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Phase 2 Strategic Plan

SCALE|AI

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1. Background

Scale AI is a purpose-driven organization that was created by key members of the Canadian AI ecosystem to deliver a highly ambitious mission:

SCALE AI is Canada's artificial intelligence (AI) Global Innovation Cluster dedicated to boosting industry performance by leveraging AI technologies to improve value chains, with a specific focus on building resilient and sustainable supply chains.

A business-led consortium, SCALE AI will drive economic growth, bolster Canada's leadership in the global innovation race, support the building of world-leading businesses, create highly skilled jobs, and accelerate the adoption of AI-powered technologies.

SCALE AI will contribute to the development of an innovative, competitive, diverse, inclusive and greener Canadian economy, with a focus on Small and Medium Enterprises (SMEs).

With over two-thirds of our GDP coming from trade activities, supply chains are the backbone of Canada's economy, fueling productivity and representing more than 1 million domestic jobs. Recent global disruptions (COVID 19 pandemic, semiconductor shortages, extreme climate events, the war in Ukraine, etc.) have had a disproportionate impact on Canada and have highlighted the inherent fragility of our supply chains and their significant need of modernization. While businesses have invested in digitizing parts of their supply chains, few have developed comprehensive AI strategies to leverage advanced solutions to minimize the effects of future global disruptions. AI-powered solutions will be instrumental in helping the Canadian economy respond to rapidly changing economic, social and environmental conditions. Now more than ever, our businesses need support in deploying these advanced technologies at large to capture the productivity gains they can provide.

Accordingly, the question for Canada is whether to import these AI-based solutions or whether to extend our global leadership in AI beyond our distinct scientific strengths. Scale AI's academic members have helped exponentially increase the number of AI professionals graduating each year but unfortunately, too many of them still pursue opportunities and achieve success outside of Canada.

As we move into Phase 2 of our mandate, Scale AI is renewing its commitment towards its original mission and is proposing a bold new plan to deliver a self-sustaining AI innovation ecosystem that creates commercialization and professional opportunities for our talent and for our companies. This will, in turn, position Canada as an undisputed global AI hub that attracts talent and generates world-leading technology solutions and vendors for business productivity and supply chain efficiencies. In Phase 2, we will build on the momentum of Phase 1 by focusing on technology transfer and commercialization of products and solutions, accelerating the rate of AI adoption and increasing the bench of product and solutions providers.

Since its inception, Scale AI has been delivering tangible and meaningful results for Canada and its AI ecosystem. Bringing together technology innovators, industry leaders and researchers through new partnerships, Scale AI has demonstrated the ability to generate $1.7 of private investment for every $1 of public funds deployed in industry-led projects, for a total of over $500M invested in supply chains so far across all programs. Despite being severely hit by the COVID-19 economic crisis, the AI ecosystem, with the concerted support of Scale AI, has recovered quickly and gained back significant momentum.

Scale AI created a new nationwide ecosystem with hundreds of organizations collaborating and investing in AI for supply chains. To date, we have supported 430+ initiatives across 7 industries (agriculture, retail, manufacturing, transport & logistics, mining, energy and healthcare) in Canada, with approximately 50% of our projects in Québec:

- In our Industry-led projects, we are co-investing in business-led, collaborative projects, representing close to $450M in value, to de-risk investments of companies across sectors that are adopting or commercializing AI solutions to address critical supply chain issues;
- In our Acceleration program, we are partnering with 29 of Canada's top incubators and accelerators to indirectly support 90+ supply chain-focused AI startups every year;
- In our Workforce Development program, we are developing the current and future Canadian workforce in AI by subsidizing 200+ public and 50+ custom programs, by investing $4M into research chairs in AI for supply chains and by deploying $1M to educate 22,000 underrepresented youth about AI through school and extracurricular activities.

As we will explain below, **Canada is at a critical juncture with regards to AI and we must double down on our investments** to create a sustainable sector at the service of our industry champions and SMEs alike.

We are thankful for the support of our Federal Government partners, as well as that of the Quebec Government, and we look forward to continuing to work with both of them for the next 5 years.

2. Our Strategic Vision

By the end of Phase 2, we aim to **establish Canada as an indisputable global hub for AI dedicated to business productivity and intelligent supply chains** with our technology setting the world standard and providing a source of competitive advantage for Canadian businesses. We will reinforce the virtuous cycle of ecosystem synergies by creating new value-creation opportunities for industry players, increasing connections between partners, accelerating SME scale up, facilitating the creation of new companies, increasing external investment in AI and growing a world class talent pool. Scale AI's vision includes building a self-sustaining Canadian AI tech sector focused on driving productivity for Canadian businesses and on creating the world's most efficient supply chains. We strive to **democratize AI to make it as widely available to Canadian companies, particularly SMEs**, by bringing together the relevant partners from vendors, businesses, academia and financiers.

Our ambition is to boost widespread demand for AI while continuing to support initiatives that push the boundaries of existing AI applications in order to grow Canada into an attractive destination for establishing and scaling AI businesses. Steering the ecosystem's attention towards difficult supply chain challenges helps Canada grow domestically, and also establishes a strong economic niche for global growth of Canadian firms, boosting Canada's status as a global hub for trade. Through this vision, Scale AI aims to generate enormous positive and long term impacts for Canadians, helping to secure our global leadership in a highly competitive sector. Scale AI's vision includes **four areas of focus**:

FOCUS 1:
ENABLE MASSIVE PRODUCTIVITY GAINS ACROSS KEY ECONOMIC SECTORS

AI is a key enabling technology for business productivity, everywhere from promotion and recommendation engine optimization to demand forecasting to optimizing labour schedules and transport logistics, and virtually every aspect of business operations in between. Through actively connecting industry leaders with emerging AI vendors and targeted investments of public funds, we will continue to create a large and diverse pool of AI service and solutions providers that will ensure Canadian businesses have access to key productivity tools.

Businesses, and more particularly SMEs, must make decisions on where to allocate their innovation budgets. By co-investing in industry-led productivity improvement and supply chain AI initiatives, Scale AI steers the efforts of the AI ecosystem to supply chains, resulting in the creation of a highly advanced and efficient network of infrastructures for goods and services that will benefit all Canadian businesses. This will, in turn, increase the efficiency and resiliency of Canadian supply chains and enable further productivity gains for a sustained advantage over foreign competitors.

FOCUS 2:
BUILD SUSTAINABLE COMPETITIVE ADVANTAGE

Canadian businesses of all sizes striving for international leadership through innovation require a solid domestic AI ecosystem to access the best-in-class talent and solutions needed to fuel their growth. Scale AI will directly support our industry champions to gain and maintain market leadership through technology. Achieving our vision would also significantly increase the potential of creating new Canadian champions, or anchor firms, through cross-pollination and organic interactions between individuals and businesses within the AI sector. By enabling our industry leaders to significantly optimize their resources and operations, Scale AI will also boost Canada's efforts towards environmental sustainability and accelerate the deployment of critical technology solutions for the energy transition.

FOCUS 3:
ATTRACT SIGNIFICANT FOREIGN DIRECT INVESTMENT

Canada's unique academic talent pool has already attracted significant investments from foreign technology companies setting up AI research labs near our country's top research institutes. But more work is necessary to convert this into

a sustainable benefit for Canada. Our vision is that Canada can leverage foreign investments to fuel the growth of our best startups and scaleups, drive widespread AI adoption in Canadian businesses and contribute to securing Canada's international leadership. Bringing this vision to life will thus attract significant additional foreign capital, including equity investors, private equity firms as well as non-tech corporations who will compete to capture some of the value created by Canada's unique pool of talent and AI technology vendors.

FOCUS 4:
CREATE A VAST POOL OF HIGHLY QUALIFIED AND HIGH PAYING JOBS

Developing and deploying AI-powered business solutions involves a wide spectrum of skills and expertise. Besides data scientists and engineers, AI also creates a strong demand for experienced talent in change management, business operations, IT, strategy and finance. AI's potential for significant strategic and financial value means that these jobs are also inherently important for Canadian businesses. Through its various programs, Scale AI is laser-focused on fostering the conditions for attracting and retaining the high-potential talent necessary to grow the ecosystem.

2.1 Canada at a critical juncture in its AI development

As its most significant funding arm, Scale AI plays a unique role within the Canadian AI ecosystem (refer to Appendix 4 for more details). In Phase 1, Scale AI used this unique position to amplify the work of other ecosystem organizations, fill gaps we are uniquely positioned to fill, and avoid duplicating existing programs and activities as much as possible. Our experiences during Phase 1 provided significant insights about the strengths, gaps and needs of the AI ecosystem, and from this foundation we have established our vision for Phase 2.

To further inform our plans for Phase 2, Scale AI conducted an in-depth assessment of the Canadian AI ecosystem, which we published under the title **AI at Scale**. In this report, we examine the state of AI in Canada throughout the entire innovation value chain[1], which includes three main stages: Research & Development, Early Adoption and Diffusion of AI technologies. Despite Canada performing extremely well according to some international benchmarks[2], our assessment finds that Canada is actually at a critical juncture in the development of an AI-powered economy, as evidenced by **3 concrete realities of the Canadian AI value chain**:

A. While Canada's R&D indicators outperform many of its peer countries in absolute and relative terms, a **significant share of R&D actually benefits foreign-owned businesses**;

B. Despite a **strong supply of AI talent and startups**, early adoption by Canadian firms trails many international peers; and

C. Large-scale diffusion of AI solutions among Canadian firms is hampered by significant **investment gaps in digitization** and low executive buy-in, significantly reducing the domestic demand for AI solutions.

In our **AI at Scale** report, we identify two possible AI trajectories for Canada:

1. **Stable or Downward:** Remain primarily an R&D centre-of-excellence, powered by foreign direct investment and benefiting foreign-owned businesses, while startups and talent leave for opportunities abroad due to weak domestic demand for AI solutions, leading to an eventual stagnation of Canada's research prowess; or
2. **Upward:** Growing into an AI-powered economy, where domestic demand for AI talent and services drives the creation and growth of AI solutions providers using Canada as a launchpad for their global expansion, creating many attractive opportunities for domestic and international talent.

[1] Harvard Business Review (2007): The Innovation Value Chain.

[2] https://www.tortoisemedia.com/intelligence/global-ai/

Only the upward trajectory holds promise for Canada - but significant work has yet to be done to lift Canada up to that path. A promising future for AI in Canada relies heavily on our nation's ability to significantly increase its demand for AI. **Our vision is that Canada belongs on the upward path**.

2.2 Our Phase 2 Strategy - Growing Domestic Demand

Our **AI at Scale** report makes clear that growing Canada's domestic demand for AI solutions has to be Scale AI's #1 priority. Our Phase 2 strategy therefore centers around **3 main objectives**:

1. **Accelerating private investments in AI for productivity across entire value chains;**
2. **Increasing the catalyzing role played by Scale AI for AI adoption and commercialization to facilitate those investments; and**
3. **Positioning Scale AI as a conduit for applied AI knowledge sharing and international outreach to foster an increased demand.**

Anchored around these 3 objectives, detailed further below, our strategy builds on the investments and partnerships we have established and on ecosystem gaps that Scale AI uncovered during Phase 1 and is uniquely positioned to address.

Collaboration with the rich variety of the academic and research organizations in the AI ecosystem in Canada will remain a cornerstone of our vision, to draw on existing expertise and capabilities without duplication, and stepping up to address the gaps we have identified on the domestic adoption side.

2.2.1 OBJECTIVE 1: ACCELERATING PRIVATE INVESTMENTS IN AI SOLUTIONS

A key barrier to growing domestic demand centers around investment. Over the past year, Scale AI has seen a **significant growth in interest in AI for supply chains from companies across Canada**. There is a robust latent demand for Scale AI support because many require further encouragement to commit large investments in AI initiatives, especially in an uncertain economic environment.

A critical additional growth step for the Canadian ecosystem will come through attracting and increasing private investments, foreign and domestic, to inject new capital to fuel domestic demand. To propel a new, more ambitious growth cycle that deepens our focus on industry-led activity, we will expand our investment base to leverage additional private (i.e. non-government) capital from:

1. Existing members, increasing their own investments as they progress their AI journey;
2. New members, making new investments as they start their AI journey; and
3. Investors, such as angels, venture capitalists (VCs) and private equity (PE) firms, investing their capital in Scale AI projects and/or members.

The third item, attracting private investors, is extremely ambitious because it requires Scale AI to create and sustain the conditions required for these investors to access, develop an interest in and invest their own capital in Scale AI-supported SMEs and startups. Potential opportunities include:

- → Connecting angel investors and early stage venture funds with startups from Scale AI's Acceleration program through dedicated and curated events;
- → Providing established startups with access to VCs interested to provide venture debt (instead of equity investments) to members involved in Scale AI projects;
- → Enabling SMEs to seek additional investors for projects funded by Scale AI;
- → Coordinating large cap investments in infrastructure with institutional investors to include digital assets, and add a value-creating AI layer on top as a parallel project co-funded by Scale AI; and
- → Encouraging investment funds to incentivize their portfolio companies to invest in AI through their board or shareholder positions.

Developing these ambitious new sources of capital will necessarily proceed cautiously, as both investors and targets feel their way through new opportunities. Naturally, our ability to attract private capital will also rely on the quality and value-creation potential of the investment opportunities available during Phase 2. Therefore, we do not anticipate that this new stream of funding will represent a large share of our investment portfolio during Phase 2. Nevertheless, our aim is to open these new channels, develop new funding models in collaboration with investors and businesses, and run some pilot projects to assess their viability.

2.2.2 OBJECTIVE 2: SCALE AI AS A CATALYST FOR AI ADOPTION AND COMMERCIALIZATION

A key barrier to businesses investing in AI lies in the inherent risk associated with novel cutting-edge technology. As mentioned above, **AI adoption projects are still highly innovative** and the likelihood of success is difficult to gauge. Consequently, when technology risk is accurately assessed and mitigated, AI adoption success rates dramatically increase which, crucially, also encourages more companies to invest.

Concurrently, while many SMEs have been told repeatedly by industry and technology commentators that they must adopt AI for their long term competitiveness, few SMEs possess the skills and network needed to successfully prioritize, launch and deploy AI initiatives. Meanwhile, Canada benefits from a large and expanding network of AI service providers and a large pool of highly qualified talent graduating from its universities each year - but few are connected to SMEs.

Scale AI's collaborative approach addresses this paradox by requiring adopters to partner with AI service providers during the project development and execution phases, which fosters the creation and sharing of IP across the ecosystem as well as establishes links for future business development. At the initial launch of Scale AI, the AI service industry was still in its infancy with few expert providers, accessible only to large enterprises. Over the course of Phase 1, **Scale AI developed an extensive network of new, domestic AI service providers** better suited to support the specific needs of SMEs in terms of solution complexity and affordability.

As we transition into Phase 2, Scale AI will leverage its experience and unique position in the ecosystem to foster more connections between adopters and service providers to drive additional investments, improve project success rates and deliver widespread AI adoption within SMEs. Concretely, Scale AI will accelerate its focus on:

- → Sharing knowledge with companies to identify the next steps in their AI journey and providing funding to support them;
- → Acting as trusted connector between adopters, vendors and other ecosystem stakeholders in structuring and executing AI supply chain projects;
- → Facilitating AI expert support for project planning and execution;
- → **Funding the productization of solutions** developed through customized engagements by AI service providers of adoption projects; and
- → Encouraging **traditional software solutions providers to develop AI** capabilities.

2.2.3 OBJECTIVE 3: SCALE AI AS A CONDUIT FOR APPLIED AI KNOWLEDGE AND INTERNATIONAL OUTREACH

Another significant barrier to growing domestic demand for AI stems from the limited understanding within Canadian businesses of the value-creating potential of AI. Those firms generally have little experience with AI[3], and therefore no real knowledge of its strategic value, the necessary ingredients for success and the expected financial impacts.

The breadth and diversity of Scale AI's Phase 1 project portfolio has given us insights into this sought-after knowledge, and thus we are uniquely positioned, compared to other ecosystem players, to use this knowledge and insight to drive domestic adoption. During Phase 2, Scale AI intends to:

- → Identify and share trends, benchmarks and key success factors based on our portfolio of 100+ AI projects, along with data and experiences shared from our partner organizations;
- → Produce industry- and sector-specific resources and guidebooks describing the approach, time and resources required to successfully design and launch AI supply chain projects (e.g. what is a reasonable impact of an AI inventory optimization engine using in retail?);
- → Publish regular updates to our **AI at Scale** research report on the state of AI in Canada, in collaboration with key stakeholders from the ecosystem, including recommendations and calls-to-action focused on our key vision of building domestic demand for AI; and
- → Promote flagship projects and organizations, domestically and internationally, positioning Canada as the exciting destination for AI talent and businesses.

Through this role, Scale AI will also be a magnet for international firms seeking insights for their own AI initiatives, which gives us the opportunity to engage and attract these firms to invest in Canada and engage Canadian service providers. Scale AI's pan-Canadian footprint, together with its bridge role between the academic, entrepreneurship and industrial sectors positions us well as a credible point of entry into the Canadian AI ecosystem.

[3] Less than 20% of companies have been using AI for more than 2 years, 'Kaggle ML & Data Science Survey on Machine Learning Adoption, 2020'.

3. Our plan for strengthening the Canadian AI ecosystem

To deploy our Phase 2 strategy, Scale AI will continue to leverage a holistic approach with a deepening focus on industry-led projects, talent development and startup acceleration. While we will be extending our most impactful investment activities from Phase 1 into Phase 2, we have also recentered some of our activities on key ecosystem needs given the reduced available funding. These activities are organized around four programs:

1. Supporting industry-led AI project initiatives;
2. Accelerating Canadian AI startups;
3. Developing Canada's AI workforce; and
4. Showcasing Canadian AI on the global stage.

In addition to these programs, Scale AI received funding from ISED as part of the Pan-Canadian AI Strategy and will be dedicating these funds to support initiatives aimed at deploying AI-powered solutions within Canadian hospitals.

3.1 Supporting industry-led investments in AI for productivity through supply chain optimizations

Since its inception, Scale AI has focused on supporting the development of AI supply chain solutions by Canadian service providers. For Phase 2, we will maintain this focus for the following reasons:

- → Supply chains involve a wide range of business operations processes. **Focusing on productivity solutions applied to supply chains** allows Scale AI to support companies from many sectors and ensures that AI applications we co-invest in directly support the creation of value for businesses and generate significant gains in productivity;
- → Canada, and the Quebec-Montreal-Toronto-Waterloo corridor specifically, is a globally recognised hub of AI research made up of the world's largest community of Operations Research (OR), Machine Language (ML) and Natural Language Processing (NLP) research scientists. The combination of these fields creates new and unique methods to solve complex business problems and improve decision making across supply chains. This combined expertise is a key competitive advantage for Canada and it is imperative that we leverage it to benefit our domestic businesses. Since business performance and supply chains rely heavily on predictions and optimization engines, they are an ideal sectors to deploy OR, ML or NLP solutions of the type at which Canada's research centres excel;
- → Decision making in industry, and particularly in supply chain operations, is one of the **key areas where AI can be commercially applied**; other areas include financial, medical, digital marketing and autonomous vehicle sectors. Strategically, Canada is better positioned to gain a leadership position in AI applied to **supply chain, a niche sector which has not yet been captured** by a dominant entity/region. Moreover, recent social, environmental and geopolitical events have caused significant disruptions to supply chains, highlighting the need for significant investments to modernize physical and digital infrastructure of Canadian firms. Concentrating Scale AI's investments in this niche sector will build a critical mass of AI supply chain service and solutions providers to secure Canada's global leadership position.

3.1.1 PIPELINE DEVELOPMENT

We built Scale AI's pipeline in Phase 1 by actively identifying and reaching out to industry adopters to find businesses willing to make sustained investments in AI, and then connecting them with the relevant service providers. We also **actively worked with AI vendors to support their commercialization efforts**. While our role in generating projects has been instrumental, we have found that generating "bottom up" projects - commencing from an adopter's or vendor's interest - is a key success factor for engaged, committed partners and projects.

Developing a robust pipeline requires constant effort to grow and nurture accounts until they are ready for an AI project investment. Some of the projects Scale AI is investing in today are actually the result of several years of support by Scale AI's dedicated investment team, to foster collaborations, steer towards AI training programs, and educate on the applications of AI relevant to their business.

To accelerate the growth of a broad-based AI ecosystem, Scale AI will continue to support a wide range of diverse projects submitted and led by industry adopters and vendors. In Phase 2, we will still proactively reach out to and engage new companies, in addition to encouraging existing members to invest in follow-on initiatives. Scale AI will adapt its approach to promote these activities based on the level of digital maturity of each company:

- → Scale AI will encourage additional companies to launch initiatives that leverage the success of previous Scale AI projects, beginning with lower complexity solutions and then gradually increasing in sophistication through follow-on investments (e.g. building upon a demand forecasting engine by integrating an advanced inventory management tool, followed by a full network optimization system); and
- → For companies already proficient in AI, Scale AI will fund AI-powered tools tackling new business problems or diffuse existing solutions into different business units.

As we move into Phase 2, Scale AI will also expand its intake approach to launch calls-for-proposals in on specific topics, to encourage our ecosystem to develop AI-powered solutions targeting critical issues for Canada:

3.1.2 SMES AT THE HEART OF SCALE AI INVESTMENTS

SMEs are inherently at the heart of Scale AI because the vast majority of AI providers are SMEs. Over the last few years, our ecosystem witnessed the emergence and growth of a rapidly increasing number of these providers. Our experience has shown that their commercial success relies not only on their expertise in AI but also on their ability to develop business-relevant solutions and services.

In Phase 2, we will expand our SME focus to include technology solution providers with no AI capabilities. Canada has a rich and diverse pool of these traditional software providers, most of which serve other SMEs. These companies usually have deep experience in developing and successfully commercializing B2B solutions and could significantly benefit from additional AI capabilities to expand their commercial and/or product base. In Phase 2, Scale AI will create value for these vendors by connecting them to the right experts, both from an AI and business integration perspective, to help develop and sell their solutions and generate valuable IP they can also use to secure future clients.

To further increase Scale AI's impact and support of Canadian SME service providers, in Phase 2 we will also **invest in the 'productization' of certain custom-made solutions** created as part of project funding, to amplify those investments and the created IP. We will achieve this by investing in the costs associated with standardizing a custom solution so that it may also be used by the SME service provider to attract a new or expanded client base. As the original adopting customer has no interest in funding these productization costs, Scale AI's investment provides crucial support necessary for scaling up these SMEs. To test the feasibility of this initiative, Scale AI encouraged two recently-selected projects to integrate such a funding model and we expect that a large share of our adoption projects will follow a similar template in Phase 2.

SME adopters also make up a sizable portion of our investment portfolio. These organizations have recognized that AI is a strategic source of competitive advantage and have significantly invested in digitization. Supporting the continued growth of these SME adopters remains a key focus for Phase 2.

3.1.3 HELPING STARTUPS GAIN COMMERCIAL TRACTION

Another driver of growth for future projects will be increasing our 'First-Client' program, through which **Scale AI facilitates early-stage startups to secure their first client**. We do this by co-investing up to 50% in smaller projects of maximum $500k. These projects build customer confidence that drives follow-on investments which directly support the scaling of new Canadian SME AI solutions providers.

3.1.4 LEVERAGING OUR ECOSYSTEM CONNECTIONS WITH UNIVERSITIES & RESEARCH CENTERS

At the heart of Scale AI's connector role lies our effective partnerships with AI research centres, accelerators and universities, who support our efforts to identify high potential companies and provide expert resources to nurture them. During Phase 1, Scale AI encouraged many of our project partners to include professors in their consortium, which led to many value-creating partnerships. Moving forward into Phase 2, and based on each project's specific needs and complexity, we will go further to establish even more links between project teams and relevant experts from our universities, to expand this connecting and mentoring value we bring to the AI ecosystem.

As part of our Phase 2 strategy for developing the ecosystem, Scale AI will also extend its collaboration with Canada's AI institutes (Mila, AMII and Vector). This will include coordinating the support provided to companies at various stages of their AI journey, providing better access to AI talent to SMEs, funding professional training programs on AI and IP, jointly organizing and participating in AI events and collaborating on key publications on AI.

3.1.5 GENERATING CONSIDERABLE INDUSTRY INVESTMENTS

In Phase 1, Scale AI generated an average of $1.80 from industry-led projects with every $1 of public funding invested by Scale AI (i.e. a funding ratio of 1:1.8), which is well above the $1.5 target set by ISED for Phase 2. We plan to **sustain this $1.80 ratio in Phase 2** industry-led projects, and even increase some projects to a $3+ ratio based on private investments resulting from other Scale AI growth efforts detailed previously.

3.2 Increasing the impact of our Acceleration program

Through the Acceleration program, Scale AI struck partnerships with 29 of the nation's best incubators and accelerator programs, providing funding to support startups dedicated to building AI solutions for supply chains. These partnerships have given us **visibility into hundreds of AI startups** with a deep understanding of their respective capabilities and expertise. In Phase 1, Scale AI focused on providing financial incentives encouraging incubators and accelerators across the nation to support startups building AI solutions for supply chains. Today, supply chains have become key sectors for most of our partner programs and Scale AI's funding must now be focused on value-creating activities for startups joining the ranks of our partner incubators and accelerators. In Phase 2, Scale AI intends to:

- → Develop scalable match-making activities between Scale AI members and startups to create commercial opportunities;
- → In collaboration with 3 research institutes (Mila, Vector, AMII), IVADO and universities across Canada, create a national matching program between data science students and startups to generate a talent pipeline for startups and allow students to gain practical experience;
- → Leverage Scale AI's pan-Canadian reach to organize targeted events involving angels, VC funds and the best startups from our portfolio; and
- → Continue funding Canadian incubators/accelerators supporting startups developing AI solutions for supply chains;

3.3 Developing the current and future workforce in data science

Given the funding made available to Scale AI for Phase 2, our Workforce Development program will prioritize initiatives best aligned with our strategic goal of driving demand for AI solutions. As a result, the Research chairs and public training programs will not be extended to Phase 2 and Scale AI will focus on the following sub-programs:

- **STEM outreach:**
  - Launch a new call for proposals to promote data science studies and careers to underrepresented groups, targeting upwards of 10k youth; and
  - Work with partner programs to create links with Scale AI industry members to expose youth to working environments and actual professionals in data science.
- **Custom training:**
  - Accelerate investments in tailored training programs targeting company-specific needs through tight integration with project funding.

3.4 Showcasing Canadian AI on the global stage

Canada's reputation as a global leader in AI is already well-established[4], which attracts a large volume of foreign talent to study with some of the world's leading AI experts. Nevertheless, Canada is still not a destination of choice for AI professionals, resulting in a significant brain drain. To **raise Canada's international profile as a destination of choice**, during Phase 2 Scale AI plans to:

- Initiate and fund cutting-edge, large-scale initiatives demonstrating to the world Canada's unique expertise and **showcasing how the 'Canadian AI' brand is differentiated**, for example in terms of ethics and inclusiveness. AI talent is attracted by high impact, ambitious innovations and ensuring that these initiatives are well funded and successful will be key to initiate a virtuous cycle of talent attraction; and
- **Co-host or shape the content of high profile international events**, such as the 2023 'All In' event in Montreal that Scale AI will host in collaboration with CCMM, Mila, IVADO, Forum IA Quebec, Montréal International, CEIMIA and many others, to actively promote successful and ambitious projects by members of the AI ecosystem and showcase the unique and exciting developments in AI taking place in Canada to global talents and organizations.

During Phase 1, Scale AI developed strong working partnerships with organizations like Montreal International, Investissement Quebec and Toronto Global, and during Phase 2 we plan to expand our interactions through increased presence at their events. Scale AI will also develop materials and AI case studies to leverage in their international activities. Moving forward, Scale AI will strengthen its ties with Global Affairs Canada to enable commercial missions and create opportunities for commercial expansion abroad for Scale AI members.

[4] https://www.tortoisemedia.com/intelligence/global-ai/

3.5 Deploying AI solutions to optimize hospital operations

At the onset of the COVID-19 pandemic, Scale AI swiftly mobilized its ecosystem to support hospitals in leveraging AI to better manage the effects of the crisis. About 2M Canadians benefited from improved health services as a result of Scale AI's COVID-19 initiative. After consulting with participants of these COVID-19 projects to learn from their successes and failures, Scale AI will launch a call for proposals to support the development of new AI-powered solutions targeting intra-hospital logistics. In keeping with our collaborative approach, Scale AI will play a convening and match-making role between hospitals across Canada and AI solutions providers to enable the launch of ambitious, high impact projects.

Given the particular context of Canadian hospitals, Scale AI's contribution will be different than for typical industry led projects, covering a larger share of a project's costs. Our ultimate goal with this program is to fund the initial development of productized AI solutions and their deployment in select hospitals while ensuring that service providers are then able to commercialize their product to other hospitals across the country.

3.6 Intellectual property strategy

An intellectual property (IP) strategy aligns IP with business objectives to optimize the business tailwinds. Our IP strategy therefore focuses on our primary goals of growing domestic demand for Canadian AI and supporting SME scale-up, as follows:

Growing domestic demand for Canadian AI: Scale AI emphasizes developing IP (e.g. AI models and optimization engines) that will have maximum commercial impact on the ecosystem. To do this, we prefer investing in projects that develop IP that (a) has a high probability of commercialization (e.g. use in a product or service) and (b) can be redeployed into new or expanded use cases, beyond the scope of the original use case. As a result, a high percentage of project IP is actually commercialized after project completion. Furthermore, since Scale AI actively encourages follow-on development and expanded commercialization of project IP, a growing number of new projects build upon earlier Scale AI projects. Scale AI also actively encourages the augmentation of project consortia in our pipeline to expand the team of SMEs, startups and adopters involved, thereby increasing the opportunities for these entities to develop new IP and increase the domestic demand for their AI-enabled products and services. All of these activities help grow domestic demand for AI.

Supporting SME scale-up: Our IP strategy supports SME scale-up in three ways:

1. **IP arrangements that facilitate SME scale-up:** We actively advocate, as part of our project selection process, that the SME AI vendors retain sufficient IP ownership or use rights to permit the SMEs to further commercialize the IP in other contexts, outside the scope of the project. While adopters previously routinely prevented this kind of activity, Scale AI has been instrumental in assisting adopters and AI providers understand the value of, and ultimately adopt, this approach. As discussed in Section A.2 above, in Phase 2 we will fund SME service providers to "productize" custom solutions turning them into a generalized solution that can attract new customers.
2. **Integrating IP thinking into business planning:** There are no one-size-fits-all IP solutions, even within the AI ecosystem. This places a premium on the ability of Canadian firms to make informed decisions about what IP approach best suits their business realities. Our IP Strategy focuses on SMEs gaining the ability to make robust IP decisions pertinent to their situations.
3. **Raising IP literacy:** Business success requires a working-level understanding of IP, but Scale AI has identified **two significant gaps** in the existing training available: (1) an absence of AI-specific IP training; and (2) an absence of training that prioritizes actionable business-oriented advice over legal intricacies. In response, we launched our **IP WHY** video training series and **IP Without Jargon** blog in Phase 1. We will continue to grow these and other offerings in Phase 2.

3.7 Addressing Cross-cutting National Priorities

Scale AI is uniquely positioned to support the national priorities of Green Economy and Supply Chain Resilience because both touch the issues we tackle in supply chains. Scale AI has developed a plan to invest in AI supply chain projects that significantly contribute towards a green economy, including CO_2 and other emission reductions in Canada, and making supply chains more resistant to shocks.

3.7.1 GREENING CANADA'S ECONOMY AND DEVELOPING SOLUTIONS TO CLIMATE CHANGE

Our team undertook an in-depth analysis[5] of Canada's emissions as per the National Inventory[6]. Our analysis indicates that **AI supply chain projects have the potential to contribute to the reduction of emissions** in two ways. First, by optimizing inefficient processes that generate emissions and second, by reducing waste, such as overproduction and inefficient distribution networks and operations.

As a result of our extensive analysis, we believe that approximately 15% of Canada's total GHG emissions could potentially be impacted by solutions within Scale AI's focus area of AI-powered supply chains, especially in the transport, agriculture and retail sectors. As a result, Scale AI will actively seek and generate investment opportunities in these sectors and integrate the potential for emissions reduction more explicitly in our due diligence process.

For example, Scale AI will launch a series of **initiatives aimed at enhancing algorithmic efficiency and reducing the overall energy consumption of AI solutions** developed in Canada. This is extremely important because of the increasing energy consumption of computational resources required for AI-powered solutions. The associated increase in power demand has significant climate change implications. In response to this challenge, Scale AI will:

- → Encourage algorithmic efficiency (green coding) and greener approaches to data centres in Scale AI projects by funding associated project costs; and
- → Promote the importance of algorithmic efficiency on climate change, for example through generating and promoting materials and guidebooks to support the implementation of best practices by Canadian firms.

3.7.2 ADDRESSING CURRENT AND FUTURE SUPPLY CHAIN DISRUPTIONS

Supporting the deployment of AI across supply chains will remain the core focus of Scale AI's Phase 2 initiatives. To fortify Canada's infrastructure against unexpected shocks we also plan to:

- → Engage with Transport Canada's Resilient Supply Chain Task Force to identify opportunities to improve or optimize key infrastructures through the deployment of digital or physical assets; and
- → Identify opportunities for Scale AI members with specific AI expertise to join Transport Canada-backed projects;

[5] See Appendix 7 for an overview of our analysis

[6] See the "National Inventory Report 1990 –2020: Greenhouse Gas Sources and Sinks in Canada"

3.7.3 SECURING CANADIAN TRADE AND BUSINESSES

Scale AI also strongly believes that **cybersecurity is a key aspect of supply chain resilience**. Sharing data across supply chain partners, which is necessary for transformative AI applications, poses a serious risk for attacks on Canadian businesses. In response, Scale AI will further contribute to this mission through its Phase 2 activities:

- → Encourage a focus on securing data exchange among project partners by increasing awareness and funding for these project activities;
- → Promote a cybersecurity focus through curated content for our members, delivered through our digital platforms, conferences and specialized workshops; and
- → Facilitate access to cybersecurity service providers through a member directory.

4. Our Organizational Capacity & Delivery Plan

4.1 Operational vision

Scale AI operates under 4 guiding principles established to ensure that we serve our members effectively while also maintaining the highest level of rigour in managing public funds:

- **Business friendliness:** we regularly review and improve our processes to be as simple as possible for users; and we provide clear feedback on the relevance of project proposals as early as possible to improve the quality of their submissions and avoid inefficient effort;
- **Lean through automation:** we use digital tools, such as Salesforce and Asana, to automate and streamline tasks, project management and reporting, so that team members can focus on higher-value-added work;
- **High-quality experienced talent:** our mix of high-potential youthful employees and industry veterans yields ample opportunities for professional growth and a highly-engaged team; and
- **Stringent funding allocations:** we manage our funds as if they were our own, focusing on investments that will truly raise the ecosystem's standards in AI adoption. We also perform significant financial due diligence before investing, both on the health of the companies, and on the relevance and appropriateness of the proposed costs. While this rigour may have initially slowed our early investment rate, it has resulted in a higher-quality pipeline materializing as we complete Phase 1 and enter Phase 2, and in an impressive leverage of $1.80 of industry investment per Scale AI dollar invested.

4.2 Board of directors

Scale AI was created by key members of the Canadian AI ecosystem, and today we remain closely connected with these organizations through our board of directors. The Scale AI Board has representatives from all of the key ecosystem stakeholders - universities (e.g. HEC Montreal, Ecole Polytechnique, McGill), research institutes (e.g. IVADO, Mila), AI service providers (e.g. PwC, BCG, IVADO Labs), AI adopters (e.g. Bombardier, Canadian Tire) and the AI investment community (e.g. Investissement Québec, Anges Québec, Backbone Angels), as well as independent industry experts. This composition ensures that Scale AI remains connected to the guidance and oversight needed to effectively grow the Canadian AI ecosystem. Our Board reviews all strategic and significant operational decisions of Scale AI, including the selection and funding of all investment projects and programs.

Scale AI is committed to gender parity and diversity on our Board, as we believe these also ensure more effective oversight and guidance for Scale AI.

The current structure of our board provides at least 4 formal meetings per year of the full board, with additional, more frequent meetings per year of the project Selection and Ratification Board Committee as well as the bi-weekly executive sub-committees.

4.3 Collaboration with other clusters

When structured in a way that increases opportunities without significantly increasing complexity, Scale AI sees interesting potential value in targeted collaborations with other GICs as follows:

1. Ecosystem engagement

Some challenges and needs of the GICs' unique ecosystems overlap to create opportunities to amplify one another's effect through collaboration. In seeking out these opportunities, Scale AI will focus on potential value creation for our members and for accelerating the development of applied AI solutions. Concurrently, we will openly share our resources to members of other clusters as they seek similar opportunities. We anticipate that many of these collaborations will arise in the course of Phase 2 as programs get underway, but we have identified several possible illustrative examples:

- → Co-hosting and extending invitations to members of other clusters in our specialized workshops (e.g. explaining startup funding vehicles available; workshop to develop IP strategies);
- → Showcasing specific AI projects or partners from other clusters during Scale AI events;
- → Co-producing content on topics overlapping other clusters' mandates (e.g. Applied AI for container port operations); and
- → Informing or influencing national policies on high priority topics (e.g. data sharing within food supply chains).

Given the specificity of each cluster's ecosystem, few activities would be truly effective involving all 5 clusters. Consequently, we anticipate that targeted initiatives involving 2-3 clusters at a time will be more effective.

2. Public and government outreach

Marketing and communications have been key areas of collaboration between Scale AI and other clusters during Phase 1. Moving forward, we expect to increase our cooperation through:

- → Regular working groups for cluster communications;
- → Key events to showcase collective cluster missions and outcomes; and
- → Joint participation to high profile panels to represent the GIC program as a group.

3. Cluster management and peer support

The Global Innovation Clusters have each developed significant knowledge and best practices on maximizing investment impact and efficient operation of a cluster. Throughout Phase 1, Scale AI regularly engaged other GICs through various teams to share experiences, to introduce members to different ecosystems, to extend invitations or attend industry events, and to share other valuable resources. In Phase 2, Scale AI will expand collaboration to other teams and topics with the GICs.

4. Member connections

One of the key roles played by Scale AI in our ecosystem is to match potential project partners. As such, many Scale AI members possess unique expertise and capabilities that could be valuable to other cluster members. In Phase 2, we will actively engage with our members to find potential connection opportunities and identify clear points of contacts within each cluster for facilitating these connections.

5. Success and performance measurement

Scale AI's goal is to generate significant outcomes for our ecosystem and for Canada, and we employ several performance metrics to assess and improve the effectiveness of our activities toward achieving this goal. The success of our efforts can be measured at 4 levels: impact, outcomes, outputs, and activities.

5.1 Our expected impact

Scale AI's plan for Phase 2 is anchored in the experience we gained in Phase 1 and will deliver tangible commercial results, including the creation of **$3 billion of direct value** (either costs saved or new revenues generated), significant commercialized IP, and **6,000 highly skilled, high paying jobs** within Canadian businesses. In addition, our programs will deliver over **$200 million of industry investments**, will create **100 new partnerships** and will support the **training of 1,000 Canadians**.

5.2 Outcomes

- **Business Value Created:** An important success indicator for our investments is the long-term value it creates for businesses, usually through increased revenues or cost reductions. Although we track and assess metrics during the entire investment cycle, the true financial impact can only be assessed after projects are completed and the new solutions have been operating for a certain period. As we move into Phase 2, this will remain a critical metric;
- **Job Creation:** Jobs created during (direct) or after (indirect) Scale AI projects is another important success metric. Companies' commitments to invest in hiring AI talent are essential to growing domestic AI demand and retaining top talent in Canada;
- Total **industry investment** in Scale AI backed initiatives;
- **Number of new partnerships created**, including those involving industry and academia as well as different industry players, for example startups and established companies; and
- **Number of people** having participated in a Scale AI approved training/outreach session.

The aggregate of the above metrics will represent the tangible, measurable value Scale AI creates for the ecosystem. Intangible benefits associated with our program activities will, by definition, be more difficult to assess quantitatively. Such intangible benefits include:

- Exponential AI knowledge growth and transfer through cross-sector collaboration, leading to innovation spillovers in other industries;
- Changing business cultures towards more collaboration (with startups, SMEs, researchers, etc.) and more appetite for risk; and
- Second-order GDP impact from importing to and creating highly-skilled labour in Canada.

5.3 Outputs

Measuring the results of our investments will also require assessing the following metrics:

- Number of significant IP assets generated (e.g. deployed AI models);
- Number / share of projects that commercialize IP after project completion;
- Number of patents filed;
- Number / share of projects that further develop IP from prior funded project;
- Number of SMEs gaining access to international commercial opportunities;
- Total unique partners involved across all Scale AI programs;
- Number and/or share of projects involving academic partners;
- Number and/or share of projects involving startups;
- Total startups supported;
- Number of participants per project;
- Number / share of projects that follow from previous Scale AI investments;
- Number of AI service providers with more than 1 project with Scale AI;
- Number of adoption projects including productization by the service provider;
- Share of total investments going to SMEs (either directly from Scale AI or through subcontracting); and
- Number of projects involving private investors.

5.4 Activities

Although the number of activities performed by Scale AI is not a measurement of success per se, it is important to monitor if our team is on track to deliver on its proposed plan. Given that each Scale AI program will have its own set of activities tracked separately, the full list of metrics is too long to include, but they will include number of projects funded, number of project teams receiving expert support from advisors from academic institutions, number and type of events hosted or co-lead by Scale AI, number of publications and their reach (including geographic), distribution of investments across Canada.

6. Our financial plan

6.1 Key financial parameters

Scale AI's approach is focused on stimulating, but not replacing, private investments. In Phase 1, we operated several programs with varying abilities to generate industry investments, each requiring specific contribution rates.

- For industry-led initiatives like investment projects, custom and public training, Scale AI's purpose is to reduce the financial risk to incentivize businesses, and particularly SMEs. These projects provided the vast majority of industry-match generated in Phase 1.
- For ecosystem building activities like Acceleration, STEM and Research Chairs that are able to generate no / little industry investments, Scale AI increased its contribution rate, with the specific expectation that sufficient industry match from industry-led projects would be generated to meet our global industry-match commitments.

While some contribution rates will be updated for Phase 2 (noted in the table below), the remainder are sufficient to generate the desired incentives to deliver our strategy. Each item in the table is discussed in detail below:

Investment type	Nominal contribution rate	Effective contribution rate	Change for Phase 2
Industry-led projects	40% (50% in QC)[7]	31% (36% incl. QC funding)[8]	None
'First-Client' program	50% capped at $250k	TBC	None
Custom training	85% until $100k then 50%	62%	50% on all costs
Public training	50%	50%	Program discontinued
Research chairs	50% up to $1M	50%	Program discontinued
STEM outreach	100%	100%	None
Acceleration	$10-50k per startup	$38k average contribution	None

6.1.1 ADOPTION, COMMERCIALIZATION AND THEMATIC PROJECTS

While our contribution rate on eligible expenses was nominally at 40%, Scale AI performed thorough reviews of all project costs and made conscious decisions to focus its support on costs directly related to the development of AI models. Costs linked to the deployment of solutions were typically covered at lower rates, while some eligible costs (travel, marketing, offices) were not covered at all. These measures brought our total effective contribution for projects to 31%. This rigorous review and assessment resulted in the high leverage ratio of 1.8 generated by Scale AI investments during Phase 1.

[7] The higher contribution rate is based on the QC government contribution to project funding and is added on top of federal funds allocated to projects.

[8] Effective contribution rate is 36% when accounting for QC government project grants.

In addition to ISED funding in Phase 1, Scale AI also received contributions from the Quebec Government to support Quebec-based project costs with an additional 10% contribution rate. This contribution mechanically reduced the industry-match ratio on the relevant projects, increasing our effective contribution rate to 36% of total project costs.

Crucially, the recent consultations with our members have highlighted that these rates have reached the lowest limit of sustainability - meaning they remain significant enough to incentivize industry investments, but further reduction would cross an important threshold. For example, as one adopter said: “in light of the significant increase of onshore talent costs (especially during COVIC 19), Scale AI’s current contribution rate of 40-50% may not be sustainable to finance projects”. Given the substantial financial risk associated with AI initiatives, coupled with Canadian companies’ historically low tolerance for risk, an effective contribution rate below 31% is unlikely to encourage organizations to invest in AI. The associated risks will not be worth the investment, in their minds. Therefore, a further reduction in Scale AI’s contribution rate is not planned or desired for Phase 2 because it would be counterproductive to our objectives of increasing demand for AI and accelerating industry investments.

6.1.2 ‘FIRST-CLIENT’ PROGRAM

To encourage established companies to partner with startups, which most see as a risky endeavour, we have determined that a 1:1 contribution is required to offset the additional risk the established companies undertake. A lower contribution would significantly reduce the willingness of industry to engage with AI startups. This aspect of our strategy is crucial to ecosystem development and SME support, because it addresses a critical hurdle for startups - a first client - and hence the higher contribution rates on these smaller investments are clearly justified.

6.1.3 CUSTOM TRAINING

Originally established at 85% for the first $100k contribution and 50% for additional investments by Scale AI into each project, these contribution rates were selected in collaboration with the Ministère du Travail, de l’Emploi et de la Solidarité Sociale du Québec related to their $23.4M workforce development fund managed by Scale AI. Similarly to our industry projects, Scale AI reviewed thoroughly the costs associated with these training projects and determined a grid of acceptable costs. As a result, the effective Phase 1 contribution rate was 62%. For Phase 2, we have assessed that industry demand for this stream will not be materially affected if we reduce our effective contribution to 50%.

6.1.4 STEM OUTREACH

We strongly believe that maintaining a contribution rate of 100% will ensure that these essential programs effectively reach the diverse youth targeted by this initiative.

6.1.5 ACCELERATION

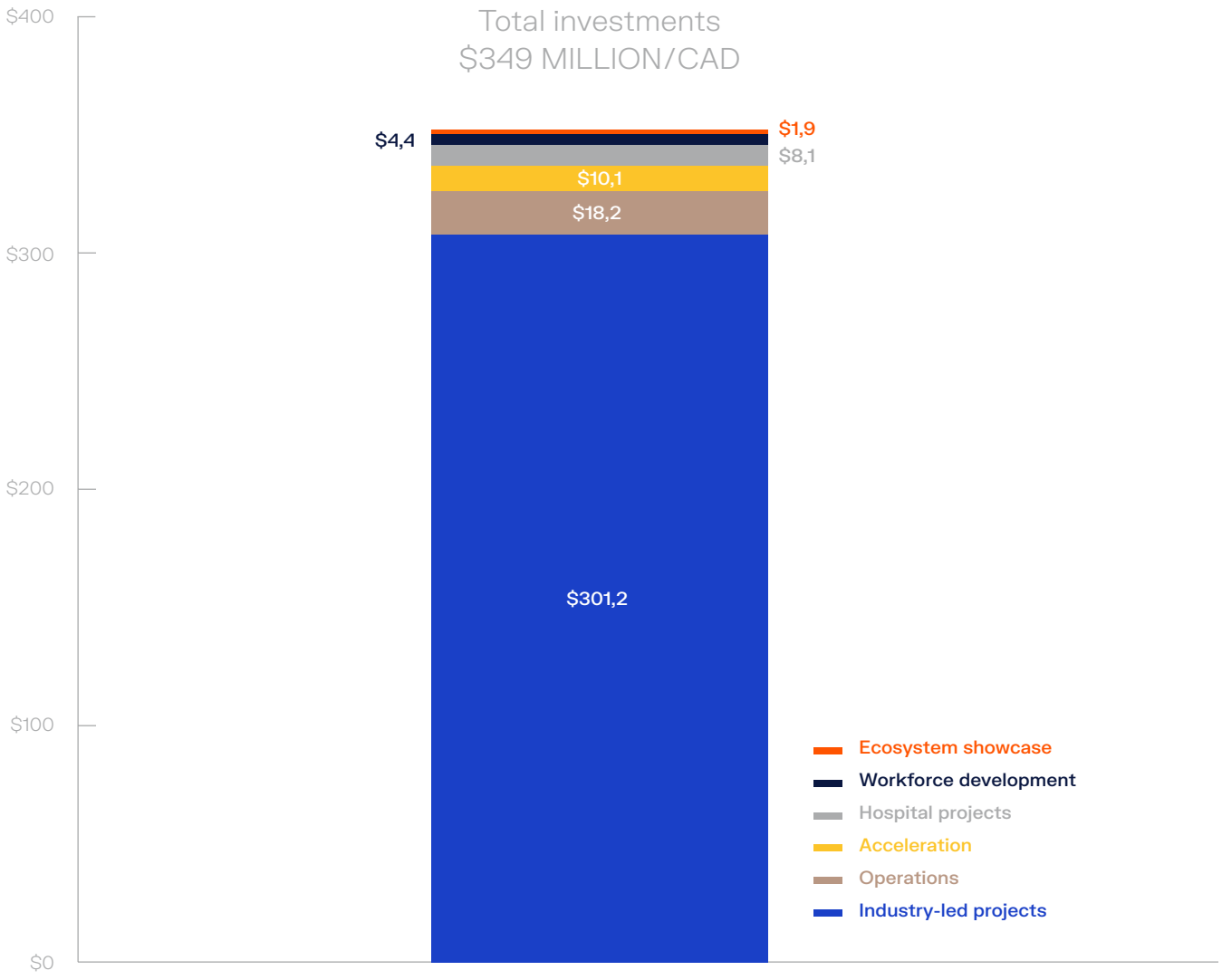
In Phase 1, Scale AI modulated the contribution to each incubator or accelerator based on the level of services provided to startups they supported. This contribution ranged from $10k per startup, up to $50k for those programs providing the most value. Moving into Phase 2, Scale AI’s contribution to incubators and accelerators will be based on a percentage of the value of specialized services provided to startups. The thresholds of Scale AI contribution will be determined in collaboration with our Acceleration program partners.

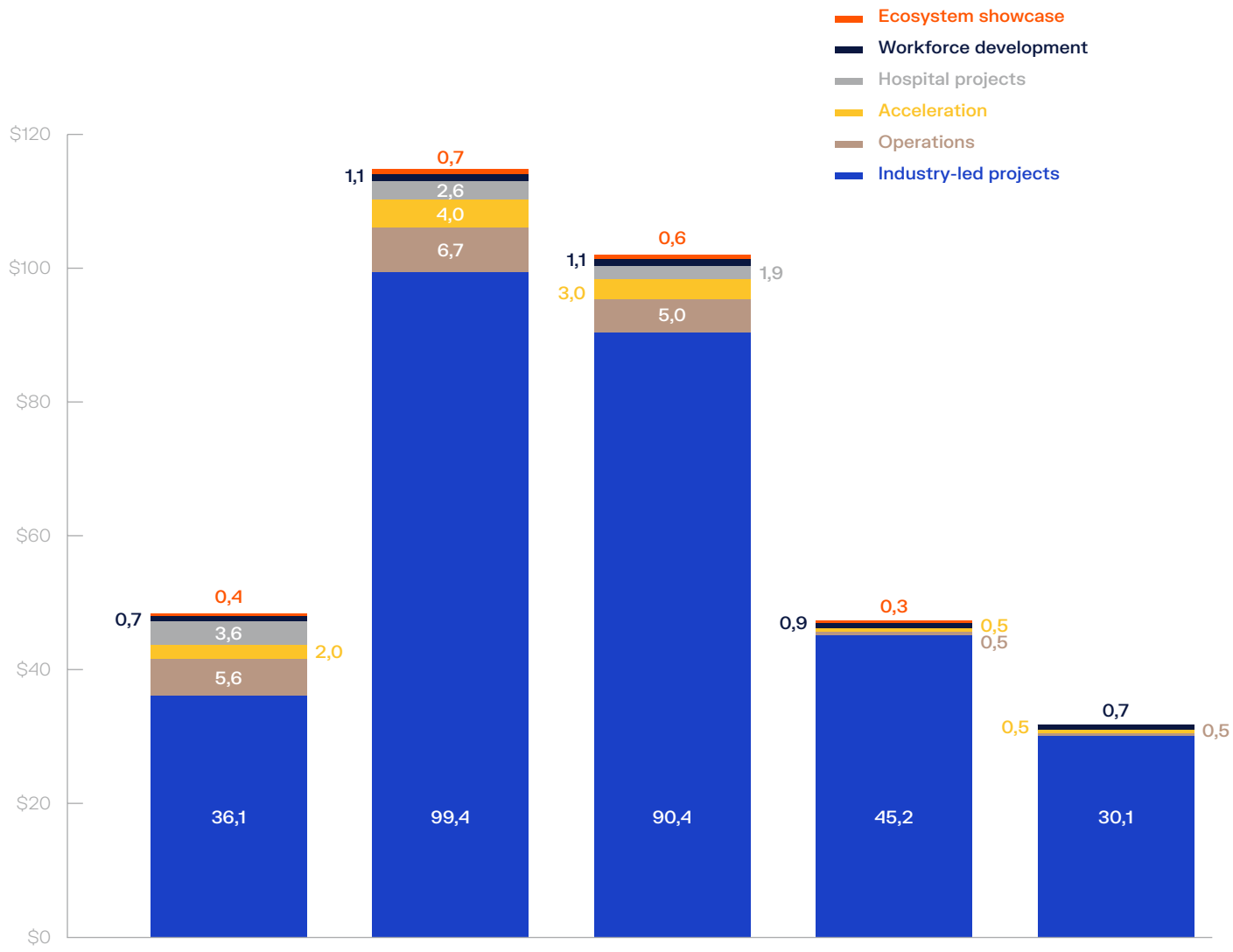
6.1.6 HOSPITAL PROJECTS

Scale AI will work in collaboration with previous partners to assess how to adequately support this type of project to ensure a high rate of success. Given Canadian hospitals' limited available resources for operational improvements, we expect Scale AI's contribution rate to be significantly higher than for traditional industry-led projects.

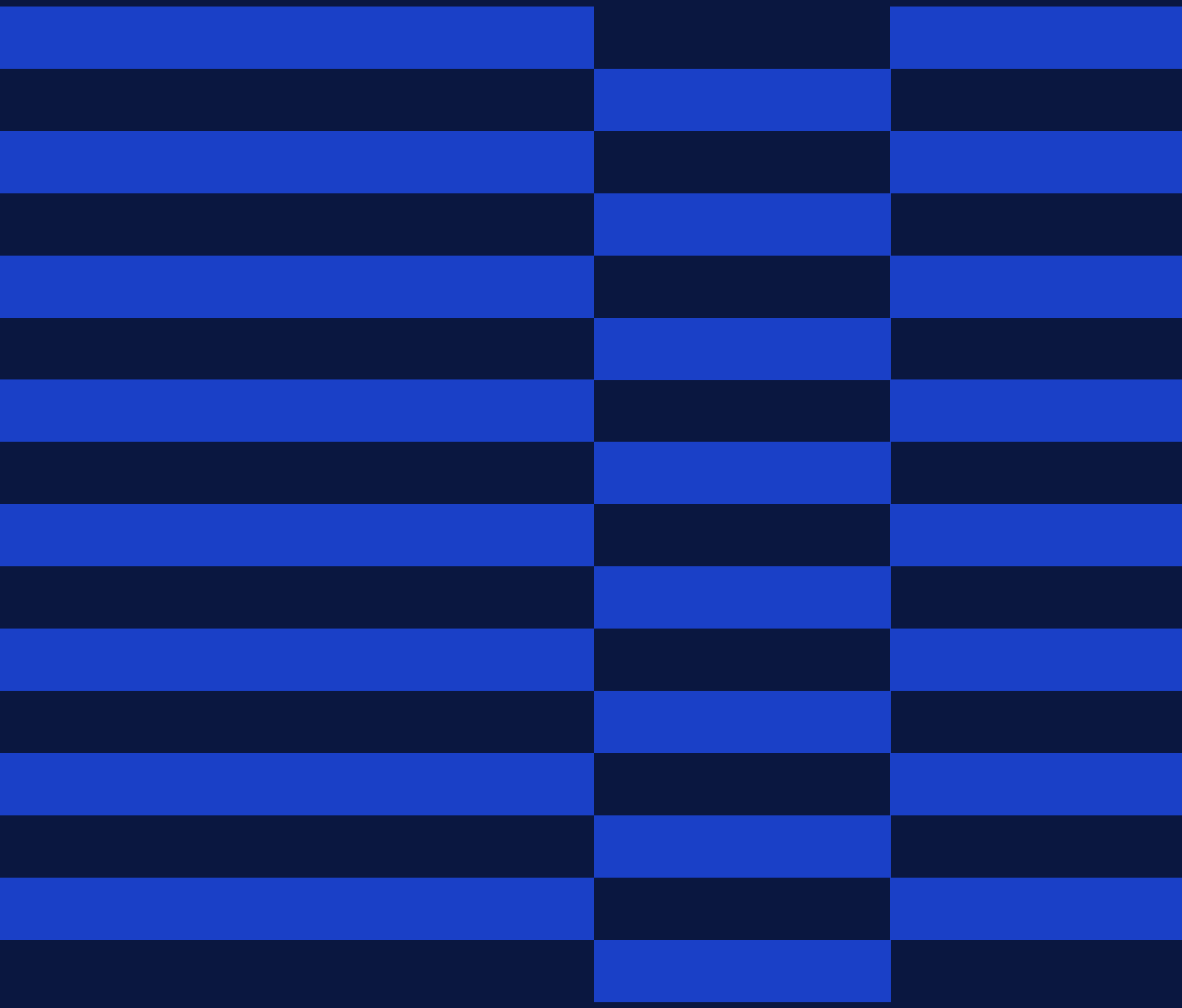
6.2 Overall Phase 2 investments by program

Scale AI will aim to deploy the $135M we received for Phase 2 and as part of the Pan-Canadian AI Strategy through 2028, which, combined with industry contributions will generate the following total investments.





Notes:
All figures shown in millions, CAD
Hospital projects funding excludes FY23 figures for consistency



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