

## Chapter 22

# Saskatchewan Polytechnic—Carrying Out Applied Research

### 1.0 MAIN POINTS

Saskatchewan Polytechnic (Sask Polytech) provides applied research to governments, corporations, and other third parties, often by entering into agreements for performing applied research. In 2021–22, Sask Polytech earned applied research revenue of \$11.1 million.<sup>1</sup>

Effective applied research processes help maintain the viability of research activities, and help protect Sask Polytech’s reputation with funding partners (e.g., research funding agencies such as Natural Sciences and Engineering Research Council or industry partners).<sup>2</sup>

By September 2022, Sask Polytech improved its processes to carry out applied research by implementing all five recommendations we made in our 2020 audit.

Sask Polytech:

- Expanded on the measures used to assess the success of its applied research beyond annual research revenue
- Implemented a new policy requiring all research projects with external funding in excess of \$5,000 to have a written agreement between the industry partner and Sask Polytech
- Developed a new research database to centralize and track research projects
- Developed a new process to require all staff and students to sign off annually on its Code of Conduct

### 2.0 INTRODUCTION

This chapter describes our first follow-up audit of management’s actions on the recommendations we made in 2020.<sup>3</sup>

In 2020, we assessed Saskatchewan Polytechnic’s processes to carry out applied research. Our *2020 Report – Volume 2*, Chapter 22, concluded Sask Polytech had, other than the areas of our recommendations, effective processes, for the 12-month period ended January 31, 2020, to carry out applied research. We made five recommendations.

<sup>1</sup> Sask Polytech financial records.

<sup>2</sup> Industry partners are companies that choose to partner with Sask Polytech in an applied research project.

<sup>3</sup> *2020 Report – Volume 2, Chapter 22*, pp. 165–181.



To conduct this audit engagement, we followed the standards for assurance engagements published in the *CPA Canada Handbook—Assurance* (CSAE 3001). To evaluate Sask Polytech’s progress toward meeting our recommendations, we used the relevant criteria from the original audit. Sask Polytech management agreed with the criteria in the original audit.

To complete this follow-up audit, we discussed actions taken by management responsible for the administration of applied research at Sask Polytech. We observed the processes, policies, and reports management prepared to meet our recommendations, and reviewed a sample of research projects’ supporting documentation.

## 3.0 STATUS OF RECOMMENDATIONS

This section sets out each recommendation including the date on which the Standing Committee on Public Accounts agreed to the recommendation, the status of the recommendation at September 6, 2022, and Saskatchewan Polytechnic’s actions up to that date.

### 3.1 Measures to Assess Success of Applied Research Broadened

***We recommended Saskatchewan Polytechnic broaden the measures used to assess the success of its applied research beyond annual growth in research revenue.*** (2020 Report – Volume 2, p. 170, Recommendation 1; Public Accounts Committee agreement September 6, 2022)

**Status**—Implemented

Saskatchewan Polytechnic established additional success measures to evaluate the achievement of its applied research objectives, beyond focusing solely on generating research revenues.

Beginning in its 2021–22 Annual Report, Sask Polytech included additional applied research success measures, such as:<sup>4</sup>

- The number of, and total funding for, external applied research projects awarded during the fiscal year
- The number of faculty members and researchers who participated in applied research projects
- The number of students who were paid participants in applied research projects
- The number of internal projects awarded through its Seed Applied Research Program<sup>5</sup>

We found these new applied research measures reasonable metrics to support Sask Polytech and its stakeholders (e.g., research funding agencies, industry partners) in

<sup>4</sup> *Saskatchewan Polytechnic Annual Report 2021–2022*, pp. 28–29.

<sup>5</sup> The Seed Applied Research Program (SARP) assists in developing faculty members’ applied research ideas and scholarly activities. Each year, SARP provides researchers with six available grants of up to \$6,000 each.

evaluating its processes to secure applied research projects, and in providing its stakeholders with the best research projects possible. For example, as a teaching institution, reporting on the number of students involved in research projects is important. Offering opportunities for students to get involved in applied research helps to drive research projects and attract students to Sask Polytech.

Management indicated it also began obtaining feedback from its industry partners to help assess the quality of its research; however, poor response rates resulted in Sask Polytech choosing to not report on this measure.

### 3.2 Process to Sign Off on Code of Conduct Developed

***We recommended Saskatchewan Polytechnic confirm staff and students reaffirm their commitment to the Code of Conduct at least annually, as required by policy.*** (2020 Report – Volume 2, p. 174, Recommendation 2; Public Accounts Committee agreement September 6, 2022)

**Status**—Intent of Recommendation Implemented

By September 2022, Saskatchewan Polytechnic developed an adequate process requiring staff and students to review and to sign off on its Code of Conduct annually.

Prior to this process change, Sask Polytech sent an annual reminder to staff and students to electronically complete the requirement of reaffirming their commitment to the Code of Conduct policy (annual acknowledgement). We found this process did not effectively reach all staff and students, and in some cases, where the reminder reached staff and students, they did not complete it.

We found, under the revised process, when students or staff log into Sask Polytech's network, a pop-up box (i.e., Terms of Use) will require the user to complete the Code of Conduct acknowledgement. If the user tries to decline the acknowledgement, the network will reject the user's attempt to gain system access.

Users require network access to obtain course material, document and track research, and register for classes. Sask Polytech planned to implement the revised process by October 2022.

Annual acknowledgement of the Code of Conduct policy provides staff and students with reminders of acceptable business practices and the need to consider whether they have any conflicts of interest to disclose.

### 3.3 Project Database Developed

***We recommended Saskatchewan Polytechnic maintain an accurate and complete inventory of its applied research projects (e.g., project status, project dates, ethics approvals).*** (2020 Report – Volume 2, p. 180, Recommendation 5; Public Accounts Committee agreement September 6, 2022)

**Status**—Implemented



Saskatchewan Polytechnic developed a new database for applied research projects that requires staff to enter all key project information (e.g., project status, project dates, ethics approvals).

As at September 2022, the Research Office was still entering data into the new database and had entered approximately 220 funding applications, of which 70 related to active applied research projects. Sask Polytech had 165 active applied research projects in 2021–22.

Our review of applied research projects entered into the new database at September 2022, found staff entered existing research project information into the database accurately.

Improving its current documentation of research projects will better position Sask Polytech to track and report on projects as it grows its applied research activities and its project numbers increase.

### 3.4 Key Project Risks Being Documented

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***We recommended Saskatchewan Polytechnic always document its assessment of the associated key risks of externally funded applied research projects prior to deciding to pursue the project.*** (2020 Report – Volume 2, p. 177, Recommendation 3; Public Accounts Committee agreement September 6, 2022)

**Status**—Implemented

Saskatchewan Polytechnic documents key risks associated with externally funded applied research projects in the new database.

We found the new database contained key project information (e.g., project status, project dates) and documentation of key project risks.

When evaluating whether to pursue a potential applied research project, Sask Polytech considers the following risks:

- Capacity risk—its capacity to do the research (e.g., does it have the necessary technical knowledge, can it meet the project deadline)
- Reputational risk—whether the scope and purpose of the project fit within Sask Polytech’s values (e.g., respect, integrity)
- Financial viability risk—whether expected revenue will be sufficient to cover expected costs including related overhead costs and whether funders will offset costs
- Ethical risk—potential ethical considerations (e.g., studies with human participants)

Formally documenting its project viability evaluation for all potential externally funded applied research projects decreases the risk of Sask Polytech undertaking projects it cannot complete.

Prior to the development of its new database, Sask Polytech researchers documented their assessment of project risk as part of the funding agency's standard project application. Researchers will now document their assessment of project risk using the new database that will prompt researchers to consider all areas of risk and attach documentation supporting the assessed level of risk.

Sask Polytech planned to have all risk assessments for active applied research projects entered into its database by the end of October 2022.

Documenting risk assessments in the database will allow Sask Polytech to easily recall the basis for decisions about project viability and acceptance.

### 3.5 Funding Agreements Established with External Partners

***We recommended Saskatchewan Polytechnic establish guidance about requiring funding agreements with industry partners involved in applied research projects.*** (2020 Report – Volume 2, p. 179, Recommendation 4; Public Accounts Committee agreement September 6, 2022)

**Status**—Implemented

Saskatchewan Polytechnic developed and implemented a policy requiring all applied research projects with funding in excess of \$5,000 to have a written agreement, signed by Sask Polytech and its industry partners.

Funding agreements for research projects typically set out responsibilities of the parties involved, funding details (e.g., cash or in-kind contributions), termination conditions, key deliverables, and associated project deadlines.

Our testing of six applied research projects with funding greater than \$5,000 found all six projects had a documented research agreement signed by Sask Polytech and the industry partner.

Having established funding agreements with industry partners assists Sask Polytech in recovering agreed upon project funding if a partner terminates its involvement with a project. This allows Sask Polytech to complete the project and meet its deliverables to other stakeholders (such as federal granting agencies where industry partners match federal funding).

