement for a circular economy. Good practice and guidance

European Commission (2020) Circular Economy Action Plan. For a cleaner and more competitive Europe.

EU Council Conclusion Communication on Deforestation

Summary for Policymakers – Special Report on Climate Change and Land (ipcc.ch)

Knowledge base:

Asplan Viak (2019) Project Report. The climate footprint of public procurement.

Deloitte (2020) for the Ministry of Climate and the Environment, Kunnskapsgrunnlag for nasjonal strategi for sirkulær økonomi. Delutredning 1 – Potensial for økt sirkularitet. (Knowledge base for a national circular economy strategy. Sub-study 1 – increased circularity potential).

Ellen MacArthur Foundation et al. (2015): Delivering the circular economy: A toolkit for policymakers.

EY (November 2019): Tempo på grønn omstilling i norsk næringsliv. Utredning av tempoet på grønn omstilling for 11 bransjer i norsk næringsliv (The pace of the green transition in Norwegian industry. An assessment of the pace of the green transition for 11 Norwegian industries).

FAO (2011) <http://www.fao.org/food-loss-and-food-waste/flw-data>

Grøntsektoren mot 2035. Sammen for økt konkurransekraft, økt etterspørsel og mer norsk (The green sector until 2035. Joining forces for increased competitiveness, increased demand and more Norwegian fruit and vegetables). Report from the Advisory committee on innovation, growth and increasing the proportion of Norwegian fruit and vegetables in the green sector

Inventura for the Norwegian Digitalisation Agency/DFØ (14 August 2020): Circular models in public procurement.

The Norwegian Environment Agency, the Norwegian Water Resources and Energy Directorate (NVE), Enova, the Norwegian Coastal Administration, the Norwegian Agriculture Agency and the Norwegian Public Roads Administration (2020): Climate Cure 2030.

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Menon (2016): Report on incentives/schemes for risk relief in innovative public procurement. Report 12/2016

Menon Economics for Energy Norway (2020) Norske muligheter i grønne elektriske verdikjeder (Norwegian opportunities in green electric value chains).

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Oslo Economics, CICERO and Inventura. Prepared for Difi and the Norwegian Environment Agency (2017) Gevinstanalyser av grønne anskaffelser (Benefit analysis of green procurement)

Oslo Economics and Inventura. Prepared for the Ministry of Trade, Industry and Fisheries (2018) Virkninger av nye samfunnshensyn i offentlige anskaffelser (Impact of new social considerations in public procurement)

PlanMiljø and Østfoldforskning (2020) Kartlegging av brukte tekstiler og tekstilavfall i Norge (Mapping of used textiles and textile waste in Norway)

Rambøll and Difi (2018): Maturity in public procurement Main survey.

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