



STARS SUMMARY REPORT

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CONCORDIA

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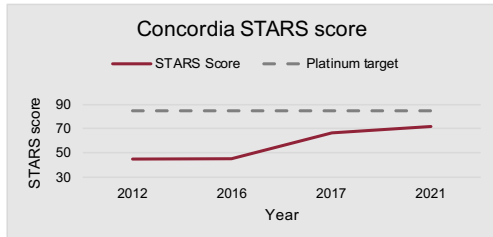
STARS Rating Summary

Sustainability Tracking, Assessment, & Rating System
Association for the Advancement of Sustainability in Higher Education

This report contains the results of the application for a STARS® rating submitted for Concordia University. The STARS rating is an official recognition that a university has met the requirements prescribed within the STARS as created, maintained, and administered by the Association for the Advancement of Sustainability in Higher Education (AASHE®).

Concordia University

Score 72.00



An institution's score is based on the percentage of points it earns by pursuing relevant credits across four main categories: Academics (AC), Engagement (EN), Operations (OP), and Planning & Administration (PA). In addition, institutions may earn up to four Innovation & Leadership (IN) points for exemplary and path-breaking initiatives that are not covered by other STARS credits or that exceed the highest criterion of a standard credit. The final institutional score is achieved through the following formula: Points Achieved/Points Possible + Innovation & Leadership Points.

Date Submitted:	December 22, 2021	Rating	Score Required
Reporting Period:	2018-2021	Bronze	25
Rating:	Gold	Silver	45
Score:	72.00	Gold	65
STARS Version:	2.2	Platinum	85

Average of Canadian Doctoral/Research institutions with FTE of >20,000 students

% achieved 100% of points possible (see far right column for actual points)

Category	Improvement Opportunity	Points Achieved	Possible
Academics	Improvement Opportunity	47.3	58
Curriculum	Increase number of programs available to students with sustainability learning outcomes	29.3	40
Research		18	18
Engagement	Improvement Opportunity	33.2	41
Campus Engagement	Continued development of student/employee sustainability peer educator programs	16.9	21
Public Engagement	Increase number of sustainability course offerings in Continuing Education	16.3	20
Operations	Improvement Opportunity	34.8	70
Air & Climate	Reduce GHG emissions in the near term	6.5	11
Buildings	Implement certified sustainability O+M program for buildings (e.g. LEED O+M)	4.3	8
Energy	Pilot the use of renewable energy	2.9	10
Food & Dining	Increase per cent of purchases of sustainably or ethically produced products	3.3	8
Grounds	Organic landscape management program	2	3
Purchasing	Paper purchase policy for 100% FSC recycled paper	4.9	6
Transportation	Incorporate alternative fuel vehicles in to fleet	5.8	7
Waste	Implement construction and demolition waste diversion program	4.6	10
Water	Conduct water study to measure changes from baseline year	0.5	7
Planning & Administration	Improvement Opportunity	21.5	32
Coordination & Planning	Create campus-community council or community advisory panel	8.3	9
Diversity & Affordability	Track affordability and access metrics	4.8	10
Investment & Finance	Disclose the amount invested in each fund and/or company for investment holdings	4.3	6
Wellbeing & Work	Increase the percentage of employees that receive a living wage	4.1	7
Innovation & Leadership	Improvement Opportunity	4	4
Innovation & Leadership		4	4
Total (Points Achieved / Points Possible + Innovation Leadership Points)		137	201

1. CONCORDIA STARS PARTICIPATION

1.1 INTRODUCTION TO STARS

The Sustainability Tracking, Assessment and Rating System (STARS) was developed by the Association for the Advancement of Sustainability in Higher Education (AASHE) in 2010. It is a voluntary self-reporting sustainability assessment. The results can be used to track sustainability over time at an institution and also as a tool to benchmark performance against that of other institutions. STARS has become one of the most popular assessments used at higher education institutions (HEI). The STARS framework is updated every few years to reflect new trends in sustainability at HEI.

The current framework (STARS 2.2) covers five categories: academics, engagement, operations, planning and administration, and innovation and leadership. These are further organized into 17 sub-categories (see table 1). STARS is an indicator-based assessment. Version 2.2 of STARS has a total of 63 indicators (or credits), with eight innovation and leadership credits scored separately (*“About STARS”*, 2018).

Table 1 - STARS categories and sub-categories

Category	Sub-category	Available points
Academics	Curriculum	40
	Research	18
	Total	58
Engagement	Campus Engagement	21
	Public Engagement	20
	Total	41
Operations	Air & Climate	11
	Buildings	8
	Energy	10
	Food & Dining	8
	Grounds	3
	Purchasing	6
	Transportation	7
	Waste	10
	Water	7
	Total	70
Planning & Administration	Coordination & Planning	9
	Diversity & Affordability	10

	Investment & Finance	6
	Wellbeing & Work	7
	Total	32
Innovation & Leadership	Exemplary Practice Innovation	4
	Total	4

Upon completion of the assessment, institutions receive one of five levels of rating based on their score out of 100 (see Figure 1). The highest rating is Platinum and requires a minimum score of 85. In descending order, the ratings and the minimum score required are Gold (65), Silver (45), Bronze (25) and Reporter. Approximately a thousand HEI have registered to use the STARS reporting tool, of which 674 have earned a STARS rating. As of January 2022, only eleven institutions have earned a Platinum rating.



Figure 1 - STARS ratings

1.2 HISTORY OF CONCORDIA'S PARTICIPATION IN STARS

Date	
2008-09	Concordia was among 66 pioneering HEI in North America, and one of only four in Canada, who participated in the STARS pilot project, including commenting on its Canadian applicability.
October 2012	Concordia officially earned a Silver rating (score of 45) with version 1.2 of the rating system. The rating lasted for three years and expired in October 2015.
February 2016	A Silver rating renewal was completed under version 2.0, with the intent of pursuing a Gold rating in the following year.
May 2017	Concordia earned a Gold rating (score of 67) with version 2.0. The rating lasted for three years and expired in November 2020.
February 2022	Concordia earned a Gold rating (score of 72) with version 2.2. The rating will expire in June 2025.

1.3 BENEFITS OF THE STARS FRAMEWORK

Research has found that assessment tools, like STARS, were one of the most important developments in operationalizing sustainability in HEI. Assessment tools can be categorized into three groups based on their approaches: accounts assessment, narrative assessment, and indicator-based assessment (Alghamdi, den Heijer, & de Jonge, 2017). According to Lozano (2016), indicator-based assessments tend to be more objective than the accounts and narrative assessments, therefore more easily measurable and comparable. He also states that “indicator-based assessments offer higher levels of transparency, consistency and usefulness for decision-making” (2006, p. 971).

Kaml and Asmuss (2013) argue that STARS is one of the most comprehensive assessment tools, as it has the attributes of a high-quality assessment tool identified by Shriberg (2002). These attributes are that the assessment tools 1) Identify important issues, 2) Are calculable and comparable, 3) Move beyond eco-efficiency, 4) Measure process and motivations and, 5) Stress on comprehensibility.

A report published in 2021 by Minutolo, Ivanova and Cong found that a relationship exists between sustainability reporting at HEI and enrollment and endowments. It was also found that reporting is associated with a reduction in greenhouse gas emissions from HEI. The authors recommend using a standardized reporting framework like STARS. They also suggest that a STARS rating can be used by HEI “as a signaling mechanism to stakeholders of their commitment to sustainability” (p. 15).

2. CONCORDIA 2021 STARS RESULTS

Table 2 is an overview of Concordia’s 2021 STARS results per sub-category. A detailed summary of points earned for each credit can be found in Appendix A.

Table 2 - Concordia 2021 STARS points per sub-category

Category	Sub-category	Earned points	Available points
Academics	Curriculum	29.3	40
	Research	18	18
	Total	47.3	58
Engagement	Campus Engagement	16.9	21
	Public Engagement	16.2	20
	Total	33.1	41
Operations	Air & Climate	6.5	11

	Buildings	4.3	8
	Energy	2.9	10
	Food & Dining	3.3	8
	Grounds	2	3
	Purchasing	4.9	6
	Transportation	5.8	7
	Waste	4.6	10
	Water	0.5	7
	Total	34.8	70
Planning & Administration	Coordination & Planning	8.3	9
	Diversity & Affordability	4.7	10
	Investment & Finance	4.3	6
	Wellbeing & Work	4.1	7
	Total	21.4	32
Innovation & Leadership	Exemplary Practice Innovation	4	4
	Total	4	4

2.1 ACADEMICS

2.1.1 Strengths

Of the four categories (excluding Innovation & Leadership), Concordia performed best in the Academics category. Particularly in the research sub-category, earning the maximum number of points available for each of these credits. For the *AC-9: Research and Scholarship* credit, an institution earns the maximum number of points when 15% or more of its employees that conduct research are engaged in sustainability research, and when 75% or more of departments that conduct research are engaged in sustainability research. Currently, 24% of Concordia's employees that conduct research are engaged in sustainability research and 100% of its departments. Concordia earned full points for the *AC-6: Sustainability Literacy Assessment* credit having conducted a [Sustainability Culture and Literacy Assessment](#) (SCLA) in Fall 2021 and scheduled a post-assessment for 2024.

Concordia scored well in *AC-10: Support for Research* by providing numerous incentives and support programs for students and faculty engaged in sustainability research. For example, there is an annual Sustainability across Disciplines conference in March each year co-hosted by the Loyola College for Diversity and Sustainability (LCDS) and the Loyola Sustainability Research Centre (LSRC), which involves research presentations by faculty and students of all levels. For *AC-11: Open Access to Research*, Concordia earned full points for facilitating open access publishing in three ways: 1) offering institutional open access repository hosting, 2) having a

published policy that mandates open access publishing and, 3) providing an open access article processing charge (APC) fund.

2.1.2 Areas to address

Concordia did not earn many points (1.5 out of 8) in the *AC-2: Learning outcomes* credit. To earn full points for this credit, an institution needs to adopt one or more sustainability-focused learning outcomes that apply to the entire (or predominant) student body, or when 100% of program-specific learning outcomes include sustainability-focused learning outcomes.

For a degree program to require an understanding of sustainability, it can (a) adopt a formal sustainability learning outcome and/or (b) include a sustainability-focused course as part of its list of required credits.

Currently, 19% of all Concordia students graduate from degree programs that require an understanding of sustainability. This gap is addressed in Concordia's Sustainability in Curriculum Plan as one of the five-year (2020-25) goals and targets. Goal number 5.3 is to "increase the number of programs available to students that have a sustainability learning outcome".¹

2.2 ENGAGEMENT

2.2.1 Strengths

In general, Concordia performed well in the public engagement and student campus engagement sub-categories. Concordia performed best in the *EN-3: Student life*, *EN-5: Outreach campaign* and *EN-10: Community Partnership* credits. Concordia has many active student groups focused on sustainability, such as Sustainable Concordia and the Sustainability Action Fund. The Low-Waste Office campaign and "Waste Not, Want Not" are two examples of sustainability-related outreach campaigns that are directed at Concordia students and employees. Concordia also has several sustainability-focused community partnerships, such as its partnership with the sustainability living labs at Bâtiment 7, World Wildlife Fund (WWF) Living Planet @ Campus program, and La Table des Chefs.

In Fall 2021 Concordia developed an Employee Educator Program and reintroduced a sustainability professional development and training opportunity for faculty and staff. This allowed the university to earn points related to employee engagement on campus.

¹ In November 2021, 89% of students voted yes to the CSU referendum question "Do you agree to call on Concordia University to make an institutional commitment that all Concordia students will learn about sustainability and the climate crisis in their curriculum by 2030, and to mandate the Concordia Student Union to advocate to achieve that goal?"

2.2.2 Areas to address

Concordia earned only half the available points for both the student and employee educator programs. As planned, the university will have to expand the programs to include more members in order to gain points for these credits. For the public engagement category, Concordia missed out on points for the community service and continuing education credits. A method for tracking the number and hours of student and employee community service would likely increase the number of points for this credit. To receive full points for the continuing education credit, Concordia will have to improve its sustainability course offerings from 2% to 10%.

2.3 OPERATIONS

2.3.1 Strengths

The maximum number of points was earned in the *OP-8: Sustainable Dining*, and the *OP-17: Support for Sustainable Transportation* credits. Concordia's many sustainable dining initiatives contributed to the success of this credit. Concordia hosts two farmers' markets, one on each campus. Local Food Days are organized once a month in Concordia's residential dining halls, where a menu is developed around a theme showcasing local products.

Concordia provides support for sustainable transportation by providing secure indoor bike parking, preferential carpool parking, and electric vehicle charging stations. These initiatives have contributed to the success in the *OP-16: Commute Modal Split* credit. The [2019 Commuter Habits Survey](#) created by the Office of Sustainability found that the total percentage of students that use more sustainable commuting options as their primary mode of transportation at Concordia is 95%. The total percentage of employees that use more sustainable commuting options as their primary mode of transportation is 86%.

2.3.2 Areas to address

For the *OP-21: Water use* credit, Concordia was unable to achieve points. This is primarily because Concordia does not track total potable water consumption. This is a metric that the Facilities Management team is looking to measure in the near future.

Concordia also scored poorly on the *OP-7: Food and Beverage Purchasing* credit. To earn more points, Concordia would have to increase both its percentage of total annual food and beverage expenditures on products that are sustainably or ethically produced (currently at 6%), and percentage of total annual food beverage expenditures on plant-based foods (currently at 32%).

These metrics are addressed in Concordia's Sustainable Food Systems Plan five-year goals and

targets (2020-25): 1.1 Increase sourcing of local/sustainable foods to 50% of total purchases in the summer and fall and 40% in winter and spring; 1.4 Support the adoption of healthy, plant-based, allergen-free, and culturally inclusive food choices on campus; 1.5 Reduce animal product (meat, poultry, fish/seafood, eggs, and dairy) purchases to 30% of the total food budget.

2.4 PLANNING & ADMINISTRATION

2.4.1 Strengths

Concordia performed best in the coordination and planning sub-category (PA-1 to 4). Concordia earned full points for PA-1 for having a sustainability committee (the Sustainability Advisory Committee and its three sub-committees), a sustainability office (our Office of Sustainability), and a sustainability officer (the P4693 sustainability coordinator position). For PA-2, full points were earned for having a published plan or plans that include measurable sustainability objectives related to Academics, Engagement, Operations and Administration. Concordia has a [Sustainability Action Plan](#), launched in November 2020, which includes a long-term vision, as well as five-year plans around five stream topics: Food, Waste, Climate, Research, and Curriculum.

2.4.2 Areas to address

No points were earned for the *PA-11: Investment Disclosure* credit. An institution earns the maximum points available for this credit by making a snapshot of its entire investment holdings publicly available. Concordia makes available the investment managers and the basic portfolio composition (i.e., asset classes), but not specific funds for companies. To receive full points, specific funds/companies need to be disclosed.

The credit *PA-8: Affordability and Access* requires metrics that are not currently tracked at Concordia and are difficult to attain as a publicly funded institution, so no points were earned for this credit.

3. CONCORDIA'S STARS PERFORMANCE OVER TIME

Table 3 is a comparison of Concordia's 2021 and 2017 STARS results by sub-category. It is important to note that there have been updates to how points are scored in credits between version 2.0 and 2.2 of STARS. STARS 2.2 is more comprehensive, and for certain credits it can be more difficult for institutions to earn points. The distribution of points among credits also varies slightly.

Table 3 - Comparison of Concordia's 2021 and 2017 STARS points per sub-category

Category	Sub-category	2017 Report (v.2.0)		2021 Report (v.2.2)		Percent change
		Earned points	Available points	Earned points	Available points	
Academics	Curriculum	23.5	40	29.3	40	25%
	Research	16.0	18	18	18	12%
	Total	39.5	58	47.3	58	20%
Engagement	Campus Engagement	15.0	18	16.9	21	-3%
	Public Engagement	18.1	21	16.2	20	-6%
	Total	33.1	39	33.1	41	-5%
Operations	Air & Climate	6.4	11	6.5	11	2%
	Buildings	2.5	8	4.3	8	72%
	Energy	1.6	10	2.9	10	77%
	Food & Dining	1.8	7	3.3	8	65%
	Grounds	2.0	3	2	3	0%
	Purchasing	4.7	6	4.9	6	4%
	Transportation	5.7	7	5.8	7	1%
	Waste	5.8	10	4.6	10	-20%
	Water	1.0	7	0.5	7	-50%
	Total	31.5	69	34.8	70	9%
Planning & Administration	Coordination & Planning	7.0	8	8.3	9	5%
	Diversity & Affordability	5.8	10	4.8	10	-16%
	Investment & Finance	3.1	7	4.3	6	62%
	Wellbeing & Work	3.3	7	4.1	7	26%
	Total	19.1	32	21.5	32	12%
Innovation & Leadership	Total	4	4	4	4	0%

3.1 ACADEMICS

Concordia was able to **increase** its points by 20 per cent in the Academics category from the last STARS report.

- For the *AC-1: Academic courses* credit, the percentage of courses that are sustainability course offerings and percentage of academic departments with sustainability course offerings has grown.
- Concordia conducted for the first time a sustainability literacy assessment and was able to earn full points in the *AC-6: Sustainability literacy assessment* credit.

- In the research subcategory (AC-9, AC-10, AC-11), the number of faculty and/or staff engaged in sustainability research and the percentage of departments engaged in sustainability research have increased. Support for sustainability research has also expanded with formally adopted policies and procedures that give positive recognition to interdisciplinary, transdisciplinary, and multidisciplinary research during faculty promotion and/or tenure decisions.

3.2 ENGAGEMENT

There has been a **reduction** in points of 5 per cent in the Engagement category from the 2017 STARS report.

- The *EN-1: Student Educators Program* credit has additional criteria for institutions to earn full points than found in the previous version of STARS.
- The *EN-9: Staff Professional Development and Training* credit has additional criteria for institutions to earn full points than found in the previous version of STARS.
- The percentage of continuing education courses that are sustainability course offerings decreased from 8% to 2%, affecting the points earned in the *EN-12: Continuing Education* credit.

3.3 OPERATIONS

Concordia was able to **increase** its points by eleven per cent in the Operations category from the last STARS report. An increase in points can be observed in the energy and the food & dining sub-categories.

- Concordia has increased its sustainable food and beverage purchasing as well as its sustainable dining options.
- Concordia's new Applied Science Hub on the Loyola campus became LEED-Gold certified in Fall 2021.
- There was, however, a reduction in points in the waste subcategory. Upon further analysis, it was found that the materials disposed of in a solid waste landfill for the 2017 report was miscalculated. Thus, a reduction in points is not an indication that Concordia's waste minimization and diversion programs are declining.

3.4 PLANNING & ADMINISTRATION

Concordia was able to **increase** its points by 12 per cent in the Planning and Administration category from the last STARS report. This is primarily because of a change in how points are scored in the investment & finance sub-category, and due to an increase in Concordia's sustainable investments.

4. GAP ANALYSIS

Concordia has received a final score of 72. To obtain a Platinum rating (score of 85), Concordia would have to earn an additional 26 points. The following section will identify areas in each category where Concordia could earn additional points.

4.1 ACADEMICS

Potential points: 11 points

Percentage of points achieved:



Concordia has achieved 82% of the points available in the Academics category with eleven potential points remaining to earn.

Concordia could improve its score in Academics by increasing the number of sustainability course offerings to at least 20% of total course offerings. As previously mentioned, this is a five-year target (2025) of the Sustainability Curriculum plan and will progress with the help of a hired sustainable curriculum developer.

The other credit that Concordia could improve is the *AC-2: Learning Outcomes* credit for which it only earned 1.5 out of 8 points. There are two avenues through which Concordia can perform better on this credit:

- Concordia could earn full points by adopting one or more sustainability-focused learning outcomes that apply to the entire study body and at least 25 per cent of students graduate from degree programs that require an understanding of sustainability
- All students graduate from degree programs that require an understanding of sustainability.

For a degree program to require an understanding of sustainability, it can (a) adopt a formal sustainability learning outcome and/or (b) include a sustainability-focussed course as part of its list of required credits.

Sustainability Learning Outcomes Case Study Université Laval, Quebec

Université Laval was able to earn 7.6 out of 8 points for the *AC-2: Learning Outcomes* credit with STARS v2.1. In 2019, approximately 95% of their students graduated from programs that have adopted at least one sustainability learning outcome. Sustainability learning outcomes were identified in program objectives and whether the program required a mandatory sustainability course as identified in the *AC-1: Academic Courses* inventory.

The University also has an institutional level sustainability learning outcome. In May 2009, the university integrated sustainability learning into its [Academic Regulation](#) under the section of general objectives of a bachelor degree. It states that all undergraduate programs must initiate and equip students with an understanding of sustainability issues and provide them with the skills to act responsibly.

4.2 ENGAGEMENT

Potential points: 8 points

Percentage of points achieved:



Concordia has achieved 81% of the points available in the Engagement category with eight potential points remaining to earn.

Concordia could improve its score in Engagement by increasing the number of sustainability course offerings in Continuing Education to at least 10% of total courses.

Concordia could earn more points in the Community Service credit by tracking more regularly the number and hours of student and employee community service. It could also develop a program to support employee's engaging in community service.

Community Service for Employees Case Study Nova Scotia Community College, Nova Scotia

Nova Scotia Community College has a formal program to support employee volunteering during regular work hours. It can track the total number of employee community service hours contributed annually through programs sponsored by the institution. Management employees are entitled to three paid days off and Operational Support employees are entitled to four paid days off per year for the purpose of engaging in community service/volunteer work, without having to use earned vacation days to perform this service.

There are several ways that employees can volunteer including:

- a. Working with schoolchildren: chaperoning children on school trips or events, taking part in reading programs or tutoring.
- b. Working with senior citizens: visiting residents of a retirement centre, delivering meals, driving them to appointments.
- c. Improving the environment: planting trees, helping set up a community garden, cleaning up community green spaces or walking trails.
- d. Helping low-income people: working in a food kitchen, helping to pass out clothes to people in need, helping out at a homeless shelter.
- e. Assisting community/charitable organizations: working with Habitat for Humanity, volunteering at a hospital, painting a community centre or fund raising for charitable organizations.
- f. Working with animals: helping out at an animal shelter or refuge.

4.3 OPERATIONS

Potential points: 34 points

Percentage of points achieved:



50%

Concordia has the greatest potential for improvement in the Operations category. Concordia has achieved 50% of the points available in the Operations category with 34 potential points remaining to earn.

Concordia is currently not pursuing the *OP-19: Construction and Demolition Waste Diversion* credit; however, it is a strategy in the Zero Waste plan.

Construction and Demolition Waste Program Case Study University of Victoria, British Columbia

The University of Victoria was able to earn full points for the OP-19 credit by requiring all contractors working on a new building construction to achieve a waste diversion rate of at least 75%. It was noted that most projects have achieved a waste diversion rate greater than 90%.

In 2019, the University of Victoria created a new tracking program for construction and demolition waste. All projects that do not have a LEED waste management requirement and are valued greater than \$200,000 must adhere to the following tracking and reporting requirements:

- i. Keep copies of all weigh bills associated with the disposal of construction waste, including approximations of recycled content provided by transfer stations.
- ii. Compile information from weigh bills in the waste tracking spreadsheet provided to them which includes: type of material, receiving facility, total landfilled (kg), total recycled (kg), and total reused (kg).
- iii. Submit the completed waste tracking spreadsheet and all project weigh bills at the end of the project.

The University currently sources less than 1% of its energy consumption from clean and renewable sources, resulting in zero points for the associated credit. This is because hydroelectricity from Hydro-Québec does not count as a clean and renewable source under AASHE STARS 2.2.

Clean and Renewable Energy Case Study Thompson Rivers University, British Columbia

Thompson Rivers University was able to earn full points for this credit by sourcing a 100% of its total energy consumption from clean and renewable sources. A small percentage of its electricity is produced onsite through a photovoltaic system on a campus building and sidewalks. Other on-site renewable non-electric energy devices include solar arrays and a geothermal heat pump system. The largest clean and renewable source of energy for the university comes from the purchasing of renewable natural gas from FortisBC and the purchasing of third-party certified Bullfrog power's green electricity and green natural gas.

Concordia could also earn additional points by implementing a certified sustainability operations and management program for buildings (e.g., LEED O+M).

As previously noted, Concordia could improve with regards to its sustainable food and beverage purchasing. It would need to increase the percent of purchases that are sustainability/ethically produced and plant-based to over 50%.

4.4 PLANNING & ADMINISTRATION

Potential points: 11 points

Percentage of points achieved:  67%

Concordia has achieved 67% of the points available in the Planning and Administration category with 11 potential points remaining to earn. Concordia could improve its score in this category by tracking the metrics required for the *PA-8: Affordability and Access* credit. These metrics include 1) percentage of need met, on average for students who were awarded any need-based aid, 2) percentage of students graduating without student loan debt, 3) percentage of entering students that are low-income, 4) graduation/success for low-income students.

Affordability and Access Metrics Case Study McGill University, Quebec

McGill University was able to track the four metrics associated with affordability and access. The responsible party for the credit is the Director of Scholarships and Student Aid within the Department of Student Services. The percentage of need met, on average, for students who were awarded any need-based aid is recorded through McGill’s Entrance Bursary Program and In-Course Financial Aid Program.

Concordia could also improve its score by disclosing the specific funds and/or companies of its investment holdings.

5. CANADIAN UNIVERSITIES STARS RATING

STARS has a benchmarking tool that allows institutions to be compared based on the scores and metrics reported. The group of institutions in table 4 were filtered based on country (Canada), institution type (Doctoral/Research) and number of full-time equivalent enrollment (20,000 students or more). The highest-ranking institution is Université de Sherbrooke that received a platinum STARS rating in 2019. Institutions in yellow have received a gold rating and institutions in grey have received a silver rating. It is important to note that although the benchmarking tool exists, a comparison between institutions using different versions of STARS should be made with caution. Indicators and scoring may have changed between versions of STARS.

Table 4 - STARS score of Canadian Doctoral/Research institutions with over 20,000 students

Ranking	Institution	Submission date (month-yr)	STARS version	Overall Score (%)
1	Université de Sherbrooke	Dec-19	2.1	85.5
2	Université Laval	Dec-19	2.1	85.0
3	University of Calgary	Dec-18	2.1	*80.45
4	McGill University	Dec-20	2.2	76.6
5	University of British Columbia	Aug-15	2.0	*75.01
6	Western University	Oct-21	2.2	74.0
7	Simon Fraser University	Oct-18	2.1	*73.9
8	Concordia University	Dec-21	2.2	72.0
9	University of Manitoba	Aug-18	2.1	*70.27
10	University of Guelph	Sep-20	2.2	67.5
11	University of Alberta	Jun-20	2.1	67.2
12	University of Ottawa	Mar-18	2.1	*60.2
13	York University	Apr-16	2.0	*55.05
14	Université de Montreal	Dec-19	2.2	54.8
15	Ryerson University	Dec-20	2.1	54.3
16	University of Waterloo	Oct-21	2.2	53.9
17	Université du Québec à Montréal	May-21	2.2	45.3

*Expired STARS certification

Concordia ranks 8th among Canadian Doctoral/Research institutions with over 20,000 students. Another Canadian university classification method is the one used by Maclean's for annual university ranking. Universities are placed into three categories based on their levels of research funding, the diversity of offerings and the breadth and depth of graduate and professional programs. Concordia is in the middle, "comprehensive" category along with fourteen other universities. Using *Maclean's* university classification, Concordia would rank third out of twelve comprehensive universities participating in STARS.

6. REFLECTION ON THE STARS REPORTING PROCESS

6.1 DATA COLLECTION: BENEFITS AND CHALLENGES

The STARS reporting process requires a significant amount of time and effort. It includes tasks such as locating the required data within the university system, identifying the correct contacts, synthesizing data, and reporting. There are several benefits that arise from the STARS reporting process. While the Office of Sustainability is interacting with different university stakeholders, cross-departmental connections are being created. The reporting process should be seen as a

collaborative effort in advancing sustainability at the university. Through this process, routines for successful reporting are created and discussions with multiple stakeholders can signal Concordia's commitment to sustainability.

Understanding how the STARS framework functions, and effectively communicating what data is required for each credit, requires learning. Minutolo, Ivanova and Cong (2021) demonstrated that a positive relationship exists between HEI that have engaged in prior STARS reporting and their current reporting score. Their findings suggest that HEI benefit from the learning involved in prior STARS reporting.

However, if long periods occur between assessments, there is a potential for unlearning. Experience gained from the reporting process can become obsolete, lost with the turnover of staff members, or inaccessible from insufficient tracking (Minutolo et al., 2021). Concordia's last STARS report was over four years ago in 2017, thereby creating potential unlearning. The report was completed by the former Sustainability Coordinator and Analyst. Although records remain for the last reporting process, a significant amount of time went into understanding and determining the relevancy of these documents. The differences in the versions of the STARS framework also render some of the learning and data from the last report inapplicable.

The decentralized nature of the university's administration created some delays in acquiring data. It was not uncommon to reach out to a recommended department only to be redirected back to the original department from which the Office of Sustainability (OoS) had made the request. The timeliness of requests was also a challenge. Departments and staff have their own mandates and, for some, requests for the STARS report were a low priority. As for data being requested from several years ago (i.e., for the 2018-2019 year), difficulties such as staff turnover or the upgrading of data systems were also common.

6.2 RECOMMENDATIONS

A significant amount of learning occurred during the current STARS reporting process. Our recommendations for the next STARS reporting period follow.

It is recommended to have a NOW article announcing the start of the data collection for the STARS report. In addition, it would be helpful to have the VPSS, CFO and the Provost send emails to the departments in their sector notifying the start of the collection process and encouraging collaboration.

For the Operations category of STARS, the majority of the data is required from Concordia's Facilities Management. This includes 22 credits and smaller individual assessments such as the greenhouse gas (GHG) emission inventory and waste analysis. Due to the magnitude of data being requested, we recommend creating a temporary position, housed within Facilities Management, to act as coordinator for the collection of Facilities Management credits. They

would also act as a liaison between the OoS and the facilities department, facilitating coordination and communication between the two departments. The temporary position could be filled through an internship or work-study position for a Concordia graduate student.

As previously mentioned, STARS requests were a low priority for certain departments. Setting more realistic timelines for data collection and keeping in frequent contact with departments throughout the data collection period is important. As the estimated timeline for the STARS reporting process is one year, it is recommended that the data collection be scheduled for the first six months, and to reserve the last six months for synthesizing and uploading the data to the online reporting tool. The data collection process should be completed during the active academic period, as many delays have been experienced in the summer months from the absence of key stakeholders on vacation.

In order to minimize the potential for unlearning between submissions, and to maximize the benefits of regularly tracking and evaluating our progress, we recommend that we submit to STARS every two years (rather than every three) and/or to take advantage of the new dynamic reporting system being developed for STARS 3.0, which will allow participants to submit updated information to the platform on an on-going basis without needing to complete an entirely new submission.

As has been the case with each of our most recent submissions, we recommend that a Sustainability Analyst within the Office of Sustainability coordinate the data collection, synthesis, submission, and reporting process.

Additionally, we recommend that the data collection process for STARS and for the Times Higher Education (THE) Impact Rankings, coordinated through the Office of the Provost, are aligned to minimize replication of effort and to reduce the frequency of requests to departments who are asked to provide data for these assessments.

6.3 STARS FRAMEWORK LIMITATIONS

STARS was first created for HEI in North America. Soon after, the STARS International Pilot was launched, and now the STARS framework is used globally. Although suited for HEI across the world, the STARS framework for certain credits is not designed to accommodate the Canadian and Quebec context.

For the *OP-6: Clean and Renewable Energy* credit, an institution earns the maximum number of points by obtaining energy from clean and renewable sources or by purchasing unbundled renewable energy products. Concordia's energy comes from natural gas, electricity and heating

oil. A small fraction is from the solar installation of the John Molson School of Business building. The fraction is so small that Concordia receives zero points out of four for this credit.

It is important to note that Hydroelectricity from Hydro-Québec is not considered a clean and renewable energy source as it is not a low-impact hydroelectric power. It is our opinion that consideration and partial points should be awarded for cleaner energy sources such as hydroelectricity from Hydro-Québec. It is important to note, however, that an increase in reliance on hydroelectricity over other sources (such as natural gas) is rewarded through the *OP-2: Greenhouse gas emissions* credit, which evaluates our carbon footprint.

For the *PA-8: Affordability and Access* credit, indicators such as the percentage of students graduating without student loan debt, or the percentage of entering students that are low-income, are used to calculate points. However, as a public institution in Quebec, financial aid for students is managed by the government, rendering data for these indicators difficult to obtain.

Several of the STARS credits seem unattainable regardless of Concordia's unique context. To earn maximum points for the *EN-1 / EN-7: Student / Employee Educator Program* credits, an institution must have one or more peer-to-peer educator programs that serve all students / employees, with at least one hour worked annually for each student / employee served by a peer-to-peer educator program. In other words, Concordia's student / employee educators must work a total combined 46,829 hours annually.

The *OP-15: Campus Fleet* credit would require all vehicles in an institution's fleet to be alternatively fueled or powered. A transition to alternatively fueled or powered vehicles happens over several years. Institutions with written policies or plans that commit to this transition like Concordia should receive partial points.

Although the STARS framework is comprehensive, it is important to note that sustainability at Concordia is not limited to what is measured and recorded in the STARS report. The STARS framework can be a good tool and complementary to other sustainability assessments at Concordia, such as the Times Higher Education (THE) Impact Rankings².

6.4 RECOMMENDATIONS FOR STARS 3.0

The next iteration of the STARS framework (v.3.0) is currently in development by AASHE, with its tentative release date scheduled for late 2023. Currently, participants can check the status of the

² For a comparison between the STARS and the THE Impact Rankings, download the STARS comparative framework: <https://stars.aashe.org/wp-content/uploads/2020/07/Higher-Education-Sustainability-Assessment-Frameworks-Compared.pdf>

project and review credits as the STARS Steering Committee approves them for public comment. Participants can also provide feedback through a suggestion box or directly by email. The OOS will share the limitations of the STARS 2.2 framework from Concordia’s perspective, illustrated above, with the committee.

The overall vision of the STARS 3.0 is to “...provide a standardized, comprehensive and user-friendly platform for sustainability assessment and reporting that inspires urgent and transformative action by higher education institutions to create an ecologically healthy and socially just world” (STARS Steering Committee, 2019). They list the following goals:

- 1) *Promote a comprehensive and inclusive vision of higher education sustainability*
- 2) *Make STARS more accessible, especially to under-resourced institutions*
- 3) *Ensure that all institutions continue to have meaningful goals to strive towards and be recognized for*
- 4) *Ensure that STARS is useful and relevant in diverse contexts*
- 5) *Continue to prioritize performance over process*
- 6) *Maintain a consistent set of metrics that allows participants to track progress over time*
- 7) *Allow participants to publish new information without requiring a full submission*

Goal number one and seven of STARS 3.0 are of interest to Concordia. The actions associated with the first goal are to better align the STARS framework to the UN’s Sustainable Development Goals (SDGs) and to improve indicators related to equity, access and social justice. These actions align with Concordia’s strategic directions.

Related to goal number seven, for STARS 3.0 the committee is considering mechanisms to facilitate annual or dynamic reporting. This would reduce the potential for unlearning at Concordia between reports.

7. MOVING FORWARD

Concordia’s STARS 2021 rating was its fourth assessment. There was a notable improvement in the Academics category and a slight improvement in the Operations, and Planning and Administration categories. More stringent criteria in STARS 2.2 contributed to a slight decline in the Engagement category. Concordia should consider a long-term commitment to reporting every two years to benefit from the learning curve effect (Minutolo et al., 2021).

The gap analysis demonstrates the feasibility of Concordia achieving a Platinum rating. Many, but not all, of these gaps are being addressed in Concordia’s Sustainability Action Plan. The Office of

Sustainability will coordinate a process to support relevant departments in considering and implementing strategies that will improve our standing in our next submission.

Despite some limitations to the STARS framework, it is a beneficial tool that allows Concordia to identify areas of strength and development in sustainability.

REFERENCES

About STARS. (2018, November 8). The Sustainability Tracking, Assessment & Rating System. <https://stars.aashe.org/about-stars/>

Alghamdi, N., den Heijer, A., & de Jonge, H. (2017). Assessment tools' indicators for sustainability in universities: an analytical overview. *International Journal of Sustainability in Higher Education*. 18(1). 84–115. <https://doi.org/10.1108/ijsh-04-2015-0071>

Kamal, A. and Asmuss, M. (2013). Benchmarking tools for assessing and tracking sustainability in higher education institutions: Identifying an effective tool for University of Saskatchewan”, *International Journal of Sustainability in Higher Education*, Vol. 14 No. 4, pp. 449-465.

Lozano, R. (2006), A tool for a Graphical Assessment of Sustainability in Universities (GASU). *Journal of Clean Production*, 14 (9/11), 963-972.

Minutolo, M. C., Ivanova, A., & Cong, M. (2021). Signaling sustainability: impact that learning how to report has on enrollment, endowment and emissions of North American higher education institutions. *Sustainability Accounting, Management and Policy Journal*, ahead-of(ahead-of-print). <https://doi.org/10.1108/sampj-06-2020-0224>

Participants & Reports. (2020). The Sustainability Tracking, Assessment & Rating System. <https://reports.aashe.org/institutions/participants-and-reports/>

Shriberg, M. (2002). Institutional assessment tools for sustainability in higher education: strengths, weaknesses, and implications for practice and theory. *International Journal of Sustainability in Higher Education*. 3 (3), 254-270.

STARS Steering Committee. (2019). Vision for STARS 3.0. <https://stars.aashe.org/wp-content/uploads/2019/11/Vision-for-STARS-3.0-Nov-2019.pdf>

APPENDIX A

Category	Sub-category	Credit Number and Title	Earned Points	Available Points
Academics	Curriculum	AC-1: Academic Courses	9.8	14
		AC-2: Learning Outcomes	1.5	8
		AC-3: Undergraduate Program	3	3
		AC-4: Graduate Program	3	3
		AC-5: Immersive Experience	2	2
		AC-6: Sustainability Literacy Assessment	4	4
		AC-7: Incentives for Developing Courses	2	2
		AC-8: Campus as a Living Laboratory	4	4
		Curriculum Total	29.3	40
	Research	AC-9: Research and Scholarship	12	12
		AC-10: Support for Sustainability Research	4	4
		AC-11: Open Access to Research	2	2
		Research Total	18	18
	ACADEMICS TOTAL			47.3
Engagement	Campus Engagement	EN-1: Student Educators Program	2	4
		EN-2: Student Orientation	2	2
		EN-3: Student Life	2	2
		EN-4: Outreach Materials and Publications	2	2
		EN-5: Outreach Campaign	4	4
		EN-6: Assessing Sustainability Culture	1	1
		EN-7: Employee Educators Program	1.6	3
		EN-8: Employee Orientation	1	1
		EN-9: Staff Professional Development and Training	1.3	2
		Campus Engagement Total	16.9	21
	Public	EN-10: Community Partnerships	3	3

	Engagement	EN-11: Inter-Campus Collaboration	3	3
		EN-12: Continuing Education	2.7	5
		EN-13: Community Service	3.6	5
		EN-14: Participation in Public Policy	2	2
		EN-15: Trademark Licensing	2	2
		Public Engagement Total	16.2	20
ENGAGEMENT TOTAL		33.1	41	
Operations	Air & Climate	OP-1: Emissions Inventory and Disclosure	2.4	3
		OP-2: Greenhouse Gas Emissions	4.1	8
		Air & Climate Total	6.5	11
	Buildings	OP-3: Building Design and Construction	2.3	3
		OP-4: Building Operations and Maintenance	2	5
		Buildings Total	4.3	8
	Energy	OP-5: Building Energy Efficiency	2.9	6
		OP-6: Clean and Renewable Energy	0.0	4
		Energy Total	2.9	10
	Food & Dining	OP-7: Food and Beverage Purchasing	1.3	6
		OP-8: Sustainable Dining	2	2
		Food & Dining Total	3.3	8
	Grounds	OP-9: Landscape Management	1	2
		OP-10: Biodiversity	1	1
		Grounds Total	2	3
	Purchasing	OP-11: Sustainable Procurement	2.5	3
OP-12: Electronics Purchasing		1	1	
OP-13: Cleaning and Janitorial Purchasing		1	1	
OP-14: Office Paper Purchasing		0.4	1	
Purchasing Total		4.9	6	
Transportation	OP-15: Campus Fleet	0.1	1	
	OP-16: Commute Modal Split	4.7	5	

		OP-17: Support for Sustainable Transportation	1	1	
		Transportation Total	5.8	7	
	Waste		OP-18: Waste Minimization and Diversion	3.6	8
			OP-19: Construction and Demolition Waste Diversion	0	1
			OP-20: Hazardous Waste Management	1	1
			Waste Total	4.6	10
	Water		OP-21: Water Use	0	5
			OP-22: Rainwater Management	0.5	2
			Water Total	0.5	7
	OPERATIONS TOTAL			34.8	70
Planning & Administration	Coordination & Planning	PA-1: Sustainability Coordination	1	1	
		PA-2: Sustainability Planning	4	4	
		PA-3: Inclusive and Participatory Governance	2.3	3	
		PA-4: Reporting Assurance	1	1	
		Coordination & Planning Total	8.3	9	
	Diversity & Affordability	PA-5: Diversity and Equity Coordination	1.3	2	
		PA-6: Assessing Diversity and Equity	0.5	1	
		PA-7: Support for Underrepresented Groups	3.0	3	
		PA-8: Affordability and Access	0.0	4	
		Diversity & Affordability Total	4.8	10	
	Investment & Finance	PA-9: Committee on Investor Responsibility	2	2	
		PA-10: Sustainable Investment	2.3	3	
		PA-11: Investment Disclosure	0	1	
		Investment & Finance Total	4.3	6	
	Wellbeing & Work	PA-12: Employee Compensation	0.8	3	
PA-13: Assessing Employee Satisfaction		1.0	1		
PA-14: Wellness Program		0.8	1		
PA-15: Workplace Health and Safety		1.5	2		

		Wellbeing & Work Total	4.1	7
		PLANNING & ADMINISTRATION TOTAL	21.5	32
Innovation & Leadership		IN-7: Community Garden	0.5	0.5
		IN-11: External Reporting Assurance	0.5	0.5
		IN-12: Fair Trade Campus	0.5	0.5
		IN-14 Food Bank	0.5	0.5
		IN-27: Online Sustainability Course	0.5	0.5
		IN-40 Sustainability Projects Fund	0.5	0.5
		IN-41: Textbook Affordability	0.5	0.5
		IN-47: Innovation A	0.5	0.5
		INNOVATION & LEADERSHIP TOTAL	4.0	
		SCORE	72.0	

APPENDIX B

Special thanks the offices and departments below for contributing to Concordia's 2021 STARS submission.

Office of the Provost and Vice-President, Academic

Dean of Students Office
Equity Office
Innovation in Teaching and Learning
Lifelong Learning
Partnerships and Experiential Learning
Campus Wellness and Support Services

Concordia Library

Office of the Vice-President, Research and Graduate Studies

Office of Research
School of Graduate Studies

Office of the Vice-President, Services and Sustainability

Environmental Health and Safety
Hospitality Concordia (Budget Planning & Business Development)
Concordia Book Stop (Budget Planning & Business Development)
Property Management Department (Facilities Management)
Strategic Planning Department (Facilities Management)
Engineering and Building Performance Department (Facilities Management)
SIS Planning and Support Office (IITS)
Human Resources

Office of the Chief Financial Officer

Office of the Treasurer
Business Process Office
Procurement Services

Office of the President and Vice-Chancellor

Institutional Planning and Analysis

University Secretariat