K2A Knaust & Andersson Fastigheter AB (publ)
Shades of Green Assessment Update 2023

Sector: Real estate

Region: Sweden

28 June 2023

EXECUTIVE SUMMARY

K2A is a Swedish real estate company founded in 2013 focusing on long-term management of self-produced rental buildings for all types of housing, but with a focus on housing for students and smaller family homes. The company currently operates in 25 locations in Sweden, mainly in Stockholm and Mälardalen. As of December 2022, K2A had 9,877 homes in the property and project portfolio, worth SEK 10,150 m and with an annual rental revenue of SEK 374,7 m.

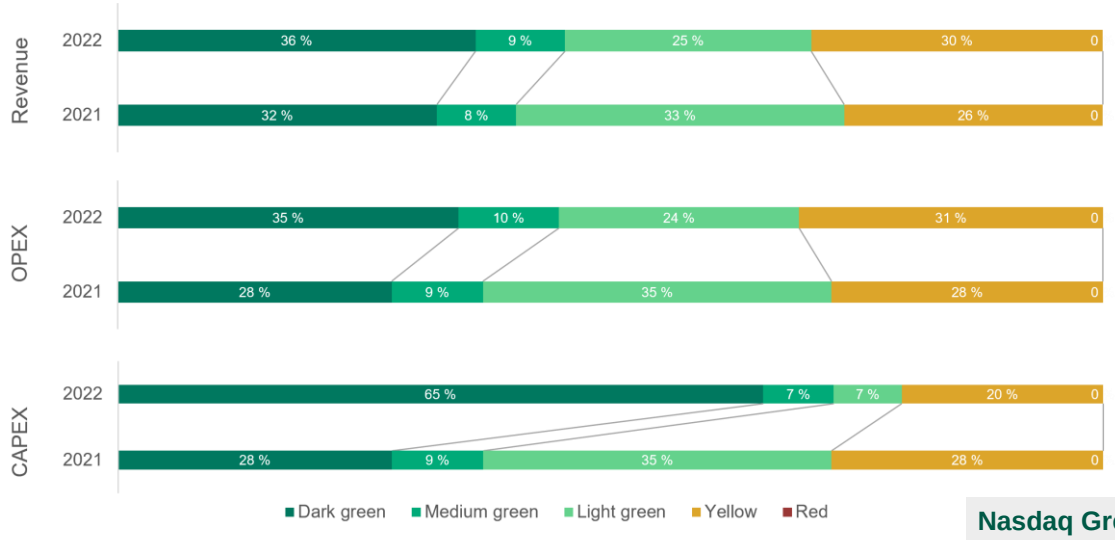

Figure 1: Shading of revenue and investments for K2A from 2021 to 2022

With the same methodology used in 2021, 70% of revenue, 69% of operating expenses and 80% of investments came from properties with a Shade of Green. This is compared to 74%, 72% and 72%, respectively in 2021. Revenue and OPEX have a similar Shade of Green compared to 2021 even with the portfolio growing 19% compared to 2021. In 2022, eight assets developed by K2A were finalized and moved over to the management portfolio, it had 22 ongoing projects, and it acquired 15 new assets. Both the revenue and the operating expenses represent K2A's management portfolio and were therefore influenced by the finalized projects entering the management portfolio and the acquisition of the new assets. The construction of ongoing projects was stopped for one year in June 2022, therefore K2A developed less new construction projects then planned. Overall, the numbers show that a handful of assets strongly influenced the shading. In 2022, eight assets represented 80% of the total investments; five of these were shaded Dark Green. Among these five, one was finalized in 2022 and is now a part of K2A's management portfolio.

Nasdaq Green Designation Annual Renewal[1]

Based on this review, CICERO Green assesses that K2A meets the Nasdaq Green Equity Designation requirements for annual renewal as set out in the Nasdaq Green Equity Principles.

[1] CICERO Shades of Green is an approved reviewer to assess alignment with the Nasdaq Green Equity Principles, Nasdaq.com/Solutions/Nasdaq-Nordic-Green-Designations

[2] For the purpose of this assessment, revenue and turnover are used interchangeably, as are operating costs and OPEX, investments and CAPEX

The Shade of Green assigned to a property reflects its overall climate risk and environmental impact. The shading is based on the same methodology CICERO Shades of Green used in 2021 to enable a comparison of K2A's portfolio over time. K2A's focus on building in locally sourced certified sustainable wood was a key consideration when assigning a Shade of Green to assets, as life cycle studies suggest that wooden buildings have lower lifecycle emissions than alternative building materials such as concrete and steel. With this methodology, Dark Green is assigned to wooden buildings with a high level of building certification, or highly energy efficient wooden buildings. Many of these buildings also have geothermal heating as an energy source which contribute to the Dark Green shading. Medium Green is assigned to properties with a Passive House certification, highly energy efficient building, and wooden buildings with an energy use corresponding to regulations (EPC C) combined with an ongoing or existing Miljöbyggnad in-use Silver certification. Light Green is assigned to wooden properties. Many of these properties have an Miljöbyggnad in-use Silver certification, contributing to the Light Green shading. Some Light Green properties have high energy intensity. However, the environmental benefits associated with the material choice of wood qualify the properties for the shade along with K2A's track record of energy efficiency improvements.

K2A maintains an excellent governance score and has continued to develop the ambition and policies outlined in last year's assessment. A key development in K2A's sustainability work has been to develop its internal roadmap on how to achieve carbon neutrality by 2027, which it expects to finalize and publish in July 2023. The roadmap will contain year-on-year emission reduction targets and is divided in sections to target different business segments and positions. Further, K2A expects to publish new policies by the end of June 2023. It has expanded its scope of policies so that it has a general sustainability policy that includes environmental aspects, but also a separate biodiversity policy, social sustainability policy and a sustainability policy for suppliers. K2A has continued its work with climate adaptation by performing updated physical climate risk assessments that will be finalized August 2023.

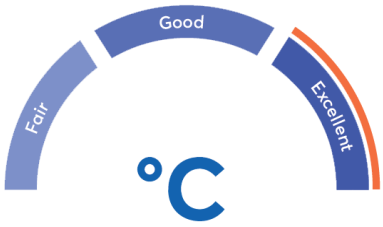

Figure 2: CICERO Green assess K2A's governance structure and practice to be Excellent.

The relevant EU taxonomy activities for K2A are the construction of new buildings, the renovation of existing buildings, and the acquisition and ownership of buildings. All of K2A's activities can be considered eligible under the EU taxonomy criteria. We assess that K2A had no fully taxonomy-aligned turnover, OPEX nor CAPEX in 2022, as Swedish trade associations are currently seeking clarity on the DNSH as further guidance is needed before concluding on alignment. 59,4% of K2A's revenue, 55% of its OPEX and 94,5% of its CAPEX was aligned with the Substantial Contribution criteria only. We consider that K2A mainly fulfils the minimum social safeguards of the EU Taxonomy.

Table 1: Sector Specific Metrics for K2A

	Energy use (kWh/m^2 Atemp)	Environmentally certified (% of area)	Emissions scope 1 + 2 ($kgCO_2e$)	Heated directly by fossil fuels (% of area)
2022	99,3	64%	1 044 000	0%
2021	105,0	42 %	914 871	0%
2020	109.6	29%	508 515	2.3%

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1 K2A key developments 2022

Company update

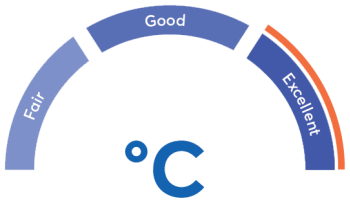
K2A is a Swedish real estate company founded in 2013 focusing on long-term management of self-produced rental buildings for all types of housing, but with a focus on housing for students and smaller family homes. The company currently operates in 25 locations in Sweden mainly in Stockholm and Mälardalen. K2A's real estate portfolio mainly consists of housing built from year 2015 to present. In addition, some older properties have undergone energy saving renovations. As of December 2022, K2A had 9,877 homes in the property and project portfolio, worth SEK 10,150 m and with an annual rental revenue of SEK 374,7 m.

In 2020, certification of K2A's existing buildings was initiated according to the Swedish environmental certification system, Miljöbyggnad iDrift. This means that all K2A's buildings older than three years[3] will have initiated the process of environmental certification in 2021. By the end of 2022, 65% of the existing buildings were certified. The remaining 35% are in process of being certified. In 2022, the company has acquired and completed multiple properties and has upscaled its solar installations, where the installed solar capacity increased by 215% from 2021 to 2022.

Governance Update

The overall assessment of K2A's environmental governance gives it a rating of **Excellent.** K2A has good strategies and short-term goals. K2A aims to have sustainable long-term management of properties with a focus on minimising the emissions per square meter of its properties by reducing the use of heat, electricity and water, using self-produced electricity from solar panels and using green district heating when possible.

A key development in K2A's sustainability work has been to develop its internal roadmap on how to achieve carbon neutrality by 2027. The roadmap is expected to be finalized and published July 2023. The roadmap will contain year-on-year emission reduction targets, and is divided in sections to target different business segments and positions, with specific targets and actions specified for individual departments and positions.



According to K2A, key actions in its roadmap include: 1) Continued use of timber as a building material for new apartments. 2) Continued efforts with to reduce the climate impacts of new apartments 3) Energy optimisation of the existing portfolio. 4) Additional investments in own-generated renewable energy. 5) Fossil-free freight transport throughout the entire supply chain. 6) Strategic work with circularity in K2A's buildings to avoid end-of-life emissions 7) Collaboration with key players to accelerate the sector's rate of transition.

Further, K2A expects to publish new polices by the end of June 2023. It has expanded its scope of policies so that it has a general sustainability policy that includes environmental aspects, but also a separate biodiversity policy, social sustainability policy and a sustainability policy for suppliers. Social policies are written to comply with what is asked of the minimum social safeguards of the EU Taxonomy and are based on international guidelines such as

[3] The certification system for buildings in-use (Miljöbyggnad iDrift) have a minimum age of three years before they are eligible for an in use-certification.

the UN Global Compact's principles for human rights, labour, the environment and anti-corruption, the UN Guiding Principles on Business and Human Rights, the ILO's Core Conventions and the OECD's Guidelines for Multinational Enterprises. After the implementation of the new policies, K2A expects to perform audits during late 2023 or early 2024. The motivation behind the audits is to understand if its current policies and procedures are well understood by its subcontractors or partners, or if it needs to provide further guidance and strengthen policies to achieve the results it seeks.

K2A has set a climate target for new construction projects to reduce life cycle emissions below 216 kg CO2e/m2 GFA (Gross Floor Area). The targets include full lifecycle emissions (phases A-D), calculated over a lifespan of 50 years. The target was set after recommendations from LFM30[4]. K2A's most recent assessment of one of its building projects showed a carbon footprint of 237 kg CO2e/m2 GFA. In 2027, K2A aims to update the target, where it is considering the limit value of 45 kg CO2e/m2 GFA. For this target, when calculating the building footprint, the biogenic carbon will be subtracted from the carbon footprint as it is embedded (in the building).

In 2022, the company tripled the amount of self-produced solar electricity compared to 2021 (570,2 MWh in 2022 compared to 195,9 MWh in 2021). In total, K2A has twelve solar parks[5], equivalent to the electricity use for 600 average K2A apartments. It is planning to install solar installations on four new properties in 2024. The ambition is to increase the share of renewable self-produced energy in the future, targeting having solar panels installed for 90% of its properties by 2027.

K2A has continued its work with climate adaptation by performing updated physical climate risk assessments 2022 that will be finalized in August 2023. After clarification from external consultants on what is demanded by the Appendix A in the EU Taxonomy, it has expanded the scope of the assessment to include soil stability. It is working with external consultants to conduct the risk assessments and has identified heat stress and extreme precipitation to be the most relevant risks. To monitor potential physical climate risks for assets moving forward, it has prepared a check list for the building management team so that they can do an inventory of the areas outside the buildings to enable discovering if anything has changed since the last assessments were done.

[4] LFM30 is a local initiative to create a geographic game plan to accelerate the construction sector's climate transition and implementation of Agenda 2030.(Om oss - LFM30)
[5] All solar installations are installed at the rooftops of K2A's building portfolio, a solar park is referring to an area of buildings with solar installations on rooftops clustered together.

Key performance indicators

Table 2: K2A Portfolio's energy mix

Energy Source	2021			2022		
District heating	**12,295 MWh**	The energy sources for K2A's buildings have the following distribution: • Renewables. 46% • Recycled[6] (heat recovery) 50% • Nuclear [7] 0,9% • Fossil 2,7%		**14,413 MWh**	The energy sources for K2A's buildings have the following distribution: • Renewables 37% • Recycled (heat recovery) 57% • Nuclear 0,2% • Fossil 4,6%	
Electricity	**3,346 MWh**			**4,804 MWh**		
Other fuels* **	**156 MWh** Company cars	0,1%	**156 MWh** Company cars	**196 MWh** Company cars, fuel construction site & factory	1,00%	196 MWh

K2A's total energy use increased by 23% in 2022, explained by the acquisition and finalization of new properties, increasing the total size of the portfolio (the portfolio's size increased by 19% in m^2 compared to 2021). Further, K2A's suppliers of district heating had changes in the composition of their energy sources, causing a decrease in the share of renewables used, and an increase in the use of recycled[6] energy and fossil. On a portfolio level, K2A's energy intensity has decreased from 105,0kWh/A_{temp} to 99,3 kWh/A_{temp} representing a reduction of 5%. According to its annual report, the reduction was achieved by measures taken within energy management.

Table 3: The table summarises K2A CO2-emissions and main CO2-emission reduction targets

Emissions	Total (tons CO_2eq[8])	Scope 1	Scope 2	Scope 3
Main Targets	Climate positive by 2027	No target	No target	No target
2022	8 649	55	989	7 605
2021	25 864	46	869	25 190

[6] Recycled heat refers to the use of heat pumps and geothermal
[7] The main use of nuclear power is for electricity, which was a part of the energy mix for three properties until Q3 2021. Now these properties belong to framework agreement with Vattenfall (100% renewable).
[8] CO_2e, carbon dioxide equivalent is a measurement term for greenhouse gas accounting.

2020	611	12	497	102.42
Change 2022-2021	-67%	+20%	+14%	-70%
Main sources		Company cars. Fuel use in factories and construction sites is included	Energy mix for district heating	Construction

Total emissions decreased by 67% in 2022 compared to 2021. K2A informs us that emissions from building operations decreased, however, due to more frequent travelling by company cars, total scope 1 emissions increased by 20%. The 14% increase in scope 2 emissions is due to the 19% increase of the size of the portfolio. The drastic decrease of total emissions is predominantly due to a reduction in scope 3 emissions (70%), where the decrease is caused by K2A's suspension of all new construction in June 2022, which will last for one year. As a result, K2A started just two construction projects in 2022, compared to nine in 2021.

2 Assessment of K2A's revenues and investments

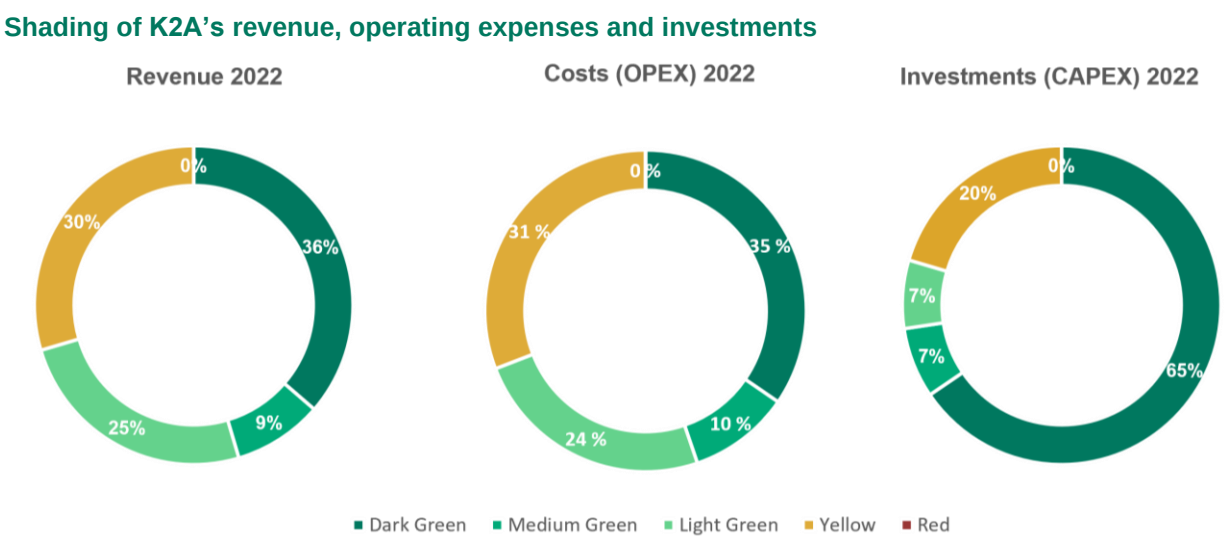


Figure 3: Shading of revenue and investments for K2A

The Shade of Green assigned to a property reflects its overall climate risk and environmental impact. We have assessed and allocated a shade of green to each property in the portfolio. Our analysis of the properties is positively influenced by our assessment of K2A's Governance Score of Excellent and the company's management of some key environmental concerns.

The shading is based on the same methodology CICERO Shades of Green used in 2021 to enable a comparison of K2A's portfolio over time. In this update, we have assigned a shade to each property based on the environmental certification scheme, energy label of buildings, and materials. K2A has a particular focus on using locally sourced wood as a key building material. The company is also working on more circular building solutions, with the ambition to be able to assemble in a way that allows for future disassembly and recycling. Material use is an important contributor to the lifecycle emissions of buildings. LCA studies imply that in general, wood-frame buildings tend to result in lower primary energy and GHG emission compared to non-wood alternatives including concrete and steel. Wooden buildings and buildings that have other environmental benefits, as demonstrated by a high level of energy efficiency or green building certification, are assessed as green.

Dark Green is assigned to wooden buildings with Nordic Swan Ecolabel or Miljöbyggnad Silver (new construction) certification, or highly energy efficient wooden buildings with an EPC label of A or B. Many of these buildings also have geothermal heating as an energy source, which contributes to the Dark Green shading.

Medium Green is assigned to properties with either a Passive House certification, highly energy efficient houses with an EPC label of B or wooden properties with an energy use corresponding to regulations (EPC C) and an ongoing or existing Miljöbyggnad in-use Silver certification.

Light Green is assigned to wooden properties[9]. Many of these properties have a Miljöbyggnad in-use Silver certification, contributing to the Light Green shading. Some Light Green properties have high energy intensity, however, the environmental benefits associated with the material choice qualify the properties for the shade[10].

Yellow is allocated for properties that do not fulfil[11] any of the criteria above.

K2A has a small share of expenses and investments that could not be allocated to specific projects. These have been allocated the same split in shading as revenues.

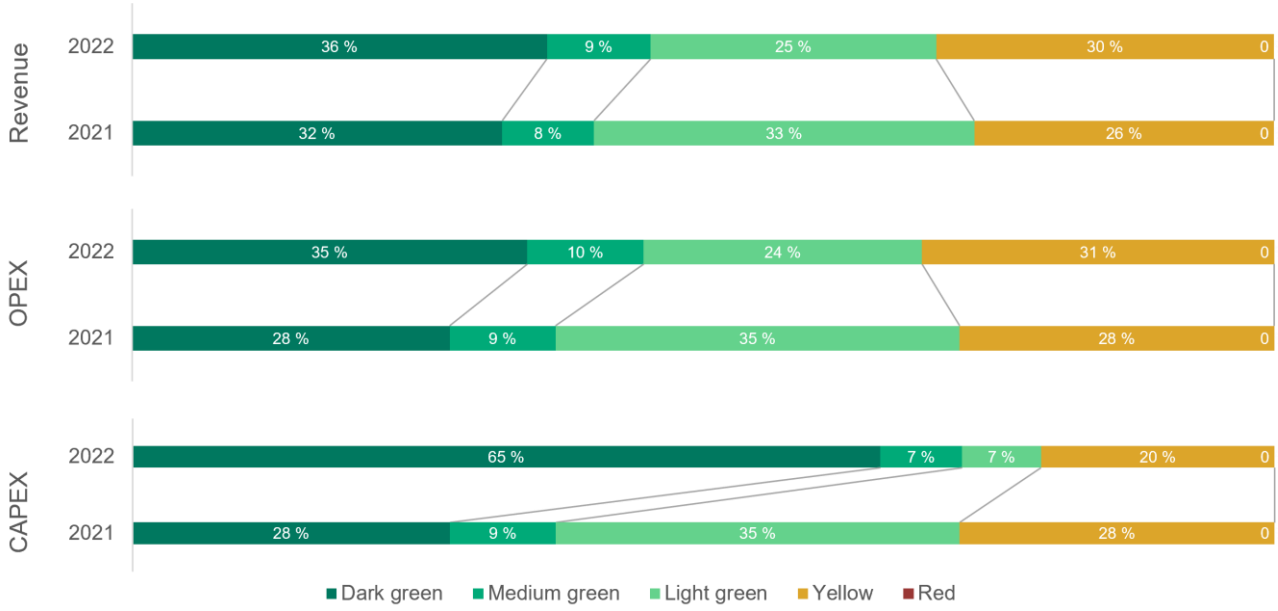


Figure 4: Past shading of revenue and investments for K2A

Based on this approach, we find that 36% of revenues in 2022 came from assets considered Dark Green, up from 32% in 2021, 9% came from Medium Green, down from 8% in 2021, and 25% came from Light Green, down from 33% in 2021. Thus, the total share of assets given a Shade of Green stayed nearly the same in 2022 compared to 2021, where also the shares of different Shades of Green stayed relatively similar. Operating expenses are distributed similarly, where 35% are shaded Dark Green, 10% Medium Green and 24% are shaded Light Green, compared to 28%, 9%, and 35% in 2021. In 2022, eight assets developed by K2A were finalized and moved over to its management portfolio, it had 22 ongoing projects, and it acquired 15 new assets. Both the revenue and the operating expenses represent K2A's management portfolio and was therefore influenced by the finalized projects entering the management portfolio and the acquisition of the new assets.

Finally, investments are shaded 65% Dark Green, 7% Medium Green, and 7% Light Green. For K2A, development projects (such as the construction and renovation of assets) and the acquisition of new assets represents the biggest investments. The construction of ongoing projects was stopped for one year in June 2022, therefore K2A developed less new construction projects then planned. Overall, the numbers show that a handful of assets strongly influenced

[9] Two wooden buildings were disqualified from the green shading given an overly high energy use.
[10] One mixed wood building with energy label C and biogas as heating source also have received a Light Green shading.
[11] Two of the buildings that have been classified as Yellow have a calculated energy performance corresponding to an EPC label of A or B. Therefore, if these assets were to get an updated EPC label, they could qualify for Medium Green.

the shading. In 2022, eight assets represented 80% of the total investments; five of these were shaded Dark Green. Among these five, one was finalized in 2022 and is now a part of K2A's management portfolio.

The shading in this update is based on the same methodology CICERO Shades of Green used in 2021 to allow for a comparison of K2A's portfolio performance over time. Investors should be aware that our methodology is dynamic, as technology, regulations, and sector norms continuously evolve. If K2A decides to complete a new full company assessment as required at the end of three years, we will use an updated methodology incorporating the latest sector information at that time.

Investors should note that our assessment is based on data reported or estimated by the company and has not always been verified by a third party. We analyse revenue, operating costs and investments, however there is typically not an explicit link between sustainability and financial data[12]. Our shading often requires allocating line items in financial statements to projects or products, for this we rely on the company's internal allocation methods. In addition, there are numerous ways to estimate, measure, verify and report e.g. data on emissions, which may make direct comparisons between companies or regulatory criteria difficult and somewhat uncertain.

Nasdaq Green Designation

CICERO Shades of Green confirms that K2A meets the requirements for Nasdaq Green Equity Designation set out in the Nasdaq Green Equity Principles.

In 2022, 70% of K2A's turnover came from assets with some Shade of Green, exceeding the 50% threshold for green activities for company turnover. The sum of OPEX and CAPEX allocated a Shade of Green is 79%. This exceeds the 50% threshold for investments, defined as the sum of CAPEX and OPEX. In 2022, K2A had no turnover assessed shaded Red, meeting the threshold of less than 5% of the company's turnover being derived from fossil fuel activities.

In addition, this report provides transparency on alignment of the company's activities with the EU Taxonomy and transparency on the company's environmental targets and KPIs is provided.

[12] Most accounting systems do typically not provide a break-down of revenue and investments by environmental impact, and the analysis may therefore include imprecisions and may not be directly comparable with figures in the annual reporting

EU Taxonomy update

The mitigation criteria in the EU taxonomy includes specific thresholds for the categories relevant to K2A, which include:

- Acquisition and ownership of buildings
- Construction of new buildings
- Renovation of existing buildings

Comments on alignment are given in the table below, and detailed thresholds, NACE-codes and likely alignment with DNSH criteria are given in Appendix 2.

Regarding the minimum social safeguards, K2A has several important measures in place and will in the future use a risk-based approach to ensure all salient social risks are identified and handled. Given that K2A mainly operates in and sources from a strongly regulated region, the measures in place appear to be properly calibrated to meet the risks likely to be the most material ones. K2A has a Code of conduct for its suppliers. CICERO Green considers that K2A mainly fulfils the minimum social safeguards of the EU Taxonomy.

Overall, we find likely shares of portfolio alignment with the EU Taxonomy as follows:

Table 5: Overall EU Taxonomy alignment (Technical Criteria + DNSH + minimum safeguards)	Revenue	OPEX	CAPEX
Total share eligible (activities covered by criteria)	100%	100%	100%
Total share likely aligned	0%	0%	0%

Table 6: Economic Activity: Acquisition and ownership of buildings (7.7) (NACE Code L68)		
Technical Criteria	**Full assessment from 2022**	**Updated comments on alignment**
Mitigation Criteria	✓ The eligible share of revenue, OPEX and CAPEX in 2021 was 100%, 100% and 54% respectively ✓ Likely aligned share of revenue, OPEX and CAPEX was in 2021 51%, 46% and 54%.	✓ The eligible share of revenue, OPEX and CAPEX in 2022 was 100%, 100% and 60,8% respectively ✓ Likely aligned share of revenue, OPEX and CAPEX was in 2021 59,4%, 55% and 55,3%.
DNSH-criteria	**Full assessment from 2022**	**Updated comments on alignment**
Climate Change Adaptation	✓ Likely aligned	✓ K2A informs us that after further clarity from external consultants on what is asked in Appendix A, more risks needed to be evaluated to comply with the criteria. As of now we assess that K2A is likely not aligned, however when it completes the current physical climate risks assessments it will likely be aligned.

Table 7: Economic Activity: Construction of New Buildings (7.1) (NACE Code F41.1, F41.2)				
Technical Criteria	**Full assessment from 2022**		**Updated comments on alignment**	
Mitigation Criteria	✓	The eligible share of revenue, OPEX and CAPEX in 2021 was 0%, 0% and 41% respectively	✓	The was no eligible share of revenue, OPEX and CAPEX in 2022 was 0%, 0% and 38,8% respectively
	✓	Likely aligned share of CAPEX was 41%	✓	Likely aligned share of CAPEX was 38,8%
DNSH-criteria	**Full assessment from 2022**		**Updated comments on alignment**	
Climate Change Adaptation	✓	Likely aligned	✓	Likely aligned
Sustainable use and protection of water and marine	✓	Not enough information to conclude	✓	Not enough information to conclude
Transition to a circular economy (circular economy)	✓	Likely aligned	✓	Not enough information to conclude
Pollution prevention and control	✓	Likely aligned	✓	Not enough information to conclude
Protection and restoration of biodiversity and ecosystems	✓	Likely aligned	✓	Not enough information to conclude

Table 8: Economic Activity: Renovation of existing buildings (7.2) (NACE Code F41 and F43)				
Technical Criteria	**Full assessment from 2022**		**Updated comments on alignment**	
Mitigation Criteria	✓	The eligible share of revenue, OPEX and CAPEX in 2021 was 0%, 0% and 5% respectively		The was no eligible share of revenue, OPEX and CAPEX in 2022.
	✓	Likely aligned share of CAPEX was 5%		
DNSH-criteria	**Full assessment from 2022**		**Updated comments on alignment**	
Climate Change Adaptation		Likely aligned	✓	N/A
Sustainable use and protection of water and marine	✓	Likely aligned	✓	N/A
Transition to a circular economy (circular economy)	✓	Likely aligned	✓	N/A
Pollution prevention and control	✓	Likely aligned	✓	N/A

3 Terms and methodology

This analysis aims to be a practical tool for investors, lenders, and public authorities for understanding climate risk. CICERO Shades of Green encourages the client to make this annual update to the company assessment publicly available. If any part of the annual update or company assessment is quoted, the full report must be made available. Our annual assessment update, including governance, is relevant for the reporting year covered by the analysis. This annual assessment update is based on a review of documentation of the client's policies and processes, as well as information provided to us by the client during meetings, teleconferences, and email correspondence. In our review, we have relied on the correctness and completeness of the information made available to us by the company.

Shading corporate revenue and investments

Our view is that the green transformation must be financially sustainable to be lasting at the corporate level. Therefore, we have shaded the company's current revenue-generating activities, investments, and operating expenses.

The approach is an adaptation of the CICERO Shades of Green methodology for the green bond market. The Shade of Green allocated to a green bond framework reflects how aligned the likely implementation of the framework is to a low carbon and climate resilient future, and we have rated investments and revenue streams in this assessment similarly. We allocate a shade of green to the revenue stream and investments according to how these streams reflect alignment of the underlying activities to a low carbon and climate resilient future and taking into account governance issues.

Shading	Examples
Dark Green is allocated to projects and solutions that correspond to the long-term vision of a low-carbon and climate resilient future.	Solar power plants
Medium Green is allocated to projects and solutions that represent significant steps towards the long-term vision but are not quite there yet.	Energy efficient buildings
Light Green is allocated to transition activities that do not lock in emissions. These projects reduce emissions or have other environmental benefits in the near term rather than representing low carbon and climate resilient long-term solutions.	Hybrid road vehicles
Yellow is allocated to projects and solutions that do not explicitly contribute to the transition to a low carbon and climate resilient future. This category also includes activities with too little information to assess.	Healthcare services
Red is allocated to projects and solutions that have no role to play in a low-carbon and climate resilient future. These are the heaviest emitting assets, with the most potential for lock in of emissions and highest risk of stranded assets.	New oil exploration

In addition to shading from dark green to red, CICERO Shades of Green also includes a governance score to show the robustness of the environmental governance structure. When assessing the governance of the company, CICERO Shades of Green looks at five elements: 1) strategy, policies, and governance structure; 2) lifecycle

considerations including supply chain policies and environmental considerations towards customers; 3) the integration of climate considerations into their business and the handling of resilience issues; 4) the awareness of social risks and the management of these, and 5) reporting. Based on these aspects, an overall grading is given on governance strength, falling into one of three classes: Fair, Good or Excellent. Please note this is not a substitute for a full evaluation of the governance of the issuing institution, and does not cover, e.g., corruption.

The EU Taxonomy, first introduced in 2020, seeks to set out common classification systems to determine the environmental sustainability of activities. The EU-taxonomy regulation[13] defines six environmental objectives. To be considered environmentally sustainable, an activity must substantially contribute to one or more of the six objectives, not significantly harm any of the other six objectives (Do-No-Significant-Harm - DNSH), and comply with the technical screening criteria (TSC). In June 2021, EU published its delegated acts outlining the TSC for climate adaptation and mitigation objectives, respectively, which it was tasked to develop after the Taxonomy Regulation entered into law in July 2020[14].

CICERO Shades of Green has assessed potential alignment against the mitigation thresholds and the DNSH criteria in the delegated acts published in June 2021 in the full assessment of the company carried out in 2021[15].

In order to qualify as a sustainable activity under the EU regulation 2020/852 certain minimum safeguards must be complied with. The safeguards entail alignment with the OECD Guidelines for Multinational Enterprises and UN Guiding Principles on Business and Human Rights, including the International Labour Organisation's ('ILO') declaration on Fundamental Rights and Principles at Work, the eight ILO core conventions and the International Bill of Human Rights. CICERO Shades of Green has completed a light touch assessment of the above social safeguards with a focus on human rights and labor rights risks[16]. We take the sectoral, regional and judicial context into account and focus on the risks likely to be the most material social risk.

Our assessment of alignment against the EU Taxonomy is based on a desk review of the listed source documents against the Taxonomy Delegate Act and following our own shading methodology.

[13] EU-Taxonomy regulation (2020/852), https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32020R0852&from=EN
[14] taxonomy-regulation-delegated-act-2021-2800-annex-1_en.pdf (europa.eu)
[15] https://www.spglobal.com/_assets/documents/ratings/research/sog/company-assessment-update-k2a-01.07.2022.pdf
[16] CICERO Shades of Green is in the process of further developing its assessment method to ensure that it encompasses the object and purpose of the minimum safeguards.

About CICERO Shades of Green

CICERO Shades of Green, now a part of S&P Global, provides independent, research-based second party opinions (SPOs) of green financing frameworks as well as climate risk and impact reporting reviews of companies. At the heart of all our SPOs is the multi-award-winning Shades of Green methodology, which assigns shadings to investments and activities to reflect the extent to which they contribute to the transition to a low carbon and climate resilient future.

CICERO Shades of Green Company Assessments indicate the greenness of a company by providing a shading of revenues, operating costs and capital expenditures, as well as an assessment the company's governance structure. CICERO Shades of Green also provides second opinions on institutions' frameworks and guidance for assessing and selecting eligible projects for green, sustainability and sustainability-linked bond investments. CICERO Shades of Green is internationally recognized as a leading provider of independent reviews of green bonds, since the market's inception in 2008. CICERO Shades of Green is independent of the company being assessed, its directors, senior management and advisers, and is remunerated in a way that prevents any conflicts of interests arising as a result of the fee structure. CICERO Shades of Green operates independently from the financial sector and other stakeholders to preserve the unbiased nature and high quality of assessments.

Environmental Finance Bond Awards 2022 Winner
External assessment provider of the year

- **2021** Largest External Reviewer, Climate Bonds Initiative Awards
- **2020** External Assessment Provider Of The Year, Environmental Finance Green Bond Awards
- **2020** Largest External Review Provider In Number Of Deals, Climate Bonds Initiative Awards
- **2019** External Assessment Provider Of The Year, Environmental Finance Green Bond Awards
- **2019** Largest Green Bond SPO Provider, Climate Bonds Initiative Awards
- **2018** External Assessment Provider Of The Year, Environmental Finance Green Bond Awards
- **2018** Largest External Reviewer, Climate Bonds Initiative Awards
- **2017** Best External Assessment Provider, Environmental Finance Green Bond Awards
- **2016** Most Second Opinions, Climate Bonds Initiative Awards

Appendix 1: Referenced documents list

Document Number	Document Name	Description
1	Data collection sheet	Financial numbers from 2022 and descriptions of K2A's activities, provided to us by request.
2	Sustainability report from 2022	
3	K2A Company assessment 2021	

Appendix 2: EU Taxonomy criteria and alignment

Complete details of the EU taxonomy criteria are given in [taxonomy-regulation-delegated-act-2021-2800-annex-1_en.pdf (europa.eu)]

Construction of new buildings (7.1)

Taxonomy activity	**Construction of new buildings (NACE Code F41.1, F41.2)**		
	EU Technical mitigation criteria	**Comments on alignment**	**Alignment**
Technical screening criteria	• Substantial contribution to climate change mitigation **Constructions of new building, eligible if:** • The Primary Energy Demand is at least 10 % lower than the threshold set for the nearly zero-energy building (NZEB) requirements in national regulation. The energy performance is certified using an as built Energy Performance Certificate (EPC). • For buildings larger than 5000 m^2, upon completion, the building resulting from the construction undergoes testing for air-tightness and thermal integrity, and any deviation in the levels of performance set at the design stage or defects in the building envelope are disclosed to investors and clients. As an alternative; where robust and traceable quality control processes are in place during the construction process this is acceptable as an alternative to thermal integrity testing. • For buildings larger than 5000 m^2, the life cycle Global Warming Potential of the building resulting from the construction has been calculated for each stage in the life cycle and is disclosed to investors and clients on demand.	**Contextual information** • Energy requirements set in BBR (Swedish building regulations) is defined as NZEB in Sweden. • In Sweden, climate calculations establishing the GWP for the construction phase are a regulatory requirement since 1 January 2022. The requirement is only valid for properties seeking a construction permit after 1 January 2022. This only covers phase A of construction, while the criterion in the taxonomy refers to phase A-C. **Information provided by the issuer** • The Nordic Swan Ecolabel requires that all new constructions are built with an energy demand at least 10% lower than regulation. • K2A informs us that air-tightness is always tested for its new properties as it required by the Nordic Swan Ecolabel. • K2A informed us that it completed two buildings that were larger than 5000 m2 in 2022, where for one of the assets the GWP was calculated as demanded by the taxonomy criteria, where for the other building the assessment did not cover the full scope (phase A-C).	**The eligible share of revenue, OPEX and CAPEX in 2022 was 0%, 0% and 38,8% respectively** **Likely aligned share of CAPEX was 38,8%**
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	EU Taxonomy DNSH-criteria	Comments on alignment	Alignment
Climate change adaptation	The physical climate risks that are material to the activity have been identified (chronic and acute, related to temperature, wind, water, and soil) by performing a robust climate risk and vulnerability assessment with the following steps[17]: **(a)** screening of the activity to identify which physical climate risks from the list in Section II of this Appendix may affect the performance of the economic activity during its expected lifetime; **(b)** where the activity is assessed to be exposed to physical climate risks, a climate risk and vulnerability assessment to assess the materiality of the physical climate risks on the economic activity; **(c)** an assessment of adaptation solutions that can reduce the identified physical climate risk. The climate projections and assessment of impacts are based on best practice and available guidance and take into account the state-of-the-art science for vulnerability and risk analysis and related methodologies in line with the most recent Intergovernmental Panel on Climate Change reports, scientific peer-reviewed publications, and open source or paying models. For existing activities and new activities using existing physical assets, the economic operator implements physical and non-physical solutions ('adaptation solutions'), over a period of time of up to five years, that reduce the most important identified physical climate risks that are material to that activity. An adaptation plan for the implementation of those solutions is drawn up accordingly. For new activities and existing activities using newly-built physical assets, the economic operator integrates the adaptation solutions that reduce the most important identified physical climate risks that are material to that activity at the time of design and construction and has implemented them before the start of operations. The adaptation solutions implemented do not adversely affect the adaptation efforts or the level of resilience to physical climate risks of other people, of nature, of cultural heritage, of assets and of other economic activities; are consistent with local, sectoral, regional or national adaptation strategies and plans; and consider the use of nature-based solutions or rely on blue or green infrastructure to the extent possible.	• Similar assessments as described under acquisition and ownership of buildings is also conducted for new projects. • For new projects, K2A will require that climate risk assessments are a part of the design process in order to adapt the building, as well as the land on the property, for future climate events.	**Likely aligned**

[17] The Taxonomy is referring to Appendix A in the Taxonomy Annex 1.

Sustainable use and protection of water and marine resources	• Where installed, except for installations in residential building units, the specified water use for the following water appliances are attested by product datasheets, a building certification or an existing product label[18] in the Union, in accordance with the technical specifications: (a) wash hand basin taps and kitchen taps have a maximum water flow of 6 litres/min; (b) showers have a maximum water flow of 8 litres/min; (c) WCs, including suites, bowls and flushing cisterns, have a full flush volume of a maximum of 6 litres and a maximum average flush volume of 3,5 litres; (d) urinals use a maximum of 2 litres/bowl/hour. Flushing urinals have a maximum full flush volume of 1 litre. To avoid impact from the construction site, the activity complies with the criteria in the EU Water Framework Directive[19]. Where an Environmental Impact Assessment is carried out in accordance with Directive 2011/92/EU[20] and includes an assessment of the impact on water in accordance with the Water Framework Directive, no additional assessment of impact on water is required, provided the risks identified have been addressed.	• When K2A build residential buildings, the requirements are not applicable. • For new construction, K2A informed us it only uses efficient water appliances in line the requirements in the taxonomy, as it is a requirement from the Nordic Swan Ecolabel. • General planning is the responsibility of the municipality and EIAs will be carried out on municipality level where required by national law. This includes a plan for impacts on water sources and will secure compliance with the EU Water Framework Directive.	**Not enough information**
Transition to a circular economy (circular economy)	• At least 70 % (by weight) of the non-hazardous construction and demolition waste (excluding naturally occurring material[21]) generated on the construction site is prepared for re-use, recycling and other material recovery, including backfilling operations using waste to substitute other materials. • Operators limit waste generation in processes related to construction and demolition in accordance with the EU Construction and Demolition Waste Management Protocol and taking into account best available techniques and using selective demolition to enable removal and safe handling of hazardous substances and facilitate reuse and high-quality recycling by selective removal of materials, using available sorting systems for construction and demolition waste. • Building designs and construction techniques support circularity and in particular demonstrate how they are designed to be more resource	• K2A require sorting of all construction waste. Materials should be recycled or reused according to the requirement for waste recycling in the Nordic Swan Ecolabel. • In Sweden, some sorted waste is sent for incineration to district heating facilities. This waste cannot be counted towards the 70%. K2A still expects to be able to fulfil the requirement of having 70% if waste prepared for re-use, recycling and other material recovery. • K2A lacks national KPIs to judge whether projects fulfil the criteria set out in the taxonomy	**Not enough information to conclude**

[18] The Taxonomy is referring to Appendix E in the Taxonomy Annex 1.
[19] Directive 2000/60/EC of the European Parliament and of the Council of 23 October 2000 establishing a framework for Community action in the field of water policy
[20] DIRECTIVE 2011/92/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL on the assessment of the effects of certain public and private projects on the environment.
[21] Refer to the European List of Waste established by Commission Decision 2000/532/EC

	efficient (with reference to ISO 208872[22]), adaptable, flexible and dismantlable to enable reuse and recycling.	that building designs and construction techniques support circularity and in particular demonstrate how they are designed to be more resource efficient, adaptable, flexible and dismantlable to enable reuse and recycling. • In the case of demolition, K2A examines materials that can be reused or recycled. In Sweden, handling of hazardous substances is regulated by national legislation and requirements from authorities. • Building modules from K2A are assembled in a way that allow for later disassembly. However, according to the company, K2A has not currently applied the ISO 20887 standard or other standards for assessing the dismantling or adaptability of buildings.	
Pollution prevention and control	• Building components and materials used in the construction comply with the criteria set out in Appendix C to the Taxonomy Annex 1. • For building components and materials used in the construction that may come into contact with occupiers, formaldehyde emissions are within relevant limits[23]. • Where the new construction is located on a potentially contaminated site (brownfield site), the site has been subject to an investigation for potential contaminants[24]. • Measures are taken to reduce noise, dust and pollutant emissions during construction or maintenance works.	• Two Swedish sector organizations (Fastighetsägarna and Byggindustrierna) are currently leading the process of getting sector-specific interpretations to Appendix C. There is currently a lack of information to judge if K2A fulfil the criteria. • The Nordic Swan Ecolabel contains requirements to phase out hazardous components and endocrine disruptors in line with Swedish regulations, as well as maximum limits for formaldehyde in line with the EU-taxonomy requirement (bullet two under pollution prevention and control). • In the case of renovation, a screening of asbestos has to be made by law.	**Not enough information**

[22] ISO 20887:2020, Sustainability in buildings and civil engineering works - Design for disassembly and adaptability - Principles, requirements and guidance (version of [adoption date]: https://www.iso.org/standard/69370.html).
[23] Emit less than 0,06 mg of formaldehyde per m³ of material or component and less than 0,001 mg of categories 1A and 1B carcinogenic volatile organic compounds per m³ of material or component, upon testing in accordance with CEN/TS 16516522 and ISO 16000-3 523 or other comparable standardised test conditions and determination method.
[24] Standard ISO 18400 can be used.

		• If the developer does not know the state of a building site in terms of hazardous substances, they have to (by law) make an investigation of the site, and if contaminated, remove the contaminated soil. • Measures to reduce noise, dust and pollutant emissions during construction and maintenance is regulated by law and the Swedish ”miljöbalken”. All the construction projects need to have a plan for how these issues are addressed in a construction project and is disclosed to and followed up by the municipality before, during and after the construction phase.	
Protection and restoration of biodiversity and ecosystems	• An Environmental Impact Assessment (EIA) or screening should be completed in accordance with national provisions[25]. • Where an EIA has been carried out, the required mitigation and compensation measures for protecting the environment are implemented. • For sites/operations located in or near biodiversity-sensitive areas (including the Natura 2000 network of protected areas, UNESCO World Heritage sites and Key Biodiversity Areas, as well as other protected areas), an appropriate assessment where applicable, has been conducted and based on its conclusions the necessary mitigation measures are implemented. • The new construction should not be built on one of the following: a) arable land and crop land; b) greenfield land of recognised high biodiversity value and land that serves as habitat of endangered species (flora and fauna) listed on the European Red List or the IUCN Red List. c) land matching the definition of forest as set out in national law used in the national greenhouse gas inventory, or where not available, is in accordance with the FAO definition of forest[26].	• Two Swedish sector organizations (Fastighetsägarna and Byggindustrierna) are currently leading the process of getting sector-specific interpretations to Appendix D. There is currently a lack of information to judge if K2A fulfil the criteria • General planning is the responsibility of the municipality and EIAs will be carried out on municipality level. Land that is covered by area protection according to the Planning and Building Act is Natura 2000, nature reserves and animal and plant protection areas, and construction is not permitted. This is stated in the general and detailed plan for each municipality. • Municipalities are not allowed to offer sites for exploitation without the developer doing an EIA.	**Not enough information**

[25] The Taxonomy is referring to Appendix D in the Taxonomy Annex 1.
[26] Land spanning more than 0,5 hectares with trees higher than five meters and a canopy cover of more than 10 %, or trees able to reach those thresholds in situ. It does not include land that is predominantly under agricultural or urban land use, FAO Global Resources Assessment 2020. Terms and definitions.(version of [adoption date]: http://www.fao.org/3/I8661EN/i8661en.pdf).

		Wetlands are covered by the EIA, and considered to be highly valuable so they are generally not to be exploited in Sweden. • K2A states that none of their properties are in areas with high biodiversity, or on arable or forested land. • For new projects, it has conducted an analysis using the WWF Risk map to check if potential sites are exposed to any ecological risks, the results were negative.	

Acquisition and ownership of buildings (7.7)

Taxonomy activity	**Acquisition and ownership of buildings (NACE Code L68)**		
	EU Technical mitigation criteria	**Comments on alignment**	**Alignment**
Technical screening criteria	• Substantial contribution to climate change mitigation **Acquisition and ownership of buildings, eligible if:** • For buildings built before 31 December 2020, the building has at least Energy Performance Certificate (EPC) class A. As an alternative, the building is within the top 15% of the national or regional building stock expressed as operational Primary Energy Demand (PED) and demonstrated by adequate evidence, which at least compares the performance of the relevant asset to the performance of the national or regional stock built before 31 December 2020 and at least distinguishes between residential and non-residential buildings. • For buildings built after 31 December 2020, the building meets the criteria set out for the activity 'construction of new buildings'. • Where the building is a large non-residential building it is efficiently operated through energy performance monitoring and assessment.	• We consider a report from Fastighetsägarna to provide adequate evidence for the energy efficiency of the top 15% of the national building stock. Fastighetsägarna has published an updated report defining the top 15 percent of the national building stock in Sweden[27]. All buildings were assessed using the top 15 percent requirement. • According to the company, energy efficiency measures are implemented on an ongoing basis and K2A assesses that the buildings that currently have less than EPC class D can be upgraded to have energy efficiency performance that corresponds to EPC class C or better. There are currently 28 such properties out of a total of 63 properties under management.	**The eligible share of revenue, OPEX and CAPEX in 2022 was 100%, 100% and 60,8% respectively** **Likely aligned share of revenue, OPEX and CAPEX was in 2021 59,4%, 55% and 55,3%.**

[27] Topp 15 och 30% (fastighetsagarna.se)

	For buildings built after 31 December 2020, buildings are eligible if: • The Primary Energy Demand is at least 10 % lower than the threshold set for the nearly zero-energy building (NZEB) requirements in national regulation. The energy performance is certified using an Energy Performance Certificate (EPC).	• All properties are assessed to be likely aligned with the energy management criteria	
	EU Taxonomy DNSH-criteria	**Comments on alignment**	**Alignment**
Climate change adaptation	Please refer to Construction of buildings.	• In 2021, K2A carried out an inventory of all existing buildings in its portfolio with respect to future climate risks according to the IPCC's RCP 8.5 climate scenario. Climate risks such as floods, heat waves, and snow loads were graded from no risk to high risk. • In 2022, after clarification on what is demanded by the Appendix A in the EU Taxonomy, it has expanded the scope of the assessment to include soil stability. It is working with external consultants to conduct the risk assessments and has identified that heat stress and extreme precipitation to be the most relevant risks. It is expecting the assessments to be completed by August 2023. • To monitor potential physical climate risks for assets moving forward, it has prepared a check list for the building management team so that they can do an inventory of the areas outside the buildings to enable discovering if anything has changed since last assessment has been done. • The company estimates that the majority of the economic activities will be in line with the EU-taxonomy requirements to climate change adaptation, within the next 3-4 years.	**Likely not aligned** While we assess K2A to likely not be aligned for all assets as of now, when it has completed its work on physical climate risks assessments, we assess that it likely will be aligned