Appendix to White Paper on Sustainability:

Sustainability Objectives for Operational Management

Real Estate

1. Paris-proof campuses
2. Fossil-free campuses
3. Optimal sustainable energy generation on campus
4. The campuses are circular, nature inclusive and climate proof

ICT

5. Twenty-five per cent reduction of ecological footprint by 2026

Food

6. We offer food that fits with our knowledge of planetary boundaries
7. We offer food that is produced responsibly

Waste and procurement

8. Our use of raw materials fits with our knowledge of planetary boundaries

Mobility

9. Twenty-five per cent reduction of ecological footprint of all travel in 2026

Real Estate

1. Paris-proof campuses

Reason for this objective

To achieve the Paris climate goals everyone has to play their part. The Dutch Green Building Council has calculated which changes need to take place in the Dutch building stock in order to become Paris-proof, thus providing practical guides for this challenge. For us, this means reducing energy consumption by approximately 65% to a maximum of 70kWh/m2/year at portfolio level.[1]

When will success be achieved? [2]

- Portfolio Paris-proof on average by 2040.[3] This means that the energy consumption (including the use of all equipment) in the buildings is less than 70kWh/m2/year. In 2019, the consumption was approximately 186kWh/m2/year.
- All current and new projects satisfy Energy-neutral Building (*Energieneutrale Gebouwen, ENG*) requirements for New Buildings, and Almost Energy-neutral Building (*Bijna Energieneutrale Gebouwen, BENG*) requirements for Renovations. This also applies to listed buildings, which do not legally have to meet these requirements.

What are we doing to achieve this?

- We are implementing the plans laid down in the UvA Energy Transition Roadmap. This involves maximum use of the natural replacement and maintenance times.
- Where opportunities or quick wins arise, measures will be implemented to accelerate sustainability.
- We are improving monitoring, also at project level and in maintenance contracts.
- We will implement all measures that are included in the list recognised measures by the end of 2021.
- Current processes are being improved in view of sustainability objectives, so that improvements in sustainability are made at the right times and in the right order, not only in terms of cooperation between the departments responsible for our buildings, but also in terms of the involvement and commitment of the faculties.

Consequences and responsibilities for faculties, staff members and students

Paris-proof relates to the energy consumption of the buildings, including all the equipment in them. This means that users can or must help play an important role in achieving the objective.

---

[1] This refers to the total energy consumption of the building, including the use of all equipment, lighting, etc., in the building. It is an ambition at portfolio level. Certain buildings, such as listed buildings or buildings where a lot of energy-intensive research takes place, can have a higher energy consumption. This must then be compensated by other buildings. Currently, the energy consumption of the portfolio is approximately 200kWh/m2/year.

[2] The energy transition objectives are largely derived from the UvA Energy Transition Roadmap.

[3] 2040 is the aim of the UvA, 2050 is the goal following from the climate agreement.

[4] Erkende maatregelen: https://www.rvo.nl/onderwerpen/duurzaam-ondernemen/energie-besparen/

Responsibilities of organisational units

- Finance Planning & Control: planning and financing
- Real Estate Development: new construction and renovation
- Facility Services: optimisation and upgrade of buildings in management phase, energy monitoring

2. Fossil-free campuses

Why?

The burning of fossil fuels, such as gas, emits CO2. This is why we are phasing out the use of gas for hot water and space heating.

When will success be achieved? [4]

- Amsterdam Science Park will be natural gas-free by 2025, the Roeterseiland Campus will be natural gas-free by 2030, and, after the renovations, the City Centre Campus will only use gas for peak load and will also be completely natural gas-free by 2040.[5]

Measures

Measures in new construction, renovation, management, maintenance and user behaviour are described in the UvA Energy Transition Roadmap. Basically it comes down to: limiting energy demand, using low-temperature heating and high-temperature cooling, doing what can be done now and using area-specific solutions where possible. Examples of measures:

Consequences and responsibilities for faculties and staff members

Investments put slight pressure on prices per square metre as described under the Paris-proof objective.

Responsibilities of organisational units

- Finance Planning & Control: planning and financing
- Real Estate Development: new construction and renovation
- Facility Services: optimisation and upgrade of buildings in management phase
- Faculties: helping to focus on achieving these objectives from the role of commissioning party

[4] The energy transition objectives are largely derived from the UvA Energy Transition Roadmap.

[5] As Amsterdam Science Park is already virtually natural gas-free thanks to an extensive thermal energy storage network, this campus will be the first to be disconnected from the gas grid. The City Centre Campus will initially continue to require a limited supply of gas even after the renovations because the use of electricity to generate high temperatures often is not the most sustainable solution and because it will not always be possible to obtain a sufficiently heavy connection. By 2040, the UvA will be natural gas-free in line with the objectives of the City of Amsterdam.

3. Optimal sustainable energy generation on campus

Why?

In the energy transition, electricity consumption will increase due to the phasing out of fossil fuels such as gas, diesel and petrol. Providing for sustainable electricity generation is a major social challenge. The land of Amsterdam Science Park that is not needed as building land could possibly be used for energy generation. This is being investigated.

When will success be achieved?

- By 2026, 10% of the University's own electricity consumption will be generated sustainably on campus.[7]

Measures

- We will install solar panels on all suitable roofs, probably starting with REC H (expected in 2020) and SP 107 (expected in 2021?).[8]
- We are investigating the possibilities of installing solar panels on undeveloped plots in Amsterdam Science Park (2020).
- We are investigating the possibilities of realising other generation capacity, for example in the form of a wind turbine in cooperation with the City of Amsterdam (2020).
- We are investigating the possibilities of using residual heat from the data centres in Amsterdam Science Park (2020).[9]

Consequences and responsibilities for faculties, staff members and students

No far-reaching consequences.

Responsibilities of organisational units

- Finance Planning & Control: financing
- Real Estate Development: generation in new construction and renovation
- Facility Services: planning and implementation of generation on existing buildings

[7] Current generation is approximately 1.5%.

[8] he installation of solar panels on these roofs depends partly on whether the Sustainable Energy Transition (SDE++) subsidy is awarded. For SP 107, the technical feasibility and desirability (?) also need to be investigated.

[9] We are investigating this in cooperation with our partners in Amsterdam Science Park, the City of Amsterdam and the Dutch Research Council (NWO). The residual heat will probably be used by other parties, in particular nearby dwellings that do not have a thermal energy storage system.

4. The campuses are circular, nature inclusive and climate proof

Why?

Objectives one, two and three focus on direct emissions associated with the use of our real estate. However, operations also have significant sustainability effects in the chain and the environment. For example, approximately eight per cent of all CO2 emissions in the Netherlands are related to energy needed for the construction and maintenance of buildings.[10] Our real estate, or the construction thereof, also has a major impact on the various impact categories that can be summarised in an ecological footprint.

When will success be achieved?

- By 2050, the UvA real estate will be circular, i.e. raw material-neutral. For construction, only reused, recycled or renewable primary raw materials will used. By 2026, a route will have been mapped out to achieve this goal with clear intermediate objectives for matters such as primary raw material use, environmental performance of buildings, nature-inclusive measures[11], and climate adaptation. We will investigate whether it is possible to reduce the environmental footprint of our buildings by 25% by 2026 compared to 2020.[12]

Measures

The above objectives are enshrined in policy documents such as schedules of requirements and the Accommodation Plan and in the Sustainability Action Plans of Facility Services and Real Estate Development.

Consequences and responsibilities for faculties, units and staff members

Intensification of the use of space, restraint in making adjustments and limiting choices regarding, for example, the use of materials in building projects.

Responsibilities of organisational units

- Finance Planning & Control: planning and financing
- Real Estate Development: new construction and renovation
- Facility Services: optimisation and upgrade of buildings in management phase
- Faculties: helping to focus on achieving these objectives from the role of commissioning party

[10] Material flows, environmental impact and energy consumption in residential and non-residential building 2020. Buildings account for 40% of the total CO2 emissions in the Netherlands and over a building's life cycle, approximately 20% of the emissions (i.e. 8% of all Dutch emissions) are related to the energy needed for the production of materials and for construction and demolition.

[11] More information (in Dutch): https://www.amsterdam.nl/bestuur-organisatie/volg-beleid/groen/flora-fauna/natuurinclusief/

[12] Measurement method to be determined.

ICT

5. Twenty-five per cent reduction of ecological footprint by 2026

Why?

The university is a major user of ICT equipment and software services. This has a substantial sustainability impact both in production and in the use phase. The emissions related to the use of ICT equipment are about the same as the emissions related to food consumption and waste and amount to about 744 tonnes of CO2-eq.

When will success be achieved?

Ecological footprint clear and 25% impact reduction achieved on equipment by 2026.

Measures

- We will use our ICT equipment for longer (the aim is at least 6-12 months longer).
- Sustainable procurement, aiming for a 25% reduction in environmental impact (e.g. Fairphones and refurbished equipment).
- Analyse data and data traffic and make a plan to slow the growth of data traffic.[13]
- Identify energy consumption and savings potential and define objectives (2020).
- Draw up and set in motion action plan to minimise energy consumption (2020/2021).
- Energy savings through migration to the cloud.[14]
- Collect and responsibly dispose of 100% of e-waste by 2026

First steps in 2020

- Identify the environmental impact of ICT and draw up an eco-footprint reduction strategy.

Consequences and responsibilities for faculties and staff members

Equipment will have to be used longer where possible.

Responsibilities of organisational units

- ICTS
- Faculties: helping to focus on achieving these objectives from the role of commissioning party

[13] One way of working towards this is to work more with links to documents in the cloud and less with attachments.
[14] Data in the cloud is about 10 times more energy efficient than having our own data centre because scale makes more efficiency possible. Security and privacy must, of course, be guaranteed.

Food

6. We offer food that fits with our knowledge of planetary boundaries

Why?

Food production is one of the main causes of CO2 emissions, accounting for 35 per cent of the environmental impact of an average inhabitant of the Netherlands, which makes the impact of this sector greater than that of housing, travel and the purchased products.[15] The environmental impact of food is mainly related to the consumption of animal proteins: meat and dairy. Within this category, beef and meat from other ruminants have the greatest impact by far. Replacing animal proteins with vegetable proteins, the protein transition, is therefore a very effective way of reducing the environmental impact of food, while replacing beef with other meat can also greatly reduce the impact.[16] In addition to the protein transition, we are focusing on reducing food waste and on the supply of sustainably produced food.

When will success be achieved?

- Fifty per cent reduction in CO2 emissions from banqueting by 2022 compared to 2018.[17]
- Twenty-five per cent reduction in CO2 emissions from the food sold in the cafeteria by 2026.[18]
- Twenty-five per cent reduction in food waste in banqueting, restaurants, bars and retail outlets by 2026.

Measures (preferably with the year in which they are implemented)

- Change and reduce the proportion of meat and dairy in the served lunches to such an extent that the 50% reduction in CO2 emissions is achieved. For example, a 75 or 100 per cent vegan lunch and/or eliminating meat from ruminants can contribute, as can ensuring that the quantities delivered more closely meet the demand.
- Negotiation with the caterer about eliminating meat from ruminants from the range of food offered and reducing the sale of all animal proteins.[19]
- Research into the current range and environmental impact of food in both banqueting and cafeterias, identification of measurement instruments, development of further potential measures and implementation (2020-2021).
- Graduation research or other research into the degree of waste, where it occurs in the process and how this can be improved (2020)

[15] CE Delft, The average consumer's 'Top 10' environmental impacts. Version February 2018, p. 8. https://www.ce.nl/environmental_impacts

[16] "Food in the Anthropocene: the EAT-Lancet Commission on healthy diets from sustainable food systems." The Lancet, Vol. 393, 2 February 2019, p.471.

[17] The University of Cambridge achieved a 33% reduction per kg of food sold in www.environment.admin.cam.ac.uk

[18] This can be achieved by making changes to the range of food offered, such as replacing beef with chicken. Although efforts are being made to achieve this, contracts with the caterer may stand in the way of implementing such changes.

[19] Meat from other animals (chicken, pork) reduces emissions by 85% and also reduces use of land; www.environment.admin.cam.ac.uk

- Graduation research or other research into the degree of waste, where it occurs in the process and how this can be improved (2020)
- Nudging to stimulate the consumption of plant-based food.

Responsibilities of organisational units

- Facility Services
- Faculties: helping to focus on achieving these objectives from the role of commissioning party

7. We offer food that is produced responsibly

Reason for this objective

The Campus is our home and we want to offer food that we can stand behind. This applies both to banqueting and to the food sold. This means that we want to exclude undesirable effects such as deforestation, overfishing and exploitation. A student or employee cannot choose from several types of milk or salmon sandwiches because this choice has already been made by the caterer. The UvA will make good agreements about this in contracts and consultations with the caterer.

When will success be achieved?

- Food offered in the UvA cafeterias is responsibly produced and this is guaranteed by quality marks or in other ways.
- The changes to the range of food offered will not cause demand to shift outside the campus.

Measures

- We are switching to more sustainable coffee beans in 2020.[20]
- We will investigate the greatest sustainability risks in our food chain, formulate proposals for minimum requirements and take measures to bring catering in line with these. To start with, a working group on responsible food will be set up to advise on this subject (2020-2021).[21]
- We will make agreements with the caterer about improvements within the current contract period and ensure that only responsibly produced food will be sold at the UvA in the event of a new tender or extension.[22]
- We will set up a corresponding campaign to accompany the transition in the food supply.

Responsibilities of organisational units

- Facility Services
- Communications Office

[20] The new beans are Blendstar Single Origin. These are locally roasted and packaged in Ethiopia, with the local population profiting more from the coffee as a result.
[21] The research will at least create transparency with regard to the quality marks available for the main product groups in our range of food and lead to recommendations for the standards we should use. For example, no more 'fish to avoid' in the cafeterias, as is the policy at Cambridge University, www.environment.admin.cam.ac.uk, list: www.goodfish.nl/en/
[22] There may not be a new tendering procedure before 2026. As a result, contractual agreements and legal provisions in, for example, procurement law are likely to restrict our freedom of movement in this respect.

Waste and procurement

8. Our use of raw materials fits with our knowledge of planetary boundaries

Why?

The world population is growing and prosperity is increasing. If other factors remain unchanged, this will lead to a greater demand for raw materials and a greater 'production' of waste. This is not compatible with the planet's capacity (which is already being exceeded), with the Paris climate goals and with the Sustainable Development Goals of the United Nations. Both manufacturers and users will therefore have to use raw materials more efficiently.[23] This is why we will avoid what is avoidable, extend the useful life whenever possible and encourage reuse and recycling in both the procurement and the end of life (waste disposal) of our products.

When will success be achieved?

- Twenty-five per cent reduction of the footprint of the products and services we purchase.
- Twenty-five per cent reduction in consumption of raw materials by 2026.[24]
- Fifty per cent reduction in use of paper by 2026, a 50% reduction in the number of printers at the UvA (2026) and purchasing our own recycled paper (2026).
- Twenty-five per cent reduction in the purchase of new furniture by extending its useful life (and possibly purchasing reused furniture).
- Twenty-five per cent reduction in the use of disposables (including coffee cups) by 2026.
- The UvA will gain more insight into the purchased and consumed quantities of chemicals and cleaning agents for each location by 2021. Based on this insight, a plan will be drawn up and implemented to reduce the use of the most environmentally and health-damaging substances where possible.

Measures

- The tendering procedures with the greatest impact, which together account for 75% of our environmental impact in the chain, will be demonstrably effectively guided towards this objective.[25]
- Discontinue the sale of disposable water bottles by 2020.[26]
- Abolish individual waste bins by 2022.[27]

[23] Interim Report 'Raw Material or Waste' *(Tussenrapport Grondstof of afval)* by the Task Force on Rethinking of Waste Products *(Taskforce Herijking Afvalstoffen)*, on behalf of the Ministry of Infrastructure and Water Management, 2019.
[24] Following the example of Wageningen University & Research, we are operationalising this circularity objective by focusing on reducing the amount of waste to be incinerated and recycled. Both reduced by 25% by 2026.
[25] This implies an analysis of the impact of our procurement and the development of a strategy, for each high-impact tender, in order to reduce this impact. This can be done using LCA calculations, the Circularity Butterfly of the MacArthur Foundation, Lansink's Ladder, etc.
[26] The aim is to have a ban in place everywhere by September 2020. A prerequisite for this is the provision of sufficient clean water points being available.
[27] This means that waste bins will be available only in central locations, such as halls. Waste can then always be separated in these locations.

- Discontinue the purchase of new furniture in the event of relocations. Furniture that is still usable should be moved to the new location, or the furniture that is already at the new workplace should be used.[28]
- Stimulate the demand side in the market for recycling and reuse processes by purchasing the recycled or previously used products ourselves. For example, by buying back our 'own' recycled paper.
- We will focus on waste reduction through our purchasing processes.
- We will promote separation and waste reduction through clear communication and smart design of the environment.

Additional measures will be developed in the coming years.

Consequences and responsibilities for faculties and staff members

- Faculties play a major role in reducing the amount of furniture, paper and other products/raw materials purchased. Among other things, changes will mean that people will have to walk further to print documents or dispose of waste.

Responsibilities of organisational units

- Facility Services
- Real Estate Development
- Faculties: helping to focus on achieving these objectives from the role of commissioning party

[28] Being unfit for use, occupational health and safety legislation, etc., of course remain valid reasons to replace furniture. This is unrelated to a possible relocation.

Mobility

9. Twenty-five per cent reduction of ecological footprint of all travel[29] in 2026

Reason for this objective

Mobility accounts for a significant part of our environmental footprint. This is evident from the UvA CO2 footprint analysis of 2014.

When will success be achieved?

An accurate analysis of the ecological footprint should provide insight into the precise changes needed to achieve the desired 25% reduction (expected in autumn 2020). While making means of transport more sustainable can help achieve the objectives, choosing other means of transport or fewer journeys will also be necessary.

For the time being, our focus is therefore on the following ambitions:

- Virtually no more flights will be taken to cities that can be reached by rail within six hours.
- Train travel to cities more than six hours from Amsterdam will double.
- We will achieve an absolute reduction in the number of kilometres flown.
- We will investigate exactly how the emissions from our journeys are built up and the most effective ways of reducing them, and we will step up our goals with this knowledge.

Measures[29]

- Flights to destinations that can be reached by train within six hours can only be booked in exceptional situations and with the approval of a supervisor.
- Train journeys to destinations that can be reached within eight hours will be expressly offered as a preferred option in the newly created booking portal.
- We will encourage direct flights (for medium distances) via the booking portal.
- We will investigate the possibilities of introducing an internal realistic CO2 price for flights.
- Personal transport by car for official travel will only be reimbursed if public transport is unworkable.[30]
- We will not issue parking spaces to staff members, except on medical grounds.
- We will compensate the CO2 emissions of all official travel with gold standard compensation.
- We will offer excellent facilities for remote meetings on all campuses.
- We will investigate the possibilities for remote attendance at (large) UvA conferences.

[29] Official travel and commuting.
[30] To this end, the justification field 'reason for car use' will be added to the expense claim form.

- We will facilitate the use of e-bikes by offering charging facilities and will investigate the possibilities for other measures such as providing an advance payment for the purchase of an (e-)bicycle.
- We will integrate the above measures in a new travel policy and in the tendering procedures for official travel (2020).
- We will take administrative measures to create transparency regarding the distances travelled and to provide employees with better insight into the environmental impact of their travel.

Consequences and responsibilities for faculties and staff members

Environmentally conscious choices for means of transport will become more attractive and other options will become less attractive. In addition, the number of kilometres flown must be reduced in particular. This can only be achieved by becoming more selective in terms of the need to travel as well as the need to fly.

Responsibilities of organisational units

- Executive Staff (policy)
- FS (tendering procedure)
- Faculties (compliance)
- Individual staff members (compliance)