Take5
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Revolutionizing Malaysia's supply chain with GenAI

EY
Building a better
working world

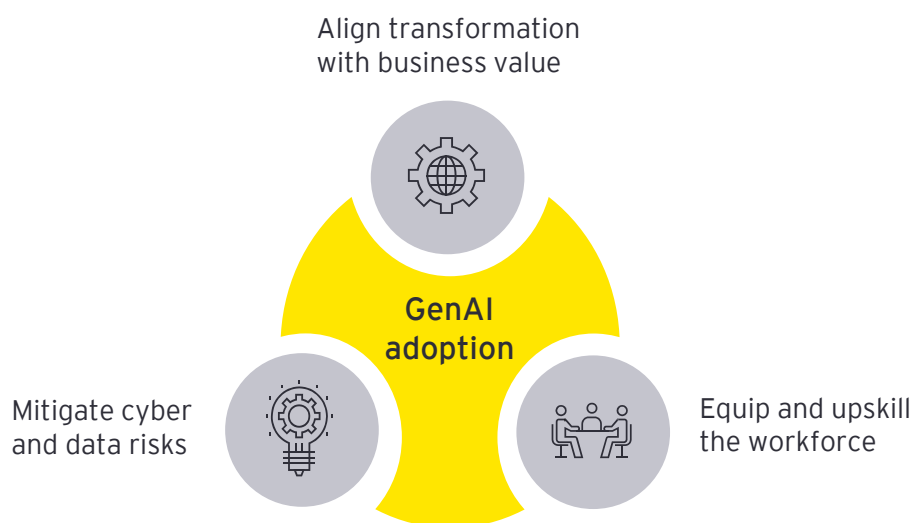# Reinventing supply chain with GenAI

In the post COVID-19 era, leading global and regional organizations are accelerating their transformation strategies to step up their operational efficiencies and reduce organizational vulnerabilities. Among their key transformation solutions is generative AI (GenAI), which boosts technical efficiencies, predicts future demands, and finds cost-effective solutions. GenAI also spurs the creation of innovative solutions and provides a holistic view of the supply chain, allowing for more efficient and agile operations.

In Malaysia, recent surveys by EY found that nine out of 10 (91%) companies opined that GenAI has significant potential to reinvent supply chains, compared to 80% of their global peers. Globally, over a quarter (28%) of companies have achieved minimal human intervention in their supply chains, with 50% achieving end-to-end visibility.

With the ongoing geo-political market uncertainties, it is critical for companies to commence their adoption of GenAI, which can facilitate autonomous, efficient and resilient operations particularly when responding to the risks and opportunities of supply chain demands.

> " New channels, short product lifecycles and intense competition are disrupting businesses and their supply chains.
> To compete, leaders are leveraging disruptive technologies to transform and strengthen their businesses through GenAI investments.
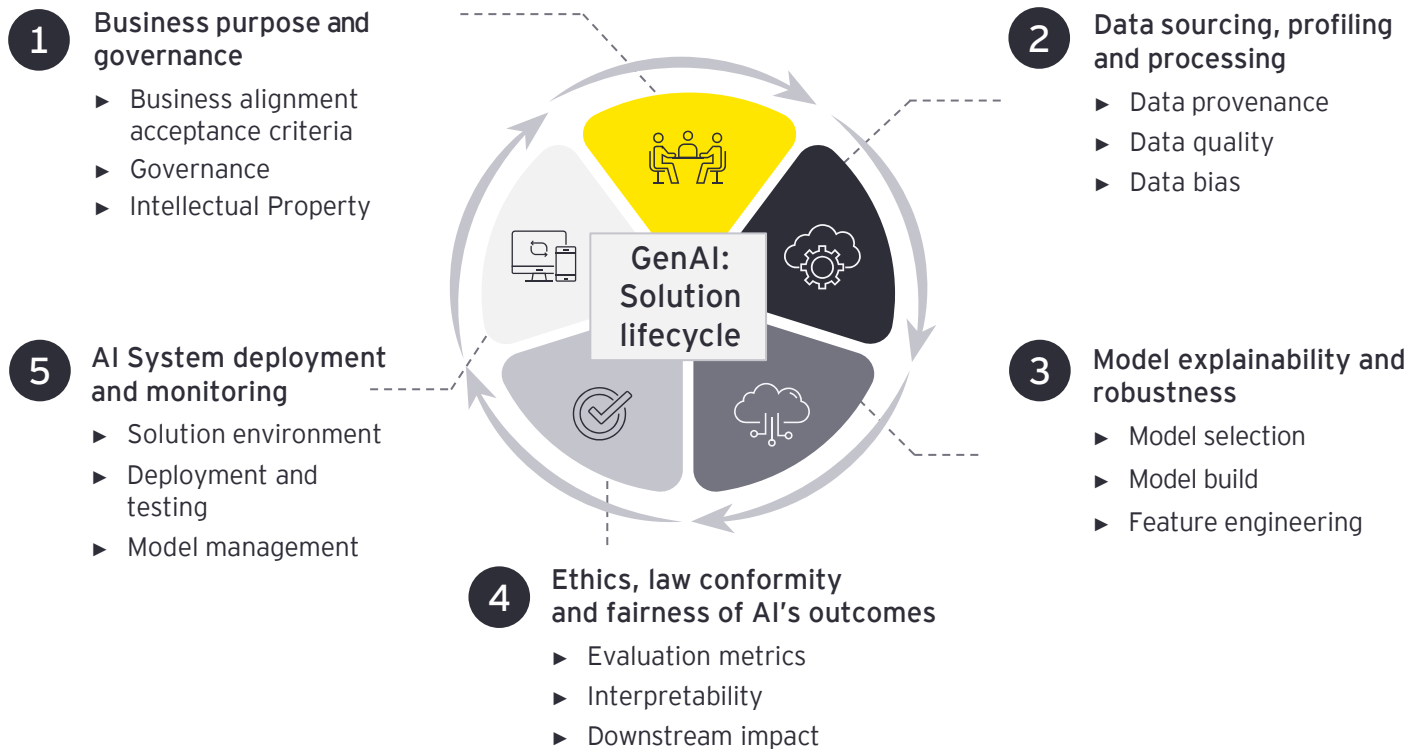
Tan Chiaw Hooi
Supply Chain and Operations Leader, Ernst & Young Consulting Sdn Bhd

A roadmap for GenAI adoption

Companies should focus on the business value and define a roadmap to shape GenAI adoption through three key steps:

Align transformation with business value

GenAI adoption

Mitigate cyber and data risks

Equip and upskill the workforce

Source: *How supply chains benefit from using generative AI?,* EY, January 2024

Deploying GenAI across supply chain operations

Companies should view GenAI as a transformative asset to unite solutions across key business dimensions. To ensure the successful deployment of GenAI within the supply chain, a holistic, business-centric approach is integral as highlighted in the GenAI: Solution lifecycle chart below.

1 **Business purpose and governance**
- ► Business alignment acceptance criteria
- ► Governance
- ► Intellectual Property

5 **AI System deployment and monitoring**
- ► Solution environment
- ► Deployment and testing
- ► Model management

GenAI: Solution lifecycle

2 **Data sourcing, profiling and processing**
- ► Data provenance
- ► Data quality
- ► Data bias

3 **Model explainability and robustness**
- ► Model selection
- ► Model build
- ► Feature engineering

4 **Ethics, law conformity and fairness of AI's outcomes**
- ► Evaluation metrics
- ► Interpretability
- ► Downstream impact

Source: *How do you go from impossible to unstoppable?,* EY, June 2024

> "
> The power of AI depends on the strength of the data it is built upon. High quality data is the cornerstone for AI models in supply chain as it drives efficiency and predictive accuracy.
>
> **Adrian Chew**
> Malaysia Artificial Intelligence and Data Leader and Partner,
> Ernst & Young Consulting Sdn Bhd

# Global and Malaysia surveys: GenAI adoption outlook and challenges

EY surveys revealed that both Malaysian and global companies consider GenAI a critical enabler to stay competitive and plan to invest in GenAI platforms, tools and talent over the next two years.
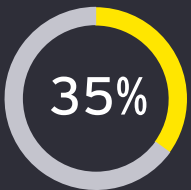
GenAI: Growth outlook

Global survey
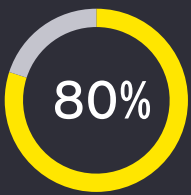
80% — GenAI has the potential to significantly **reinvent** supply chain.
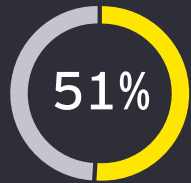
51% — Having **the best GenAI platforms and tools** is important to engage the supply chain workforce effectively.
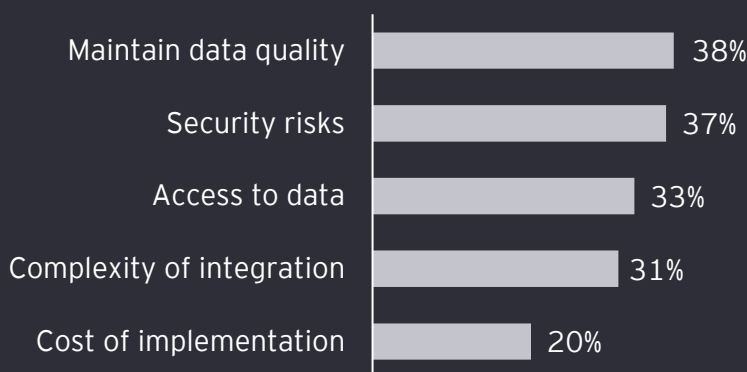
35% — The current deployment of GenAI within supply chain functions are largely in the **planning stages**.

A survey by EY conducted in Malaysia highlights that companies share similar GenAI adoption perspectives as their global peers, as reflected below:

► Nine out of 10 (91%) companies opined that GenAI will revolutionize supply chain.

► Six out of 10 companies (58%) indicate that upskilling of their workforce is integral for successful GenAI adoption in their supply chain management.

► One-third (33%) of companies indicate that their GenAI implementations are still in the planning stages.

GenAI adoption challenges: Five key areas

Global survey

Challenge	Percentage
Maintain data quality	38%
Security risks	37%
Access to data	33%
Complexity of integration	31%
Cost of implementation	20%

In contrast to global companies, over half of Malaysian companies consider the cost of implementation a key determinant of success in GenAI adoption.

Three out of five companies think that maintaining data quality is critical for efficient operations.

Source: *Unleashing the power generative AI to build autonomous supply chains*, HFS Research (UK) and EY, June 2024
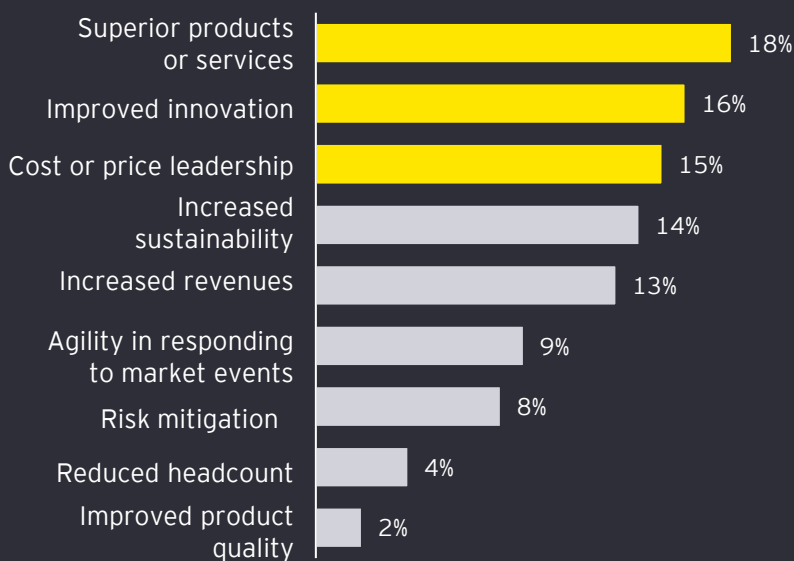
Global and Malaysia surveys:
Benefits and risks when adopting GenAI

Surveys by EY highlight that companies see GenAI as a catalyst for innovation and increased agility.

Set out below are the expected benefits and risks of GenAI adoption:

GenAI investments: Expected benefits

Global survey

Benefit	Percentage
Superior products or services	18%
Improved innovation	16%
Cost or price leadership	15%
Increased sustainability	14%
Increased revenues	13%
Agility in responding to market events	9%
Risk mitigation	8%
Reduced headcount	4%
Improved product quality	2%

Malaysian companies are keen to adopt GenAI :

► More than a third (34%) of companies expect GenAI to help develop superior products and services.

► One out of five (17%) companies expect GenAI initiatives to improve innovations.

► And 14% expect that GenAI will deliver cost or price leadership benefits.

GenAI adoption: Five risk factors

Global

1. Infringement of privacy laws and regulations
2. Increased cybersecurity vulnerability
3. Brand or reputation damage
4. Overreliance on untested technology
5. Reduced employee productivity due to job insecurity

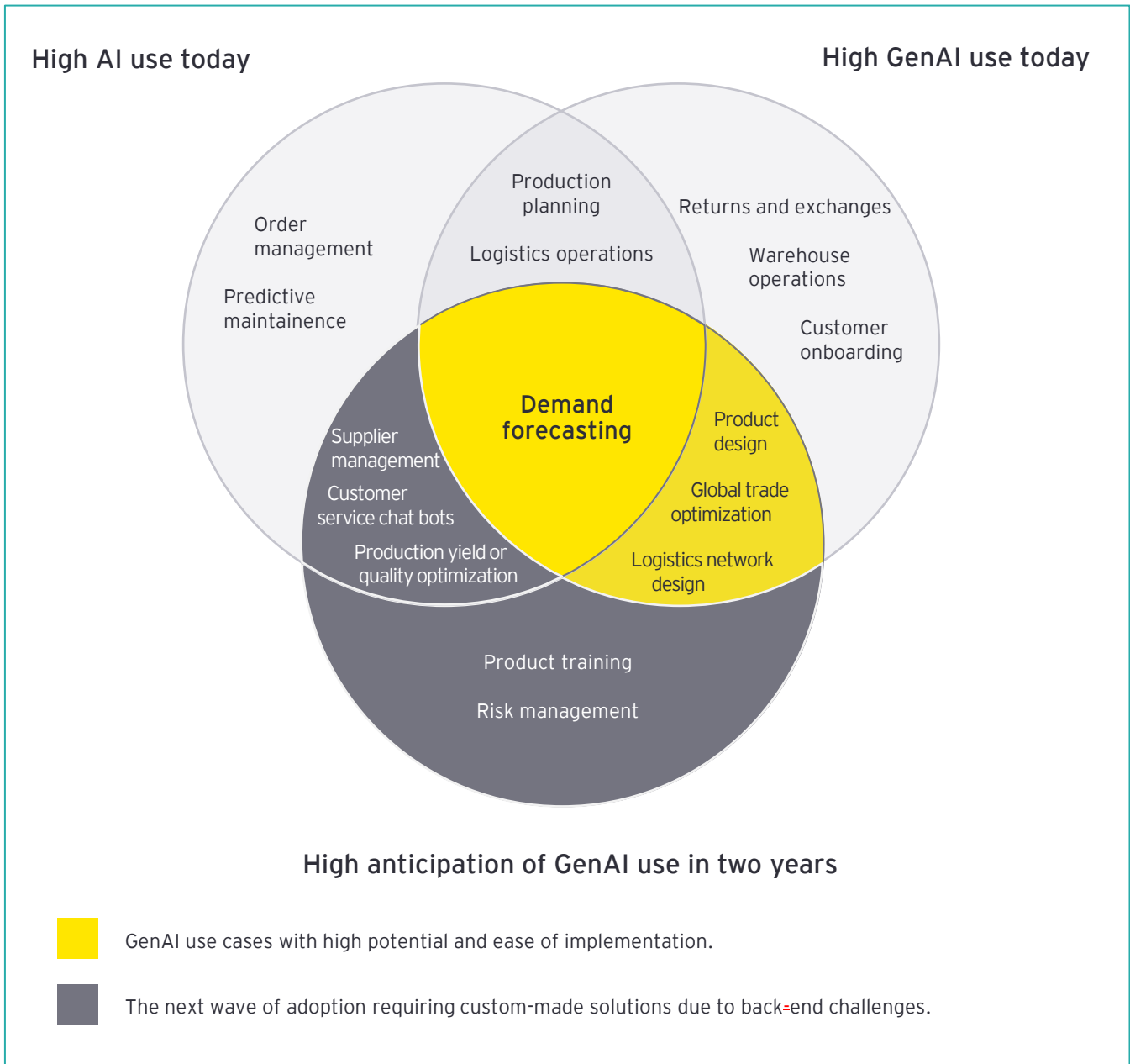### Malaysia

1. Increased cybersecurity vulnerability
2. Inaccuracies and hallucinations
3. Exposure of confidential intellectual property
4. Infringement of privacy laws and regulations
5. Overreliance on untested technology

Source: *Unleashing the power generative AI to build autonomous supply chains*, HFS Research (UK) and EY, June 2024

How are front-runners using AI and GenAI?

Most global companies (82%) leading the autonomous supply chain movement (front-runners) are deploying both traditional AI and GenAI across their supply chains. Over the next two years, there is substantial growth anticipated in GenAI, as set out in the chart below.

High AI use today

High GenAI use today

Order management

Predictive maintainence

Production planning

Logistics operations

Returns and exchanges

Warehouse operations

Customer onboarding

Supplier management

Customer service chat bots

Production yield or quality optimization

Demand forecasting

Product design

Global trade optimization

Logistics network design

Product training

Risk management

High anticipation of GenAI use in two years

GenAI use cases with high potential and ease of implementation.

The next wave of adoption requiring custom-made solutions due to back-end challenges.

Note: Chart excludes
► Contracting or contract management.
► Procurement.
► Sourcing materials.
► Warranty service.
► Material science and engineering.

Source: *How will generative AI prompt a step change toward autonomous supply chains?*, EY, June 2024

GenAI use in supply chain

Today, there is widespread accelerated adoption of GenAI in supply chain management, particularly in the areas of the procurement processes, which include sourcing, contracting and planning or logistics.

Some areas where leading companies are leveraging GenAI to manage their supply chain operations include:

Technology

Sourcing

► GenAI use: Request for Proposal (RFP) support and vendor negotiation.

► Objective: To support procurement users to manage the RFP process and run vendor negotiations.

Energy

Contracting

► GenAI use: Legal contract analysis.

► Objective: To integrate all stages of the contract management lifecycle.

Consumer

Planning or logistics

► GenAI use: Demand forecasting.

► Objective: To improve accuracy of demand forecasting, resource and route optimization.

Key outcomes

Using GenAI, the company managed to accelerate time to value, negotiate initial terms for sourcing, mitigate capacity constraints and optimize communication efforts.

The company completed complex contract analysis across borders, contract types and languages, using advanced commentary generation with large language models (LLM) and OpenAI.

GenAI provides the company with more data points, improves the accuracy of demand forecasting by 48% and enhances route optimization across distribution centers.

Source: *How will generative AI prompt a step change toward autonomous supply chains?*, EY, June 2024

Next steps to GenAI implementation

To implement GenAI in supply chain, companies should consider the following measures:

1 Develop a phased GenAI adoption roadmap with current and future use cases.

2 Leverage cloud technologies for faster deployments and scalability.

3 Empower the workforce with the best GenAI platforms, tools, and cross-functional collaboration.

4 Begin with cross-functional collaboration and move towards a collaborative ecosystem.

5 Customize key performance indexes for measuring success.

6 Develop a complementary tech ecosystem for success.

7 Establish and enforce a comprehensive governance and compliance action plan.

Source: *Unleashing the power generative AI to build autonomous supply chains*, HFS Research (UK) and EY, June 2024

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