12 weeks to AI

July 2024

Industry Trends

AI Trends

Only 53% of AI projects make it from pilot to Production. This is due to AI projects being hard to scale and companies not having experience in AI/ ML Ops

Gartner

Only between 11-14% of medium and large sized organizations have deployed AI/ML models in Canada

IDC

84%

Of executives believe they won't achieve their growth objectives unless they scale AI

Accenture

Generative AI is at the peak of inflated expectations. This means there is an extremely high risk of unproductive projects and no realization of ROI or lack of satisfaction

Gartner

70%

By 2025, 70% of enterprises will identify the responsible and ethical use of AI among their top concerns

Gartner

Over 60% of companies struggle to hire AI data scientists, ML engineers and AI product managers

McKinsey

Challenges that enterprises face while trying to navigate their AI Journey

We have a basic understanding of AI and are looking to utilize AI in our organization, but we are struggling to build a strategy or choose the optimal starting point.

Our existing systems and applications are so complex that we cannot envision ever getting to an AI / Data driven end state.

The business has identified several AI use-cases but we do not have a framework or methodology to strategically prioritize and maximize value.

It is unclear how our competitors are using AI and how should we should adopt AI to remain competitive and stay ahead.

We are an in the middle of our AI journey and have implemented multiple small-scale ML POCs and use cases — but feel our approach is siloed and can't fully operationalize them at scale.

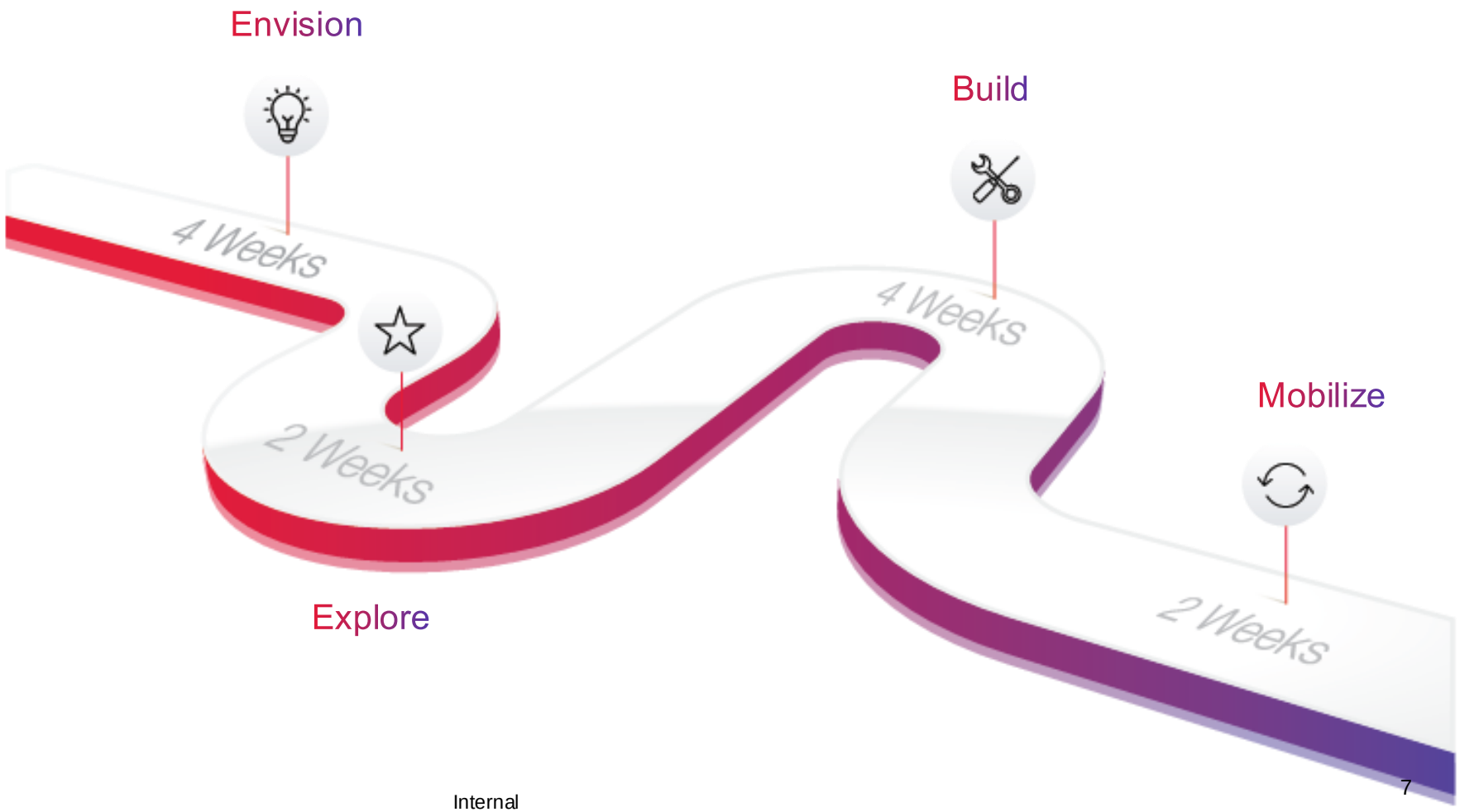
We are an experienced AI-driven business with most models productized but need help with advanced drift analysis or MLOps.

With the risks posed by Generative AI, how do we apply our privacy and security policies? What are the right guard rails to develop responsible AI practices?

My organization does not have enough certified & experienced Data Scientists and AI Architects to properly build and scale our AI solutions.

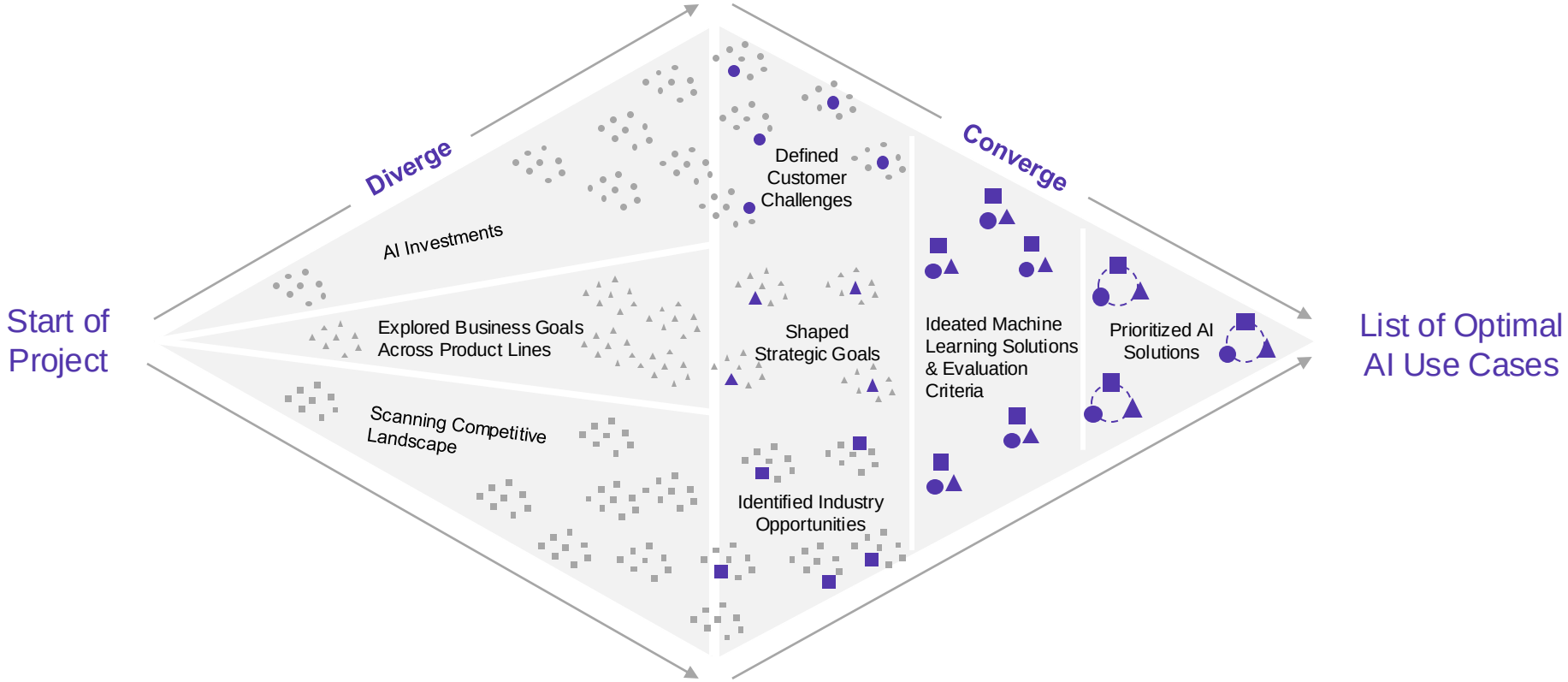
Driving continuous value through your AI Adoption

Responsibly going from **Zero to AI in less than a quarter**



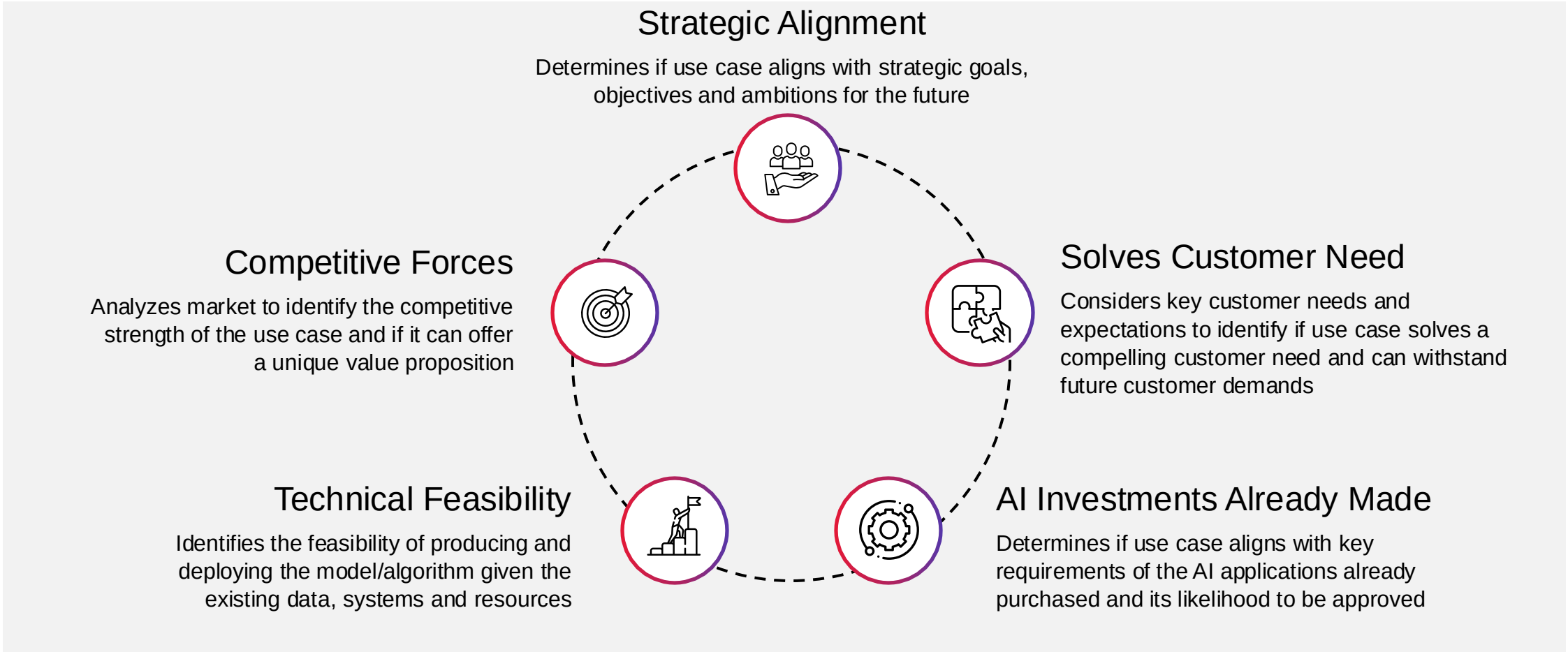
Envision

Our team collaborates with key stakeholders across your product teams to generate ideas and identify optimal AI solutions:

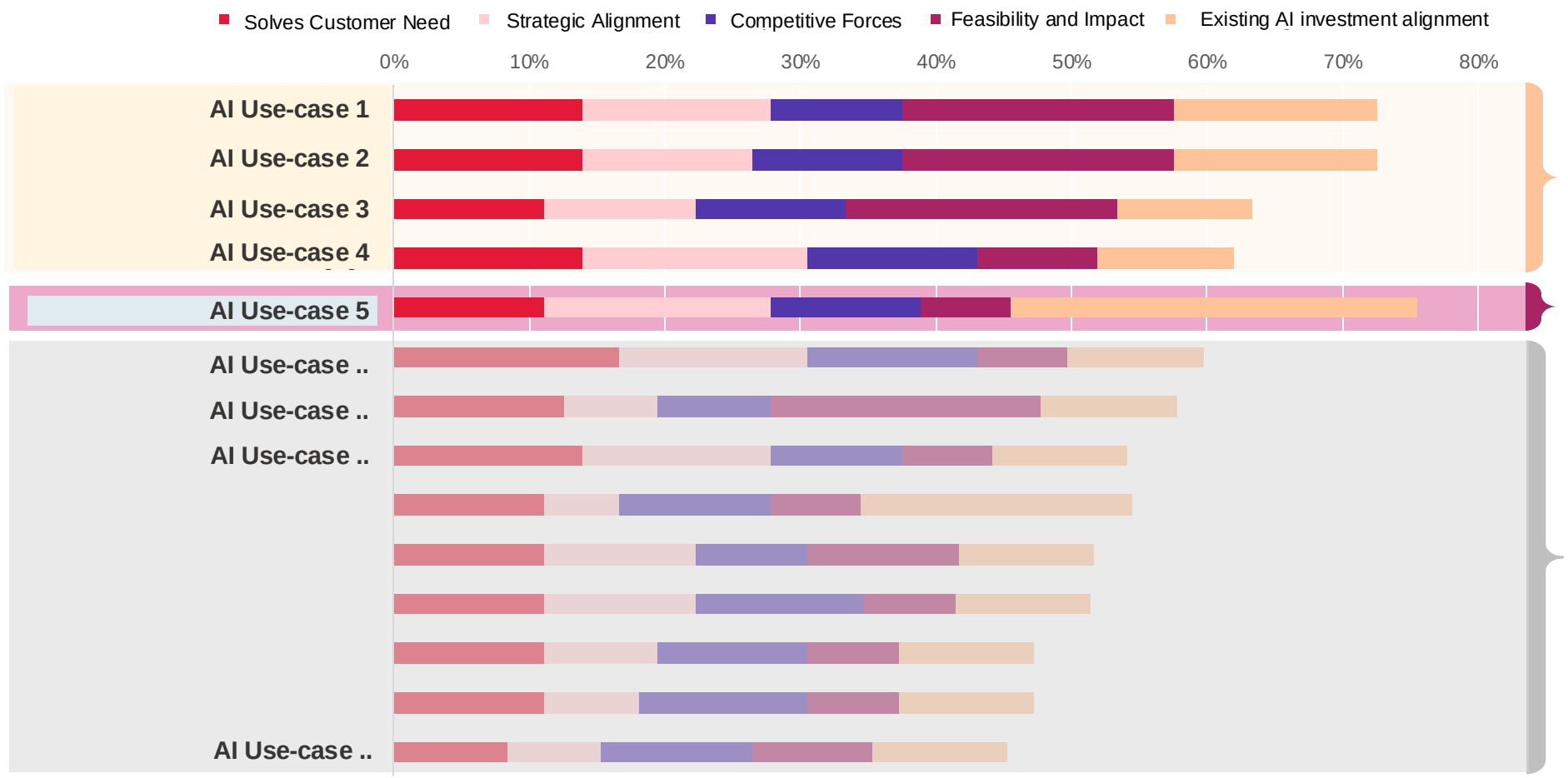


Explore

Using industry best practices and CGI's Artificial Intelligence expertise, the team identifies key dimensions that help identify optimal use case candidates.

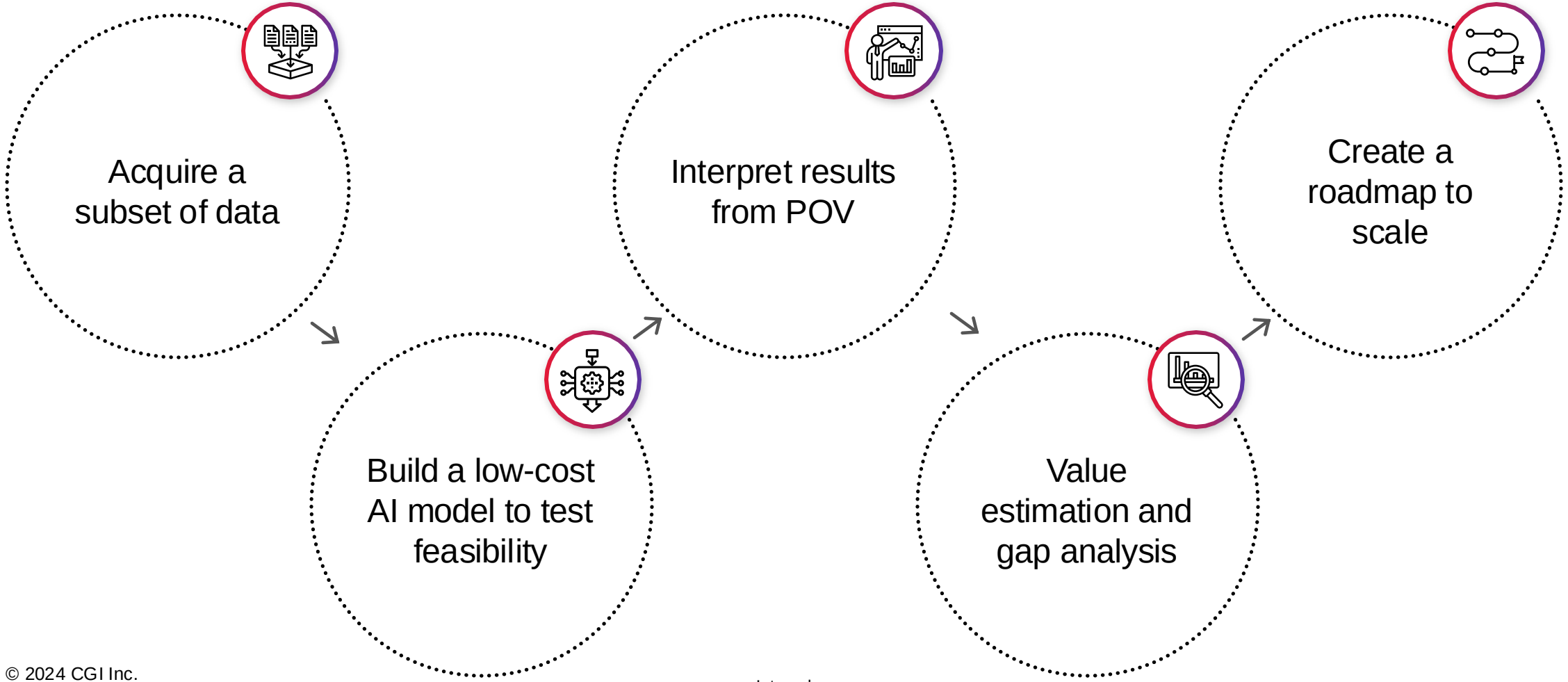


Prioritization Output



Rapid prototyping and roadmap to scale

Build and test the shortlisted optimal artificial intelligence use cases and build a roadmap to scale



Benefits and Outcomes

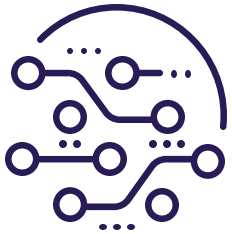
Benefits

Structured Proven Approach

- Following a structured, collaborative approach that defines your AI path to production
- Unlock your data's value and AI potential producing measurable business outcomes

Build Responsibly and Re-use

- Responsible AI, baked in, not bolted on
- Build reusable models focused on minimizing time to market and enabling scale



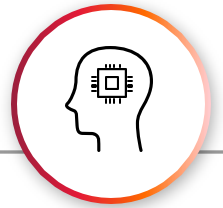
Test Before You Invest

- Build AI models to test the top use cases leveraging your actual data
- CGI's iterative approach to AI model validation minimizes risk and cost

Expedite Buy-in

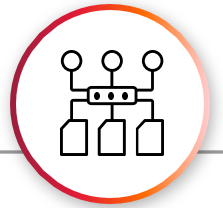
- Confidently provide answers to leadership of expected ROI
- Build your business case based on validated results and a clear vision to production

Why CGI's 12 weeks to AI works



Proven industry experience partnering with AI experts

We bring significant industry and AI expertise to co-create an optimal and validated AI roadmap. We focus on the required people, process and technology changes required to scale AI successfully at your organization



Repeatable outcomes

Our goal is to leave your team with a repeatable approach. Our prioritization framework helps teams identify and implement future AI opportunities with clear expected outcomes and measurable success criteria

Leveraging your organization's data, responsibly

Our approach tests the top use cases with actual organizational data. The models that are developed and tested always start with responsibility baked in throughout the process

Why Customer’s Trust Us

600+

Canadian certified and experienced Data and AI professionals for AWS, Azure and Google

Over

Four Decades

delivering enterprise-class services with a focus on delivering business outcomes

Recognized as a

Leader

in IDC’s 2022 Canadian AI Services MarketScape Report

No matter our client’s

AI Maturity

we meet them where they are and focus on delivering value throughout the engagement

We go

Beyond the Hype

and demystify AI for our clients, prioritizing use cases with clear and measurable impacts

Case Study

CASE STUDY

Enhancing fraud detection accuracy using AI

The client was the Commercial Banking business of one of the largest Canadian banks. Their IT team was responsible for Fraud detection and mitigation.

The client were looking to enhance existing architecture and ML technology stack to transition towards advanced Machine Learning techniques (Unsupervised Learning, Deep Learning, etc.), and scale existing models to enhance fraud detection accuracy with continuous deployment and monitoring. Fraud detection accuracy was low, and they had no automated mechanism for rapid model development, implementation and continuous deployment.

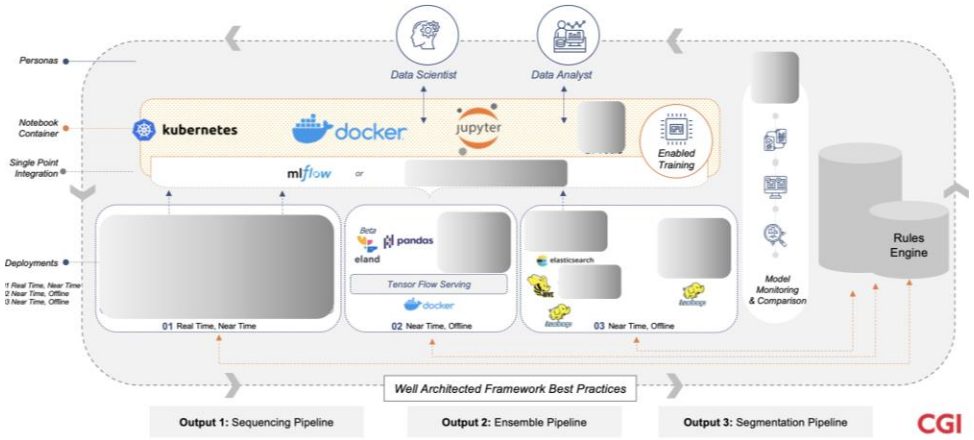
CGI Completed a proof-of-value and provided an AI solution roadmap to scale. We strengthened ML capabilities with a hybrid ML approach that adds Unsupervised algorithms to the mix. All Fraud model types were made to compete in Champion Challenge mode to provide highest accuracy for fraud detection. Well-Architected Machine Learning Framework based assessment helped identify and fix gaps in Security, Efficiency, Operational Excellence, Cost and Reliability.

This led to enhanced fraud detection with path to continuous deployment and monitoring, reduction in numbers of customers impacted by false positives, and increased capacity for branch, contact centre and investigations teams.

Implementation

Comprehensive proof-of-value development and future state roadmap that included:

- In depth assessment of current state
- Analysis of all ML and supporting tools within the Future State Architecture
- Visual architecture of proposed tools, associated integration and potential ML outputs
- Mobilization plan to actualize future state that includes operational and technical imperatives
- Implemented POC of proposed Future State to demonstrate viability



Challenges

- Difficulty in kickstarting advanced methods of Machine Learning model development and production
- Ambiguity regarding ML tool investments
- Lack of collaboration between Data Scientists and rest of the organization

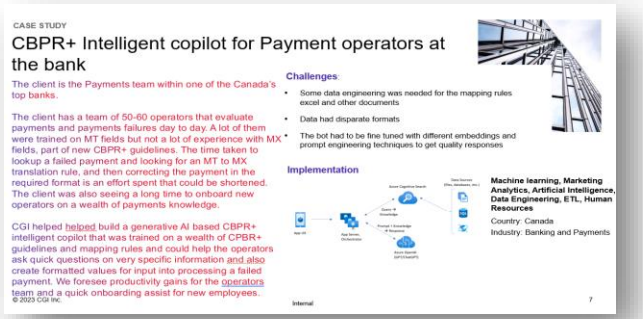
AI Strategy, AI Implementation, Artificial Intelligence, Data Engineering, ETL, MLOps, AI at scale, Machine Learning, Kubernetes, Elastic Search, Hadoop, Hive

Country: Canada

Industry: Banking

Recent AI Implementations

CBPR+ Intelligent Copilot for Payments


CASE STUDY

CBPR+ Intelligent copilot for Payment operators at the bank

The client is the Payments team within one of the Canada's top banks.

The client has a team of 50-60 operators that evaluate payments and payments failures day to day. A lot of them were trained on MT fields but not a lot of experience with MX fields, part of new CBPR+ guidelines. The time taken to lookup a failed payment and looking for an MT to MX translation rule, and then correcting the payment in the required format is an effort spent that could be shortened. The client was also seeing a long time to onboard new operators on a wealth of payments knowledge.

CGI helped helped build a generative AI based CBPR+ intelligent copilot that was trained on a wealth of CPBR+ guidelines and mapping rules and could help the operators ask quick questions on very specific information and also create formatted values for input into processing a failed payment. We foresee productivity gains for the operators team and a quick onboarding assist for new employees.

Challenges:
- Some data engineering was needed for the mapping rules excel and other documents
- Data had disparate formats
- The bot had to be fine tuned with different embeddings and prompt engineering techniques to get quality responses

Implementation

Machine learning, Marketing Analytics, Artificial Intelligence, Data Engineering, ETL, Human Resources

Country: Canada
Industry: Banking and Payments

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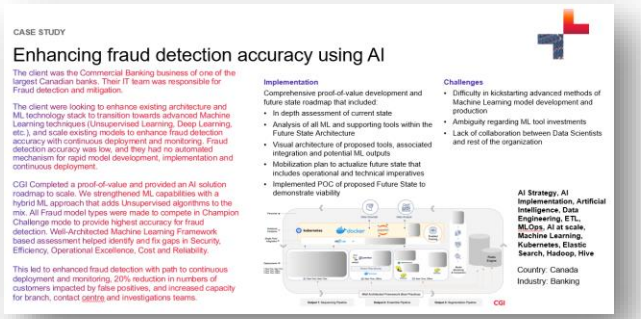
Enhancing fraud detection accuracy using AI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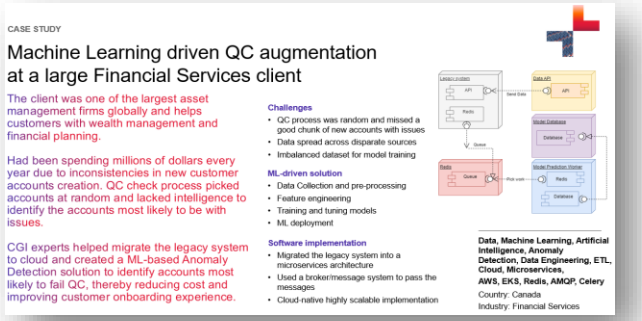
Country: Canada
Industry: Banking

CGI

Machine Learning driven QC failure prediction


CASE STUDY

Machine Learning driven QC augmentation at a large Financial Services client

The client was one of the largest asset management firms globally and helps customers with wealth management and financial planning.

Had been spending millions of dollars every year due to inconsistencies in new customer accounts creation. QC check process picked accounts at random and lacked intelligence to identify the accounts most likely to be with issues.

CGI experts helped migrate the legacy system to cloud and created a ML-based Anomaly Detection solution to identify accounts most likely to fail QC, thereby reducing cost and improving customer onboarding experience.

Challenges
- QC process was random and missed a good chunk of new accounts with issues
- Data spread across disparate sources
- Imbalanced dataset for model training

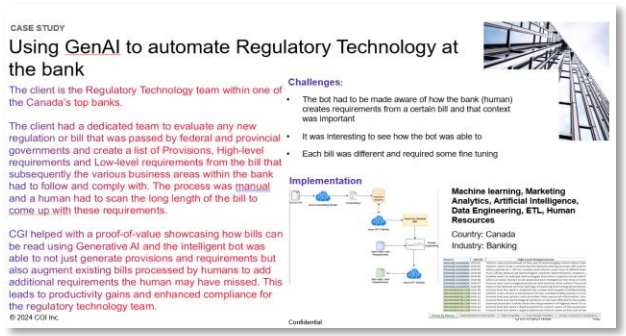
ML-driven solution
- Data Collection and pre-processing
- Feature engineering
- Training and tuning models
- ML deployment

Software implementation
- Migrated the legacy system into a microservices architecture
- Used a broker/message system to pass the messages
- Cloud-native highly scalable implementation

Data, Machine Learning, Artificial Intelligence, Anomaly Detection, Data Engineering, ETL, Cloud, Microservices, AWS, EKS, Redis, AMQP, Celery

Country: Canada
Industry: Financial Services

Gen AI to automate Regulatory Tech


CASE STUDY

Using GenAI to automate Regulatory Technology at the bank

The client is the Regulatory Technology team within one of the Canada's top banks.

The client had a dedicated team to evaluate any new regulation or bill that was passed by federal and provincial governments and create a list of Provisions, High-level requirements and Low-level requirements from the bill that subsequently the various business areas within the bank had to follow and comply with. The process was manual and a human had to scan the long length of the bill to come up with these requirements.

CGI helped with a proof-of-value showcasing how bills can be read using Generative AI and the intelligent bot was able to not just generate provisions and requirements but also augment existing bills processed by humans to add additional requirements the human may have missed. This leads to productivity gains and enhanced compliance for the regulatory technology team.

Challenges:
- The bot had to be made aware of how the bank (human) creates requirements from a certain bill and that context was important
- It was interesting to see how the bot was able to
- Each bill was different and required some fine tuning

Implementation

Machine learning, Marketing Analytics, Artificial Intelligence, Data Engineering, ETL, Human Resources

Country: Canada
Industry: Banking

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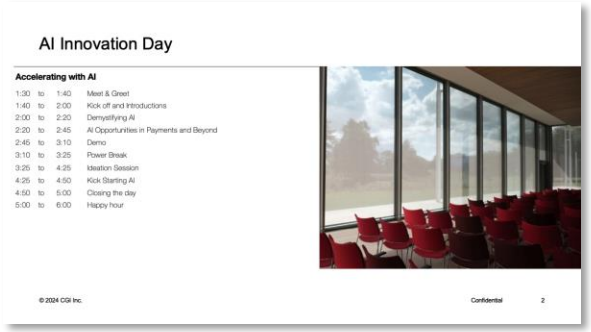
AI Innovation day to kick start opportunities and alignment


AI Innovation Day

Accelerating with AI

1:30	to	1:40	Meet & Greet
1:40	to	2:00	Kick off and Introductions
2:00	to	2:20	Demystifying AI
2:20	to	2:45	AI Opportunities in Payments and Beyond
2:45	to	3:10	Demo
3:10	to	3:25	Power Break
3:25	to	4:25	Ideation Session
4:25	to	4:50	Kick Starting AI
4:50	to	5:00	Closing the day
5:00	to	6:00	Happy hour

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AI4Whales: Earth Observation and ML for Wildlife Conservation


AI4Whales: EO and ML for Wildlife Conservation

- Whales play a key role to sustaining a healthy ocean and planet, **affecting the air breath**
- In average a whale accumulates about **33 tonnes of CO2** over a lifespan
- Whales support the growth of phytoplankton, which stores **40% of all CO2 produced**
- A **1% increase** in phytoplankton productivity is equivalent to **2 billion mature trees**
- The IMF estimated to **2M$** the value of a whale in terms of CO2 de-carbonization value

Whales are one of the main actor for decarbonizing our atmosphere and directly impact global warming

IDEA
- Combine **Earth Observation** & **Machine Learning** technologies to detect the position and route of Fin Whales (PoC)
- Provide data to conservation organizations to propose **alternative shipping routes**

VALUE
- Scalable & non-intrusive
- Protect **endangered** species
- Fight **global warming**
- Grow EO & ML **use cases**
- **Re-use** algorithm in CGI GeoData 360 (other animals, ships....)
- **CSR** partnership (client / IP)

About CGI

Insights you can act on

Founded in 1976, CGI is among the largest IT and business consulting services firms in the world.

We are insights-driven and outcomes-based to help accelerate returns on your investments. Across hundreds of locations worldwide, we provide comprehensive, scalable and sustainable IT and business consulting services that are informed globally and delivered locally.

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