Twimbit AI Spotlight:
Grab

Insights into industry-leaders and their strategies for winning with AI

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Summary

Twimbit AI Spotlight is a curated series of reports dedicated to organizations that exemplify excellence and set the benchmark in AI transformations and innovation. By highlighting their strategies, investments, and groundbreaking applications, the Twimbit AI Spotlight reveals critical factors for achieving AI-driven success. Each edition focuses on a leading industry player, offering strategic insights tailored for executives navigating their AI journeys.

This edition spotlights **Grab**, Southeast Asia's leading superapp and a digital ecosystem serving over 42 million monthly transacting users across 500+ cities. Beyond ride-hailing, the platform powers a wide range of services spanning deliveries, financial inclusion, merchant enablement, and urban mobility — contributing an estimated US$12.2 billion in economic value to the region in 2024.

AI sits at the core of Grab's ambition to lead Southeast Asia's digital economy. Embedded across its ecosystem, AI enhances user experience, empowers partners, optimizes operations, and reinforces platform trust. The strategy is sharply focused on **delivering value to four core stakeholders — consumers, drivers, merchants, and enterprise**s — through **data-driven precision, talent-driven innovation, and pioneering R&D**, ensuring scalable and intelligent services across diverse markets.

A foundation of data and infrastructure readiness underpins this AI-first strategy. **One of the largest and richest datasets in the region**, drawn from Grab's daily multi-vertical operations, powers AI development across ride-hailing, deliveries, financial services, and mapping. To accelerate scale and sophistication, the company leverages a strategic ecosystem of partners — including **AWS, OpenAI, NATIX, and NUS** — to advance both platform intelligence and urban mobility innovation.

AI is positioned as a core business capability within Grab's organization. Through sustained investments in **dedicated AI leadership, a strong culture of innovation, and enterprise-wide AI fluency**, the company ensures that AI is deeply embedded across teams and decision-making processes.

Grab's portfolio of AI use cases reflects one of the most dynamic and business-aligned innovation programs in Southeast Asia. The company **invests heavily in AI solutions that drive impact for external stakeholders** — consumers, driver-partners, merchants, and enterprise collaborators — while simultaneously **equipping employees with advanced AI tools and platforms** to foster operational excellence and organization-wide intelligence.

Introduction: From A Taxi Ride to A Way of Life

When Grab first launched in Malaysia in 2012, it began with a simple mission: to make taxi rides safer and more convenient. What started as a small idea quickly grew into something much bigger. Over the years, Grab evolved from a humble ride-hailing app into Southeast Asia's everyday super app—an essential part of life for millions across the region.

Today, Grab connects people not just to rides, but to meals, groceries, financial services, and even new income opportunities. Operating in over 500 cities across 8 countries, Grab has become an AI-powered platform that's deeply integrated into the daily routines of Southeast Asians.Grab's super app experience is powered by four interconnected pillars:

- **Mobility**: Ride-hailing, two-wheeler services, and rentals
- **Deliveries**: Food (GrabFood), groceries (GrabMart), and parcels (GrabExpress)
- **Financial Services**: Payments (GrabPay), lending, insurance, and investments
- **Enterprise and New Initiatives**: Advertising (GrabAds), cloud kitchens, and digital mapping (GrabMaps)

Beyond convenience, Grab has played a vital role in shaping Southeast Asia's digital economy—contributing an estimated US$12.2 billion in economic value in 2024 alone. It has empowered over 2 million driver-partners and 11 million micro-entrepreneurs, creating meaningful livelihoods, especially for those traditionally underserved. In fact, 80% of GrabFood merchants have reported increased earnings thanks to the platform.

Grab's financial solutions have also been instrumental in advancing financial inclusion, reaching millions of people previously left out by traditional banking systems. With 42 million monthly transacting users in 2024, Grab continues to grow—mobility and delivery revenues alone rose by 19% and 13%, respectively, year-on-year.

This edition of Twimbit AI Spotlight will explore how Grab strategically integrates AI to align with its **vision, redefining the future of mobility, financial inclusion, and everyday digital life** across Southeast Asia.

Grab's AI Strategy: AI as a Strategic Catalyst

AI is central to how Grab scales services, adapts to complex markets, and builds long-term platform resilience. It goes beyond automation — becoming the core enabler of smarter decisions, better experiences, and stronger trust.

> *"To build Southeast Asia's leading super app, creating a digital ecosystem that empowers consumers, drivers, merchants, and enterprises."*

This vision comes to life through a wide range of interconnected services from **mobility & deliveries to financial services, commerce, and B2B solutions**. Each line of business presents unique challenges and opportunities, requiring hyperlocal and high-impact solutions for Grab's four core stakeholders – consumers, drivers, merchants, and enterprises.

Supporting this at scale requires more than just infrastructure — it demands intelligence. AI is the silent engine behind Grab's everyday operations, embedded across the platform to personalize interactions, optimize logistics, detect fraud, & enhance trust across millions of transactions.

That is why Grab's AI strategy focuses on enabling smarter growth through precision, innovation, and responsibility. To bring this to life, Grab's AI strategy is anchored by four key pillars:

Intelligent Infrastructure: Powering Scalable Precision

At the heart of Grab's platform is the ability to make real-time, intelligent decisions at scale. Every interaction — from ride-matching to food delivery — depends on data being processed accurately and quickly. Grab runs over 1,000 AI models daily, transforming billions of data points into actionable insights.

To support this, Grab partners with AWS and Microsoft, ensuring flexible cloud infrastructure that enables rapid processing and localized responses. This data foundation powers hyperpersonalized services that adapt to the unique needs of consumers, drivers, and merchants across Southeast Asia's diverse markets.

Innovation-Driven Talent: Building Capability from Within

Building world-class AI requires world-class people. Grab's talent strategy balances attracting external experts with nurturing internal innovation.
The AI for SEA program taps into the wider talent pool through open challenges, often converting top participants into full-time hires. Meanwhile, the AI Centre of

Excellence in Singapore is both a training ground and an innovation hub — with plans to create over 50 AI and data roles by 2025. Internally, Grab fosters a culture of experimentation through programs like Grabathon, where teams prototype new ideas, including generative AI applications.

Hyperlocal R&D Engine: Accelerating Contextual Innovation

Southeast Asia's complexity demands AI solutions tailored to each market. Grab's R&D efforts are designed not just to innovate, but to localize at scale.
The Grab-NUS AI Lab, established in 2018, focuses on mobility, safety, and traffic optimization — areas vital to urban living. Grab's R&D footprint now spans seven cities globally, enabling it to blend global best practices with regional insights. This network fuels experimentation and ensures that AI solutions remain relevant, inclusive, and grounded in local realities.

Responsible AI by Design: Embedding Trust at Scale

As AI becomes more embedded in daily services, responsible governance is non-negotiable. Grab was early to recognize the importance of ethical AI and established a dedicated AI Governance Task Force to oversee this work.
Its ethics principles are informed by frameworks from OECD, UNESCO, and WEF — and grounded in Grab's core values of trust, transparency, and inclusivity. These principles are operationalized through an integrated AI risk framework, embedded into product development and business workflows. This approach ensures that innovation and responsibility scale hand-in-hand.

Together, these four pillars form the foundation of how Grab operationalizes AI across its ecosystem. Each will be explored in more detail in the following sections.

Grab's AI-Ready Data Ecosystem

To power AI across its ecosystem, Grab has built a comprehensive data readiness pipeline — spanning how data is sourced, stored, and prepared. These three foundational steps ensure that every AI use case is built on trusted, real-time, and high-quality data.

1. Intelligent Data Sourcing

Grab collects data from every interaction within its superapp — enabling it to capture hyperlocal context at scale. The core sources include:

- **Users (consumers or businesses)**, through ride bookings, food orders, app usage, and payments;
- **Drivers and Merchants**, via GPS, order fulfillment, and service ratings;
- **Internal systems**, such as fraud monitoring, logistics routing, and campaign engines;
- **External partners**, contributing public and market data for planning and benchmarking.

This diverse data is streamed in real time using **Apache Kafka**, which routes information across Grab's systems efficiently. To keep this data organized and discoverable, Grab uses internal tools like **Heimdall** that catalog datasets — making it easy for teams to trace origins and ensure proper context.

This system enables Grab to react in real time, while also enriching its AI models with constantly updated, ground-level data.

2. Scalable Data Infrastructure

Grab's data architecture is cloud-first, built in close partnership with **Amazon Web Services (AWS)** to support both speed and scale.

To handle different data needs, Grab uses a multi-tiered infrastructure:

- **Operational data**, such as ongoing ride details or payment status, is managed using Amazon DynamoDB for real-time speed;
- **Analytical data**, like campaign performance or user segmentation, is stored on Amazon S3 using efficient formats for scalable access;
- **Historical data**, including order logs or monthly reports, resides in Amazon RDS (MySQL) for time-based querying;

This architecture gives Grab the flexibility to serve both everyday operations and long-term strategic planning — without compromising performance.

3. Seamless Data Preparation

Before data is used to train AI models, it must be cleaned, labeled, and transformed — a process Grab has embedded deeply into its data operations. Data preparation is handled through **Coban**, Grab's internal platform, which enables:

- **Automated pipeline management**, reducing manual handoffs by orchestrating data movement across systems — supported by **Coban UI**;
- **Collaborative data exploration**, where analysts and engineers work in real time using **Apache Zeppelin**, an interactive environment for testing and tweaking datasets;
- **Data processing at scale**, enabled by **Apache Spark on AWS EMR**, which handles large volumes like sales trends or traffic forecasts;
- **Data governance and labeling**, with **Heimdall** providing standardized tags, lineage tracking, and dataset classification — ensuring reuse and clarity;
- **Self-service analytics**, where teams access dashboards and reports via **Tableau**, enabling faster business insights across functions.

These tools ensure that Grab's data is not just collected and stored, but fully AI-ready — enabling the company to move quickly from raw information to actionable intelligence.

AI Talent and Workforce Strategy

With a strong data foundation in place, the next step is turning information into intelligence. Grab recognizes that this leap—from data to impact—depends not just on platforms, but on people. Its AI workforce strategy focuses on empowering talent across the organization to build, apply, and scale AI use cases with real-world value.

Dedicated AI Leadership and Strategic Positioning

Grab treats AI as a core business enabler, not an experimental function. Its technology division, GrabTech, plays a central role in driving growth by embedding AI teams within key verticals—rather than isolating them in standalone R&D units. These embedded teams are responsible for everything from building infrastructure (like the Catwalk platform) to deploying applied models (such as Mystique).

Beyond structure, Grab invests in visibility and thought leadership. It actively recruits top-tier talent from global markets and maintains a public-facing engineering portal, where Grabbers share their work in AI, machine learning, and data systems. This reinforces Grab's ambition to lead AI development in the region, while deepening internal expertise.

Culture of Innovation and Experimentation

Innovation at Grab is not a side project — it's a core capability. Programs like GrabathonX, an internal hackathon series, bring together cross-functional teams to develop AI-driven solutions for real business challenges. These initiatives help rapidly move ideas from concept to prototype, creating a continuous pipeline of innovation aligned with both user needs and strategic goals.

Democratizing AI Across the Workforce

Grab also recognizes that AI impact must extend beyond engineering. Through the AI Gateway, employees across departments can access best-in-class tools from OpenAI, Azure, AWS, and Google. This lowers the barrier to experimentation, enabling marketing, product, and operations teams to prototype solutions and improve decision-making using AI.

By equipping its workforce to engage with AI directly, Grab embeds intelligence deeper into the organization—turning technical capability into a shared advantage.

From Ideas to Impact: Grab's Way on Building AI

Grab's approach to building AI is structured, collaborative, and responsible — designed to move from business ideas to AI solutions quickly, while ensuring scalability and governance throughout. The process brings together employees, expert teams, and internal platforms under a model known as the "Grab Way."

1. Cross-Functional Ideation

AI ideation at Grab is democratized — accessible to all employees, not just technical teams. This open model encourages anyone across the company to identify business problems and prototype AI-powered solutions.

- **Employees (Grabbers):** Employees can propose and experiment with AI use cases through the **AI Gateway**, a centralized platform that connects to multiple GenAI providers like OpenAI, AWS, and Google. Using exploration keys and Chimera notebooks, they can prototype ideas safely and independently. Over 3,000 employees have engaged through this platform.
- **AI Centre of Excellence (AI COE):** Located at Grab's Singapore HQ, the **AI COE** supports early ideation by providing expert review and aligning ideas with Grab's broader strategic goals. It also ensures that use cases reflect Grab's standards on feasibility, scalability, and ethical alignment.
- **R&D Units:** Spread across regional tech hubs, Grab's R&D teams support the technical validation of early concepts. They offer hands-on guidance, assess feasibility, and test foundational AI tools for use in downstream development.

This open-yet-guided approach ensures that AI ideas at Grab are not only abundant — but directionally correct and strategically aligned.

2. Responsible Development

Once an idea shows promise, it moves into the development stage, where technical teams and specialized units collaborate to build, test, and refine the AI model.

- **AI COE:** In this phase, the **COE** takes the lead by onboarding the use case into Grab's development lifecycle. It oversees best practices, provides technical and ethical guidelines, and ensures the model meets standards for scalability and business value.
- **AI Governance Task Force:** Nested within the COE, this task force conducts formal reviews of AI models — especially those with higher risk

exposure, such as generative outputs, user-facing automation, or financial decisions. They assess risks ensuring AI remains trustworthy.
- **R&D Units:** R&D teams continue to support development by managing infrastructure, refining model architecture, and preparing tools for testing and scaling. They also maintain a catalog of reusable models and provide governance tooling (e.g., smart rate limits, threat detection).

Together, these groups ensure that every model built at Grab is not only technically sound — but ethically aligned, secure, and scalable for Southeast Asia's diverse markets.

3. Scalable Deployment & Continuous Monitoring

After development, models are deployed across Grab's ecosystem and continuously monitored for performance, cost, and compliance.

- **R&D – Catwalk Deployment Platform:** Grab uses **Catwalk**, its internal ML deployment system, to serve over 1,400 models across products. R&D leads this effort, ensuring smooth rollouts and rapid rollback if needed.
- **AI Gateway – Monitoring & Cost Management:** Post-deployment, the **AI Gateway** plays a monitoring role — logging every call's request and response metadata, including token usage and cost attribution. It provides dashboards, alerts, and enforcement of rate limits to prevent budget overruns or misuse.
- **AI COE – Governance Continuity:** The **COE** continues its oversight post-launch, updating governance thresholds based on risk levels and usage trends. Grab's long-term vision is to embed real-time governance into the development lifecycle — enabling dynamic rules and ongoing ethical alignment.

By combining open innovation with deep technical oversight, Grab ensures every AI use case is built with speed, responsibility, and regional relevance — turning internal ideas into business value across Southeast Asia.

AI Use Cases in Action: Impact Across Grab's Ecosystem

Grab's AI strategy extends beyond technical innovation — it is embedded into the core of its customer, partner, and internal operations. From enabling inclusive experiences to empowering merchants and automating internal workflows, Grab deploys AI to drive tangible outcomes across its platform. Below are key examples, grouped by the stakeholders they impact most.

Customers Use Cases

Grab uses AI to simplify and enhance the customer experience — from making the platform more inclusive to improving ride efficiency and enabling access to financial services.

1. **AI Voice Assistant**

Grab's voice assistant enables visually impaired users to book rides using simple spoken commands. Integrated into the app, it uses natural language processing to interpret multi-language instructions, identify locations, and confirm bookings — all without screen interaction.

Impact: This feature enhances accessibility & Inclusivity for thousands of users

2. **AI for Credit Assessment**

Grab uses machine learning to assess creditworthiness for personal and merchant loans through its GrabFin platform. The system analyzes alternative data points such as GrabPay frequency and delivery volumes — going beyond traditional credit history. It generates real-time credit decisions directly in the app, enabling access to financial services within minutes.

Impact: This supports financial inclusion for Southeast Asia's underbanked population, unlocking credit access for thousands of individuals each month

3. **AI for Ride Provisioning**

Grab uses predictive AI to enhance ride matching, driver positioning, and real-time tracking. Features like GrabRideGuide analyze demand patterns and suggest positioning strategies to drivers, while intelligent driver-rider matching uses historical behavior and preferences to minimize cancellations and improve satisfaction. Real-time tracking powered by AI further enhances ride safety.

Impact: These features reduce wait times and improve ride availability. In testing, GrabRideGuide boosted driver earnings by 21% and helped balance supply across 14 cities.

Drivers Use Cases

Grab equips drivers with AI-powered tools that increase efficiency, optimize earnings, and enhance navigation across Southeast Asia's dynamic cities.

1. **AI Ride Guidance**

To help drivers identify high-demand areas, Grab developed an AI ride guidance feature that analyzes real-time and historical demand patterns, traffic data, and events. It suggests optimal positioning to maximize potential earnings while reducing idle time.

Impact: Used weekly by over 250,000 drivers, this tool has increased driver earnings by up to 21% per online hour while reducing passenger wait times.

2. **Voice-Based Road Reporting**

Drivers can verbally report road conditions like traffic jams, flooding, or closures via the app. AI models process these inputs and update GrabMaps in real time, improving route planning for all users.

Impact: The feature collects over 16,000 reports daily from drivers, contributing to more accurate navigation and safer driving conditions.

Merchants Use Cases

Grab empowers merchants — especially small businesses — with AI tools that automate operations, generate insights, and boost sales.

1. **AI Merchant Assistant**

Available in the GrabMerchant app, this assistant acts as a 24/7 business advisor, providing tailored insights on promotions, menu optimization, and customer engagement. It uses merchant data and LLMs to deliver proactive recommendations in chat form.

Impact: The assistant helps merchants save 5–10 hours per week and drives 10–20% higher sales through smarter business decisions.

2. **GenAI for Menu Descriptions**

To attract more customers, Grab offers an AI feature that turns basic dish inputs into appealing menu descriptions. It understands regional culinary preferences and generates persuasive content for the GrabFood platform.

Impact: Merchants using this feature have seen order volumes increase by 15–25%, with minimal time spent on content creation.

Enterprises Use Cases

Grab also brings AI capabilities to external businesses through tools that enhance security, marketing, and financial services.

1. **GrabDefence: AI-Powered Fraud Prevention**

GrabDefence is a suite of machine learning tools that identify fraud in real-time by analyzing transactions, user behavior, and device activity. It flags suspicious patterns like promo abuse or GPS spoofing, and delivers API-based insights to partner platforms.

Impact: Earlier anti-fraud efforts reduced fraud by up to 80% in Indonesia — demonstrating GrabDefence's powerful role in building safer digital ecosystems.

2. **GrabAds: Smarter Targeting at Scale**

GrabAds uses AI to analyze user data — including location, purchase patterns, and app engagement — to deliver personalized advertising across Grab's ecosystem. Machine learning models predict user behavior and optimize campaigns to improve ROI for brands and partners.

Impact: This capability boosts ad conversion rates by 10–20%, helping businesses reach high-value audiences more efficiently across Southeast Asia.

Internal Team Use Cases

Grab also uses AI to improve internal efficiency and insight delivery, enabling faster and more informed decision-making across departments.

1. **LLM-Powered Content Moderation**

To ensure platform safety, Grab uses AI models to detect inappropriate or policy-violating content in real time. The system automates moderation at scale, while human reviewers handle edge cases.

Impact: This has reduced manual moderation efforts by 70–80%, improving response times and user trust.

2. **Jarvis Report Builder**

Jarvis automates complex report generation for account managers and commercial teams. It integrates data extraction, analysis, and slide creation into one seamless flow, reducing a multi-hour task to just 10 minutes.

Impact: Jarvis boosts productivity by freeing up 20–30 hours per week per manager, accelerating decisions across the business.

Key Takeaway

Grab's AI journey offers clear lessons for leaders aiming to build business-aligned, scalable AI capabilities:

1. **Anchor AI to Business Goals**

   Grab's AI initiatives are tightly linked to its mission across all services — rides, food, finance, and enterprise tools — ensuring every use case drives real business impact, not just innovation for its own sake. Each use case addresses real-world challenges across customers, partners, and internal teams.

2. **Invest in Strong Foundations**

   A robust AI architecture — combining the AI Gateway, AI COE, and internal R&D — enables Grab to prototype, govern, and scale models across markets. This ecosystem-first approach ensures agility, security, and performance at scale.

3. **Democratize Talent and Tools**

   By opening ideation to all employees and equipping teams with tools like Chimera notebooks and exploration keys, Grab transforms its workforce into active contributors to AI development — beyond just data scientists.

4. **Deploy with Purpose, Not Volume**

   Rather than racing to deploy AI everywhere, Grab focuses on use cases that unlock measurable value — from reducing booking errors and content moderation time to increasing merchant sales and driver earnings.

5. **Embed Governance Throughout the Lifecycle**

   Grab's AI COE and Governance Task Force ensure compliance and trust are built into the development process — from model onboarding to post-launch monitoring — setting a benchmark for responsible AI deployment in dynamic markets.

At Twimbit, we help enterprises move from AI aspiration to execution. Whether you're setting up your first use case or scaling a company-wide AI strategy, we offer the frameworks, research, and expertise to guide your transformation.

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