

# In-depth sustainability information

In-depth reporting of Castellum's key sustainability metrics, which are reported based on EPRA guidelines (third edition), the GRI Index and additional sustainability data, background information, methods and assumptions for sustainability information.

**33%**

certified property portfolio

**1%**

reduced water consumption in the like-for-like portfolio

**1st**

The Nordic region's first WELL-certified building

During the year, Castellum began construction of the Emigranten Göteborg office building, adjacent to its venerable Amerikahuset building in Gothenburg.

# EPRA Sustainability Best Practices Recommendation, sBPR

## Sustainability indicators under EPRA

Castellum's reporting of its sustainability efforts follows the guidelines from the Global Reporting Initiative (GRI) Standards: Core option. The GRI's industry-specific supplements for the construction and property sector have been taken into account. The sustainability report is presented annually and sources are given for the data, assumptions and conversion factors used as part of the report. No material changes regarding the organization or supply chain occurred in 2018.

## EPRA Performance Measures

Castellum reports the company's key sustainability metrics based on the European Public Real Estate Association (EPRA) Sustainability Best Practices Recommendations (sBPR), third version, September 2017.

Castellum reports key sustainability metrics for all 28 of the EPRA's sBPR performance measures. Key metrics are reported for energy, greenhouse gas emissions, water, waste, and environmentally certified buildings as well as corporate governance and societal aspects.

## EPRA Overarching Recommendations

### Organizational boundary

Castellum limits its reporting to properties where we have operational control in accordance with the principles of the Greenhouse Gas protocol. Operational control was selected since it provides Castellum with the best conditions for reporting the statistics and data that Castellum can directly influence. Properties where the customer is responsible for agreements regarding energy, water deliveries and waste removal are thus excluded. Nor does Castellum own measurement data in cases where the customer is responsible for the agreement, and it is therefore difficult for us to report that type of data.

### Coverage

For properties Castellum owns and manages, we work actively to gain access to the relevant measurement data. Having access to measurement data is important for Castellum, as it creates conditions for proper, efficient technical management in our buildings. At present, Castellum has excellent access to measurement data for nearly its entire portfolio. The size of the share of properties included in the respective indicators is shown next to the respective key metrics. Note that the share of potential objects to report under absolute figures for the respective years includes objects sold during the year in question, excluding land.

Castellum does not, however, have access to measurement data for all its properties. We are primarily lacking measurements of waste owing to the fact that the waste management contractors cannot provide statistics for all properties. Measurement data is also missing for energy and water. This is due to changes in the portfolio from purchases and sales of properties as well as development properties, which makes access to the relevant data more difficult. Castellum works continually on improving access to the relevant statistics.

In total, Castellum owned 647 (671) properties at the end of 2018, excluding properties consisting only of land.

### Estimation of landlord-obtained utility consumption

No data has been estimated; all measurement data reported has been measured and assured.

### Third party assurance

In accordance with ISAE 3000, Castellum's Sustainability Report under the GRI Standards has been subject to a limited assurance engagement by Deloitte AB. The Sustainability Report includes key sustainability metrics in accordance with the EPRA's sBPR performance measures. See the assurance report on page 155.

### Boundaries – reporting on landlord and tenant consumption

Castellum reports only energy purchased by the landlord (i.e. Castellum). It does not therefore report tenants' own electricity consumption, since in the main we do not have access to those statistics. Castellum cannot directly influence tenants' electricity consumption, which makes the statistics to some extent less relevant.

### Normalization

Castellum calculates key intensity metrics through division by the total floor area of the buildings; this is the most widely accepted method in Sweden for comparing energy use and resource consumption.

Castellum uses Swedish Meteorological and Hydrological Institute (SMHI) degree days to normalize energy for heating.

### Segmental analysis (by property type, geography)

In line with the company's financial reporting, Castellum reports sustainability data divided into the following building types: offices, retail, industrial and developments. Since Castellum only owns properties in Sweden and a very small share in Denmark and Finland, reporting the statistics by geographical division is not relevant.

### Disclosure on own offices

Castellum's own offices are reported separately on page 198.

### Narrative on performance

To read more about the changes from 2017 to 2018 regarding key environmental metrics and the savings achieved, see pages 68–69. No adjustments have been made to the data reported. Decisions on community engagement are planned in the respective regions.

### Location of EPRA Sustainability Performance in companies' reports

See Castellum's EPRA index on page 200.

### Reporting period

Reporting for the respective years recognized in the EPRA table refers to calendar years (i.e. January 1 to December 31).

### Materiality

Castellum's materiality analysis is reported on page 202.

# EPRA: Sustainability performance measures — Environment

## ENERGY

EPRA Code	Units of measure	Indicator	Absolute measures (abs)		
			Castellum		
			2018	2017	
Elec-Abs Elec-LfL	MWh	<b>Electricity</b>	<b>Total landlord obtained electricity</b>	<b>93,098</b>	<b>88,482</b>
		<i>of applicable properties</i>	<i>Electricity disclosure coverage</i>	443/495	455/470
DH&C-Abs DH&C-LfL	MWh	<b>District heating &amp; cooling</b>	<b>Total landlord obtained heating and cooling</b>	<b>251,994</b>	<b>249,202</b>
		<i>of applicable properties</i>	<i>District heating &amp; cooling disclosure coverage</i>	470/522	472/487
Fuels-Abs Fuels-LfL	MWh	<b>Fuels</b>	Total landlord obtained fuels	<b>3,922</b>	<b>5,455</b>
		<i>of applicable properties</i>	<i>Fuels disclosure coverage</i>	17/17	27/27
	MWh	<b>Energy</b>	Total energy use	<b>349,014</b>	<b>343,140</b>
			Total energy use (Degree day corrected)	371,220	365,927
Energy-Int	kWh/sq. m.	<b>Energy intensity</b>	Building energy intensity	97	94

The table shows energy usage as total and like-for-like figures for Castellum AB per property type. Applicable properties refers to the number of properties within our organizational boundaries for this indicator. The degree day-corrected energy use is normalized with data from SMHI. Castellum only reports on landlord obtained energy, our own offices are included in the data above. No energy data is estimated.

## GREENHOUSE GAS EMISSIONS

EPRA Code	Units of measure	Indicator	Absolute measures (abs)		
			Castellum		
			2018	2017	
GHG-Dir-Abs GHG-Dir-LfL	Tonnes CO <sub>2</sub> e	<b>Direct</b>	<b>Scope 1</b>	<b>675</b>	<b>1,122</b>
GHG-Indir-Abs GHG-Indir-LfL	Tonnes CO <sub>2</sub> e	<b>Indirect</b>	<b>Scope 2</b>	<b>4,362</b>	<b>6,133</b>
		<b>Other indirect</b>	<b>Scope 3</b>	<b>151</b>	<b>138</b>
GHG-Int	Kg CO <sub>2</sub> e/sq. m.	<b>GHG Intensity</b>	<b>GHG Intensity</b>	1.2	1.6

The table shows greenhouse gas emissions from fuel in own vehicles in absolute (Scope 1) and from building energy usage in absolute and LfL (Scope 1 & 2) and from employee travel in absolute (Scope 3). In 2018, greenhouse gas emissions from company owned vehicles was 197 tonnes CO<sub>2</sub>e compared to 341 tonnes CO<sub>2</sub>e in 2017. GHG intensity is divided by the total floor area of Castellum's portfolio, 2018 = 4,229,339 square meters.

## WATER

EPRA Code	Units of measure	Indicator	Absolute measures (abs)		
			Castellum		
			2018	2017	
Water-Abs Water-LfL	m <sup>3</sup>	<b>Municipal water</b>	<b>969,783</b>	<b>1,008,457</b>	
Water-Int	m <sup>3</sup> /sq. m.	<b>Building water intensity</b>	<b>0.27</b>	<b>0.28</b>	
		<b>of applicable properties</b>	<b>Water disclosure coverage</b>	<b>503/554</b>	<b>517/531</b>

The table shows water usage. Applicable properties refers to the number of the properties within our organizational boundaries for this indicator.

## Like-for-like (Lfl) by property type

Offices & retail			Industrial			Castellum total		
2018	2017	% change	2018	2017	% change	2018	2017	% change
33,369	32,078	4.0%	8,756	8,491	+3.1%	<b>42,126</b>	<b>40,569</b>	<b>+3.8%</b>
162/162	162/162		81/81	81/81		243/243	243/243	
88,788	86,597	+2.5%	38,488	37,832	+1.7%	<b>127,277</b>	<b>124,430</b>	<b>+2.3%</b>
172/172	172/172		96/96	96/96		268/268	268/268	
514	451	+13.7%	964	947	+2.1%	<b>1,478</b>	<b>1,399</b>	<b>+5.6%</b>
2/2	2/2		6/6	6/6		8/8	8/8	
<b>122,672</b>	<b>119,127</b>	<b>+3.0%</b>	<b>48,210</b>	<b>47,271</b>	<b>+2.0%</b>	<b>170,882</b>	<b>166,399</b>	<b>+2.7%</b>
130,182	125,990	+3.3%	51,977	50,510	+2.9%	182,159	176,501	+3.2%
103	100	+3.0%	77	76	+2.0%	95	92	+2.7%

## Like-for-like (Lfl) by property type

Offices & retail			Industrial			Castellum total		
2018	2017	% change	2018	2017	% change	2018	2017	% change
27	306	-91%	20	21	-5%	<b>244</b>	<b>655</b>	<b>-63%</b>
1,319	1,299	+2%	625	530	18%	<b>1,944</b>	<b>1,829</b>	<b>+6%</b>
-	-	-	-	-	-	<b>151</b>	<b>138</b>	<b>+10%</b>
0.9	1.1	-16%	0.7	0.6	+17%	<b>1.0</b>	<b>1.1</b>	<b>-11%</b>

## Like-for-like (Lfl) by property type

Offices & retail			Industrial			Castellum total		
2018	2017	% change	2018	2017	% change	2018	2017	% change
372,006	373,150	-0.3%	151,915	157,163	-3.3%	<b>523,921</b>	<b>530,312</b>	<b>-1.2%</b>
0.33	0.33	-0.3%	0.23	0.24	-3.3%	<b>0.30</b>	<b>0.30</b>	<b>-1.2%</b>
171/171	171/171		108/108	108/108		<b>279/279</b>	<b>279/279</b>	

**WASTE**

EPRA Code	Units of measure	Indicator	Absolute measures (abs)	
			Castellum	
			2018	2017
Waste-Abs Waste-LfL	tonnes	<b>Hazardous waste</b>	11	19
		<b>Recycled waste</b>	1,025	833
		<b>Waste to combustion</b>	1,377	1,113
		<b>Total waste</b>	2,414	1,964
of applicable properties		<b>Waste disclosure coverage</b>	146/669	137/671

The table shows generated waste by tenants. Applicable properties refers to the number of the properties within our organizational boundaries for this indicator.

**SUSTAINABILITY CERTIFIED BUILDINGS**

EPRA Code	Indicator
Cert-tot	<b>Number of certified assets</b>
	<b>Certified area (sq. m.)</b>
	<b>Certified area, share of total portfolio (%)</b>

The table shows number of sustainability certified buildings by type of certification. Applicable properties refers to the floor area of the properties within our organizational boundaries for this indicator. Some assets are certified according to two or more certification schemes, meaning that the total number of assets certified are not a sum of the segmented numbers.

**CASTELLUM AB OFFICE(S)**

Units of measure	Indicator	Absolute performance		
		2018	2017	
MWh	<b>Electricity</b>	<b>Total consumed electricity</b>	655	755
		<b>Proportion of electricity from renewable sources</b>	100%	100%
	<b>District heating and cooling</b>	<b>Total consumed district heating and cooling</b>	987	1,070
		<b>Proportion of landlord obtained district heating and cooling from renewable sources</b>	95.8	95.2
	<b>Fuels</b>	<b>Total consumed fuels</b>	0	0
		<b>Proportion of landlord obtained fuels from renewable sources</b>	-	-
kWh/sq. m. per year	<b>Energy intensity</b>	155	143	
Number of applicable properties	<b>Energy and associated GHG disclosure coverage</b>	20/20	21/21	
%	<b>Proportion of energy and associated GHG estimated</b>	0%	0%	
tonnes CO <sub>2</sub> e	<b>Direct</b>	<b>Scope 1</b>	200	354
	<b>Indirect</b>	<b>Scope 2</b>	20	48
	<b>Other indirect</b>	<b>Scope 3</b>	151	138
tonnes CO <sub>2</sub> e/year per sq. m./year	<b>GHG intensity</b>	<b>Scope 1 &amp; 2 emissions</b>	0.03	0.03

## Like-for-like (Lfl) by property type

Offices & retail			Industrial			Castellum total		
2018	2017	% change	2018	2017	% change	2018	2017	% change
1	2	-32%	3	4	-31%	5	7	-22%
497	484	+3%	48	58	-17%	545	542	1%
657	871	-25%	107	178	-40%	764	1,049	-27%
<b>1,156</b>	<b>1,357</b>	<b>-15%</b>	<b>158</b>	<b>241</b>	<b>-34%</b>	<b>1,314</b>	<b>1,597</b>	<b>-18%</b>
58/58	58/58		32/32	32/32		91/91	91/91	

## Castellum

Miljöbyggnad		EU GreenBuilding		LEED		BREEAM		WELL		Total sustainability certified assets		
2018	2017	2018	2017	2018	2017	2018	2017	2018	2017	2018	2017	% change
41	27	55	78	5	6	46	29	1	-	141	129	12%
<b>401,856</b>	<b>279,807</b>	460,506	591,825	95,720	133,474	602,467	499,783	13,409	-	<b>1,407,948</b>	<b>1,269,742</b>	<b>11%</b>
<b>10%</b>	<b>6%</b>	11%	14%	2%	3%	14%	11%	0%	-	<b>33%</b>	<b>29%</b>	<b>4%</b>

## EPRA: Social performance measures

### HEALTH & SAFETY

EPRA Code	Units of measure	Indicator	Boundary	Corporate performance		Performance by asset type							
				Castellum		Offices & stores		Industrial		Projects			
				2018	2017	2018	2017	2018	2017	2018	2017		
	% of total number of worked hours	<b>Injury rate</b>	<b>Direct employees</b>	0.001452%	0.000387%								
	% of total number of worked hours	<b>Lost day rate</b>	<b>Direct employees</b>	2.17%	0.80%								
	% of total number of worked hours	<b>Absentee rate</b>	<b>Direct employees</b>	3.75%	2.00%								
H&S-Emp	Total number	<b>Fatalities</b>	<b>Direct employees</b>	0	0								
H&S-Asset	% of assets	<b>Health and Safety assessments</b>		100%	100%	100%	100%	100%	100%	100%	100%	100%	
H&S-Comp	Total numbers	<b>Number of incidents</b>		8	0								

Coverage of H&S Asset are 100%.

# EPRA Sustainability: Index

The table below reports references to information for the respective EPRA indicators.

EPRA code	Indicator	GRI Standard disclosure	Reference
<b>Environmental Sustainability Performance Measures</b>			
Elec-Abs	Total electricity consumption	302-1	196-197
Elec-LfL	Like-for-like total electricity consumption	302-1	196-197
DH&C-Abs	Total district heating & cooling consumption	302-1	196-197
DH&C-LfL	Like-for-like total district heating & cooling consumption	302-1	196-197
Fuels-Abs	Total fuel consumption	302-1	196-197
Fuels-LfL	Like-for-like total fuel consumption	302-1	196-197
Energy-Int	Building energy intensity	CRE1	196-197
GHG-Dir-Abs	Total direct greenhouse gas (GHG) emissions	305-1	196-197
GHG-Indir-Abs	Total indirect greenhouse gas (GHG) emissions	305-2	196-197
GHG-Int	Greenhouse gas emissions intensity from building energy consumption	CRE3	196-197
Water-Abs	Total water consumption	303-1	196-197
Water-LfL	Like-for-like total water consumption	303-1	196-197
Water-Int	Building water intensity	CRE2	196-197
Waste-Abs	Total weight of waste by disposal route	306-2	198-199
Waste-LfL	Like-for-like total weight of waste by disposal route	306-2	198-199
Cert-tot	Type and number of sustainably certified assets	CRE8	198-199
<b>Social performance measures</b>			
Diversity-Emp	Employee gender diversity	405-1	202
Diversity-Pay	Gender pay ratio	405-2	77
Emp-Training	Training and development	404-1	77, 203
Emp-Dev	Employee performance appraisals	404-3	77, 203
Emp-Turnover	Employee turnover and retention	401-1	77
H&S-Emp	Employee health and safety	403-2	199
H&S-Asset	Asset health and safety assessments	416-1	199
H&S-Comp	Asset health and safety compliance	416-2	199
Comty-Eng	Community engagement, impact assessments and development programmes	413-1	73
<b>Governance Performance Measures</b>			
Gov-Board	Composition of the highest governance body	102-22	107-110, 112-113
Gov-Select	Nominating and selecting the highest governance body	102-24	106-107
Gov-Col	Process for managing conflicts of interest	102-25	106

# Background data for GRI disclosures

In this section, we report on the methods, assumptions and conversion factors used to produce Castellum’s GRI disclosures. In addition, supplementary tables are presented, as well as information for the Annual Report and descriptions of omitted information.

## Stakeholder dialogue and materiality analysis

To develop and improve operations, Castellum has identified and analyzed stakeholder expectations of our operations.

Castellum conducts continual dialogue with customers, suppliers, employees, Group Management and the Board of

Directors that shows which sustainability issues the stakeholders consider to be most important for Castellum.

In addition to the stakeholder dialogue, Castellum conducts ongoing discussions on sustainability-related issues at board meetings, meetings with shareholders, and in everyday encounters with customers, employees and suppliers.

## Castellum’s most important issues from a stakeholder group perspective

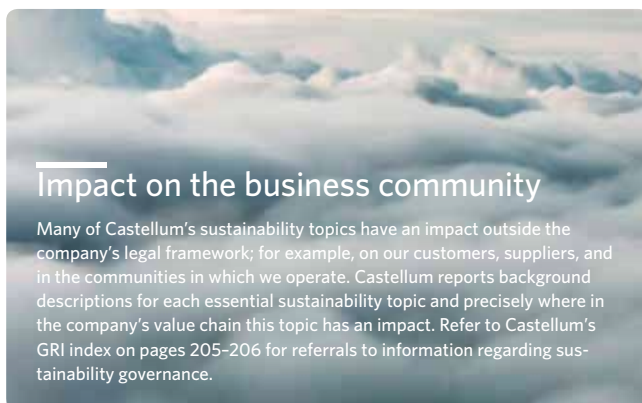
Stakeholder group	Most important issues
<b>CUSTOMERS</b>	<ul style="list-style-type: none"> <li>More efficient use of resources</li> <li>Environmentally and socially sustainable building materials and installations</li> <li>Environmental certification of buildings</li> </ul>
<b>BOARD OF DIRECTORS</b>	<ul style="list-style-type: none"> <li>More efficient use of resources</li> <li>Offer an attractive workplace</li> <li>Environmental certification of buildings</li> </ul>
<b>SUPPLIERS</b>	<ul style="list-style-type: none"> <li>Environmentally and socially sustainable building materials and installations</li> <li>Adapting the properties for climate change</li> <li>Increased investment in renewable energy</li> </ul>
<b>GROUP MANAGEMENT</b>	<ul style="list-style-type: none"> <li>More efficient use of resources</li> <li>Promote increased diversity and equality</li> <li>Offer an attractive workplace</li> </ul>
<b>EMPLOYEES</b>	<ul style="list-style-type: none"> <li>More efficient use of resources</li> <li>Offer an attractive workplace</li> <li>Environmentally and socially sustainable building materials and installations</li> </ul>

The table shows the most relevant issues for Castellum’s key stakeholder groups, as expressed in the specific stakeholder dialogue conducted in the autumn of 2016 and updated in 2018.

## Castellum’s major sustainability areas and how they correlate with the GRI Standards

Castellum’s sustainability topics	GRI Standards area
Adapting the properties for climate change	Emissions
Anti-corruption	Anti-corruption
Diversity and equal opportunity	Equality
Pay adequate tax	Financial performance
Efficient use of resources (energy, water and materials)	Energy, water, legal compliance
Offer an attractive workplace	Employment and working conditions, training, health and safety
Audit suppliers about working conditions, human rights and the environment	Evaluation of suppliers regarding societal and environmental impact
Sustainable financing, e.g. "green MTNs"	-
Healthy premises that increase our tenants’ well-being	-
Increased investment in renewable energy	-
Environmental certification of buildings	Product responsibility
Environmentally and socially sustainable building materials and installations	-
Collaborate with customers to achieve higher sustainability performance	-
Create attractive communities, e.g. offering apprenticeships	Local communities
Creating conditions for waste sorting	Waste
Creation of smarter workplaces through modern technology, e.g. services to share office space	-
Increase the amount of green space and ecosystem services	-

The table shows how Castellum’s sustainability topics correlate with the aspects of the GRI Standards. A number of Castellum’s sustainability topics are considered important for the company’s sustainability efforts and therefore extend outside the GRI reporting system.



### Impact on the business community

Many of Castellum’s sustainability topics have an impact outside the company’s legal framework; for example, on our customers, suppliers, and in the communities in which we operate. Castellum reports background descriptions for each essential sustainability topic and precisely where in the company’s value chain this topic has an impact. Refer to Castellum’s GRI index on pages 205–206 for referrals to information regarding sustainability governance.



### Materiality analysis

The result of the stakeholder dialogues that were conducted, in combination with the company's materiality analysis, means that Castellum is focusing on the following topics. These are also collected in Castellum's agenda for the sustainable city.

#### THE PLANET

How we will responsibly and efficiently reduce resource use and carbon emissions that cause global warming.

#### FUTURE-PROOFING

How we create a sustainable property portfolio in a changing world.

#### WELL-BEING

How we promote health, wellness and productivity.

#### CONDUCT

How we can create better communities, with increased employment and involvement.

Relevance for stakeholders	Higher	<ul style="list-style-type: none"> <li>Biodiversity and ecosystem services</li> <li>Working environment, internal and external</li> </ul>	<ul style="list-style-type: none"> <li>Efficient use of resources (energy, water and materials)</li> <li>Promote increased diversity and equality</li> <li>Increased investment in renewable energy</li> <li>Healthy premises that increase tenants' well-being</li> <li>Create smarter workplaces through digitalization, innovation and modern technology (e.g. services for sharing office space)</li> <li>Adapting the properties for climate change</li> <li>Offer an attractive workplace to our employees</li> <li>Environmentally and socially sustainable building materials and installations</li> <li>Collaborate with customers to achieve higher sustainability performance (e.g. waste sorting, charging stations, solar cells)</li> <li>Environmental certification of buildings</li> </ul>
	High	<ul style="list-style-type: none"> <li>Pay adequate tax</li> <li>Sustainable financing, (e.g. "green" MTNs)</li> </ul>	<ul style="list-style-type: none"> <li>Audit suppliers about working conditions, human rights and the environment</li> <li>Anti-corruption</li> <li>Create attractive communities, (e.g. offering apprenticeships)</li> <li>Environmental and climate risks</li> </ul>
	High	<b>Castellum's impact on sustainable development</b>	
		High	Higher

### Health & safety, GRI 403-2

Castellum had 8 injuries among employees and 10 injuries among suppliers.

Castellum's workplace injuries are handled according to established procedures. If an employee suffers an occupational injury or gets into an accident at work, or if some near-accident occurs at work, the regional managing director, the manager concerned and the HR Director — as well as the employee — will investigate the causes so that the risk of ill health and accidents can be prevented in the future. The regional managing director, or alternately the manager concerned, must report the occurrence to the Swedish Work Environment Authority without delay. The regional managing director is also responsible for reporting work-related injuries to Castellum's legal department. The documentation will be used in the systematic health and safety work so as to prevent future accidents.

### Equality, GRI 405-1

Demographic structure personnel	2018		2017		2016	
	Number of people	Proportion women	Number of people	Proportion women	Number of people	Proportion women
<b>Board of Directors</b>	<b>7</b>	<b>57%</b>	<b>7</b>	<b>57%</b>	<b>7</b>	<b>57%</b>
Under 30 years	-	-	-	-	-	-
30-50 years	1	100%	1	100%	1	100%
Over 50 years	6	50%	6	50%	6	50%
<b>Executive management</b>	<b>9</b>	<b>44%</b>	<b>9</b>	<b>56</b>	<b>9</b>	<b>44%</b>
Under 30 years	-	-	-	-	-	-
30-50 years	6	67%	5	60%	6	50%
Over 50 years	3	0%	4	50%	3	33%
<b>Employees excl. exec. mgmt</b>	<b>374</b>	<b>42%</b>	<b>384</b>	<b>38%</b>	<b>408</b>	<b>38%</b>
Under 30 years	32	29%	51	31%	59	31%
30-50 years	198	54%	215	44%	221	43%
Over 50 years	145	27%	118	31%	128	30

This table shows the demographic structure of personnel, according to age and gender, for various administrative levels. Castellum does not track the minority status of employees.

**Energy, GRI 302-1**

Energy source	Absolute energy use, 2018	Renewable share
District heating	232,144	94.9%
Electricity, geothermal	2,118	100%
Electricity - Direct, etc.	846	100%
Natural gas	239	0%
Biogas	3,372	100%
Oil	309	0%
Building electricity	90,670	100%
District cooling	19,850	97.9%
<b>Total</b>	<b>349,552,303</b>	

All energy consumption is reported in MWh; to recalculate energy consumption from MWh to gigajoules (GJ), use a conversion factor of 3.6.

**Emissions, GRI 305-1, 305-2 and 305-3**

We monitor our greenhouse gas emissions annually in accordance with the Greenhouse Gas (GHG) Protocol. The base year is set to 2007, which was when Castellum began monitoring energy and carbon emissions annually.

Biogenic carbon dioxide emissions for Scopes 1 and 3 (tonnes CO <sub>2</sub> e)	2018	2017	2016
Scope 1	664	924	1,263
Scope 3	0	0	0

CO <sub>2</sub> emissions for energy consumption (Scope 2, tonnes CO <sub>2</sub> e)	2018	2017	2016
Market-based valuation	4,362	6,133	9,066
Location-based valuation	47,818	48,560	50,272

The table on the next page reports on the activities, assumptions and conversion factors forming the basis for reporting Castellum's energy consumption and greenhouse gas emissions.

**Supplier environmental assessment, GRI 308-1**

Castellum is unable to report quantitative data for the number of supplier audits containing environmental criteria; we report only qualitatively on how we work to influence our suppliers regarding the environment. Castellum's ambition in 2019 is to implement the Group-wide model, produced in 2018, regarding monitoring how environmental requirements are to be handled. Currently there is no decision on whether this model is to be adapted based on the requirements in the GRI.

**Supplier social assessment, GRI 414-2**

Castellum is unable to report quantitative data for supplier evaluations regarding impact on society; we report only to a certain extent on the Group's negative and positive impacts in the supplier chain and how we want to influence using our

Code of Conduct. Castellum's ambition over the long term is to produce a Group-wide model for how our suppliers' impact on society is to be monitored. Currently there is no decision on whether this model is to be adapted based on the requirements in the GRI.

**Training and education, GRI 404-1**

Castellum does not break down training hours by gender and occupational category, as the company does not have access to this information at the personal level. The information may be developed in the next few years with a Group-wide HR system.

**Training and education, GRI 404-3**

Castellum does not break down employee dialogue by occupational category, as the company does not have access to this information at the individual level. The information may be developed in the next few years with a Group-wide HR system.

**Economic performance (GRI 201-1)**

	2018		2017	
	MSEK	%	MSEK	%
Income	5,577	100%	5,182	100%
Economic value retained	1,430	26%	1,063	21%
Operating costs	1,408	25%	1,419	27%
Tax	74	1%	96	2%
Dividend	1,448	26%	1,366	26%
Interest costs	835	15%	885	17%
Employees	382	7%	353	7%

Scope	Activity	Activity data	Conversion factor
Scope 1	Oil consumption in buildings where the tenant does not have separate metering or billing of actual consumption.	Internal collection of statistics relating to consumption in buildings heated by oil.	Heating oil 0.28 tonnes CO <sub>2</sub> e/MWh Source: GHG Protocol, GWP 2014 IPCC Fifth Assessment Report
Scope 1	Natural gas consumption in buildings where the tenant does not have separate metering or billing of actual consumption.	Internal collection of statistics relating to consumption in buildings heated by natural gas.	Natural gas: 0.203 tonnes CO <sub>2</sub> e/MWh Source: GHG Protocol, GWP 2014 IPCC Fifth Assessment Report
Scope 1	Business travel with company vehicles.	Travel with company vehicles is based on meter readings. Greenhouse gas emissions are based on distance covered and on combined-cycle fuel consumption for each vehicle.	Gasoline: 0.0002375 tonnes CO <sub>2</sub> e/MWh Diesel: 0.0002798 tonnes CO <sub>2</sub> e/MWh Biofuel: 0 tonnes CO <sub>2</sub> e/MWh CNG: 0.0000505 tonnes CO <sub>2</sub> e/MWh Source: GHG Protocol, GWP 2014 IPCC Fifth Assessment Report
Scope 1	Refrigerants.	Refrigerant emission data is collected from the mandatory refrigerant report of each respective property.	Statistics from Svenska Kyl & Värmepumpsföreningen. The data is reported in connection with the Fluorinated Greenhouse Gas regulation, EU/517/2014, and appurtenant Swedish legislation, which is declared based on applicable practices.
Scope 2	Consumption of electricity in properties where the tenant does not have separate measurement or invoicing of actual consumption.	Internal collection of statistics for properties where Castellum is responsible for electricity contracts. Electricity consumption is normalized via a "cooling factor" for the space that is cooled, based on the average temperature for the year.	Origin-labelled renewable electricity: 0g CO <sub>2</sub> e/MWh Source: The Swedish Energy Markets Inspectorate.
Scope 2	Consumption of district heating in properties where the tenant does not have separate measurement or invoicing of actual consumption.	Internal collection of statistics for properties where Castellum is responsible for district heating. District heating consumption is adjusted based on SMHI degree days and vacancy rate.	Statistics from respective district heating providers. <sup>1</sup>
Scope 3	Business travel, taxi.	The majority of the data from suppliers and manual retrieval.	0.0001467 tonnes CO <sub>2</sub> e/MWh Source: GHG Protocol, GWP 2014 IPCC Fifth Assessment Report
Scope 3	Business travel, air.	The majority of the data from suppliers and manual retrieval.	Nordic region: 0.000172 tonnes CO <sub>2</sub> e/MWh Europe: 0.000097 tonnes CO <sub>2</sub> e/MWh World: 0.000113 tonnes CO <sub>2</sub> e/MWh Source: GHG Protocol, GWP 2014 IPCC Fifth Assessment Report
Scope 3	Business travel, train.	The majority of the data from suppliers.	0.00000017 tonnes CO <sub>2</sub> e/MWh Source: SJ
Scope 3	Business travel, private vehicles.	Internal monitoring of kilometers driven on business with private vehicles.	0.0001467 tonnes CO <sub>2</sub> e/MWh Source: GHG Protocol, GWP 2014 IPCC Fifth Assessment Report

<sup>1</sup>Since the district heating suppliers' conversion factor for the preceding year (2018) was only calculated in 2019, the conversion factor for 2017 is used for emissions linked to traditional district heating.

# GRI index

Castellum reports its sustainability activities in accordance with GRI Standards: Core option. The GRI's industry-specific supplements for the construction and property sector have been taken into account. The Sustainability Report is issued annually. The basis for the analysis is a completed stakeholder dialogue and a materiality analysis. The report describes how the Castellum Group worked with sustainability issues in 2018.

The following table specifies where the information has been reported. For specific standard indicators, reporting relies upon what is essential to business operations. All reported GRI Standards modules refer to the 2016 version. Deloitte has conducted a limited assurance engagement with the report. The latest sustainability report was published in February, 2018.

## GENERAL STANDARD DISCLOSURES

GRI reference	Page/Reference	GRI reference	Page/Reference		
<b>Organizational profile</b>		<b>Stakeholder engagement</b>			
102-1	Name of the organization	132	102-40	List of stakeholder groups	201
102-2	Activities, brands, products, and services	2, 11-13	102-41	Collective bargaining agreements	77
102-3	Location of headquarters	132 (Note 1)	102-42	Identifying and selecting stakeholders	201
102-4	Location of operations	135 (Note 2)	102-43	Approach to stakeholder engagement	201
102-5	Ownership and legal form	60, 132	102-44	Key topics and concerns raised	201-202
102-6	Markets served	32-33	<b>Reporting Practice</b>		
102-7	Scale of the organization	2, 4, 76, 81	102-45	Entities included in the consolidated financial statements	146 (Note 24)
102-8	Information on employees and other workers	72, 76-77	102-46	Defining report content and topic boundaries	64, 66-67, 195
102-9	Supply chain	44, 70	102-47	List of material topics	66-67, 201
102-10	Significant changes to the organization and its supply chain	70, 195	102-48	Restatements of information	195
102-11	Precautionary principle or approach	6, 64, 66	102-49	Changes in reporting	195
102-12	External initiatives	64, 66-67	102-50	Reporting period	202
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<b>Strategy</b>			102-52	Reporting cycle	205
102-14	Statement from senior decision-maker	6-7	102-53	Contact point for questions regarding the report	Back cover
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102-18	Governance structure	105-110, 116-118	*Not reported in full in accordance with GRI standards		
102-22	Composition of the highest governance body and its committees	107-110, 112-113			
102-24	Nominating and selecting the highest governance body	106-107			
102-25	Conflicts of interest	106			

**GENERAL STANDARD DISCLOSURES**

GRI reference		Page/Reference
<b>GRI 201: Economic performance</b>		
103-1, 103-2, 103-3	Explanation of the material topics and its boundary, the management approach and its components and Evaluation of the management approach	31, 90-91, 138
201-1	Direct economic value generated and distributed	27, 203
201-3	Defined-benefit plan obligations and other retirement plans	133, 139 (Note 11)
<b>GRI 205: Anti-corruption</b>		
103-1, 103-2, 103-3	Explanation of the material topics and its boundary, the management approach and its components and Evaluation of the management approach	66-67, 72, 118
205-3	Confirmed incidents of corruption and actions taken*	72
<b>GRI 302: Energy</b>		
103-1, 103-2, 103-3	Explanation of the material topics and its boundary, the management approach and its components and Evaluation of the management approach	66-69
302-1	Energy consumption within the organization	68-69, 196-197, 203
CRE1	Building energy intensity	68-69, 196-197, 203
<b>GRI 303: Water</b>		
103-1, 103-2, 103-3	Explanation of the material topics and its boundary, the management approach and its components and Evaluation of the management approach	66-69
303-1	Water withdrawal by source	69, 196-197
CRE2	Building water intensity	69, 196-197
<b>GRI 305: Emissions</b>		
103-1, 103-2, 103-3	Explanation of the material topics and its boundary, the management approach and its components and Evaluation of the management approach	66-69
305-1	Direct (Scope 1) GHG emissions	68-69, 196-197, 203-204
305-2	Energy indirect (Scope 2) GHG emissions	68-69, 196-197, 203-204
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CRE3	Greenhouse gas emissions intensity in buildings	68-69, 196-197
<b>GRI 306: Effluents and Waste</b>		
103-1, 103-2, 103-3	Explanation of the material topics and its boundary, the management approach and its components and Evaluation of the management approach	66-69
306-2	Waste by type and disposal method*	69, 198-199
<b>GRI 307: Environmental Compliance</b>		
103-1, 103-2, 103-3	Explanation of the material topics and its boundary, the management approach and its components and Evaluation of the management approach	40, 66-69
307-1	Non-compliance with environmental laws and regulations	40
<b>GRI 308: Supplier Environmental Assessment</b>		
103-1, 103-2, 103-3	Explanation of the material topics and its boundary, the management approach and its components and Evaluation of the management approach	66-67, 70
308-1	New suppliers that were screened using environmental criteria*	70, 203

GRI reference		Page/Reference
<b>GRI 401: Employment</b>		
103-1, 103-2, 103-3	Explanation of the material topics and its boundary, the management approach and its components and Evaluation of the management approach	66-67, 75-77
401-1	New employee hires and employee turnover	77
<b>GRI 403: Occupational Health and Safety</b>		
103-1, 103-2, 103-3	Explanation of the material topics and its boundary, the management approach and its components and Evaluation of the management approach	66-67, 71.76
403-2	Types of injury and rates of injury, occupational diseases, lost days, and absenteeism, and number of work-related fatalities	76, 77, 199
<b>GRI 404: Training and Education</b>		
103-1, 103-2, 103-3	Explanation of the material topics and its boundary, the management approach and its components and Evaluation of the management approach	66-67, 75-77
404-1	Average hours of training per year per employee*	77, 203
404-3	Percentage of employees receiving regular performance and career development reviews*	77, 203
<b>GRI 405: Diversity and Equal Opportunity</b>		
103-1, 103-2, 103-3	Explanation of the material topics and its boundary, the management approach and its components and Evaluation of the management approach	66-67, 75-77
405-1	Diversity of governance bodies and employees	76, 202
405-2	Ratio of basic salary and remuneration of women to men	77
<b>GRI 413: Local communities</b>		
103-1, 103-2, 103-3	Explanation of the material topics and its boundary, the management approach and its components and Evaluation of the management approach	66-67, 72-73
413-1	Operations with local community engagement, impact assessments, and development programs	44, 73
<b>GRI 414: Supplier Social Assessment</b>		
103-1, 103-2, 103-3	Explanation of the material topics and its boundary, the management approach and its components and Evaluation of the management approach	66-67, 70-72
414-2	Negative social impacts in the supply chain and actions taken*	70, 203
<b>GRI 416: Customer Health and Safety</b>		
103-1, 103-2, 103-3	Explanation of the material topics and its boundary, the management approach and its components and Evaluation of the management approach	40, 66-67
416-1	Assessment of the health and safety impacts of product and service categories	40
416-2	Incidents of non-compliance concerning the health and safety impacts of products and services	202
<b>CRE: Product responsibility</b>		
103-1, 103-2, 103-3	Explanation of the material topics and its boundary, the management approach and its components and Evaluation of the management approach	40, 44, 66-67, 70
CRE8	Sustainability certifications for new construction, expansion and reconstructions	27, 40, 70, 198-199

\*Not reported in full in accordance with GRI standards

# Reporting according to the Task Force on Climate-Related Financial Disclosures (TCFD)

For the first time, Castellum has adapted the company's reporting in accordance with the recommendations in the TCFD framework to describe how we work strategically with climate-related risks and opportunities. The table below describes the scope of the reporting and page references are made for the respective areas. In 2019, Castellum will work further on scenario analyses linked to climate change.

GOVERNANCE	STRATEGY	RISK MANAGEMENT	INDICATORS & GOALS
Recommended disclosures	Recommended disclosures	Recommended disclosures	Recommended disclosures
<p><b>A.</b> The Board's monitoring of climate-related risks and opportunities</p> <p>→ pages 66, 108-109</p>	<p><b>A.</b> Climate-related risks and opportunities the organization has identified</p> <p>→ pages 63, 98</p>	<p><b>A.</b> The organization's processes for identifying climate-related risks</p> <p>→ pages 63, 93, 98</p>	<p><b>A.</b> The organization's indicators for evaluating climate-related risks and opportunities</p> <p>→ pages 66-69, 196-197</p>
<p><b>B.</b> Management's role regarding assessing and managing climate-related risks and opportunities</p> <p>→ pages 66, 108-109</p>	<p><b>B.</b> Impact from risks and opportunities on the organization's operations, strategy and financial planning</p> <p>→ pages 63, 98</p>	<p><b>B.</b> The organization's processes for managing climate-related risks</p> <p>→ page 98</p>	<p><b>B.</b> Emissions of Scope 1, 2 and 3 under the Greenhouse Gas Protocol.</p> <p>→ pages 196-197</p>
	<p><b>C.</b> Preparation of the organization's strategy in consideration of various climate-related scenarios.</p> <p>→ pages 63, 207</p>	<p><b>C.</b> Integration of the above processes in the organization's general risk management</p> <p>→ pages 93, 98</p>	<p><b>C.</b> Goals for managing climate-related risks and opportunities.</p> <p>→ pages 66-67</p>