

Empowering Innovation:

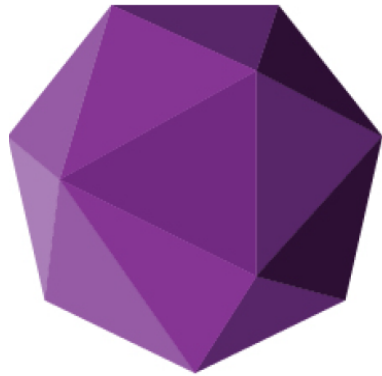
The Synergy of AI Programming & Applied Research

Presented by
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Saskatchewan's 1st
Technology Access
Centre

Tech-Access  Canada



DICE

Digital Integration Centre of Excellence

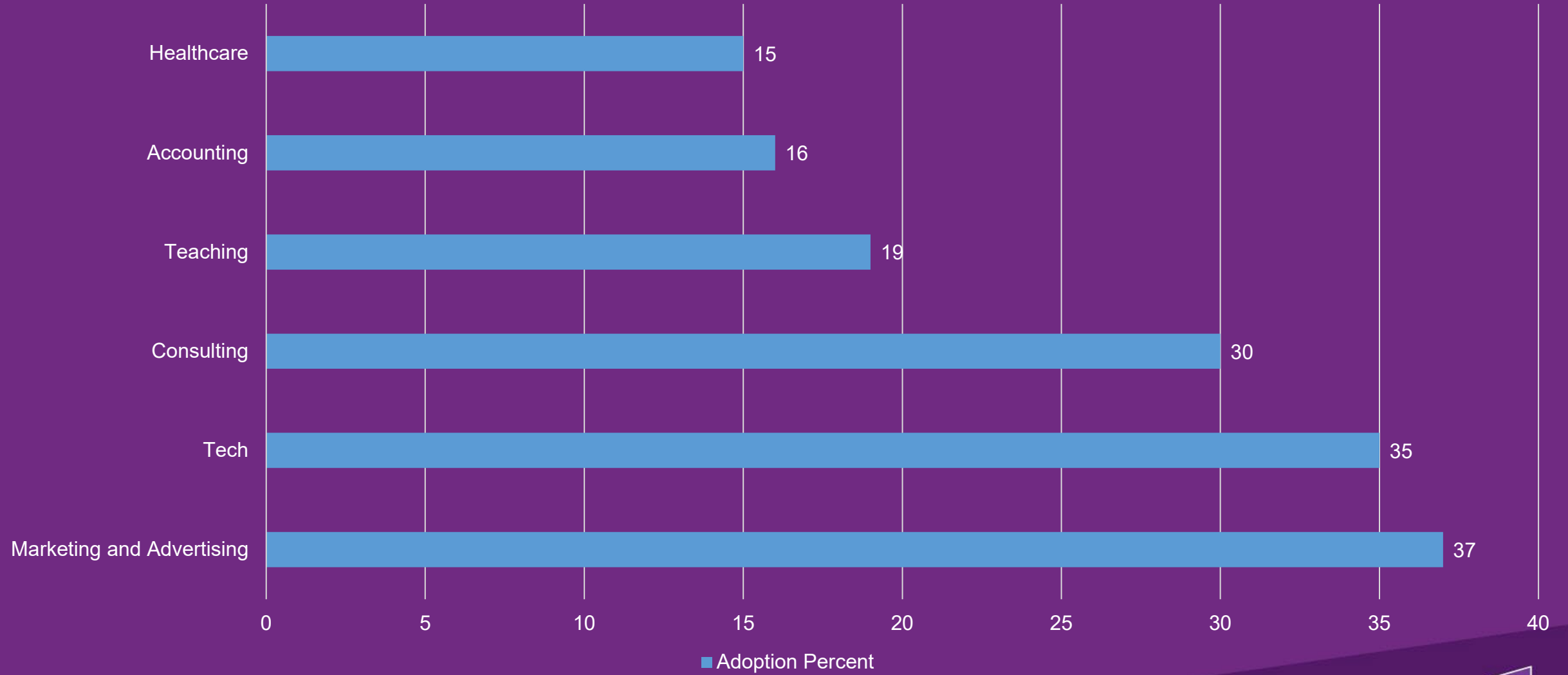
SASKATCHEWAN POLYTECHNIC

Impact of Artificial Intelligence

AI will be the most transformative technology since electricity.
- Eric Schmidt



Adoption Percent



Who is Using AI

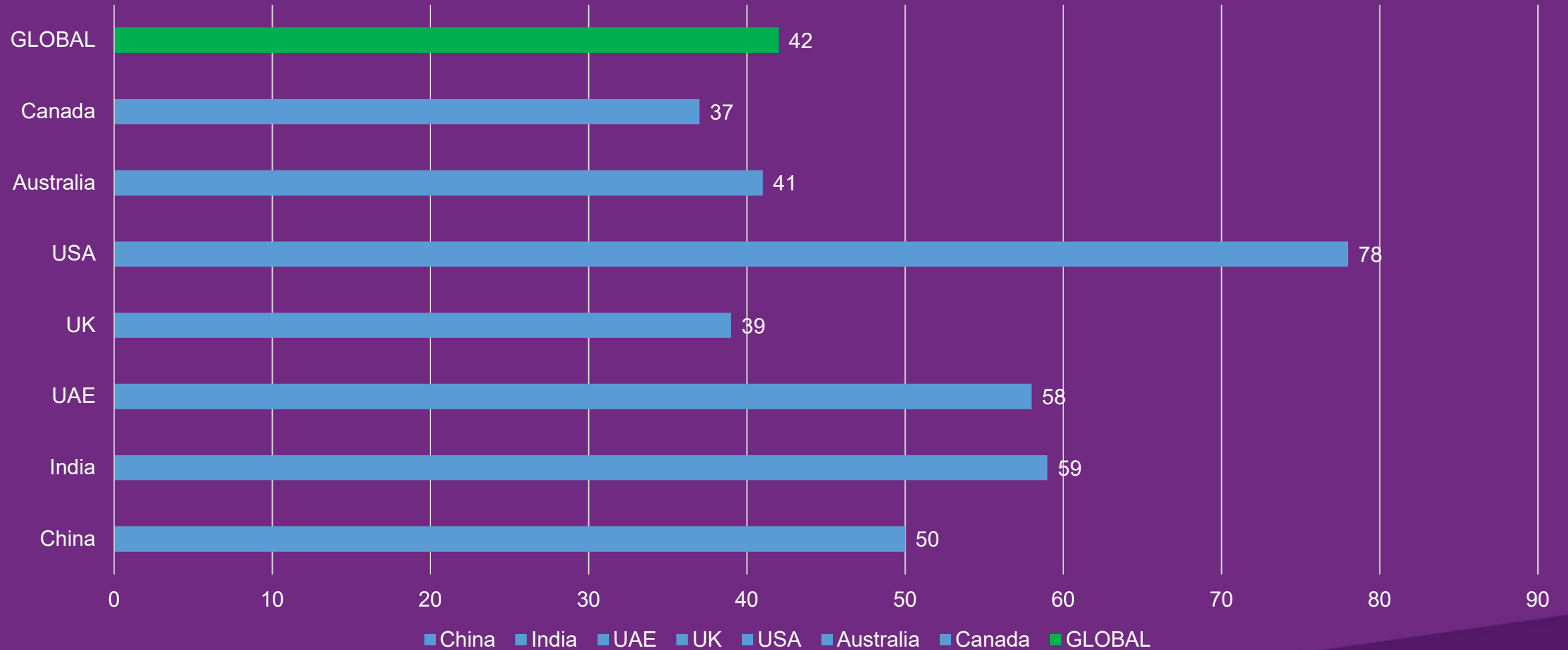
"AI will probably most likely lead to the end of the world, but in the meantime, there'll be great companies." - Sam Altman

	HR	Production	Sales & Marketing	Service Development	Risk	Operations	Strategy	Supply Chain
Automotive	11%	26%	20%	15%	4%	18%	6%	17%
Retail	2%	18%	22%	17%	1%	15%	4%	18%
Finance	10%	4%	24%	20%	32%	40%	13%	8%
Healthcare	9%	11%	14%	29%	13%	17%	12%	9%
High tech	12%	11%	28%	45%	16%	34%	10%	16%
Average	9%	12%	20%	23%	13%	25%	9%	13%

37% of Canadian companies reported using AI

42% of Canadian companies reported they are exploring AI

Adoption Percent



Global AI Index Ranking

Country	Talent	Infrastructure	Operating Environment	Research	Development	Government Strategy	Total Rank
USA	1	4	35	1	1	17	1
China	24	1	6	2	2	2	2
United Kingdom	3	23	24	5	11	11	3
Canada	7	15	5	10	10	1	4
Israel	5	29	14	7	9	45	5
Singapore	4	8	55	4	14	15	6
South Korea	28	6	32	12	3	7	7
Netherlands	6	9	10	15	8	33	8
Germany	11	13	30	6	12	10	9

What is Hindering AI Adoption

- 24% - Too much data complexity
- 24% - Projects are too complex or difficult to integrate and scale
- 25% - Lack tools or platforms to develop models
- 29% - Price is too high
- 34% - Limited AI skills, expertise or knowledge

So Why All the Fuss?

- 2025 global market value of AI is estimated at almost \$400 billion
- 2030 global market value of AI is projected to be \$1.81 trillion with a wider market impact of \$15.7 trillion
- It will create 170 million new jobs
- It will displace 92 million jobs
- Net result is 78 million new jobs

Estimated Workforce 2020-2030			
Rank	Country	Net Change in Workforce (2020–2030)	Notes
1	India	+138 million	Largest increase globally; very young population
2	Nigeria	+30-40 million (est.)	Fastest-growing in Africa; high birth rate
3	Pakistan	+20-25 million (est.)	Strong demographic momentum
4	Ethiopia	+15-20 million (est.)	Very young population
5	Indonesia	+13-15 million (est.)	Large, growing youth cohort
6	Egypt	+10-12 million (est.)	Youth-driven workforce expansion
7	Bangladesh	+10-12 million (est.)	Continued growth in new entrants
8	DR Congo	+10-12 million (est.)	High population growth
9	United States	+8.9 million	Modest growth, largely immigration-driven
10	Canada	Stable / slight growth	Growth driven by immigration
-	China	-30 to -35 million	Largest decline globally; rapid aging
-	Japan	-4 million	Rapidly aging, shrinking workforce
-	Germany	-3 million	Net loss due to retirements

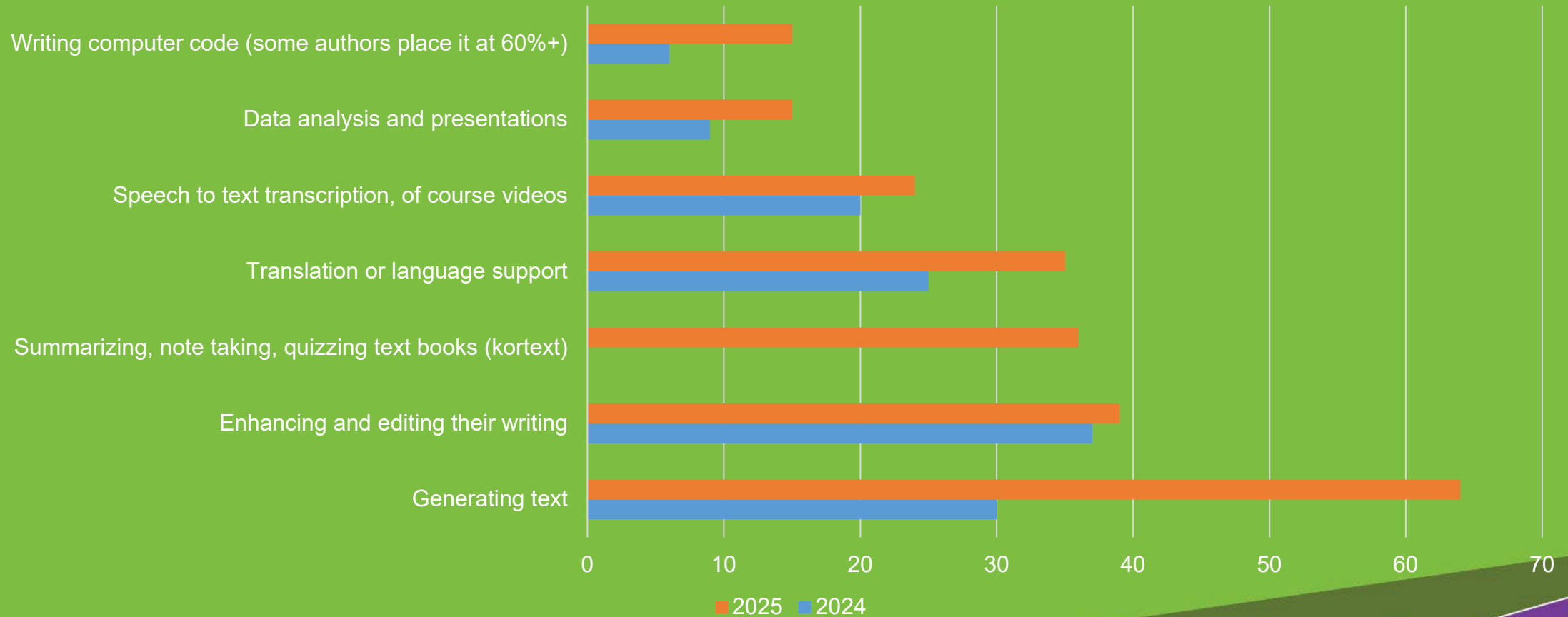
AI in Education

- UK study in 2025 of post secondary students who use AI on their assignments and exams – 92%, up from 66% in 2024.
- 18% admitted to putting AI results directly into their work.
- The digital divide has increased since 2024 – cost for AI subscriptions.
- 80% of post secondary institutions stated they had clear AI policies.
- 76% of post secondary institutions would spot the use of AI in assessed work.

AI in Education Continued

- Students overwhelmingly believe that it is essential that they have good AI skills upon graduation but only 35% say they get support from their institution to develop these skills.
- Staff AI literacy has increased from 17% in 2024 to 42%.
- 80% of employers plan to invest in upskilling their workforce through targeted AI training programs.
- 70% think AI literacy is essential

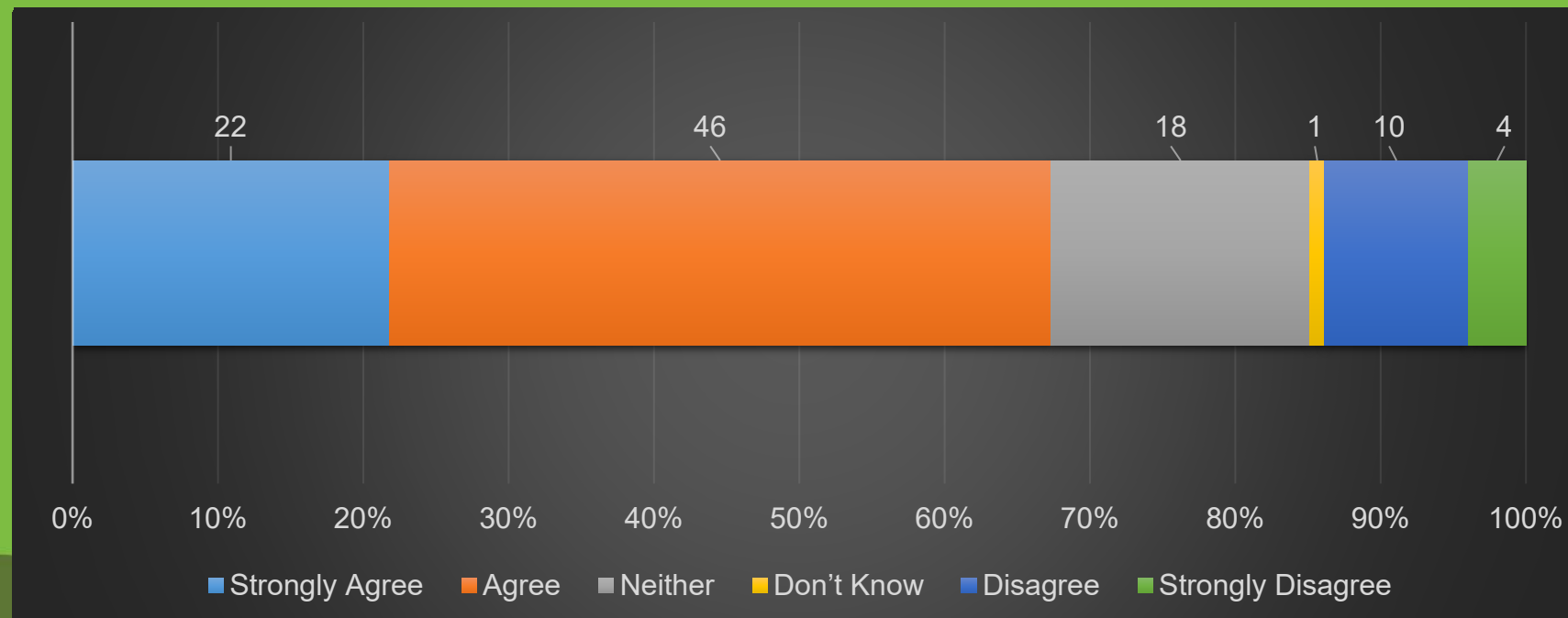
Where are Students Using AI



Impact of AI Skills

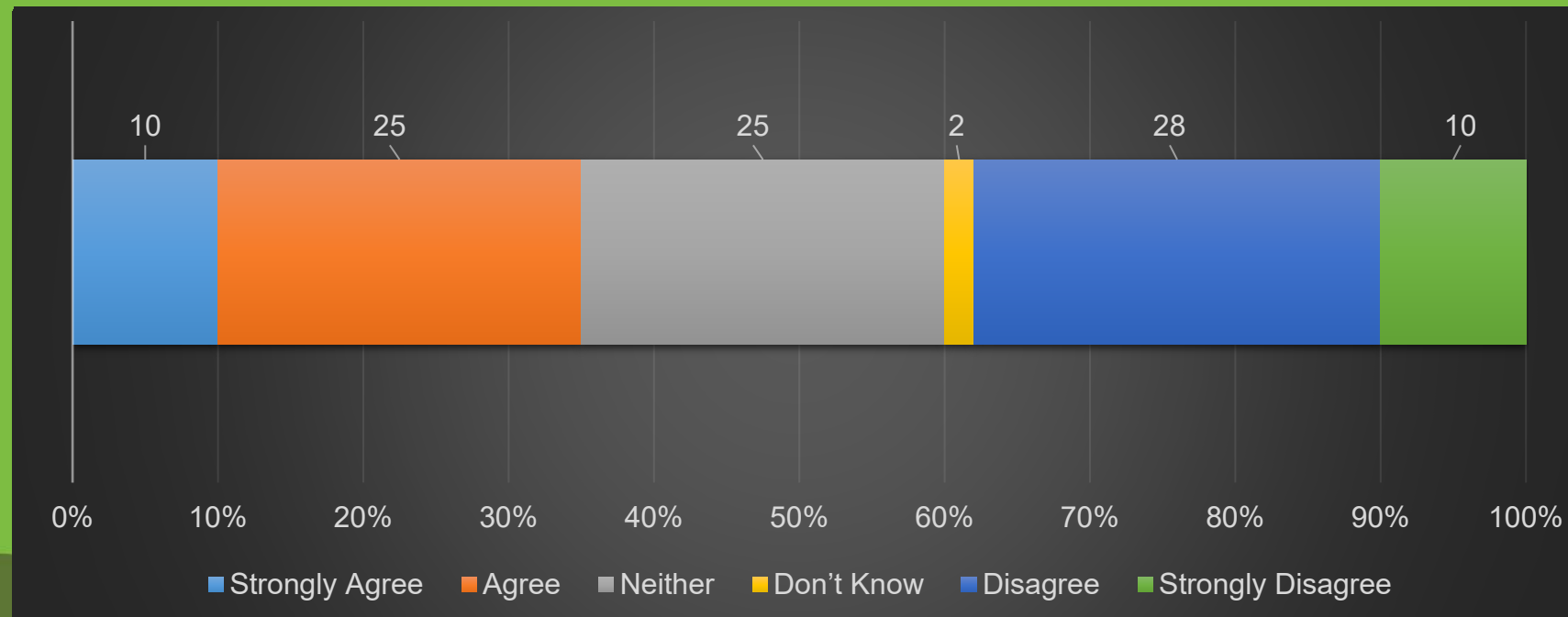
- How far do you agree or disagree that...

To thrive in today's world, it is essential to understand and be able to use AI effectively.



Impact of AI Skills

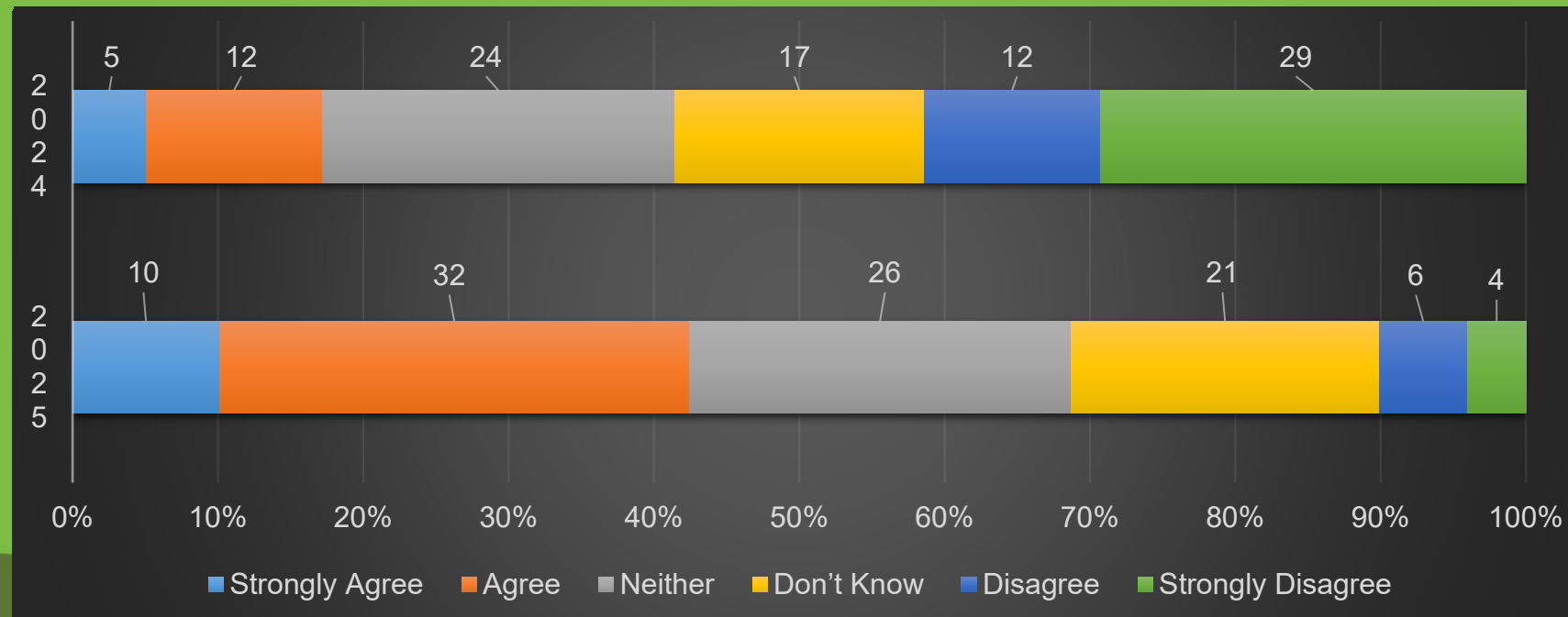
- How far do you agree or disagree that...
My institution has given me support to improve my AI skills.



Impact of AI Skills

- How far do you agree or disagree that...

Staff at my institution are well-equipped to support me to work with generative AI.



How are Teachers Using AI

Reason to Use AI in Education	Percentage
For research	44%
Generating lesson plans	38%
Summarizing or synthesizing information	38%
Generating classroom materials like tests and assignments	37%
Running prompts in the AI tools to find what students see	43%
Training students on how to effectively use AI tools	35%
Generating rubrics for grading student work	20%
Adapting texts to different reading levels	16%
Generating answers to student queries	14%

Teachers' Concerns Around AI

Concern	Percentage
Increased plagiarism in essays and other writing works	65%
Reduced human interaction in the learning process	62%
Data privacy and security	42%
Displaced educator's jobs	30%
Unequal access to AI resources	30%
Automation of manual tasks	23%

Change Management in Education

- 89% of academic leaders believe that AI and digital technology are set to bring irreversible changes in teaching methods.

Metric	Percentage of Institutions
Policies impacted by AI	87%
View AI as a strategic priority	57%
Faculty training on AI	63%
Staff training on AI	56%
Developed AI-related Acceptable use Policies	39%
No change in policy due to AI	13%

AI Programming and Applied Research

- Jobs requiring AI specialist skills are growing 3.5 times faster than all jobs combined.

Factor	Hiring AI Expert	Growing AI Expert
Speed of Access	Immediate access to advanced skills	Slower, depends on training investment
Cost	High (up to 25% more)	Lower direct cost but training costs
Talent Availability	Competitive, talent shortages common	Depends on internal workforce potential
Cultural Fit	May require onboarding and integration	Existing staff already fit company culture
Long-term Sustainability	Risk of turnover, ongoing competition	Builds loyalty, sustainable pipeline
Breadth of Skills	Can target specific expertise	May require broader, ongoing training

AI Staffing in Post Secondary

- Hiring external AI expertise is fast but expensive and competitive.
- Growing your own talent through upskilling is slower but can be more sustainable and cost effective.
- Most organizations are pursuing a hybrid strategy of hiring for immediate needs while reskilling their existing workforce.

SaskPoly Approach

- Integrating applied research with students, faculty and professional staff.
- Trialing AI products and services.
- Providing training to faculty.

Will it Work?

Questions?