



Report from the SAPES Co-Chair to the Community 2024 Competition

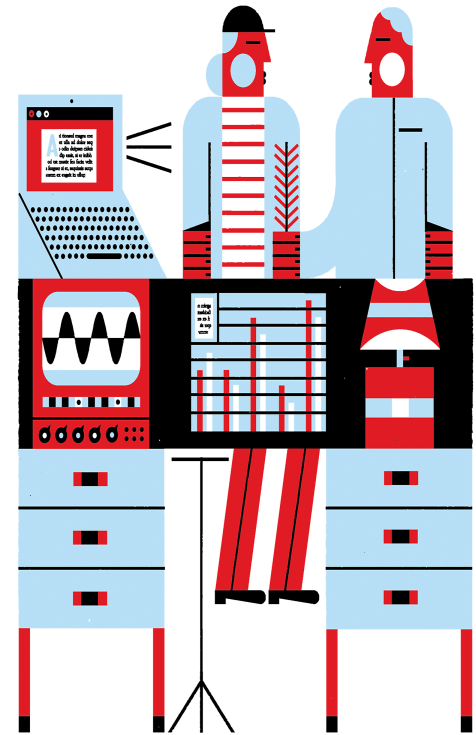
Presented by: Alexandros Gezerlis, University of Guelph

Congress of the Canadian Association of Physicists

May 30, 2024

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The Subatomic Physics Evaluation Section

- The Subatomic Physics Evaluation Section (SAPES) is a standing review committee that oversees various programs:
 - Individual and Project Discovery Grants
 - Research Tools and Instruments (RTI - Category 1, 2 or 3) Grants
 - Major Resources Support (MRS) Grants
- Funded through a unique **independent envelope mechanism at NSERC**, since 1991
- This comprehensive approach is essential
 - Complexity and inter-dependency of many proposals
 - Country-wide collaborations among individuals, groups, universities, and national research organizations
 - Long-term and large-scale international projects and commitments
 - Possibility to exchange funds between the various programs as a function of the priorities of the community and the pressures it faces

The Subatomic Physics Evaluation Section

Name	Institution	Term	Expertise
Maxime Brodeur	University of Notre Dame	2023-2026	Exp. Low Energy Nuclear Physics
Thomas Brunner	McGill University	2022-2026	Exp. Neutrino Physics
Maria Chamizo-Llatas	Brookhaven National Laboratory	2023-2026	Exp. Accelerator R&D
Barbara Erazmus	CNRS Subatech, Nantes	2023-2026	Exp. Nuclear & Particle Physics
Alexandros Gezerlis	University of Guelph	2022-2025	Th. Nuclear Astrophysics
Roxanne Guenette (Co-Chair)	University of Manchester	2022-2025	Exp. High Energy Physics
Nikolina Ilic	University of Toronto	2021-2024	Exp. Particle Physics
Ritu Kanungo	Saint Mary's University	2023-2027	Exp. Nuclear Physics, Nuclear Reactions
David Morrissey	TRIUMF/University of Victoria	2021-2024	Th. Particle Physics
Giulia Ricciardi	University of Naples	2022-2025	Th. High Energy Particle Physics
Gordon Semenov	University of British Columbia	2023-2026	Th. Quantum & Field Theory
Matthias Schindler (Co-Chair)	University of South Carolina	2021-2024	The. Nuclear Physics
Timothy Sumner	Imperial College of London	2023-2026	Exp. Astroparticle Physics, Dark Matter
Michel Vetterli	Simon Fraser University	2023-2026	Exp. High Energy Physics
Albert Young	North Carolina State University	2020-2024	Exp. Nuclear Physics, Strongly Interacting Matter (IEP)

The Subatomic Physics Evaluation Section

Support to Operations

- Group Chair
 - Kristin Poduska, Memorial University of Newfoundland
 - Monitors consistency of deliberations for Physics in general
 - Provides advice on procedures and policies as needed
 - Not a member; does not participate in reviews/votes
- NSERC Staff
 - Shashini Jayaratne, Program Assistant
 - Philip Bale & Amélie Champagne, Program Officers
 - Kevin Lapointe, Manager

**Many thanks
from SAPES!!**

Pre-Competition Details

- 52 applications
- Total requested: \$11.41M
- Available funds: \$6.03M
- Projected average funding rate: 52%

Compare to past funding rates:

2019	2020	2021	2022	2023
64%	56%	40%	64%	60%

Virtual Competition

- In a continued response to Covid-19, the Discovery Grants 2023/2024 Competition was held virtually
- Additionally, NSERC offered extensions to all 2023/2024 awards
 - **With funds:** one-time extensions offered to all active DG and SAPMR holders
- Covid-19 Extension with Funds for 2023/2024:

	% of Accept	Total Extension Amount
SAPPJ*	-	\$0
SAPIN	88%	\$1,030,000
SAPMR	100%	\$1,400,000
Grand Total	94%	\$2,430,000

*Due to the 3-year duration of SAPPJs, no further projects were offered extensions

Competition Week

- **February 18 – February 23, 2024**
- Large Project Day was held February 18th
 - Invited Participants received SAPES questions in advance
- Assessment of applications done in 3 rounds;
- Deliberations followed NSERC's policies and guidelines throughout all rounds of competition;
- All recommendations were determined through anonymized electronic voting, with the median vote selected as the final recommendation.

Competition Budget - Pre-competition

SUBATOMIC PHYSICS ENVELOPE MULTI-YEAR COMMITMENTS BY CATEGORY Competition 2024					
	2024	2025	2026	2027	2028
RTI - COMMITTED	\$157,500				
RTI - 2023 Competition	\$1,739,344	\$200,000	\$0		
RTI - TOTAL	\$1,896,844	\$200,000	\$0	\$0	\$0
THEORY - COMMITTED	\$3,237,300	\$1,671,200	\$1,174,000	\$738,000	
THEORY - 2024 Competition	\$1,294,210	\$1,337,286	\$1,342,232	\$1,388,440	\$1,371,099
THEORY - TOTAL	\$4,531,510	\$3,008,486	\$2,516,232	\$2,126,440	\$1,371,099
EXP OPS** - COMMITTED	\$20,666,105	\$6,859,830	\$296,005	\$177,000	\$135,000
EXP OPS - 2024 Competition	\$7,606,415	\$8,285,049	\$8,117,512	\$563,167	\$524,675
EXP OPS - TOTAL	\$28,272,520	\$15,144,879	\$8,413,517	\$740,167	\$659,675
MRS - COMMITTED	\$2,703,917	\$427,393	\$434,115	\$449,465	\$110,545
MRS - 2024 Competition	\$769,646	\$840,096	\$361,653	\$369,356	\$376,103
MRS - TOTAL	\$3,473,563	\$1,267,489	\$795,768	\$818,821	\$486,648
TOTAL - COMMITTED	\$26,764,822	\$8,958,423	\$1,904,120	\$1,364,465	\$245,545
TOTAL - 2024 Competition	\$11,409,615	\$10,662,431	\$9,821,397	\$2,320,963	\$2,271,877
GRAND TOTAL	\$38,174,437	\$19,620,854	\$11,725,517	\$3,685,428	\$2,517,422
TOTAL ENVELOPE	\$29,159,960	\$29,159,960	\$29,159,960	\$29,159,960	\$29,159,960
COMPETITION BUDGET	\$6,026,238				
Unspent from previous FY	\$3,631,100				
AVAILABLE	-\$5,383,377	\$9,539,106	\$17,434,443	\$25,474,532	\$26,642,538

**EXP OPS = Experimental Operations – Includes Project grants and experimental Individual grants

Competition Week

Round 1

- Presentation by the **first** reviewer, followed by discussion with the **second through fifth** reviewers on merit criteria, as well as the budget and Data Management Plan
- **Five** reviewers vote anonymously:
 - Merit Criteria
 - Recommended Budget

Rounds 2 and 3

- Discussion by all **five** reviewers, related to the budget
- **Five** reviewers vote anonymously:
 - Recommended Budget

Multiyear Commitments - End of Competition

SUBATOMIC PHYSICS ENVELOPE MULTI-YEAR COMMITMENTS BY CATEGORY Competition 2024					
	2024	2025	2026	2027	2028
RTI - COMMITTED	\$157,500				
RTI - 2024 Competition	\$568,656	\$200,000			
RTI - TOTAL	\$726,156	\$200,000			
THEORY - COMMITTED	\$3,237,300	\$1,671,200	\$1,174,000	\$738,000	
THEORY - 2024 Competition	\$854,150	\$854,150	\$843,500	\$782,500	\$774,500
THEORY - TOTAL	\$4,091,450	\$2,525,350	\$2,017,500	\$1,520,500	\$774,500
EXP OPS** - COMMITTED	\$20,666,105	\$6,859,830	\$296,005	\$177,000	\$135,000
EXP OPS - 2024 Competition	\$4,162,000	\$4,172,000	\$4,030,000	\$210,000	\$210,000
EXP OPS - TOTAL	\$24,828,105	\$11,031,830	\$4,326,005	\$387,000	\$345,000
MRS - COMMITTED	\$2,703,917	\$427,393	\$434,115	\$449,465	\$110,545
MRS - 2024 Competition	\$310,000	\$130,000	\$132,500	\$136,000	\$138,500
MRS - TOTAL	\$3,013,917	\$557,393	\$566,615	\$585,465	\$249,045
TOTAL - COMMITTED	\$26,764,822	\$8,958,423	\$1,904,120	\$1,364,465	\$245,545
TOTAL - 2024 Competition	\$5,894,806	\$5,356,150	\$5,006,000	\$1,128,500	\$1,123,000
GRAND TOTAL	\$32,659,628	\$14,314,573	\$6,910,120	\$2,492,965	\$1,368,545
TOTAL ENVELOPE	\$29,159,960	\$29,159,960	\$29,159,960	\$29,159,960	\$29,159,960
COMPETITION BUDGET	\$6,026,238				
Unspent from previous FY	\$3,631,100	\$131,432			
AVAILABLE	\$131,432	\$18,607,919	\$22,249,840	\$26,666,995	\$27,791,415

**EXP OPS = Experimental Operations – Includes Project grants and experimental Individual grants

All remaining funds will be added to the SAP envelope for CY2024.

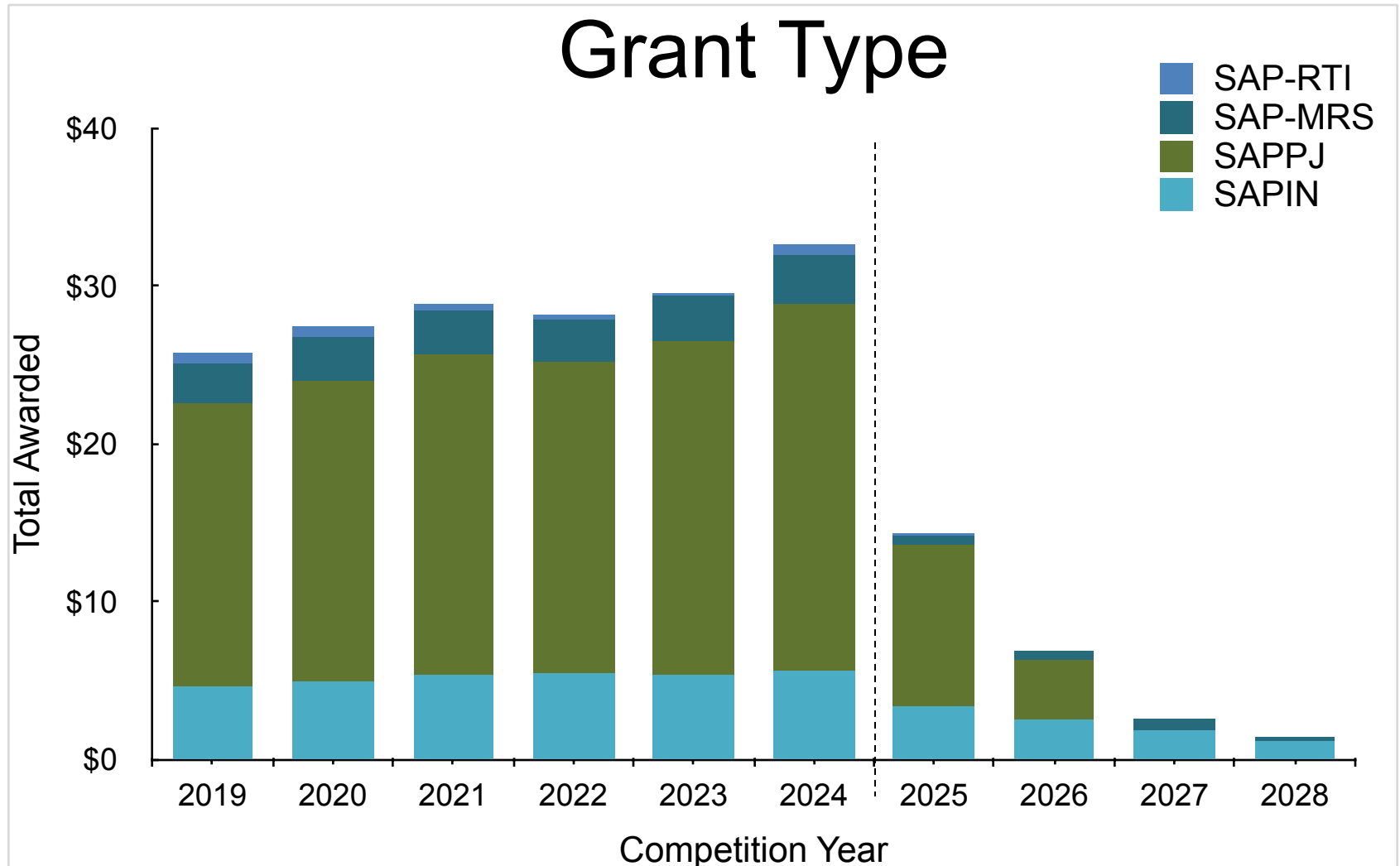
Share of Envelope at End of Competition

Comparison to Past Years

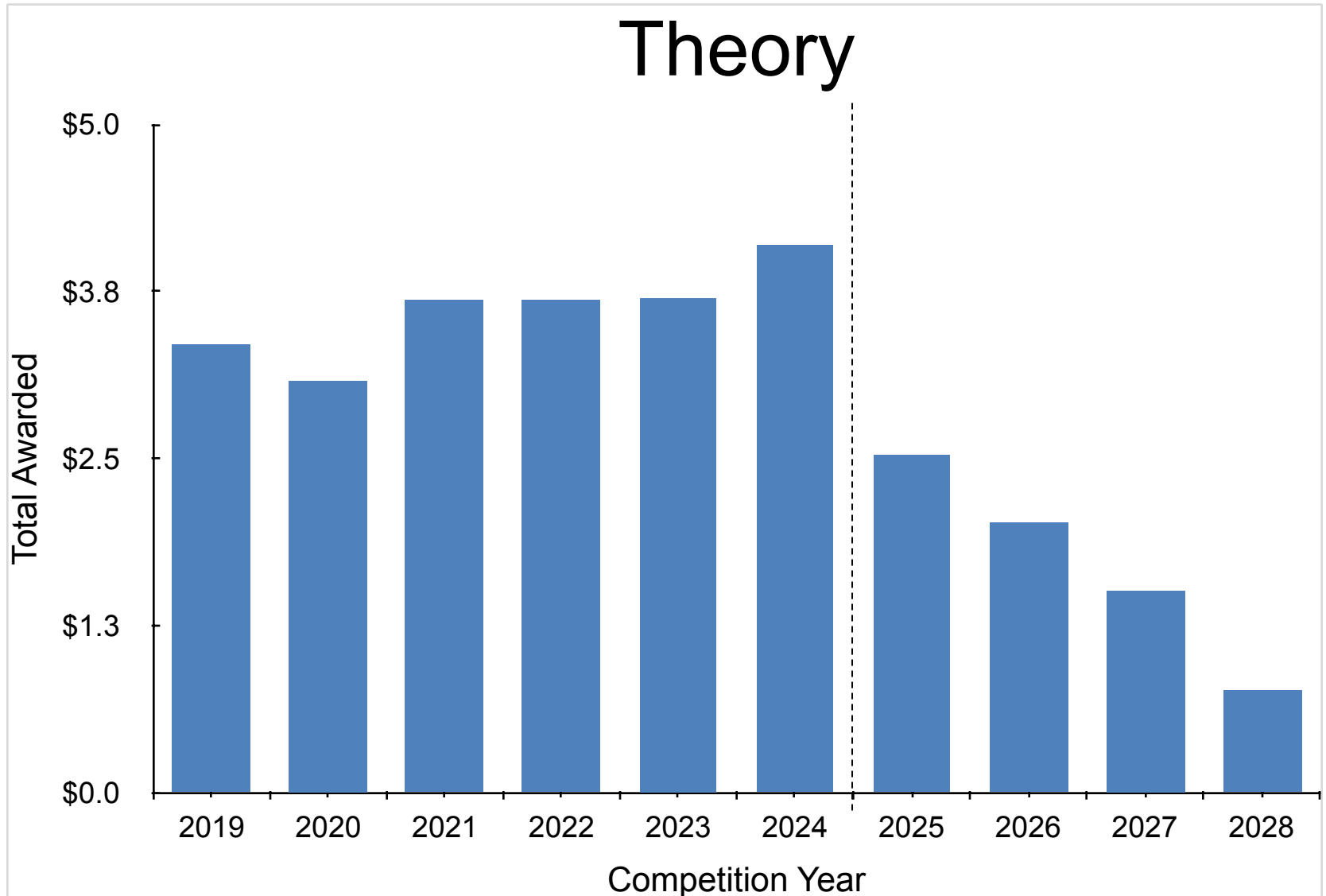
Subatomic Physics Evaluation Section Evolution of Envelope's Shares

	2019	2020	2021	2022	2023	2024
Theory	13%	11%	13%	13%	13%	13%
RTI	3%	2%	2%	1%	0%	2%
Total Research Ops	84%	86%	86%	86%	88%	85%
Exp. Ops	74%	76%	76%	77%	77%	76%
MRS	10%	10%	10%	9%	10%	9%

Evolution of SAPES Awards



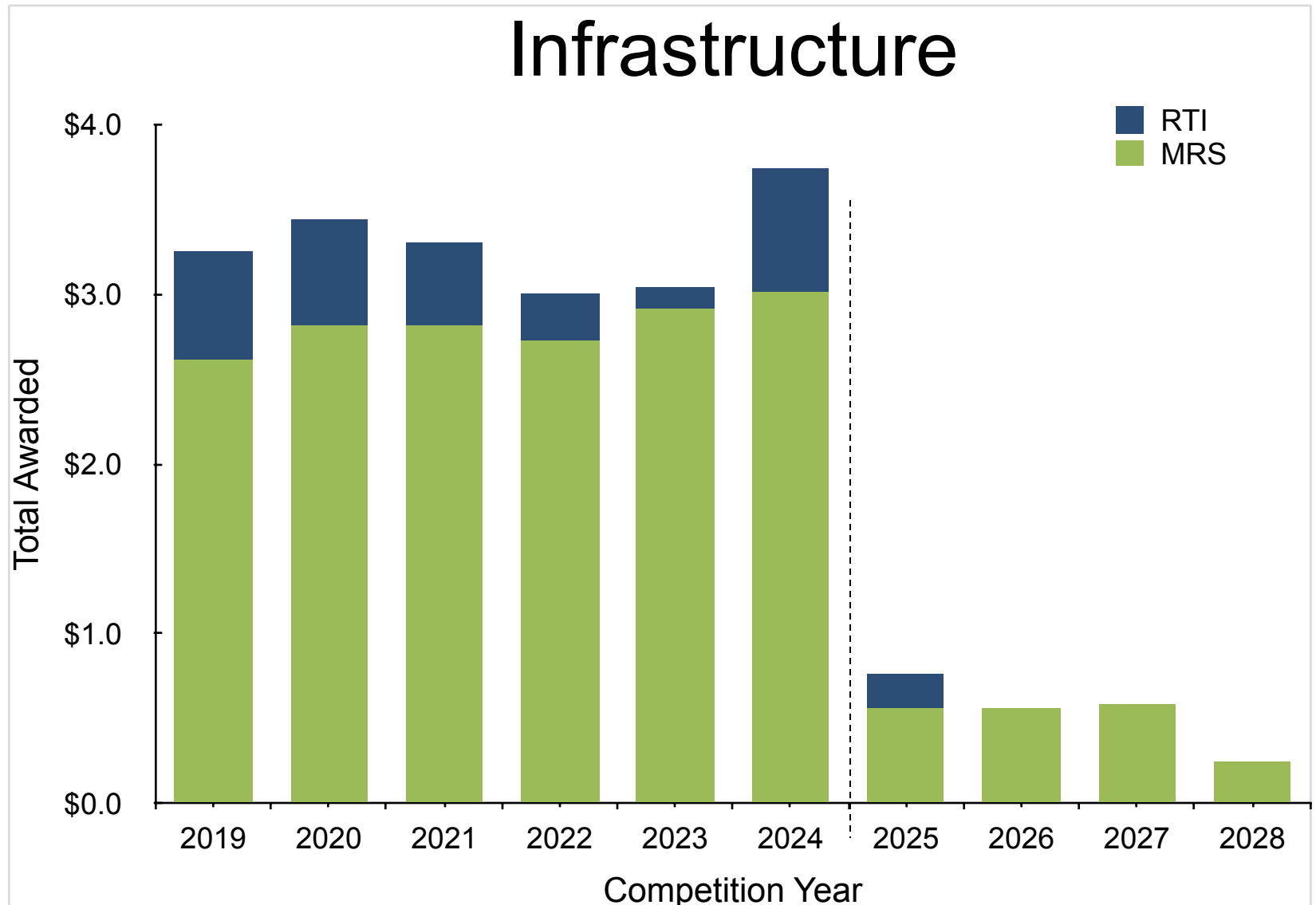
Evolution of SAPES Awards



Theory Results 2019-2024

	2019	2020	2021	2022	2023	2024
Number of Theory applications received	14	17	10	11	15	13
Theory success rate	79%	82%	80%	82%	73%	92%
% of applications submitted that were Theory	24%	30%	21%	26%	32%	25%
% of amount requested from Theory	7%	15%	12%	6%	7%	11%
% of amount awarded to Theory	7%	16%	15%	5%	6%	14%
Theory funding rate	64%	60%	51%	59%	51%	66%
Funding rate overall for that CY	64%	56%	40%	70%	60%	52%
Theory Envelope Share (includes ongoing commitments)	13%	11%	13%	13%	13%	13%

Evolution of SAPES Awards



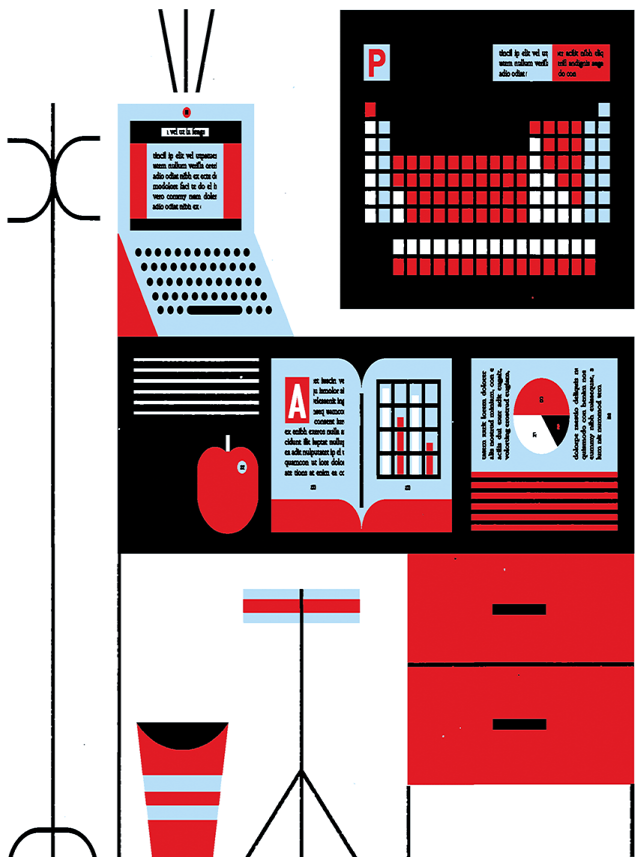
Data Management Plan Pilot in Subatomic Physics

Tri-Agency Research Data Management (RDM) policy requirements are being implemented using a gradual, phased-in approach:

- Data Management Plan (DMP) requirement piloted in the Subatomic Physics Discovery Grants – Individual and Project for competition 2024 (launched in summer 2023).
- Applicants were required to submit a 2-page DMP with their applications, which was reviewed by committee members but not included in adjudication score.
- Pilot is being evaluated through an applicant survey, review of submitted DMPs, and consultations with committee members.
- Broader implementation of the DMP requirement into other NSERC programs will be informed by pilot evaluation, as well as continued engagement with the research community, CIHR, SSHRC and the Digital Research Alliance of Canada.

Feedback from this year (Alex Gezerlis, not NSERC)

- Applicants should highlight breadth of impact rather than focus on numbers
- Big influence on the deliberations resulted from McDonald Institute funding future
- The question of institution-specific minimum HQP stipends was discussed
- SAPES members raised the prospect of a return to in-person deliberations with NSERC leadership
- NSERC staff are working wonders given the limitations of the virtual medium



Questions?

Philip Bale & Amélie Champagne

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