Core Research Platforms | Facts & Figures 2022

Across the McMaster campus — from state-of-the-art national research facilities to suites of equipment housed within centres and institutes to department-based laboratories — our core research platforms (CRPs) provide our researchers with the cutting-edge methods and tools required to impact their fields of research. They also enable our private sector, government and community partners to access some of the country's top talent.

2022 AT A GLANCE

30 Total # of CRPs

$19.6M Total revenue

2900+ Total users

149 Total staff (FTE)

>60 Total staff with advanced degrees

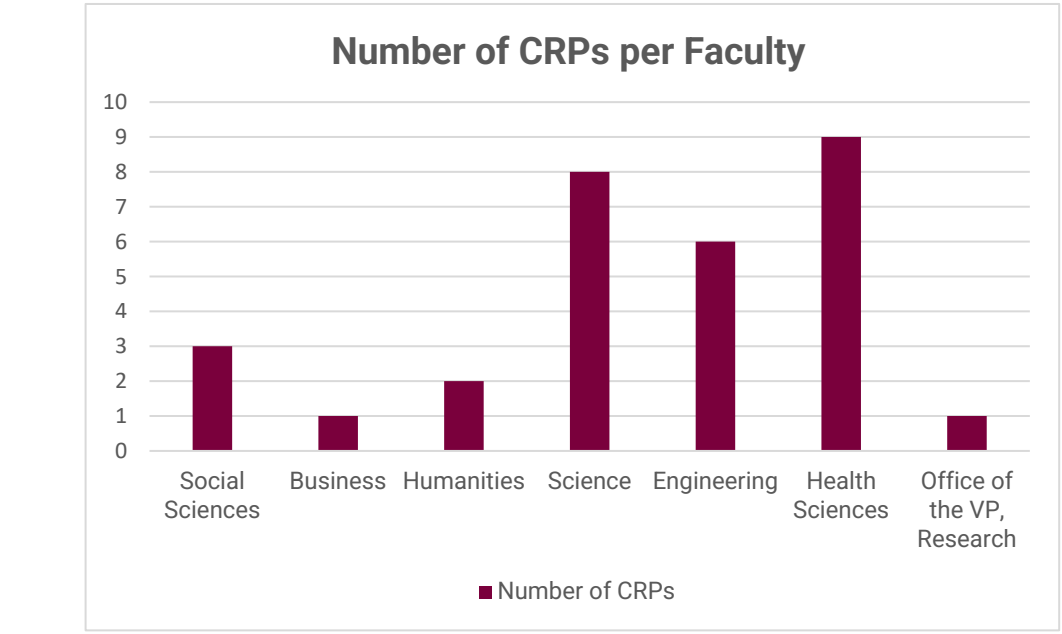
$22M Invested in operations and management

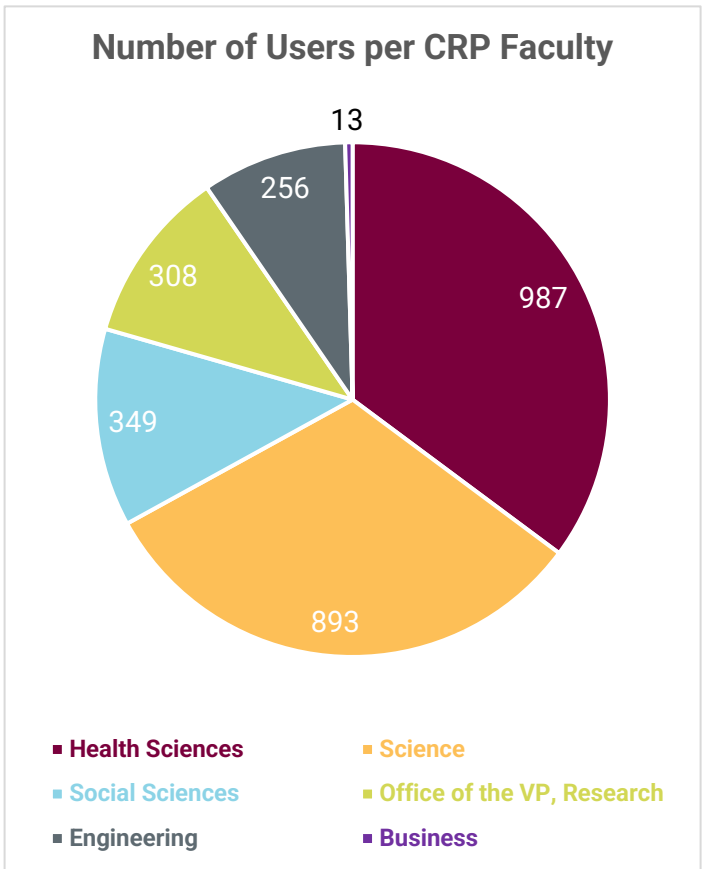
11 CRPs support undergraduate labs

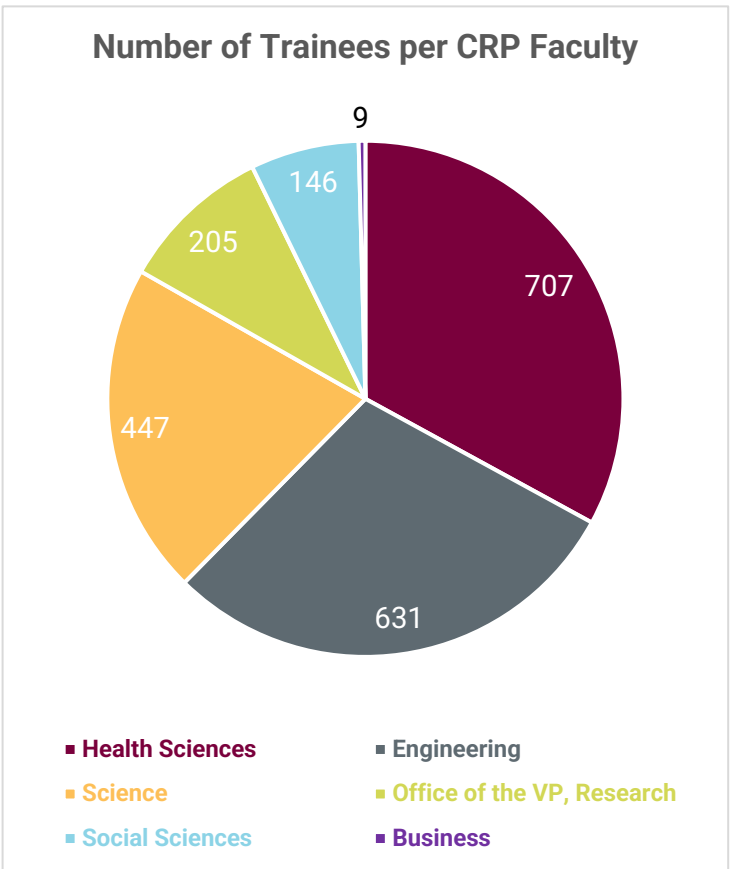
2000+ Total students and staff trained

7300+ Staff hours dedicated to training

CRPs by Faculty







*Humanities data not available at this time.

Impact Highlights

Creating Interactive Education Programs
LIVELab

With funding from an NSERC PromoScience Grant, the LIVELab developed an extensive youth education and outreach program. Interactive Tours introduce youth to LIVELab technology and demonstrate how it can be used to solve real-world problems. Music production workshops allow youth to utilize loops, drum pads, synthesizers, and digital effects to create their own digital music.

Solving Industry Challenges
McMaster Manufacturing Research Institute (MMRI)

The MMRI assisted Honda with designing a condition monitoring system for their vehicles. The system allows inspections to be performed remotely and periodic testing allows them to keep track of machine health. As a result, Honda has improved their maintenance schedule and has had no failures/downtime over the past year, leading to significant cost savings.

Developing Next-Generation Vaccines
Robert E. Fitzhenry Vector Laboratory

The Fitzhenry Vector Lab manufactured two inhaled, second generation COVID-19 vaccines, which are currently entering phase II clinical testing in Canada.

Catalyzing Tomorrow's Materials Innovations
Canadian Centre for Electron Microscopy (CCEM)

A recent investment from the Canada Foundation for Innovation (CFI) has enabled renovations and new instrument installations at the CCEM. The Centre currently operates nineteen microscopes - fourteen of which have been newly installed or upgraded since 2020. This suite of instrumentation is rarely found elsewhere in the world and places CCEM at the absolute forefront of analytical capability.

Exploring the Role of Technology in Our Lives
McMaster Digital Transformation Research Centre (MDTRC)

Over the past year, the MDTRC has received funding from the Social Sciences and Humanities Research Council (SSHRC) and the McMaster Institute for Research on Aging to examine IT threats and misinformation among older adults. The MDTRC team is uniquely positioned to engage in research specifically designed to increase digital inclusion as the migration to digital life has accelerated.

Partnering to Advance Community Well-Being
Community Research Platform (CRP)

The CRP partnered with the YWCA of Hamilton to address the critical issue of homelessness and reproductive health. As a result, the YWCA secured dedicated shelter beds for people who are pregnant and homeless and launched a midwifery drop-in clinic. This initiative demonstrates the benefits of community-academic partnerships which bring together research and action to advance community wellbeing.

Enabling Cutting-Edge Research in Chemistry & Biology
Centre for Microbial Chemical Biology (CMCB)

The CMCB's High Through-Put Screening lab (HTS) was the first academic HTS lab in Canada and continues to be a vital platform at McMaster, supporting drug discovery research. HTS is one of three screening centres in Canada that are working together to establish a Canadian screening consortium. Additionally, the CMCB recently purchased new mass spectrometry equipment and implemented a suite of services to address gaps in metabolomics and proteomics research.