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# AI in Capital Markets

# Foreword

Dear Readers,

Market volatility, increasing regulatory scrutiny, growing competition, evolving customer expectations, and sustainability imperatives are pushing capital markets firms to focus on resilience, adaptability, and sustainable business practices. Artificial intelligence (AI) technologies such as generative AI (GenAI) have become a key enabler in this strategic play, helping firms to stay ahead of the curve.

Areas such as virtual assistance, process streamlining, and personalised service are seeing the highest number of pilot or planned initiatives, followed by decision accuracy, fraud detection, automated financial advisory, and compliance. Most of the implementations are at an experimental stage with varying degrees of adoption maturity.

With four decades of experience in the capital markets industry, TCS is helping customers across the globe in their AI-led transformation initiatives. Our services cover consulting, application development and maintenance, digitization, production support, assurance, business process services, 3rd party product implementation, infrastructure services and TCS-BaNCs implementation services. We are infusing predictive and GenAI interventions to not only reimagine future possibilities but also to future-proof organisations.

In this inaugural edition of the newsletter, we bring to you our unique perspectives on how GenAI is disrupting the capital markets, the key findings from our AI for Business Study – Capital Markets, TCS differentiated capabilities and customer stories.

We hope you enjoy reading this and do give your feedback on [bfsi.marketing@tcs.com](mailto:bfsi.marketing@tcs.com)

**With regards,**

**Srinivasa Yerchuru**

Global Practice Head - Banking, Financial Services and Insurance





## AI for Business Study – Key Findings

# TCS AI for Business Study – Key Findings for Capital Markets

TCS' Thought Leadership Institute conducted a double-blind study of approximately 1,272 senior executives with P&L responsibilities in 12 industry sectors across Asia, Europe, Nordics, LATAM, North America, and the United Kingdom and Ireland, with respondents having annual revenue of \$5 billion to \$100 billion. The global study examines how CEOs, directors, and business line managers prepare their businesses to be AI/GenAI ready, focusing on aspects such as their strategy around operations, talent, and future implementation plans. The study provides the challenges, perceptions and the impact of AI/GenAI on the industry.

## Key Challenges



Ethical and responsible AI use



Reevaluation of business strategies and models



Lack of IT readiness

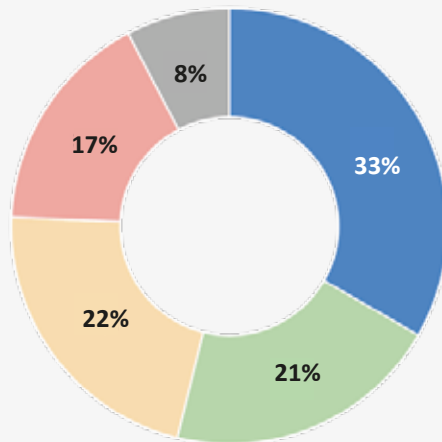


Cultural shifts



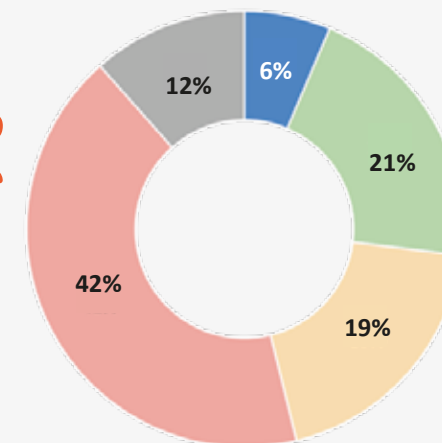
Increased investment in AI research and development

## Industry Impact



- Yes, we are undertaking a change management process and rethinking our business and operating models, and the roles of our employees, vendors and distributors
- Yes, we are actively making changes to our offerings and how we sell them
- Yes, we've started discussing AI's strategic implications and are making enterprise-wide plans
- Yes, we've discussed AI's potential impact, but we don't know our next steps
- We haven't had much discussion about AI's impact on our business

## Expected productivity gains



- 0X or more increase in productivity
- 4X to 9X increase in productivity
- Double our productivity
- Incrementally improve our productivity
- We're not expecting much impact on productivity



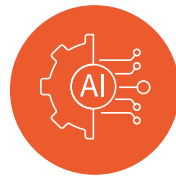
# Partner with TCS on GenAI journey



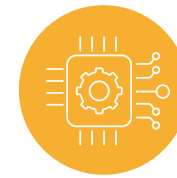
Financial services firms are eager to explore the potential of GenAI as a transformation level



GenAI is evolving rapidly with increased sophistication and capability



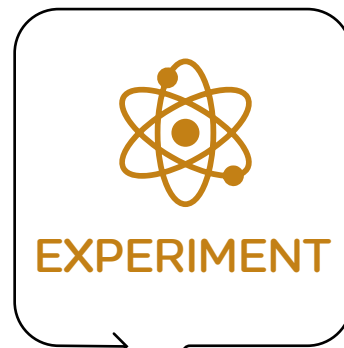
Business are looking to explore the potential of the technology while addressing associated risks



TCS has invested in GenAI offerings covering the entire spectrum of GenAI adoption journey



Understand the impact of GenAI



Ensure GenAI generates value for context



Scale GenAI investments to realize full potential

TCS GenAI offerings are tailored to the adoption journey of our customers from early state explorations to scaling the solutions

## Reimagining future with GenAI

Awareness | Art of the possible | Ideation

## GenAI Readiness Assessment

Business | Technology | Stakeholders

## GenAI Value Assessment

Use Cases | Value Articulation

## POC/ Pilot

Design | Execution

## GenAI Roadmap

Business case | Risk | Prioritization

## GenAI Solution Design

Information | Integration | Architecture

## Implementation

Tech | Infra | Build  
**Operations and Monitoring**





# TCS Perspectives

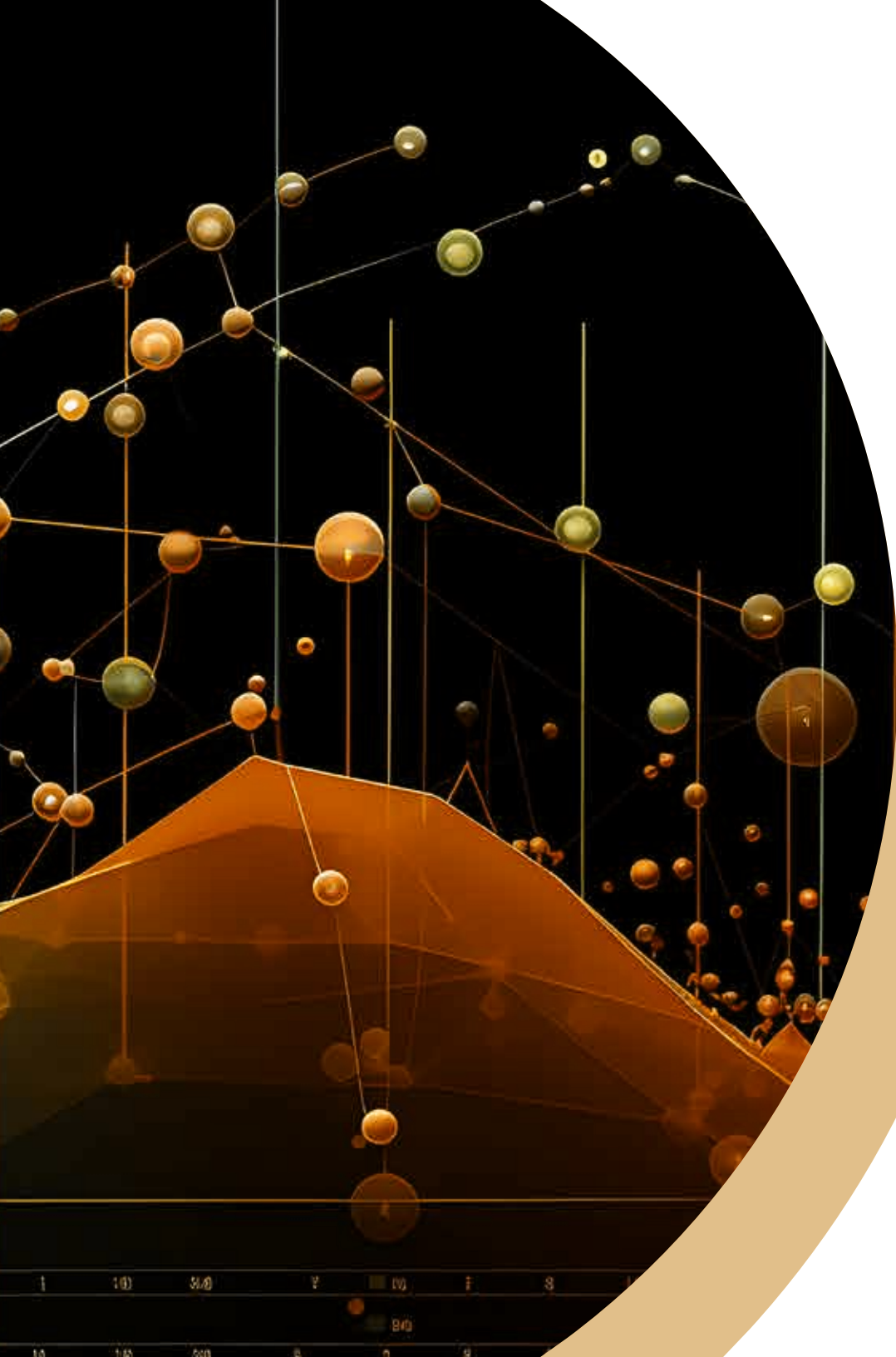


# GenAI in capital markets: Moving beyond use cases

The banking, financial services, and insurance (BFSI) industry considers artificial intelligence (AI) a key lever for disruptive transformation. The BFSI industry report of the TCS AI for Business Study reveals that BFSI business executives want to innovate and make money with AI, without just restricting it to a cost-saving tool. According to the report, 67% of executives surveyed tilted toward leveraging AI primarily for innovation and revenue growth compared with just 18% solely focused on using AI to lower costs and optimize operations. We observed a similar trend in the securities and investment services space with three in five B2B finance executives strongly inclined toward using AI for innovation rather than optimization.

[Read more](#)





# How generative AI will disrupt capital markets

Capital market firms operate in a complex and ever-changing technology landscape. At the same time, they must contend with increased regulatory scrutiny, competition from fintech players and the crypto industry, soaring operational and service costs, increased customer expectations, black swan events and so on. Firms need to constantly adapt to stay ahead of the curve, and artificial intelligence (AI) technologies such as generative AI (GenAI) have become a key enabler in this strategic play.

[Read more](#)





# Generative AI's Impact on FX Markets

Technology and Finance are a match made in heaven. In the vast and intricate world of Finance, few areas have evolved technologically as much as FX trading over the past few decades. From being mostly voice based in the early 1990s to the lightning-fast algorithmic executions of the present, the transformation of FX markets shaped by technological advancements has been both fascinating and intriguing. The latest edition of the technological disruption in FX will supposedly be led by Generative AI, a buzzword that garners apprehension as much as it raises interest among the financial markets community in general and the FX world in particular.

[Read more](#)





# Generative AI – pioneering the next wave in capital markets

Generative AI has surged in prominence recently due to its revolutionary potential, stemming from advancements in machine learning techniques and the adoption of deep learning models. These models, now in the form of Large Language Models (LLMs), have overcome language complexity barriers by training on extensive datasets encompassing text, images, and audio, enabling nuanced understanding and contextually accurate outputs across languages. Generative AI finds application in various domains, from answering questions and summarizing topics to coding tasks, showcasing its versatile utility.

[Read more](#)





# Generative AI use cases for Asset Management Firms

We are experiencing the emergence of Generative AI (GenAI), a transformative deep learning technique within the realm of Artificial Intelligence. Built upon Large Language Models (LLMs), GenAI harnesses the advancements in transformers and encoder-decoder mechanisms to become commercially accessible. This powerful tool enables interactions with users, generating outputs in various formats such as text, code, images, and videos.

[Read more](#)



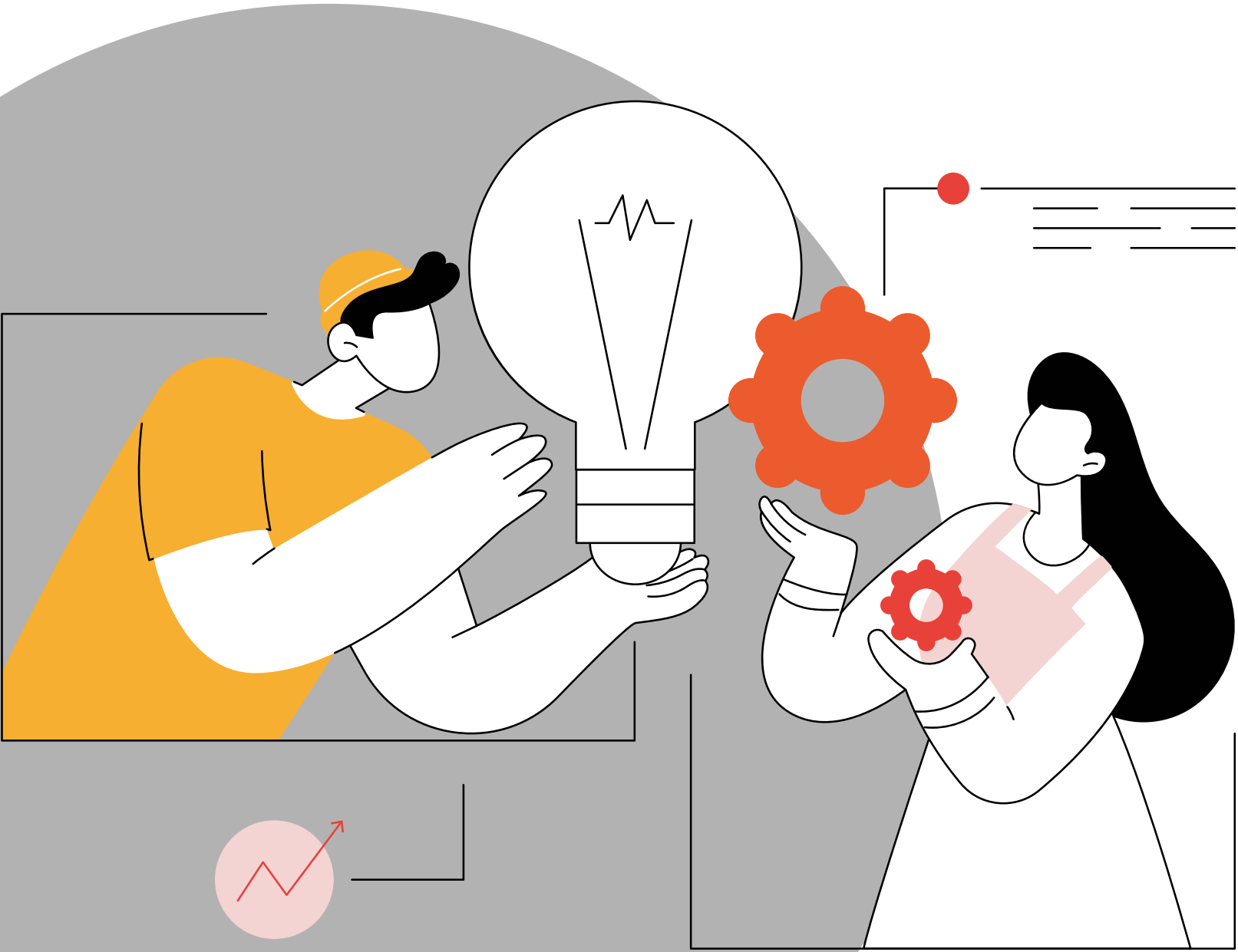


# AI regulations – a global round up

As Artificial Intelligence progresses rapidly, global efforts are underway to establish regulatory frameworks ensuring the safety and reliability of AI systems, driven by awareness of associated risks. Leading technology companies, governments, and policymakers advocate for a standardized global framework to develop advanced AI systems responsibly. This article discusses emerging regulations worldwide, anticipates challenges, and explores their potential impact on sectors like investment.

[Read more](#)





# Customer Engagements



# Enterprise BOT boosts operations and empowers financial advisors



## Business Challenge

Create a Generative AI Solution for CAs which can provide personalized, relevant, contextual, accurate answers. Provide help in repeatable ways to solve problem from content available in resource center such as - manuals, guidelines, policies & procedures



## TCS Solution

- Develop foundation framework with right architecture to scale this as an enterprise BOT
- Train the LLM on various data repositories containing unstructured data
- Measure AI metrics leveraging RAGA framework
- Pilot with operations for accuracy and contextual response from the BOT



## Benefits

- 25% productivity to the client service associates during account opening and maintenance
- Reusable BOT that can be integrated and customized for any FA and operations use case. Reduced cost of build for AI.
- Flexibility to keep adding content for more context and accuracy of the LLMs



AI

# Leveraging AI to automate risk assessment of public vendors



## Current scenario

Large financial organizations have thousands of public and private vendors who are assessed periodically and on need based - in scenarios of contract renewal or new service engagement. The process of data gathering, validating and calculating the risk scoring is done using both public and private sources which is time consuming and can't be done in real-time. TCS proposed to automate the process and leverage GenAI to capture data for public vendors to enhance productivity and efficiency.



## Business Challenge

- Financial risk review for public and private vendors is time consuming and resource-sensitive
- Missing out on real-time information about the vendor / update on vendor risk score



## TCS PoC

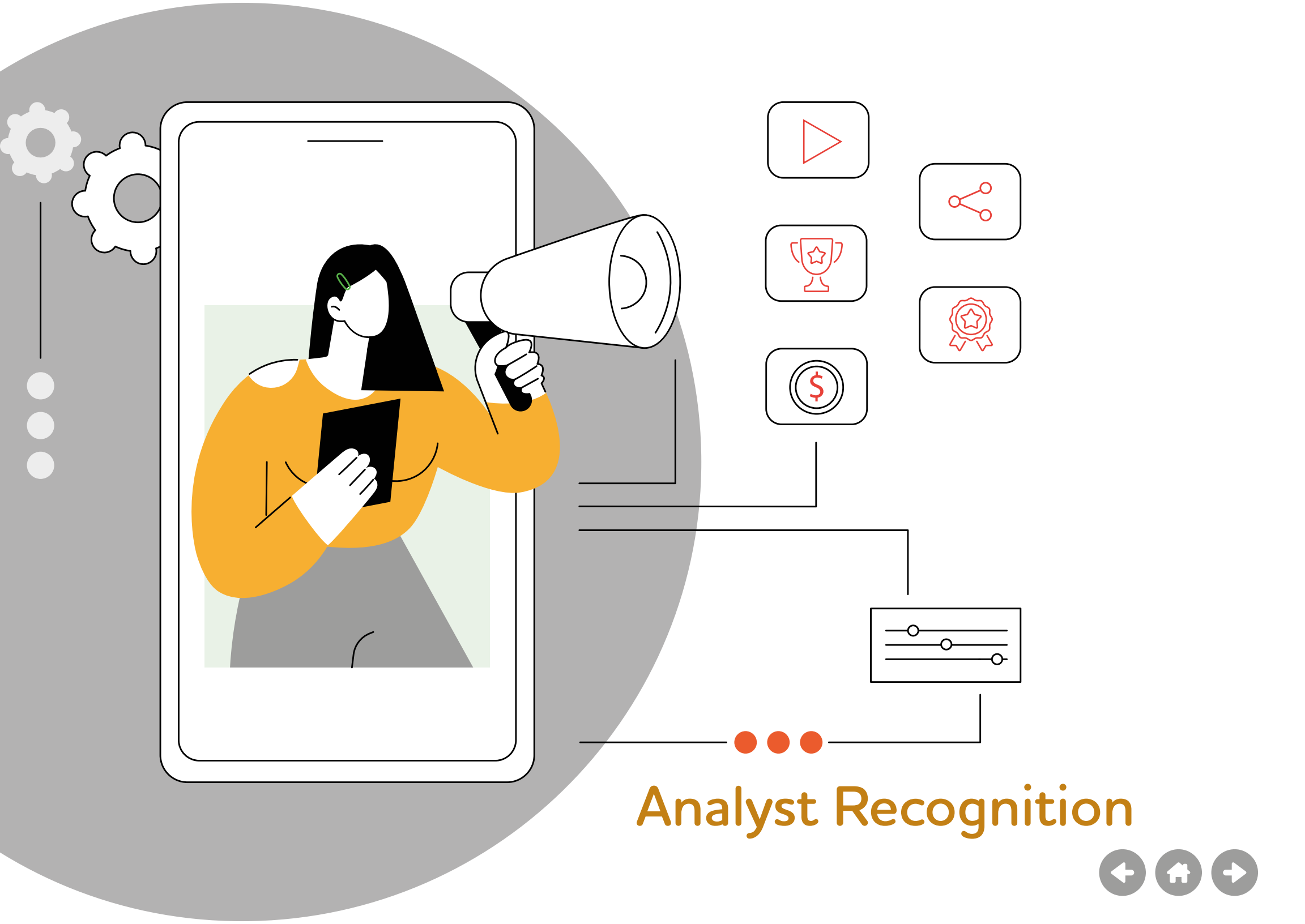
- Built a system to automate the process of validation and analysing the risk assessment data of a vendor received in response to questionnaire for private vendors and public sources for public vendors. The system output being compatible with customer's existing data sources
- Used GenAI to capture data of the public vendor from the websites and external sources to calculate vendor's risk score
- Develop a system to access real-time news of the vendor for latest assessment
- Leverage customers' existing ecosystem of OpenAI and cloud



## Benefits

- 70% effort saving with automation of end-to-end workflow
- Enhanced processes and improved performance
- Insights on real-time events for the vendors for accurate and latest risk score
- Increased efficiency and transparency in their vendor assessment program
- 100% regulatory compliant
- 100% data accuracy leading to less manual interventions



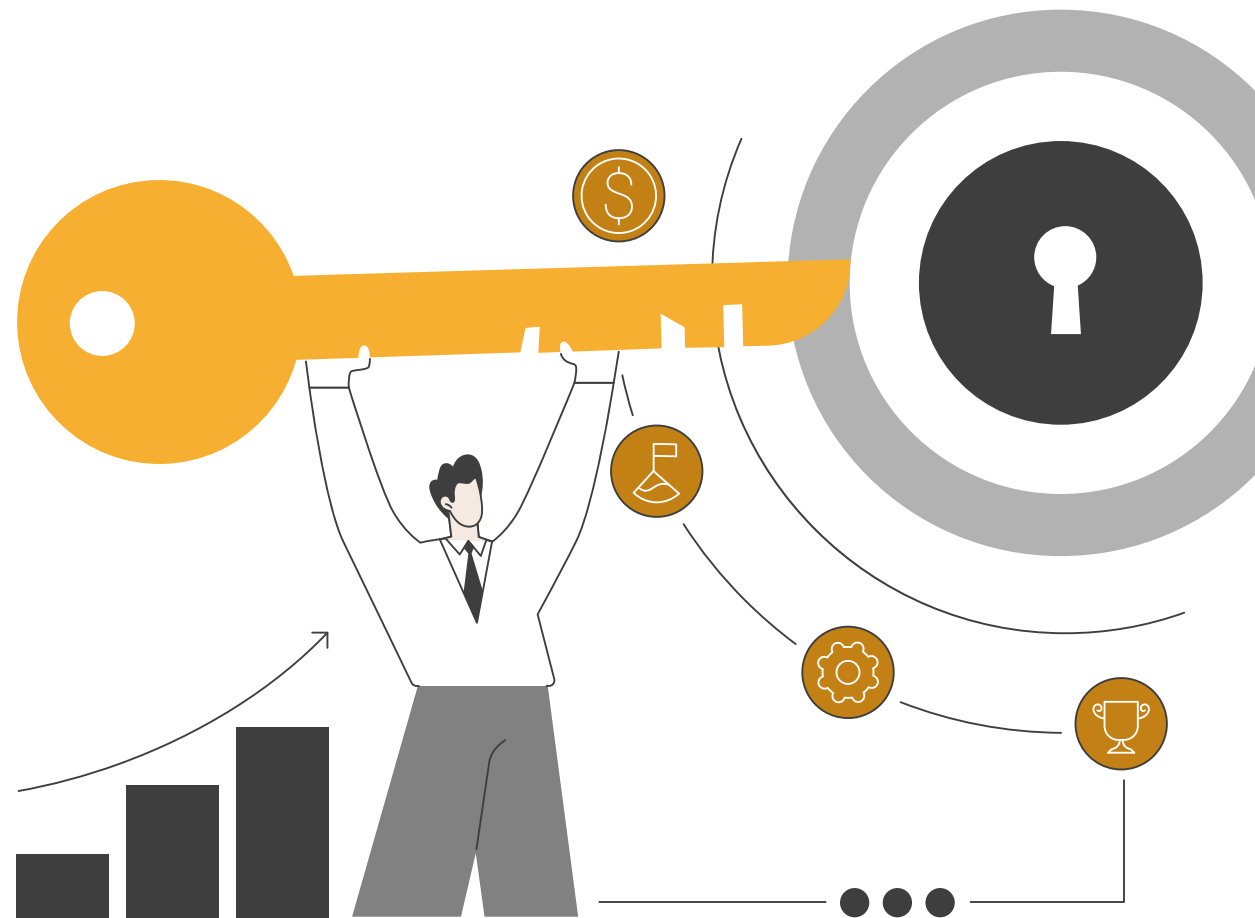


# Analyst Recognition

TCS has been positioned as a leader on the Everest Capital Markets IT services PEAK Matrix Assessment 2024, which is an annual RFI process with leading IT service providers.

## Key Strengths:

- TCS has formed strategic partnerships ranging from hyperscalars, leading technology providers, fintechs to co-innovate and develop joint GTMs.
- TCS is investing in developing IP, tools and accelerators in areas such as AI/ML, blockchain, decision fabrics, ESG and governance frameworks.
- TCS WisdomNexts™ platform leverages AI services orchestration and broker platform, reusable components and pre-configured models to deliver tailor generative AI solutions.
- TCS is actively investing in emerging research topics and developing POCs (Proof of Concepts) in Generative AI areas (digital assistant for advisors, synthetic data).



## About Tata Consultancy Services

Tata Consultancy Services is an IT services, consulting and business solutions organization that has been partnering with many of the world's largest businesses in their transformation journeys for over 56 years. Its consulting-led, cognitive powered, portfolio of business, technology and engineering services and solutions is delivered through its unique Location Independent Agile™ delivery model, recognized as a benchmark of excellence in software development.

A part of the Tata group, India's largest multinational business group, TCS has over 601,000 of the world's best-trained consultants in 55 countries. The company generated consolidated revenues of US \$29 billion in the fiscal year ended March 31, 2024, and is listed on the BSE and the NSE in India. TCS' proactive stance on climate change and award-winning work with communities across the world have earned it a place in leading sustainability indices such as the MSCI Global Sustainability Index and the FTSE4Good Emerging Index.

For more information, visit [www.tcs.com](http://www.tcs.com).

### Contact

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