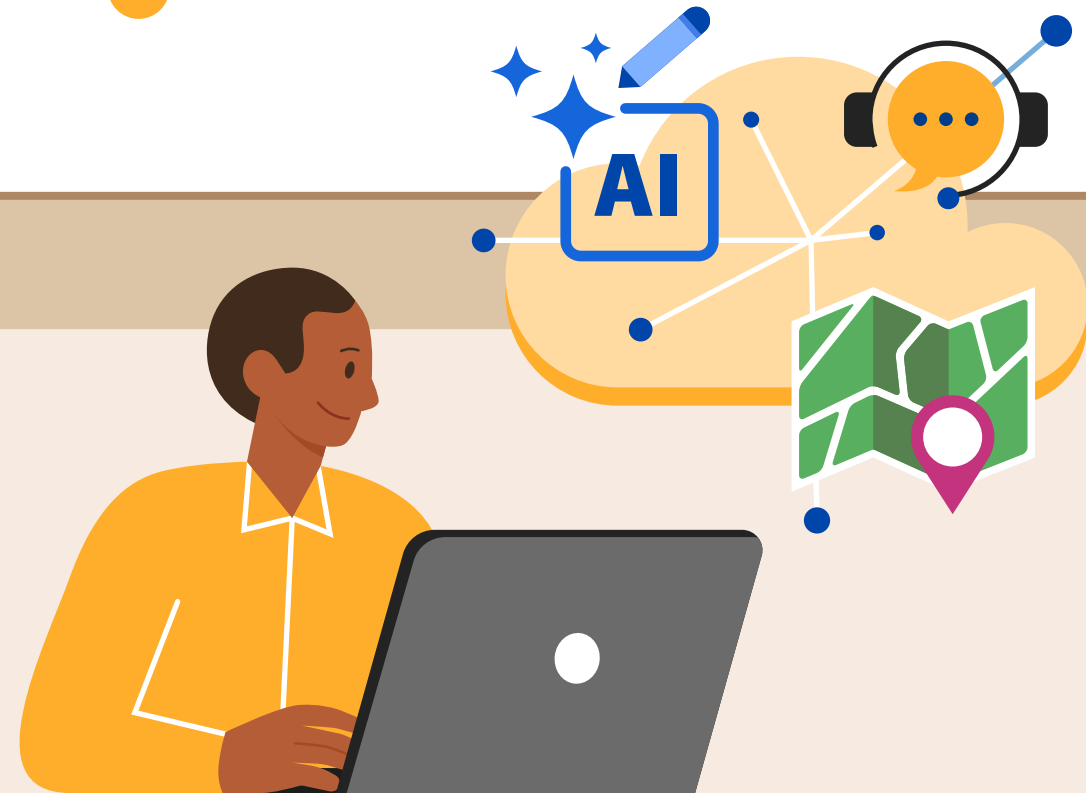
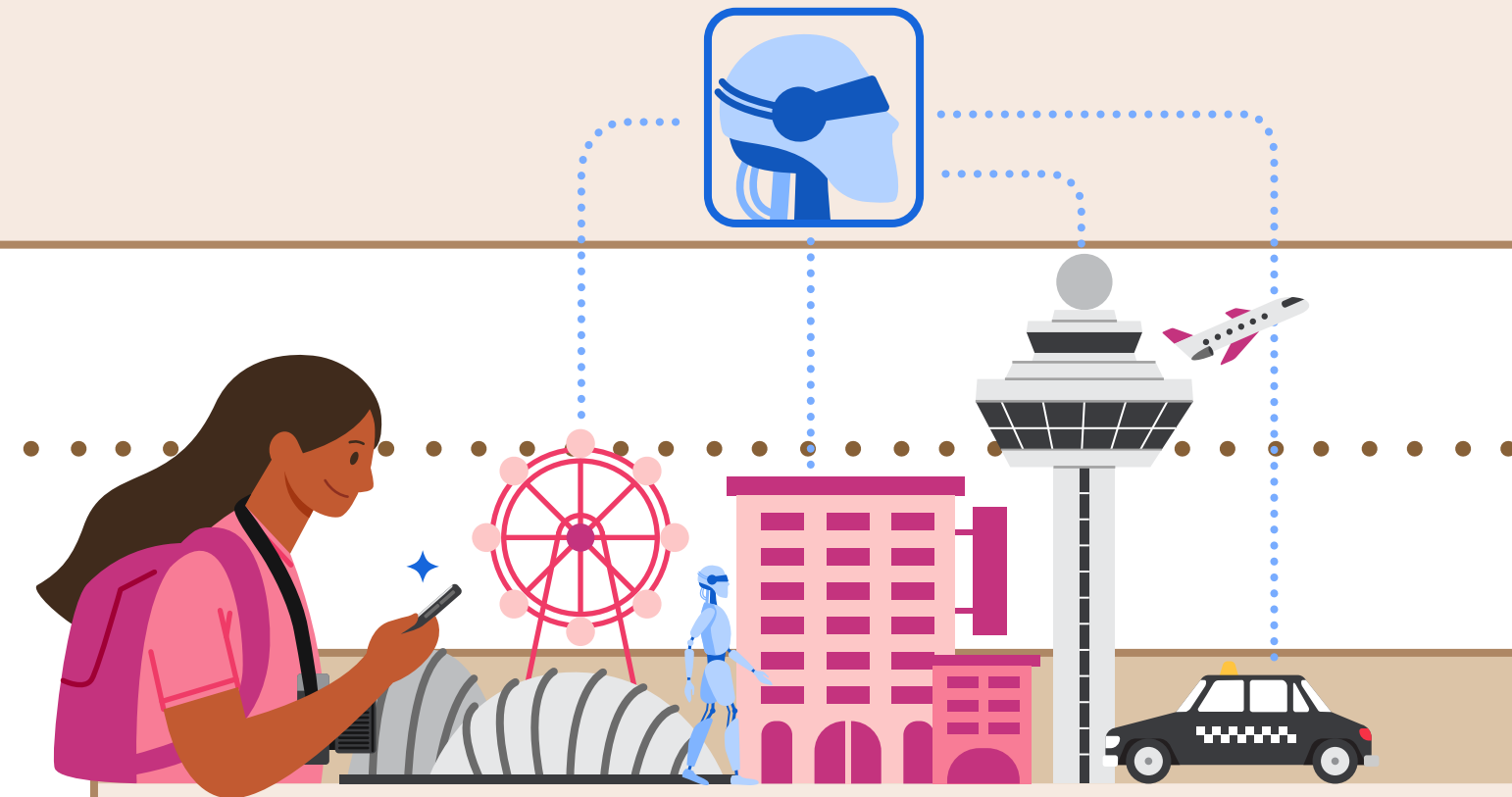
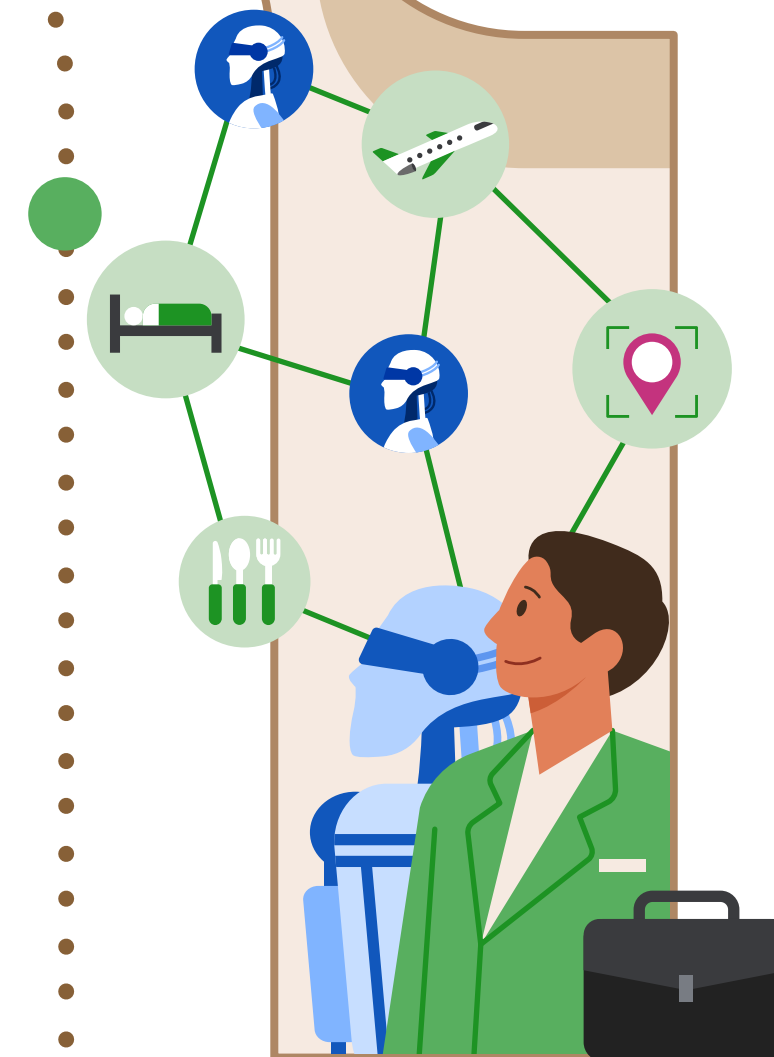
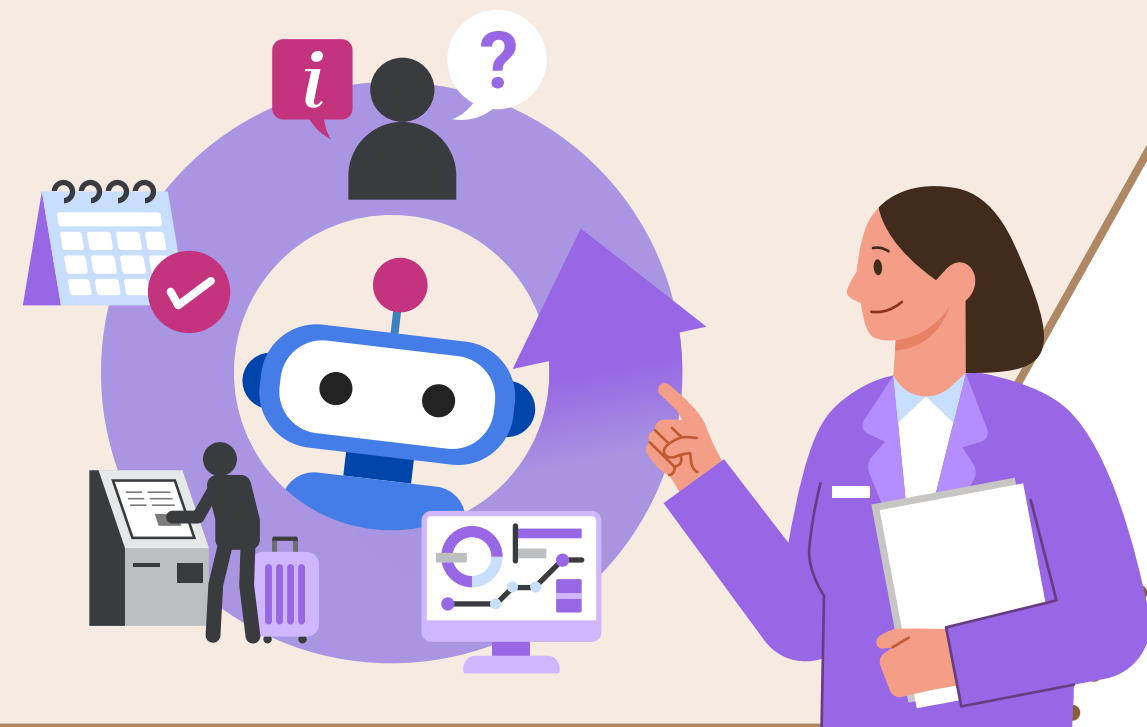
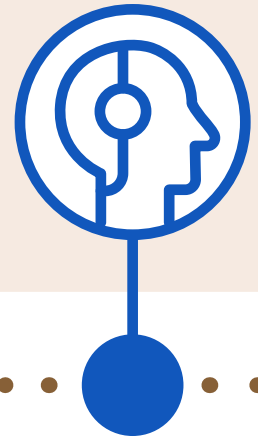


AI PLAYBOOK FOR TOURISM

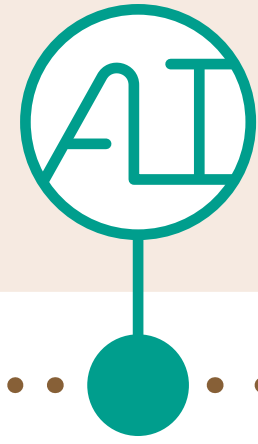


POWERED BY
SINGAPORE
TOURISM
BOARD



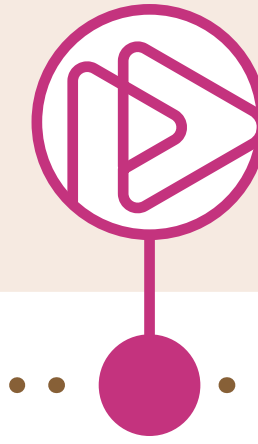
INTRODUCTION AND VISION

p.03



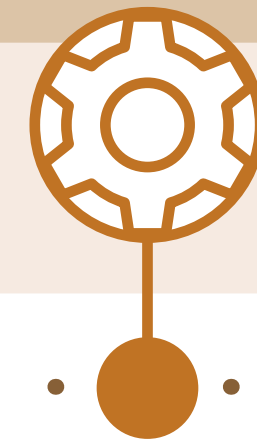
AI ROADMAP

p.09



IDEAS ON GETTING STARTED

p.16



ANNEX: CONSIDERATIONS FOR AI ADOPTION

p.24



ANNEX: USEFUL RESOURCES

p.32

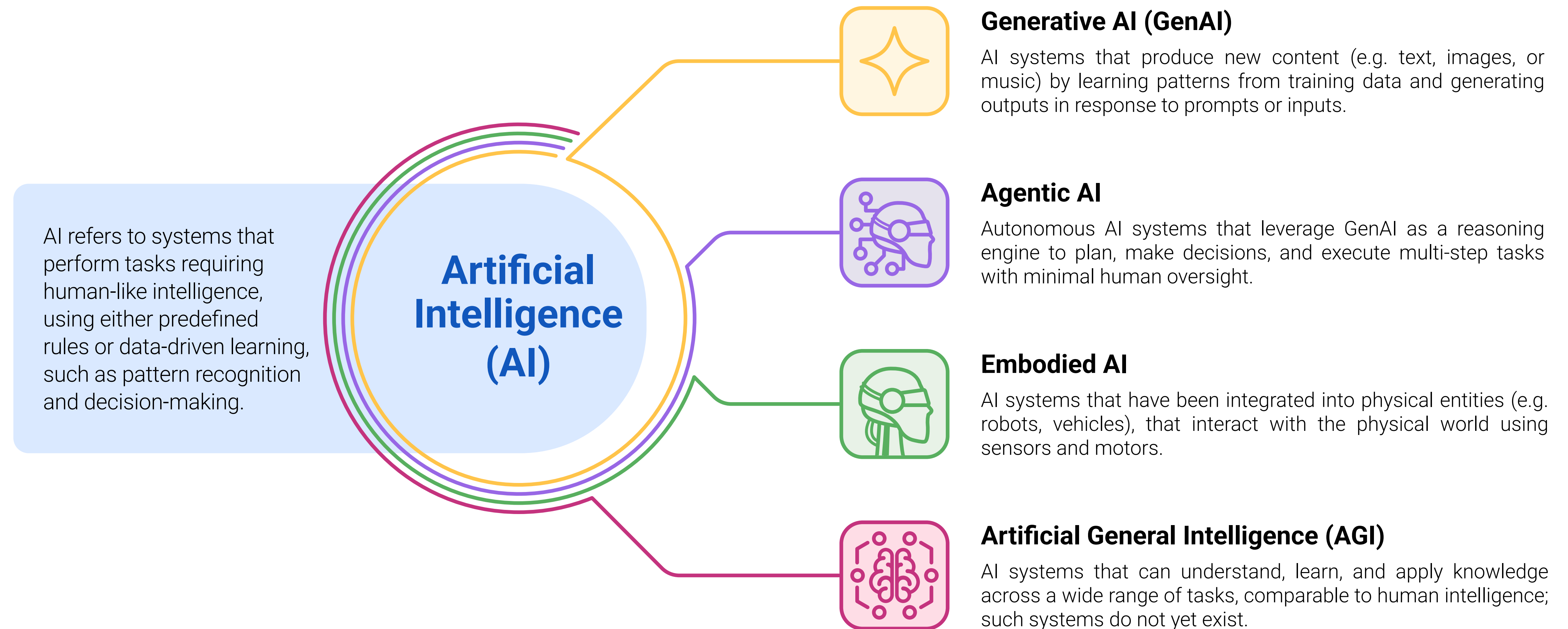
CONTENT

INTRODUCTION AND VISION



An Overview of AI Types and Capabilities

To effectively adopt AI, your organisation has to fully understand its distinct capabilities.

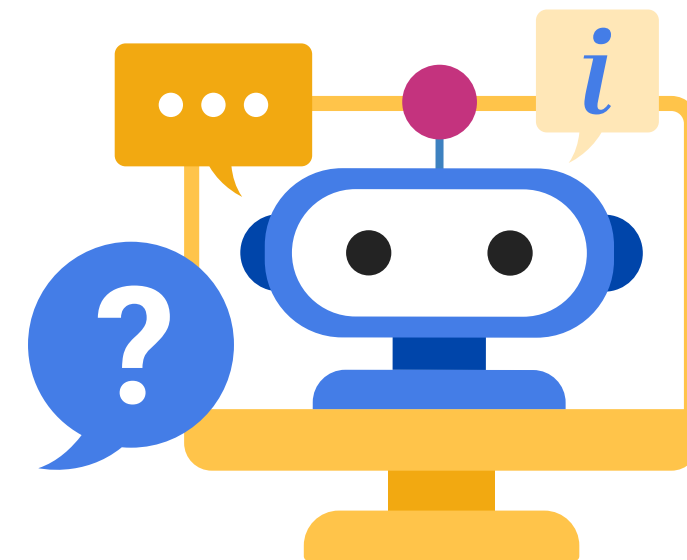


The Advancement of AI

From GenAI Chatbots to Agentic AI

Since 2023, GenAI and Agentic AI's capabilities have rapidly improved, making it more accessible for widespread use. This has accelerated the progression from rudimentary applications (e.g. GenAI Chatbots) to advanced applications (e.g. AI agents), better harnessing the technology's potential.

A tool that answers questions through conversation.

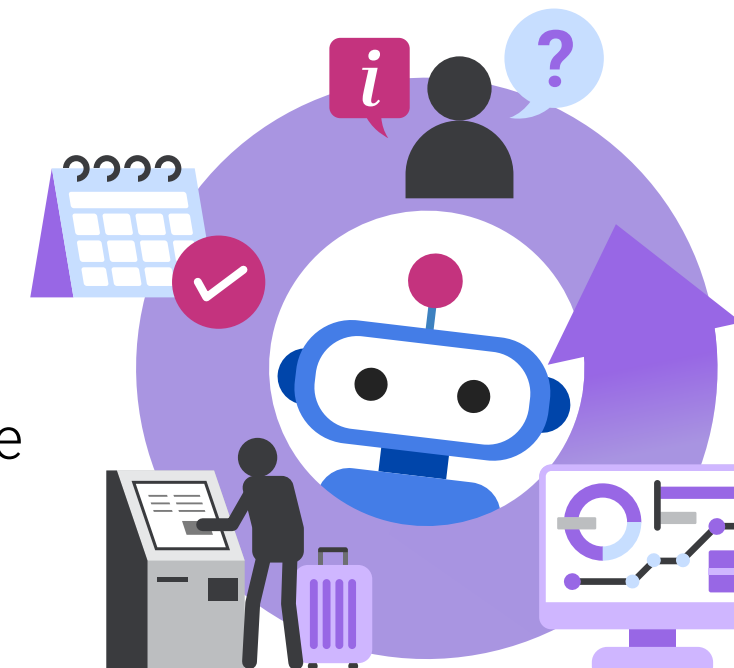


GenAI Chatbots

Fixed rules and repetitive tasks

◆ **GenAI** refers to AI systems that create new content, such as text, images, code, or audio, based on patterns learned from training data. GenAI supports decision-making but requires human direction.

An AI assistant that helps complete routine tasks based on training data.



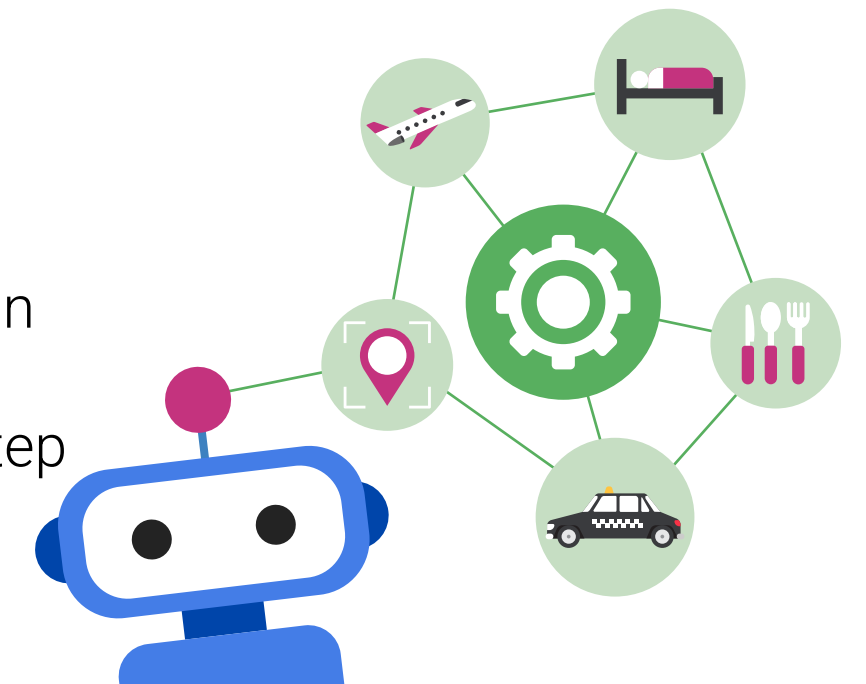
Copilots

Smart, tailored assistance

◆ The introduction of context awareness and task-oriented capabilities enable GenAI Chatbots to evolve into **Copilots** that provide contextual, domain-aware responses.

Improvements in capabilities

An AI tool that can plan and execute complex, multi-step tasks to achieve specified goals.



AI Agents

Autonomous execution across tools and workflows

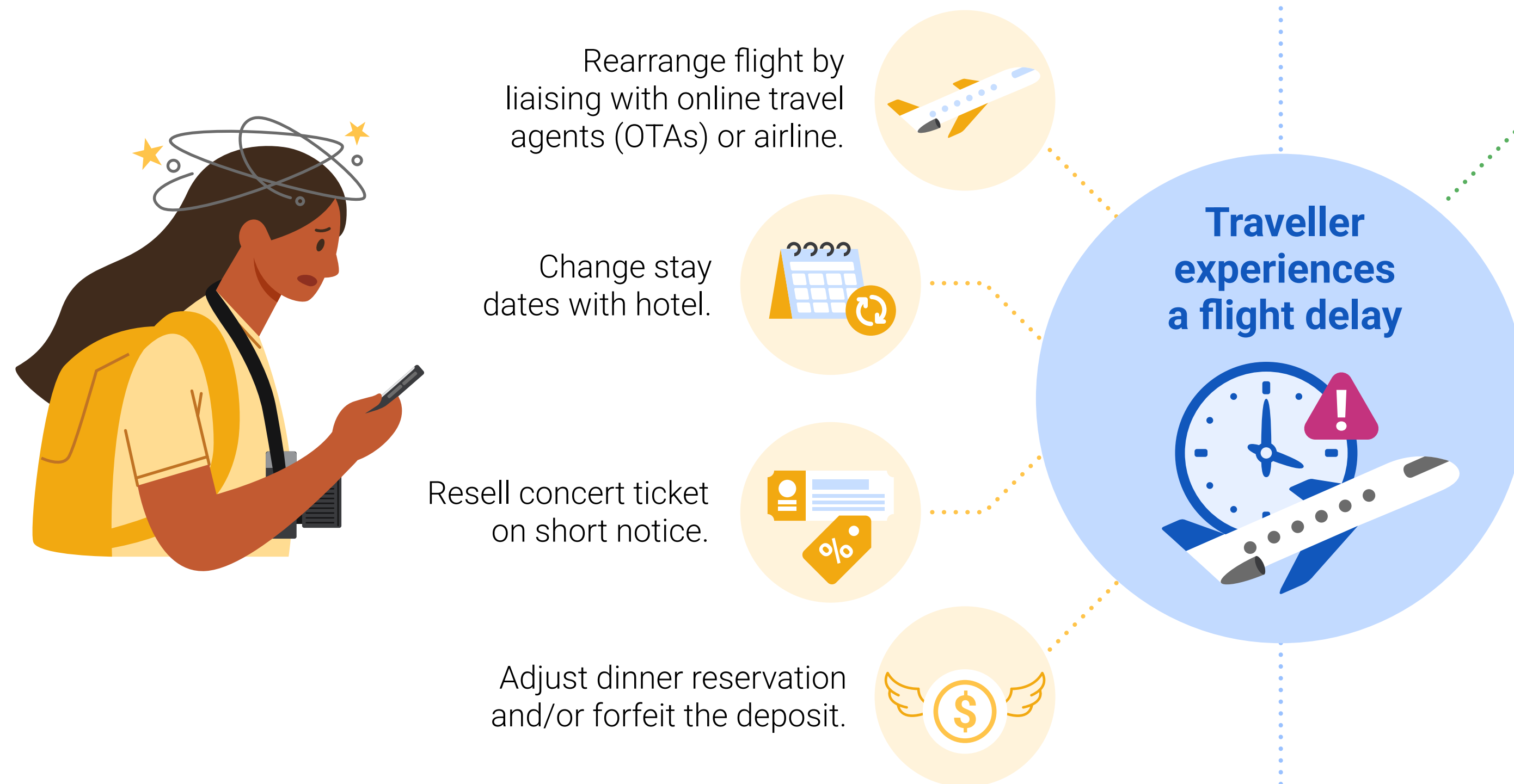
◆ **Agentic AI** refers to AI systems that plan, make decisions and execute complex, multi-step tasks by integrating across tools and workflows with minimal human input.

Transforming the Travel Experience

As GenAI advances, it will unlock greater value when its “suggestions” can evolve into tasks AI can carry out autonomously.

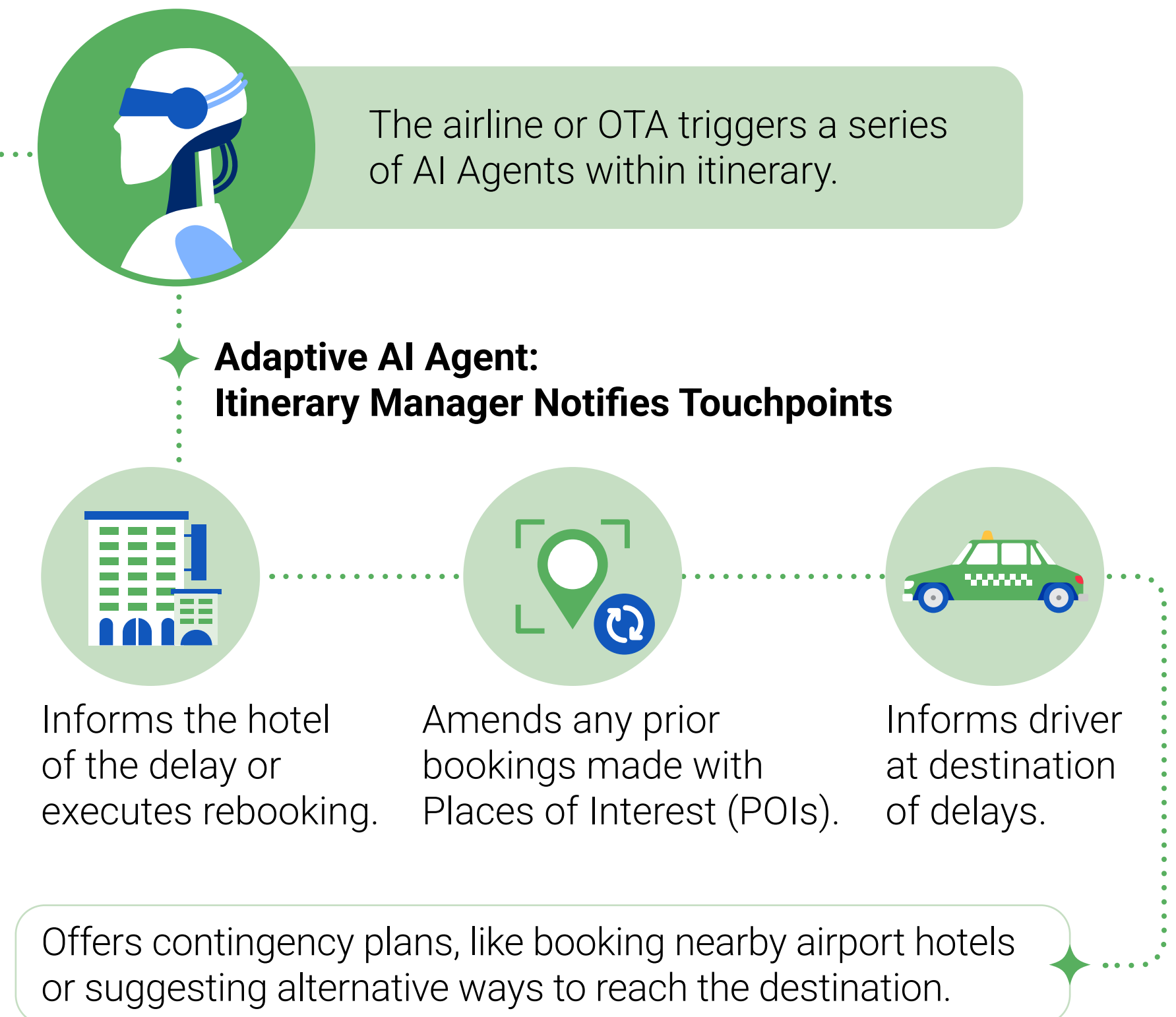
Current State

Today, travellers must manually coordinate changes across multiple platforms when encountering flight delays or other travel disruptions.



Future Vision

We envision a future in which the tourism sector is **backed by a network of AI agents** that coordinate across tourism businesses to meet travellers' needs.



The Future of AI in Tourism

In the tourism sector, GenAI is transforming travel planning and booking through AI-assisted experiences. Further advancements, including Agentic AI, are expected to enable a wider range of use cases across the industry.

What does success look like in this new era of AI-driven transformation?

Unlocking business value through AI-powered insights

AI agents can drive productivity gains of approximately 10% by proactively scheduling tasks such as predictive maintenance and housekeeping. This is enabled by combining real-time data from Internet of Things (IoT) sensors, staff availability, and visitor schedules to optimise task allocation.

This represents a significant improvement over current approaches, which rely on real-time alerts alongside manual scheduling and intervention.

Source:

<https://www.mckinsey.com/industries/travel/our-insights/remapping-travel-with-agentic-ai>

Enhanced operational efficiency through automation

Operational costs can be reduced by approximately 30–40% through autonomous task execution by AI agents. These agents can manage repetitive workflows such as staffing optimisation and automated service fulfilment.

This is in contrast to traditional rule-based automation, which requires substantial human oversight and can increase operational costs.

Source:

<https://www.travelagentcentral.com/data-trends/ai-drives-hefty-cost-savings-hotels>

Enhanced visitor discovery and personalised travel experiences

91% of travellers are already using AI-powered tools to research and book their travel destinations, fundamentally changing how destinations and businesses are discovered and compared.

By being visible within AI-driven search and planning tools, businesses can attract higher-quality leads and increased demand.

Personalised recommendations further improve conversion rates and reduce drop-offs.

Source:

<https://www.klook.com/newsroom/travelpulse-2026-biggerbudgets-boldertrips/>

Case Study 1 Marriott's Renaissance Hotels Virtual Concierge

RenAI is a GenAI-powered virtual concierge that guests can access via messaging to receive curated recommendations on local experiences, dining, and more. This enhances guest experiences while freeing employees from routine tasks, allowing them to focus on higher-value activities that improve overall guest satisfaction.

Source:

<https://aiexpert.network/marriott-ai/>

Case Study 2 Visa's Trip Planner

Visa's Trip Planner is a hyper-personalised itinerary planning tool enabled by tools such as Gemini LLM and Vertex AI. With user consent, it draws on Visa's data insights, cardholder spending patterns, and real-world behavioural data to suggest tailored itineraries for travellers.

Source:

<https://www.edb.gov.sg/en/business-insights/insights/how-visa-dp-architects-and-ocean-network-express-a-re-building-scalable-ai-solutions-with-singapores-ai-trailblazers-initiative.html#ai-trailblazer-case-study-1>

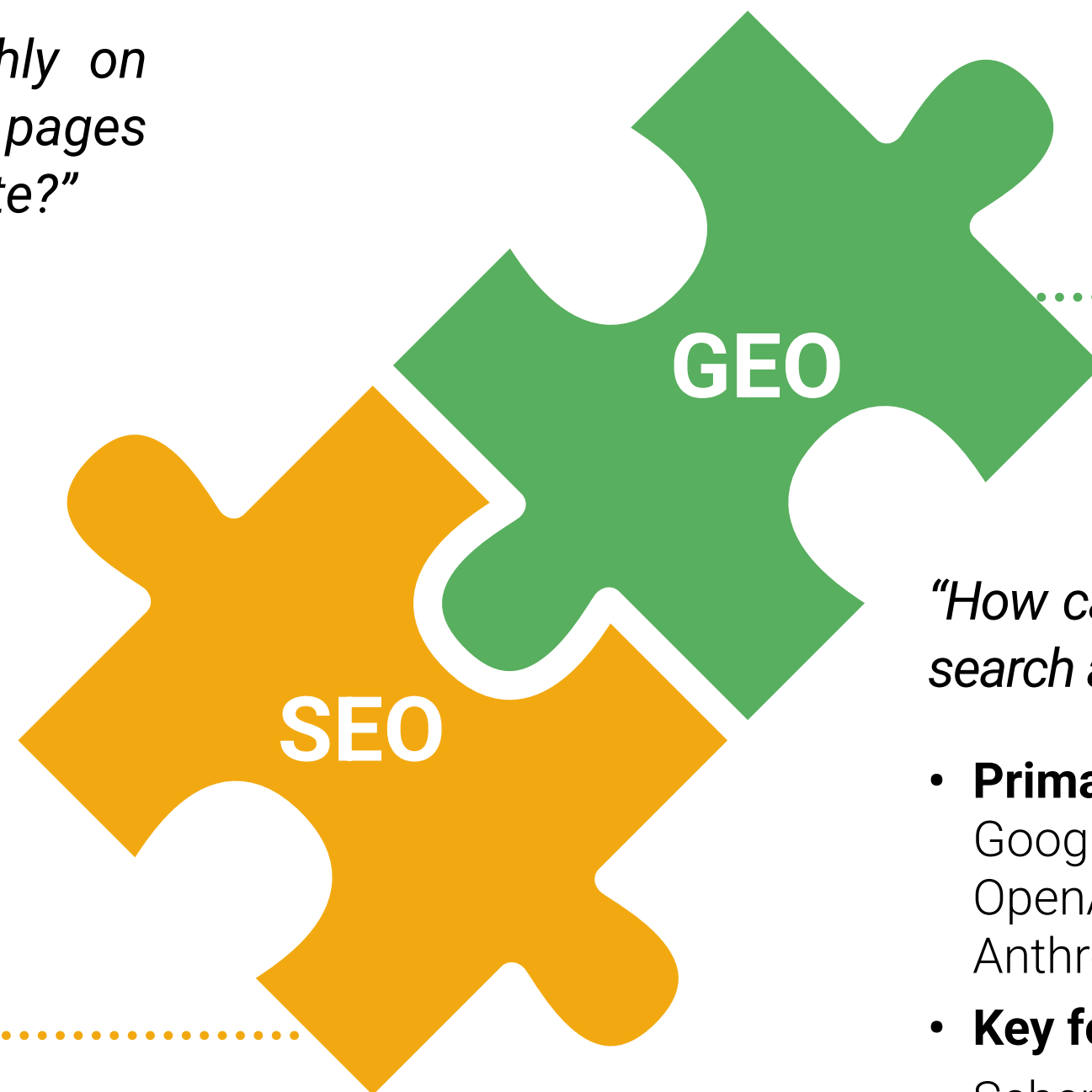
Emerging Space

Generative Engine Optimisation (GEO)

GEO focuses on making content more visible, relevant, and compelling on GenAI search and chat platforms, complementing traditional Search Engine Optimisation (SEO).

“How can I rank highly on search engine results pages for users to visit my site?”

- **Primary platforms**
Google Search, Bing
- **Key focus**
Keywords and site performance
- **Success measures**
Page ranking, Click-through rates



“How can I get my content featured in GenAI search and chat platforms’ responses?”

- **Primary platforms**
Google AI (Gemini, AI Overviews, AI Mode), OpenAI (ChatGPT), Meta AI (Llama), Anthropic (Claude)
- **Key focus**
Schema data, natural language, concise and digestible formats
- **Success measures**
Frequency of GenAI mentions and citations (where applicable)

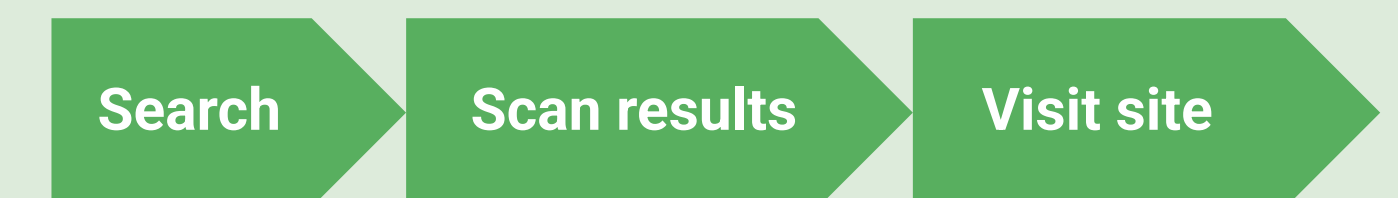
Note: GEO complements rather than replaces SEO. While SEO makes your content discoverable, GEO ensures your brand is mentioned by GenAI search and chat platforms.

Why GEO matters

1 Shifts in behaviour patterns

Travellers are increasingly relying on GenAI search and chat platforms for trip planning and recommendations, reducing reliance on web search results.

Traditional search behaviour:



AI-assisted behaviour:



2 Brand perception is increasingly mediated by GenAI

The effectiveness of GenAI chatbots in recommending tourism businesses or destinations can directly shape travellers’ perceptions and influence their itinerary-planning decisions.



AI ROADMAP



AI Roadmap for Tourism

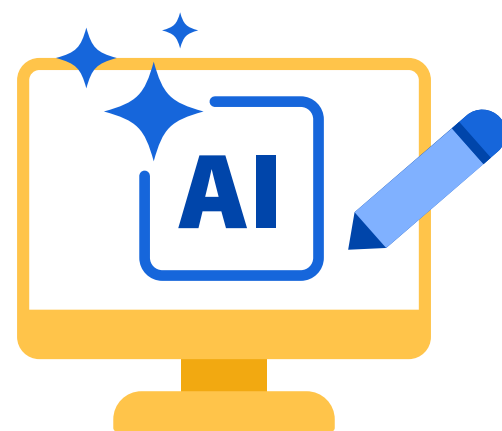
There are four key phases to get from where we are today, to a future where the tourism sector is backed by a network of AI agents that dynamically communicate to serve the needs of the traveller.

1

Nascent

Using GenAI tools in daily work

Tourism businesses start by using GenAI features built into existing tools or simple off-the-shelf solutions. These tools are easy to adopt and require little technical setup.



2

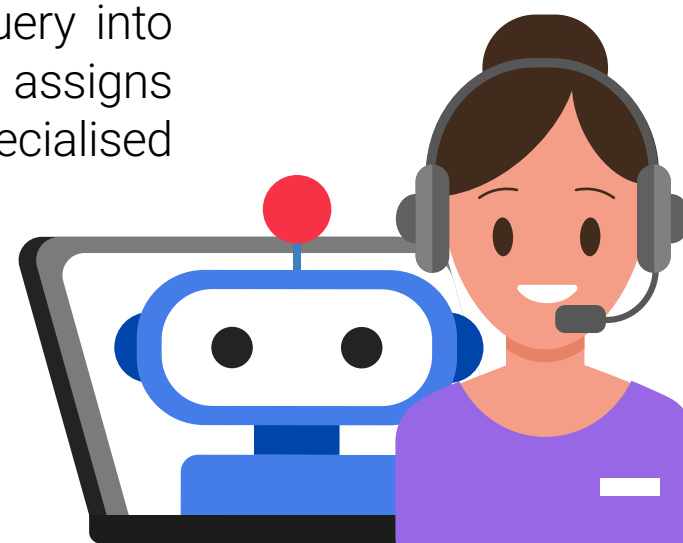
Optimised

Connecting internal systems and automating simple tasks

Businesses begin using GenAI and/or Agentic AI to streamline internal backend processes from end-to-end.

Single Platform

A master AI agent breaks the query into subtasks and assigns them to specialised AI agents.



3

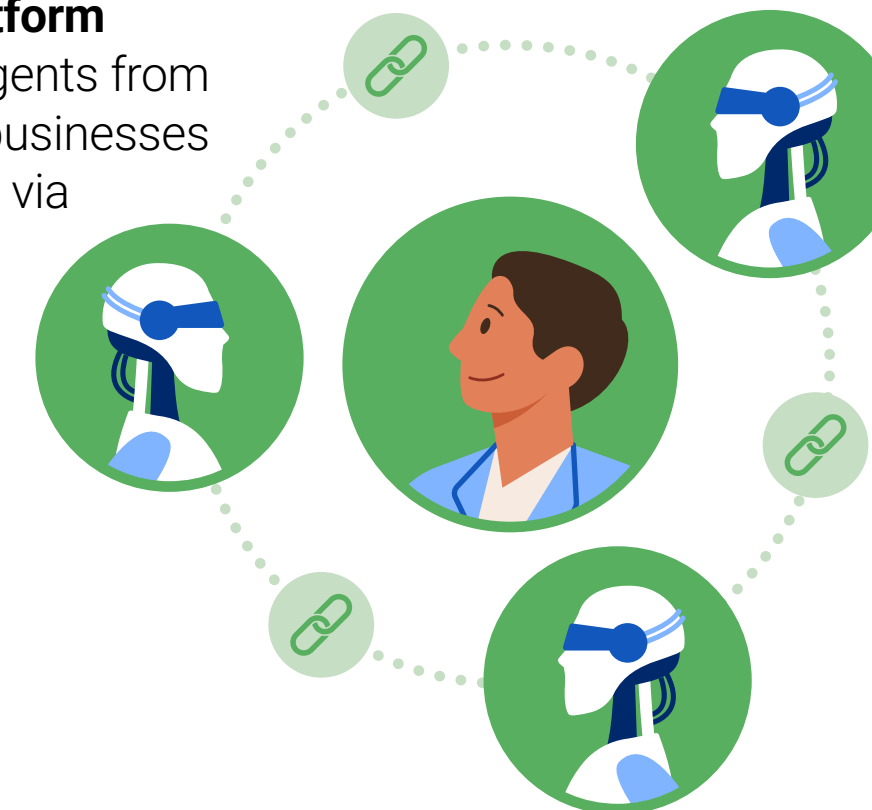
Connected

AI works across systems and partners

Multi-agent workflows become highly integrated, coordinating across industries such as hospitality, venues, and attractions, as well as complementary technologies such as wearables.

Cross-platform

Multiple agents from different businesses interacting via protocols.



4

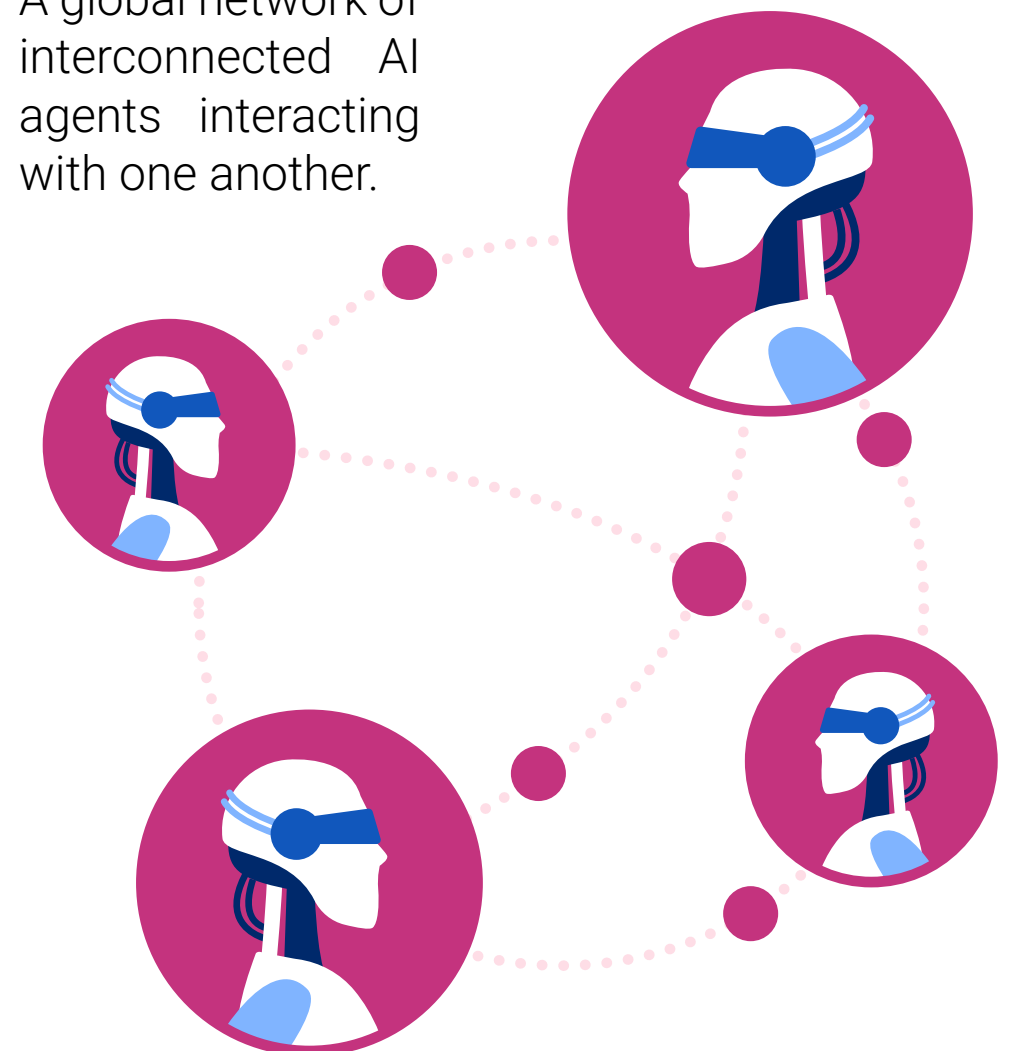
Transformational

Enabling fully automated, end-to-end operations*

AI agents plan, execute, and optimise without human initiation.

Internet of Agents

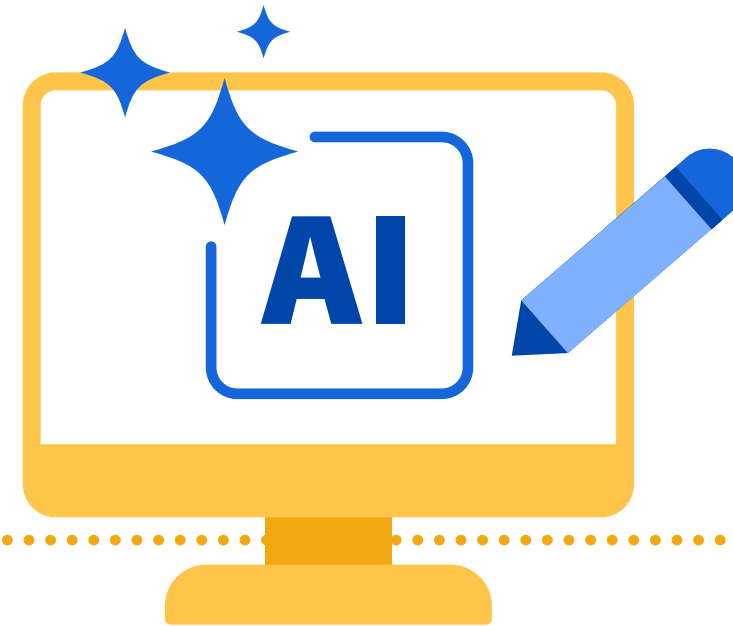
A global network of interconnected AI agents interacting with one another.



**Though dependent on the pace of technology advancement, analysts have projected Phase 4 to be achieved beyond 2035.*

1 Nascent

Tourism businesses begin their AI journey by adopting ready-made GenAI features in familiar software platforms.



Definition

In this phase, tourism businesses adopt GenAI features built into the software tools they already use, with little technical setup or expertise required. These “plug-and-play” solutions allow businesses to benefit from GenAI through familiar tools. They are quick to set up and cost-effective, with businesses typically paying standard subscription fees for enhanced features.

Key Characteristics



Pre-Built GenAI Integration

GenAI capabilities will be accessed through familiar software interfaces like Microsoft Copilot or Adobe Creative Suite, with no coding required.



Task-Specific Assistance

GenAI will support individual tasks such as content creation, email responses, or social media posts rather than managing end-to-end workflows.



Standalone Functionality

Tools will operate independently without connecting to other systems or sharing data across platforms.



Low Barrier to Entry

Implementation will require only standard software subscriptions, with minimal training or technical investment.

Key Actions to Get Started



Review business processes to identify areas where AI can add value

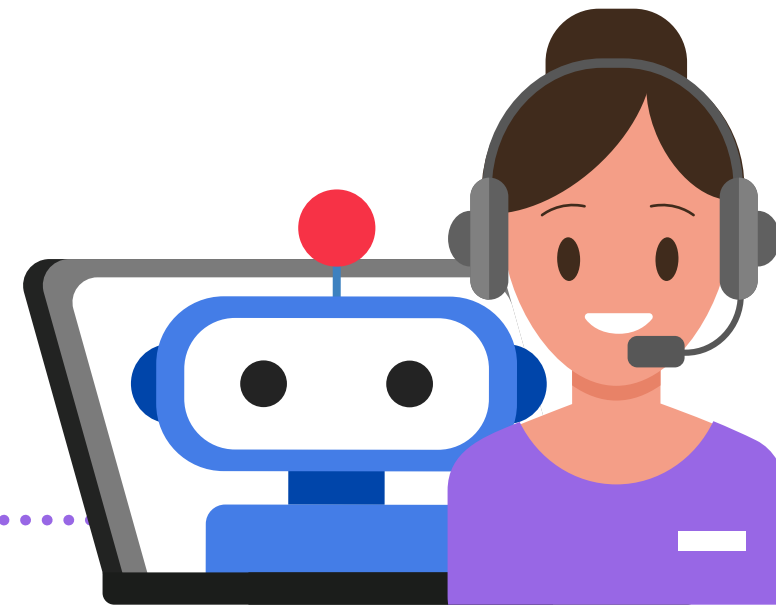


Implement AI in everyday processes and develop team proficiency

2

Optimised

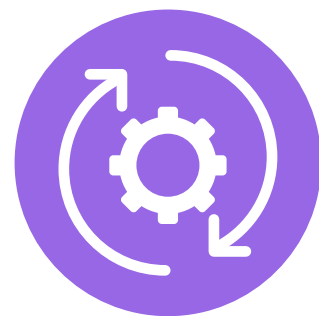
Tourism businesses connect AI tools to automate entire workflows and processes within their operations.



Definition

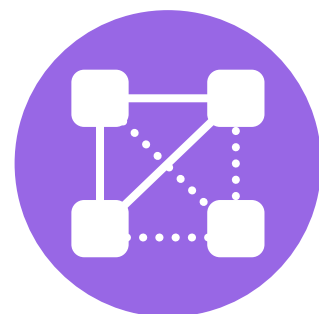
In this phase, tourism businesses connect multiple GenAI tools, so integrated workflows can run smoothly from start to finish with reduced human involvement. Rather than using isolated features, tourism businesses create coordinated and connected systems where AI agents can make decisions and execute tasks across different business functions. At this stage, the focus is on optimising internal operations through agentic workflows, with humans stepping in when needed.

Key Characteristics



Workflow Automation

AI will manage the entire process from start to finish, such as handling bookings from enquiry to confirmation, and follow-up communications.



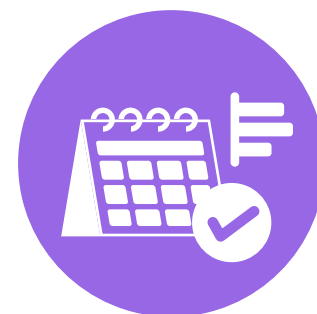
Cross-System Integration

Business tools and platforms will become connected, enabling information to be shared automatically and records to be updated across departments.



Predictive Actions

AI systems will anticipate needs and take proactive steps, like automatically adjusting inventory or sending timely reminders to customers.



Decision-Making Capability

AI agents will support operational decision-making based on predefined criteria, such as optimising pricing or scheduling based on availability and demand.

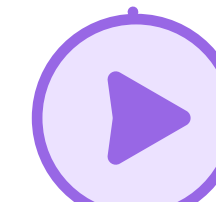
Key Actions to Get Started



Establish clear success metrics



Implement data standardisation to ensure consistency of information across all systems



Choose solutions that work with your existing systems (Performance Management System (PMS), Customer Relationship Management (CRM), booking platforms)



Establish clear governance for AI by implementing frameworks, policies, and safeguards

3

Connected

AI systems across different tourism businesses communicate and collaborate to deliver seamless traveller experiences.



Definition

In this phase, AI systems from different tourism businesses communicate and collaborate to create a seamless and coordinated experience throughout the entire visitor journey. This phase moves beyond optimising individual businesses, creating a connected network effect where AI agents share information and coordinate services. The focus shifts from internal efficiency to ecosystem-wide collaboration and delivering better experiences for travellers.

Key Characteristics



Cross-Business Communication

AI agents from hotels, restaurants, attractions, and transport providers will share relevant customer information and coordinate services automatically.



Ecosystem-Wide Coordination

Connected systems will work together to optimise the entire visitor experience, rather than focusing only on individual business operations.



Real-Time Adaptation

AI agents will be able to instantly adjust plans across multiple providers when circumstances change, such as weather disruptions or capacity constraints.



Contextual Intelligence

AI systems will take into account broader situational factors like local events, cultural preferences, and seasonal patterns to provide more relevant and personalised recommendations.

Key Actions to Get Started



Train staff on AI governance policies and ensure organisational readiness



Set up role-specific data permissions to control information access

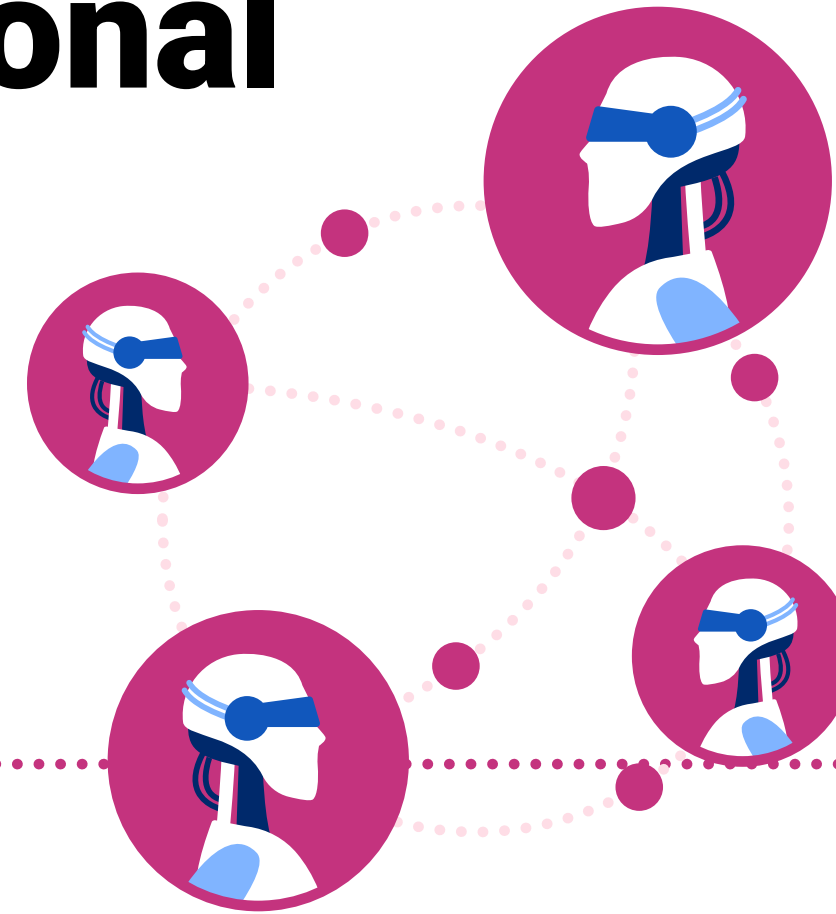


Choose interoperable solutions that support open integration standards, i.e. widely used ways for systems to connect and share data

4

Transformational

Autonomous AI agents independently manage strategic decisions and operations across the entire tourism ecosystem.



Definition

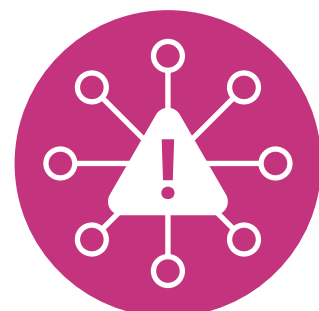
In this phase, autonomous AI agents operate independently across the tourism ecosystem, managing complex operations with minimal human oversight. This phase transforms how tourism businesses fundamentally operate, moving from human-directed GenAI assistance to AI-driven operations. This also represents a fundamental shift in how the sector operates, with intelligent AI agents coordinating activities across the entire ecosystem.

Key Characteristics



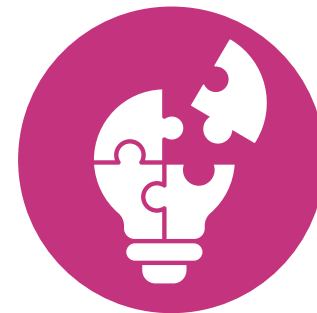
Strategic Decision-Making

AI agents will support and drive high-level business decisions, negotiate contracts, and adapt strategies in response to market conditions and performance data.



Crisis Management Autonomy

Connected AI systems will handle major disruptions by coordinating emergency responses, alternative arrangements, and communications across multiple providers.



Creative Problem-Solving

AI systems will identify new opportunities and innovative solutions that extend beyond programmed responses or human-defined parameters.



Continuous Learning and Optimisation

AI agents will continuously improve performance, sharing insights across the network to enhance service delivery and operational efficiency.

Key Actions to Get Started



Establish consistent data formatting across all systems



Use established AI frameworks to guide responsible adoption, with clear risk mitigation measures



Verify compliance with applicable security and data protection regulations

Progression through the four phases enables tourism businesses to capture increasing levels of value and efficiency.

While these four phases outline the evolution of AI in tourism, progressing from one phase to the next requires addressing specific challenges and taking deliberate steps to build the necessary capabilities.

While early phases focus on improvements within individual businesses, later phases require greater collaboration and standardisation across the tourism ecosystem.

Foundations established in earlier phases, including capabilities and technology infrastructure, directly impact the ability to progress to more advanced stages. This makes each transition critical for long-term success.



Adoption Checklist

Key considerations for AI adoption:

- 1

Identify the Business Problem
Where can AI deliver the most business value?
- 2

Data Readiness and Knowledge Architecture
Is our data usable?
- 3

Technology and Architecture Decisions
Should we build, buy, or partner?
- 4

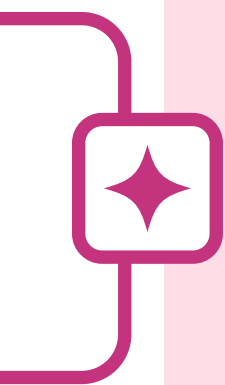
Governance, Risk, and Responsible Use of AI
What are the potential risks?
- 5

Interoperability and Future-Proofing
Can our systems integrate with others, or are we locked into one vendor?
- 6

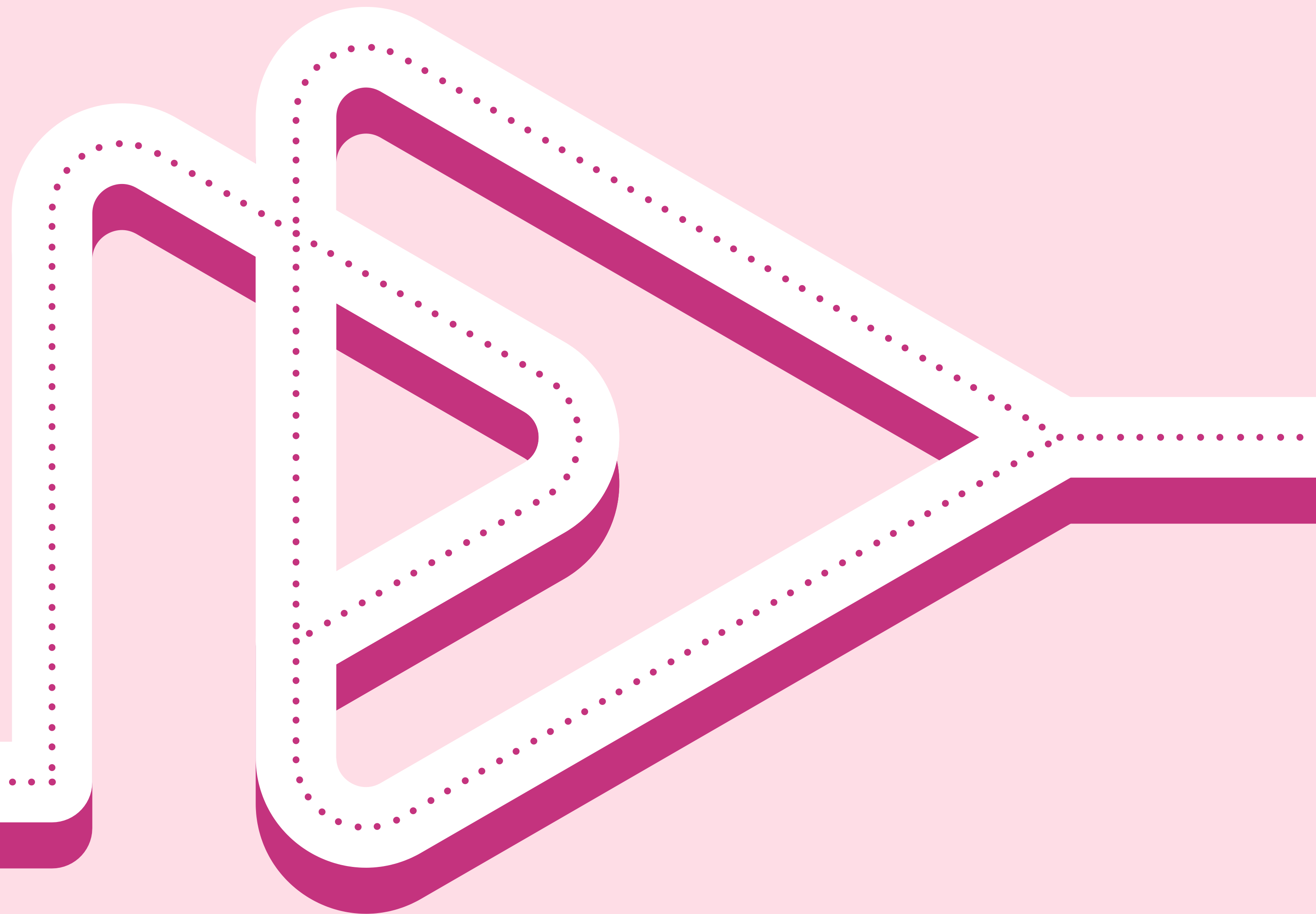
Change Management and Workforce Adoption
How will we ensure staff adoption of these tools?

Businesses cannot rely on AI evolving on its own; they must actively invest in technology infrastructure, workforce training, and process redesign.

By identifying the key actions for each phase of progression, tourism businesses can develop targeted strategies and allocate resources effectively.

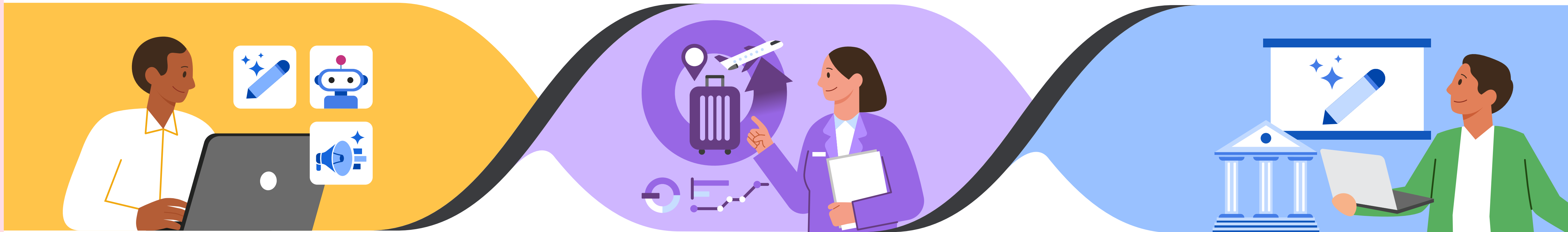


IDEAS ON GETTING STARTED



How to Begin Your AI Transformation Journey

Here are three practical ways to kickstart AI adoption in your organisation:



Adopt Off-the-Shelf Solutions

Start with common business functions such as marketing, sales, and customer engagement. Leverage established, high-impact tools including GenAI chatbots, integrated CRM systems, and content generation platforms.

These solutions can deliver immediate operational efficiencies.

Prioritise Industry-Specific Use Cases

Focus on high-value applications where AI can deliver measurable impact, such as personalised guest engagement or workflow automation. Prioritising the right use cases ensures that AI can help deliver the most measurable impact for your organisation.

Accelerate Adoption through Government Programmes and Support

Tap into an ecosystem of industry training, innovation programmes, and government-backed grants. These resources help reduce implementation risks, upskill your workforce, and fast-track your AI adoption journey.

Off-the-Shelf Solutions

GenAI Chatbots for Customer Engagement

How GenAI Enhances These Solutions

1. Generates personalised, context-aware responses based on customer preferences and inputs.

Potential Impact

1. Improved productivity

- a. Increases individual productivity by reducing the need to handle repetitive enquiries, allowing employees to focus on higher-value tasks
- b. Reduces operational costs by minimising the need for 24/7 staffing, with potential to lower or eliminate after-hours support costs
- c. Speeds up resolution of routine queries, with FAQ response times reduced by approximately 38%

2. Enhanced visitor experience and customer engagement

- a. Provides immediate and personalised responses to complex enquiries, reducing wait times associated with email or live chat support
- b. Enables more engaging customer interactions through additional features and tailored responses
- c. Strengthens customer service by delivering faster, more relevant support

Sources:

<https://www.ibm.com/think/insights/unlocking-the-power-of-chatbots-key-benefits-for-businesses-and-customers>

<https://neilpatel.com/marketing-stats/ai-chatbot-task-resolution-impact/>

GenAI Chatbot Solutions

- | | |
|----------------------------|---|
| 1. AiConvo* | 7. Indigitall |
| 2. AI Customer Engagement* | 8. OTG IAB – GenAI Customer Engagement* |
| 3. Breakout | 9. Thareja AI |
| 4. CoSupport AI | 10. Voltade Envoy Version 1* |
| 5. Ehly AI Assistant* | |
| 6. Exabloom Chatbot* | |

**For more details on Productivity Solutions Grant (PSG)-supported solutions: Visit [SMEs Go Digital](#). Non-PSG solutions were top-ranked solutions referenced across software review sites: [G2](#), [Capterra](#), and [Gartner Peer Insights](#).*

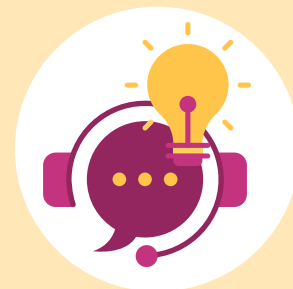
Do note that this list is non-exhaustive and is intended for reference only; it does not constitute an endorsement by STB of any of the listed products. Businesses are encouraged to conduct their own due diligence to ensure a solution's features, reliability and security standards are the perfect fit.

Upskilling the Workforce

Equip your employees with the following skills to maximise business impact:



**Product and
Experience
Performance
Management**



**Customer
Service
Innovation**

Off-the-Shelf Solutions

Marketing and Sales Solutions

How GenAI Enhances These Solutions

1. Generate first drafts for marketing and customer engagement content using natural language prompts.
2. Assists employees in refining and adapting GenAI outputs to suit different contexts (e.g. brand voice, target audiences, and channel requirements).
3. Surfaces actionable insights from existing data sources to help optimise marketing and sales campaigns.

Potential Impact

- | | |
|--|---|
| <ol style="list-style-type: none"> 1. Improved productivity through increased efficiency <ol style="list-style-type: none"> a. Reduces time spent on ideation and content drafting by generating multiple content variations quickly b. Lowers the cost and effort of experimentation and innovation c. Saves marketers over five hours per week, equivalent to more than a month of working time per year | <ol style="list-style-type: none"> 2. Enhanced visitor experience through consistent content <ol style="list-style-type: none"> a. Improves customer engagement, conversion, and retention through consistent messaging across channels b. Ensures a uniform brand voice, tone, and format |
|--|---|

Source:
<https://www.salesforce.com/news/stories/generative-ai-for-marketing-research/>

Source:
<https://www.mckinsey.com/capabilities/tech-and-ai/our-insights/the-economic-potential-of-generative-ai-the-next-productivity-frontier>

GenAI Marketing and Sales Solutions



Content Creation and Optimisation

1. Addlly AI Enterprise Playground Version 1*
2. Canva
3. CreatifyAI
4. GenAI SEO Writer Version 1*
5. Pebble *



Marketing Strategy and Performance

1. AI Insights Pro*
2. Evam
3. Hubspot Marketing Hub
4. Semrush
5. Trackdesk

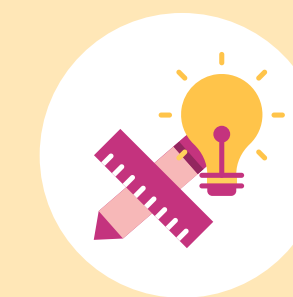
*For more details of PSG-supported solutions: Visit [SMEs Go Digital](#). Non-PSG solutions were top-ranked solutions referenced across software review sites: [G2](#), [Capterra](#), and [Gartner Peer Insights](#).

Do note that the solutions listed above have been categorised according to their primary function, and some solutions may cut across both categories.

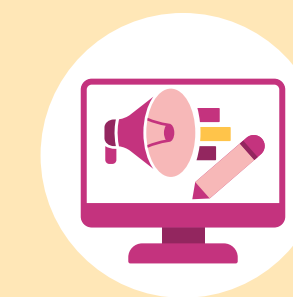
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Upskilling the Workforce

Equip your employees with the following skills to maximise business impact:



Visual Design and Communication Principles



Content Marketing Strategy

Off-the-Shelf Solutions

Customer Relationship Management (CRM)

How GenAI Enhances These Solutions

1. Generates summaries of customer interactions, allowing employees to quickly assess the quality of support and identify areas for improvement.
2. Surfaces actionable insights from CRM data (e.g. customer behaviour, preferences and purchase history) to support employees in segmentation, targeting and decision-making.
3. Helps employees retrieve information from the CRM through natural language prompts, reducing manual search time.

Some CRM solutions also include an in-built GenAI chatbot that can:

- a. Assist employees in providing instant, accurate and personalised answers to customers' queries based on a knowledge base built from internal resources
- b. Automate repetitive tasks (managing notes and call logs/searching for records)

Potential Impact

1. **Improved data analytics**
 - a. Drives a 15–20% improvement in customer satisfaction and a 5–8% increase in revenue
2. **Improved productivity**
 - a. Enables employees to focus on higher-value work such as engaging customers and closing sales

3. Enhanced visitor experience through an increase in customer value, attraction, conversion and retention:

- a. Enables immediate responses to complex customers enquiries, reducing reliance on email or live chat support
- b. Ensures consistent communication across all customer touchpoints
- c. Improves conversion and retention through data-driven campaigns that address customer pain points

Source:
<https://www.mckinsey.com/capabilities/growth-marketing-and-sales/our-insights/next-best-experience-how-ai-can-power-every-customer-interaction>

GenAI CRM Solutions

- | | |
|----------------------|----------------------------|
| 1. ActiveCampaign | 7. Hubspot CRM |
| 2. Bigin by Zoho CRM | 8. Pepper Cloud CRM |
| 3. Capsule CRM | Version 14.0 |
| 4. Close | (AI Plus Plan)* |
| 5. CRMOne | 9. Pipedrive |
| 6. EngageBay | 10. Salesforce Sales Cloud |

**For more details on PSG-supported solutions: Visit [SMEs Go Digital](#). Non-PSG solutions were top-ranked solutions referenced across software review sites: [G2](#), [Capterra](#), and [Gartner Peer Insights](#).*

Do note that this list is non-exhaustive and is intended for reference only; it does not constitute an endorsement by STB of any of the listed products. Businesses are encouraged to conduct their own due diligence to ensure a solution's features, reliability and security standards are the perfect fit.

Upskilling the Workforce

Equip your employees with the following skills to maximise business impact:



**Consumer
Intelligence
Analysis**



**Customer
Service
Innovation**

Prioritising Industry-Specific Use Cases

Augment key industry-specific operations through AI to achieve greater productivity and enhanced visitor experiences.

Hotels

AI-enabled Digital Concierge

Smart digital assistants that help guests book hotel services, restaurants and activities based on their preferences. These systems integrate with hotel platforms to manage requests automatically – from reservations to room service – while keeping guests informed and enabling staff to manage tasks more efficiently.

AI-enabled Hotel Robots

Smart robots that support hotel operations such as room service delivery, concierge duties, and security monitoring. Equipped with AI, they can navigate hotel environments safely, interact with guests naturally, and integrate with hotel management systems to ensure efficient service delivery.

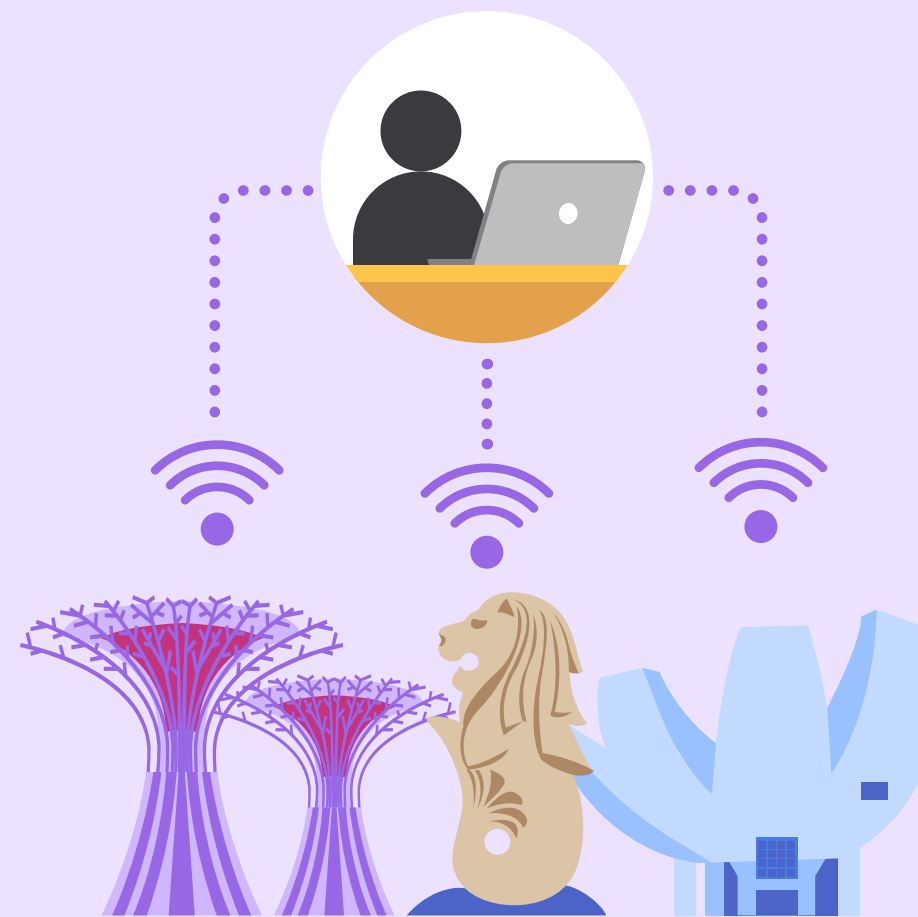


For more information:
<https://go.gov.sg/hotelindustrydigitalplan>

Attractions

Mechanical Exhibits and Systems Monitoring

AI-powered platforms that monitor exhibit and system performance in real time. By analysing data from sensors, these systems can predict potential equipment failures and provide diagnostic insights to staff, enabling timely maintenance.



For more information:
<https://go.gov.sg/attractionsindustrydigitalplan>

Meetings, Incentives, Conferences, and Exhibitions (MICE)

AI Proposal Builder

AI-enabled proposal generator that creates customised and branded business proposals, improving turnaround time.

Lead Management Software

A software that streamlines sales processes – from pipeline tracking and lead optimisation – to enable staff to dedicate more time to build rapport and close deals.

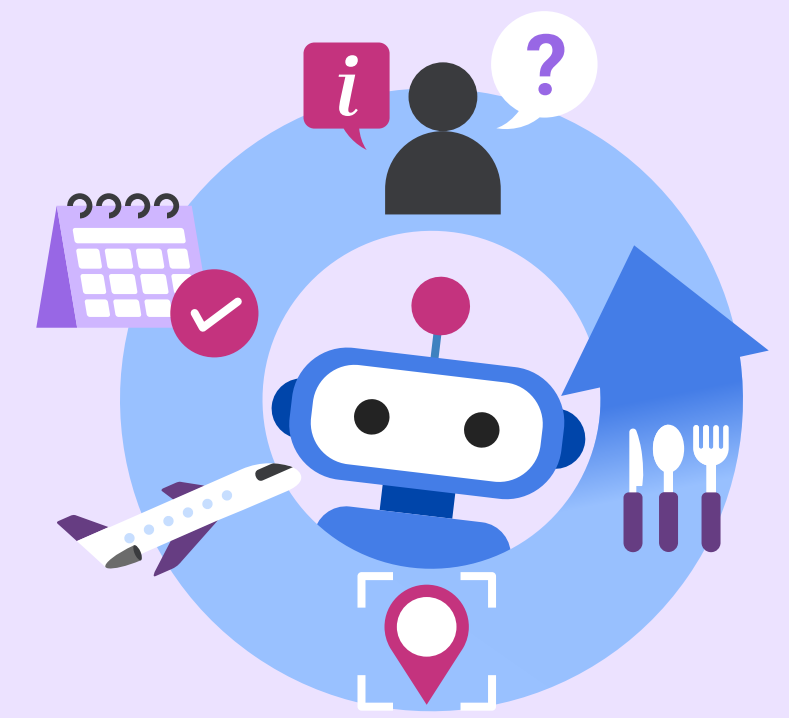


For more information:
<https://go.gov.sg/miceindustrydigitalplan>

Travel Agents

AI-enabled Travel Management System (TMS)

AI-enabled systems that streamline itinerary planning by generating personalised travel plans based on customer preferences, budgets, and past behaviour. These systems can also automate routine tasks such as handling enquiries and reporting, enabling faster response times and allowing staff to focus on higher-value customer engagement and business development.



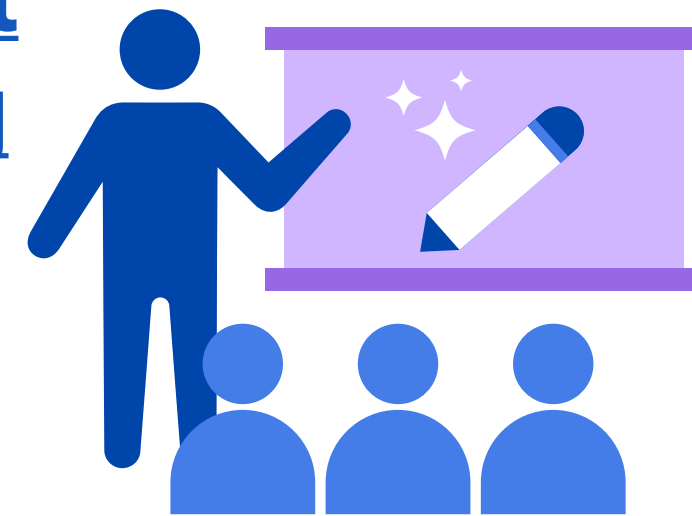
For more information:
<https://go.gov.sg/travelagentindustrydigitalplan>

Leveraging Government Programmes and Support

Drive business growth and operational excellence by harnessing government resources, training initiatives, programmes, and grants tailored to navigate the complexities of your AI journey.

Capability Development and Manpower Training

Build a future-ready workforce by equipping your team with the skills needed to adopt AI. Leverage a suite of courses, training programmes, and career conversion pathways to ensure staff can effectively use AI tools and manage new digital workflows that support business transformation.



Grants

De-risk your digital investment through funding support. Grants can help offset the costs of third-party consultancy, software, and hardware required to implement productivity-enhancing technologies, enabling businesses to adopt AI with greater financial confidence.

Programmes and Workshops

Accelerate innovation and adoption by participating in programmes designed to de-risk technology adoption. These initiatives help bridge the gap between concept and implementation, offering tailored consultancy and opportunities to prototype and test new ideas.



Guidelines and Playbooks

Navigate your AI journey with roadmaps and governance framework. Access step-by-step guides that outline technical and ethical considerations that best fit your business. These guides consist of impactful use cases and guardrails that aim to help you build a secure, resilient environment while managing adoption risks.

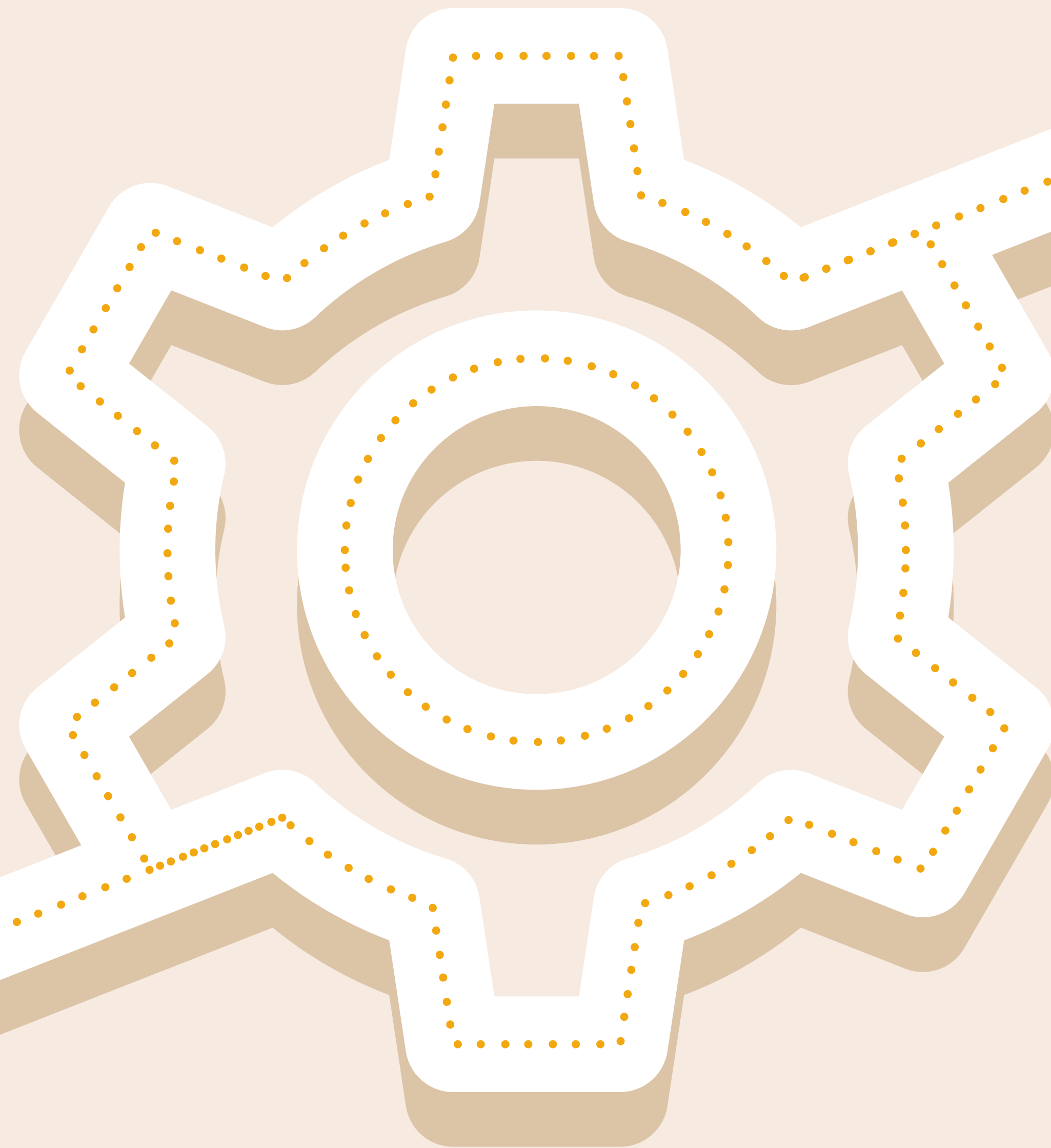




Empowering you to transform your business
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ANNEX: CONSIDERATIONS FOR AI ADOPTION



There are six possible considerations for AI adoption. Tourism businesses can focus on those that will be most relevant to their business and the phase they are at in the AI roadmap.



1 Identify the Business Problem

Identify where AI can deliver the greatest value by first gaining a clear understanding of your organisation's current workflows, challenges, and strategic priorities. To realise the full potential of AI, your organisation may need to rethink and redesign existing processes.



Essential Steps

1. Map current workflows to identify friction points where AI could add value.
2. Prioritise use cases based on potential impact and ease of implementation.
3. Estimate the expected ROI for each AI initiative (cost savings, revenue increase, efficiency gains).
4. Define measurable success metrics, such as conversion rates, customer satisfaction scores, or operational cost reductions.

Potential Tourism Applications

1. Dynamic pricing optimisation to improve revenue by ~20%.
2. Automated customer service to reduce response times by 80%.
3. Predictive maintenance to minimise operational disruptions.

Source:

<https://www.hospitalitynet.org/opinion/4128912.html>

Action Items

Start with one pain point, implement a pilot, and measure results before scaling solution to other areas.



2

Data Readiness and Knowledge Architecture

Assess your organisation's current data capabilities, ensure data is accurate and consistent, and establish clear governance practices. Successful AI implementation depends on robust data collection and management systems.



Non-Exhaustive List of the Data to Collect

1. Guest details (names, emails, booking history, preferences, and special requests)
2. Business metrics (daily occupancy, pricing that works, response times, marketing results)
3. Guest feedback (reviews, social media comments, complaints, and compliments)

Keep Your Data Clean

1. Establish data cleansing processes to ensure accuracy and consistency e.g. remove duplicate records.
2. Ensure standardised data formats across all systems.

Protect Guest Information with Proper Data Governance

1. Ensure clear data ownership and accountability.
2. Implement data access controls, i.e. ensure staff only have access to the data they need for their roles.
3. Ensure compliance with data protection regulations e.g. clear and transparent communication to guests regarding what data is collected, why it is collected and how it is used.

Action Items

Focus on collecting high-quality data, maintaining clean and standardised records, and clearly defining data ownership and access.



3 Technology and Architecture Decisions

Assess whether your organisation's existing systems (e.g. PMS, CRM, booking platforms) already have built-in AI capabilities before investing in new tools. If not, evaluate the complexity and cost of integration. Choose solutions that align with your current setup and scale with your organisation's needs.



Start with Built-in AI Features

Some PMS, CRM and marketing platforms already include AI capabilities (e.g. drafting responses to guest enquiries, generating marketing content, and analysing customer reviews). Your organisation should activate and test these before adopting new tools.

Integrate AI into Existing Systems

Where possible, connect AI tools to your booking systems, CRM, or PMS through Application Programming Interfaces (APIs) to support and automate tasks (e.g. responding to enquiries, personalised marketing, generating customer insights).

- Ideal for: Businesses with existing IT infrastructure and/or development capabilities

Buy Off-the-Shelf AI Tools for Quick Wins

Adopt ready-made solutions such as GenAI chatbots, marketing copilots or tools that analyse guest reviews and feedback. These can improve productivity and customer engagement with minimal setup.

- Ideal for: Small to mid-sized operators (Hotels, tour companies, travel agencies with limited IT infrastructure)

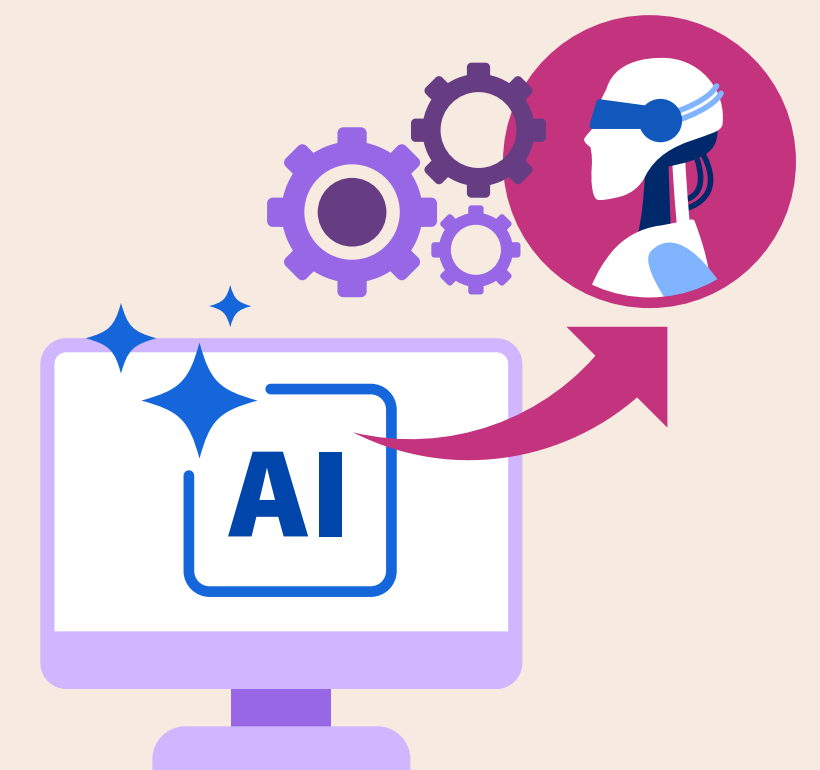
Build or Partner for Differentiated Capabilities

Develop custom AI solutions, often with technology partners to deliver capabilities beyond what off-the-shelf tools can offer.

- Ideal for: Businesses requiring more advanced or specialised AI capabilities

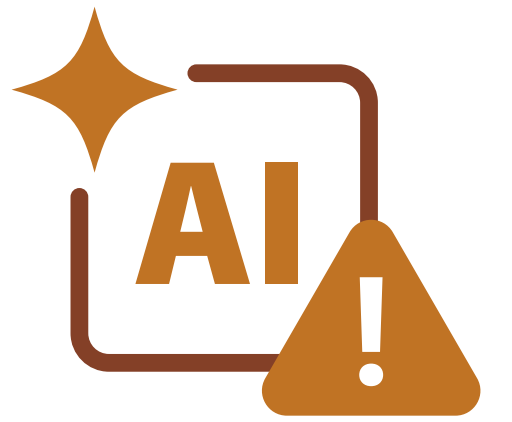
Action Items

Prioritise quick wins using existing and off-the-shelf tools, then scale through integration, custom development, or partnerships.



4 Governance, Risk, and Responsible Use of AI

Establish clear governance for AI by implementing frameworks, policies and safeguards to ensure its responsible, ethical and safe use – whether in building, buying or partnering for solutions. Adopting recognised frameworks, such as the Model Governance Framework for GenAI by IMDA and AI Verify Foundation can help your organisation manage risks while confidently leveraging the technology's benefits.



In addition to adopting a governance framework, businesses should consider the following risks and key considerations:

Risk of Data Privacy and Confidential Information Exposure

Uploading sensitive customer or business data (e.g. bookings details, payment information) into public AI tools may lead to unintended exposure, as the data could be stored, processed, or shared beyond the intended recipients.

Risk of Copyright or Intellectual Property Infringement Issues

GenAI tools can generate marketing text, images or promotional materials. However, some outputs may resemble copyrighted or protected content. If used publicly (e.g. in marketing campaigns, brochures or social media), it could lead to legal or reputational risks.

Inaccurate or Hallucinated Responses

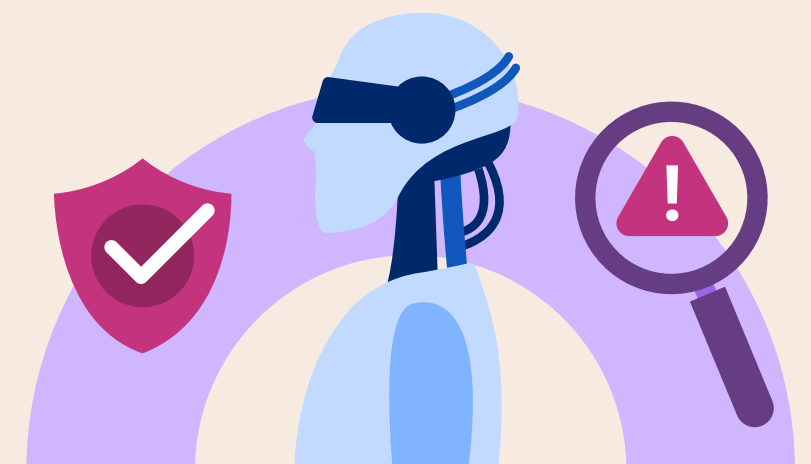
GenAI tools may produce responses that appear credible but are incorrect, distorted, or biased. This occurs because outputs are generated based on patterns in training data rather than verified facts. In the tourism context, this may result in inaccurate information being shared with visitors (e.g. opening hours, ticket prices, tour details, or policies).

Protecting Data with Appropriate Infrastructure and Hosting Requirements

When building solutions, tourism businesses should consider the nature and sensitivity of the data involved, and select the most appropriate infrastructure and hosting environments. For example, handling sensitive personal data (e.g. passport numbers, payment information) may require the data to be hosted locally to reduce the risk of data breaches.

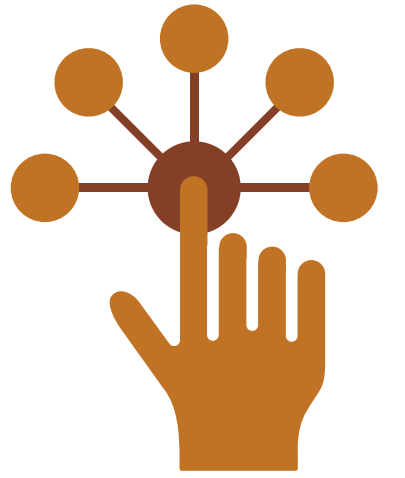
Action Items

Adopt established AI frameworks such as the Model Governance Framework for GenAI by IMDA and AI Verify Foundation to guide responsible use, and implement clear risk management and mitigation controls.



5 Interoperability and Future-Proofing

Recognise that your organisation may rely on multiple systems, such as booking engines, PMS, CRM, ticketing platforms, or POS systems. If AI tools cannot connect to these systems, staff may need to manually transfer information between platforms, reducing productivity and limiting future AI use cases.



Ensure the AI Tool Integrates with Your Existing Systems

Check with vendors whether their solution can connect to systems your organisation already use (e.g. PMS, booking engine, CRM, ticketing platform). Integration enables access to relevant information such as bookings, availabilities, product details and customer enquiries.

Choose Solutions That Support Emerging Interoperability Standards (e.g. MCP)

New frameworks such as the **Model Context Protocol (MCP)**¹ enable AI agents to securely connect to different business systems and data sources. Solutions that support such standards will make it easier to connect AI tools to booking systems, knowledge bases and other operational platforms.

Look for Solutions with APIs or Standard Integrations

Tools with APIs allow different systems to share information automatically. For example, a GenAI chatbot connected to your booking system can respond to visitor queries on availability, pricing, or tour schedules without investing staff labour to do manual checks.

Avoid Platforms That Lock in Your Data

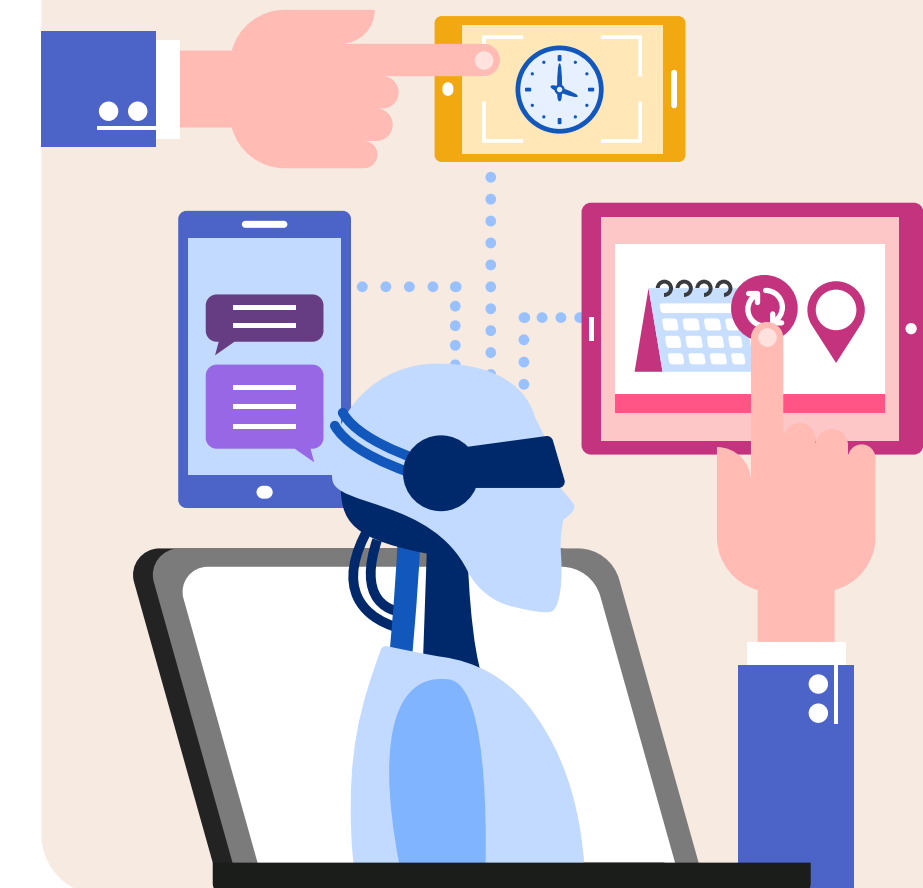
Ensure your data can be exported or connected to other tools. This gives your business flexibility to adopt new systems, integrate additional AI tools, or switch vendors in the future.

Verify Data Security and Compliance

Review the vendor's approach to data protection. This is especially important for businesses handling booking information, personal details or payment information. Ensure the solution meets relevant security and data protection standards.

Action Items

Select solutions that support API connectivity, open standards, and allow you to retain control of your data.



¹MCP helps GenAI work smoothly across different systems by standardising how they connect. Think of APIs as the pipes that link systems together, and MCP as the “brain” that knows how to use those pipes.

6

Change Management and Workforce Adoption

Focus on introducing AI to your organisation gradually, building trust, and embedding it into daily work. The main challenge is often not the technology itself, but whether staff adopt and use it effectively.



Change Management Framework

1. Start with Small, Practical Use Cases Staff Will Value

Introduce AI through simple, everyday tasks, such as drafting replies to customer enquiries, generating marketing captions, summarising reviews, or translating guest messages. Quick wins help demonstrate immediate value and reduce resistance.

2. Pilot Before Scaling

Begin with a focused implementation in one area (e.g. internal operations). Successful pilots build confidence and provide proof points before expanding to other functions.

3. Assign a Tech Lead and/or Internal Champions to Guide Adoption

Appoint or upskill a Tech Lead with AI-related competencies (e.g. data integration, algorithmic modelling) to optimise performance across systems and organisational touchpoints. Identify digitally confident employees or team leads to act as AI champions, supporting colleagues and demonstrating practical ways the technology can enhance day-to-day work.

Workforce Adoption Strategies

1. Reframe Roles – AI as a Copilot, Not a Replacement

Communicate clearly that AI is intended to support staff, not replace them. Provide concrete examples of how roles will evolve, not disappear. For example, GenAI can draft responses or suggest itineraries, while staff review and personalise the final output to ensure accuracy and service quality.

2. Provide Simple Training and Hands-on Practice

Offer short, practical training sessions focused on everyday use cases. Provide sample prompts or templates to help staff get started with confidence.

3. Embed AI into Existing Workflows

Where possible, integrate AI tools into systems staff already use (e.g. CRM, booking platforms). Involve your team in redesigning processes that incorporate AI. Staff who contribute to shaping new workflows are more likely to adopt them, and their frontline experience can help identify practical challenges that may otherwise be overlooked.

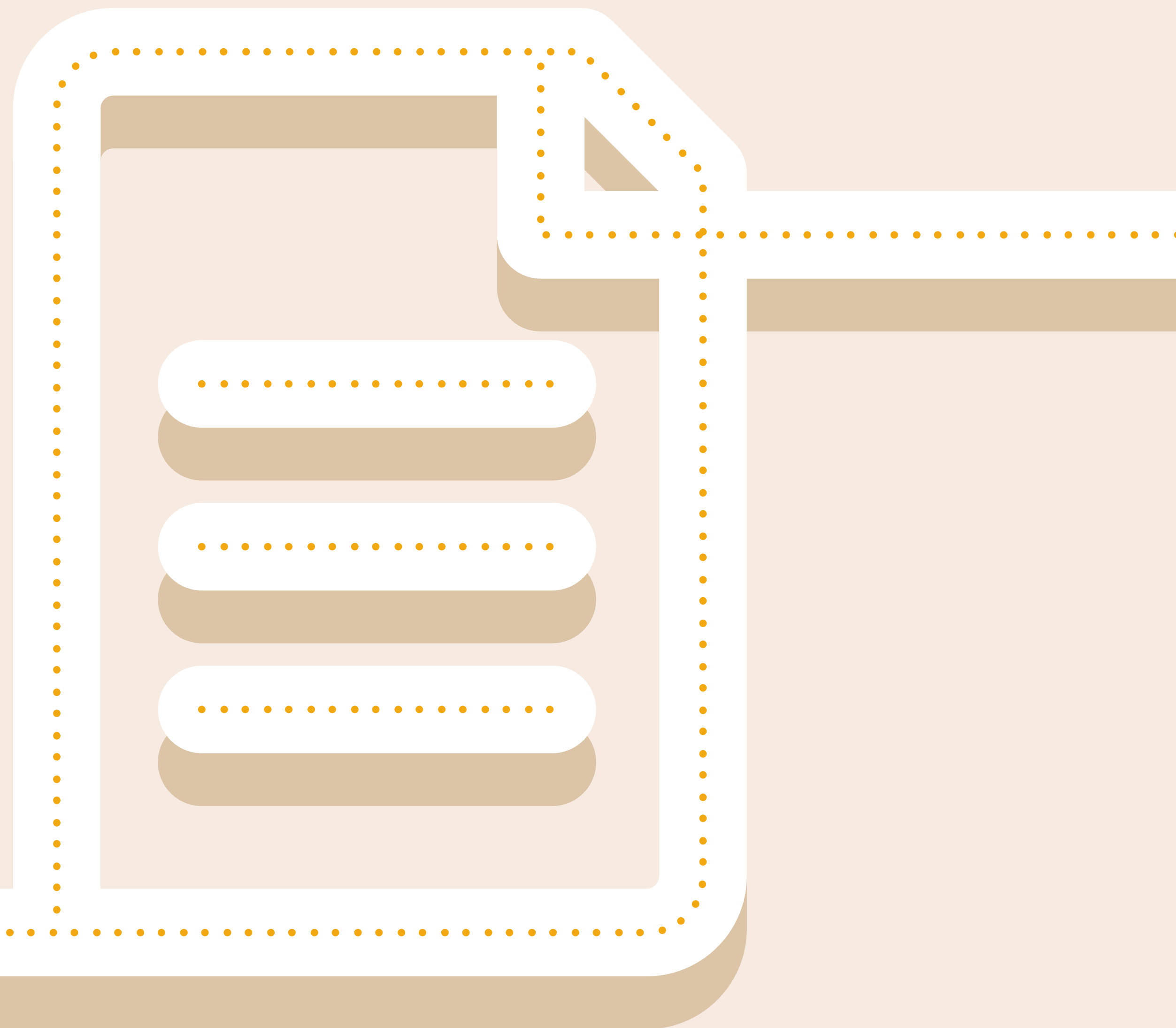
Action Items

Enable your staff through training and support, redesign workflows to incorporate AI, and embed its use into daily operations.





ANNEX: USEFUL RESOURCES



Tourism Technology Transformation Cube (Tcube) Centre of Excellence

A one-stop resource that centralises knowledge, tools, and partnerships to drive digital transformation. Tcube enables tourism businesses to Learn, Test, and Scale solutions that enhance revenue using data analytics, improve productivity, and augment the visitor experience.



LEARN

Inspire the industry through **case studies and events** to show how technology can transform the tourism sector.



TEST

Encourage experimentation by turning industry problem statements into **viable tech pilots**.



SCALE

Deploy **successful use cases** for maximum impact across the industry.

go.gov.sg/stbtcube



Capability Development and Manpower Training

Leverage a suite of courses, trainings and career conversion pathways to ensure staff can effectively use AI tools to support the business transformation.

Courses and Training Programmes	Agency	For More Information
AI Singapore (AISG) provides a comprehensive suite of self-paced courses designed to build AI literacy and technical capabilities across all proficiency levels. From foundational awareness to advanced implementation, these programmes empower participants to confidently adopt and manage AI technologies within the tourism sector.	AI Singapore (AISG)	LearnAI AISG
The TechSkills Accelerator (TeSA) – Pinnacle AI Industry Programme (PAIP) is a high-level initiative that embeds AI talent directly within your organisation to solve complex business challenges. By matching industry partners with AI apprentices and specialists, the programme accelerates the development of proprietary AI solutions while building a sustainable pipeline of advanced in-house technical expertise.	Infocomm Media Development Authority (IMDA)	Pinnacle AI Industry Programme (PAIP) IMDA
The TechSkills Accelerator (TeSA) Company-Led Training (CLT) programme enables companies to recruit and train fresh or mid-career professionals in high-demand areas like AI, data analytics, and software engineering. With salary and training support, the initiative helps tourism businesses build a digital workforce tailored to their technical and operational needs.	Infocomm Media Development Authority (IMDA)	Company-Led Training Programme (CLT) IMDA
SkillsFuture Enterprise Credit (SFEC) offsets out-of-pocket costs for supported enterprise and workforce transformation programmes and courses. The credit can be applied to a wide range of curated, SkillsFuture-funded GenAI courses and digital transformation programmes.	Enterprise Singapore (EnterpriseSG) and SkillsFuture Singapore (SSG)	SkillsFuture Enterprise Credit (SFEC) EnterpriseSG & SSG
The Career Conversion Programme for Tourism Professionals (CCP-TP) provides companies with salary support to train new hires and reskill existing workers for emerging roles within the tourism sector, including Hotels, MICE, Attractions, and Tour and Travel agencies.	Workforce Singapore (WSG)	Career Conversion Programmes (CCPs) WSG
The Tourism Leadership Excellence & Advancement Programme (T-LEAP) is a leadership development programme that equips participants with advanced skills in strategic planning, problem-solving, and technology integration. Through dynamic workshops, industry-focused case studies, and expert mentorship, participants learn how to leverage data, drive sustainable practices, and lead teams with confidence in a rapidly evolving environment.	Singapore Tourism Board (STB)-supported	Tourism Leadership Excellence & Advancement Program (T-LEAP) EHL
NTUC LearningHub supports organisations in building practical AI capabilities through a structured 6-level framework (Pre-AI Adoption, AI Unaware, AI Aware, AI Ready, AI Competent and AI Governance). Its curated courses range from AI fundamentals to advanced workflow automation. Programmes include driving AI strategy, marketing with AI tools and skills to strengthen AI implementation capabilities.	Singapore Tourism Board (STB)-supported	AI-Ready SG for Tourism NTUC LearningHub



Programmes and Workshops

Accelerate innovation and adoption by participating in programmes designed to de-risk technology adoption.

Programmes and Workshops	Agency	For More Information
Privacy Enhancing Technology (PET) Sandboxes provide a secure environment for tourism businesses to pilot data-sharing projects without compromising personal or sensitive information. By using advanced techniques like de-identification and synthetic data, businesses can derive high-value insights and train AI models while ensuring compliance with data protection standards.	Infocomm Media Development Authority (IMDA)	Privacy Enhancing Technology Sandboxes IMDA
The Digital Leaders Programme (DLP) is designed for digitally mature tourism enterprises seeking to accelerate transformation by building strong, in-house technical capabilities. It supports leadership teams in developing strategic digital roadmaps, hiring specialised talent (e.g. AI engineers), and executing high-impact initiatives that drive revenue growth and operational excellence.	Infocomm Media Development Authority (IMDA)	Digital Leaders Programme IMDA
The Digital Leaders Accelerator Bootcamp is a modular, hands-on initiative run in partnership with global consultants. Specifically targeting C-suite executives to move beyond AI pilots, the bootcamp provides expert coaching to design and implement “AI Confidence Projects” that deliver measurable business outcomes.	Infocomm Media Development Authority (IMDA)	Digital Leaders Programme IMDA
The Enterprise Compute Initiative is designed to support Singapore-based companies in advancing AI transformation by providing access to cloud credits, tools, and consultancy services. It enables businesses to develop Minimum Viable Products (MVPs) and implement effective change management strategies.	Digital Industry Singapore (DISG)	Enterprise Compute Initiative DISG
The Advanced Digital Solutions (ADS) scheme supports the adoption of high-impact, cutting-edge technologies that go beyond basic digitalisation. It offers up to 70% funding for integrated solutions such as AI-powered robotics, IoT-enabled building management systems, and advanced data analytics.	Infocomm Media Development Authority (IMDA)	Advanced Digital Solutions IMDA



Grants

These schemes bridge resource gaps, enabling businesses to adopt AI with greater financial confidence.

Grants	Agency	For More Information
STB is committed to partnering with the industry to drive innovation and resilience. Through the Tourism Development Fund (TDF) , businesses can access three main schemes designed to enhance competitive advantages and transform operations. Explore how the Business Improvement Fund (BIF) helps tourism businesses boost productivity and competitiveness by funding projects that redesign business processes, adopt digital solutions or implement sustainability initiatives across the tourism sector.	Singapore Tourism Board (STB)	Business Improvement Fund (BIF) STB
Training Industry Professionals in Tourism (TIP-iT) supports manpower development by enabling tourism businesses to build on existing and new capabilities. This includes upskilling employees and developing new competencies to improve operational efficiency and visitor experience	Singapore Tourism Board (STB)	Training Industry Professionals in Tourism STB
The Enterprise Development Grant (EDG) specifically supports small and medium-sized enterprises (SMEs) in upgrading, innovating and growing their business. By co-funding project costs, the grant supports projects that help businesses upgrade under three main categories: • Core Capabilities • Innovation & Productivity • Market Access	Enterprise Singapore (EnterpriseSG)	Enterprise Development Grant EnterpriseSG



Guidelines and Playbooks

Access step-by-step guides designed to identify technical and ethical considerations that best fit your business.

Guides, Playbooks, and Discovery Portals	Agency	For More Information
The IMDA GenAI Navigator is an interactive guide that helps tourism businesses identify high-impact AI use cases tailored to their specific operational needs.	Infocomm Media Development Authority (IMDA)	GenAI Navigator IMDA
The IMDA GenAI Playbook is a comprehensive guide for enterprises seeking to implement GenAI to transform business operations and remain competitive. It covers essential fundamentals, practical use cases, and key implementation factors, providing a structured approach to unlocking the technology's potential.	Infocomm Media Development Authority (IMDA)	Generative Artificial Intelligence (GenAI) Playbook for Enterprises IMDA
The Hotel Jobs Transformation Map (JTM) provides insights into how emerging technologies are reshaping specific roles within the tourism and hospitality sectors, particularly in data and technology-related roles that support AI adoption. It serves as a detailed guide for employers to identify evolving skill requirements, enabling proactive workforce planning and the job redesign. The emerging skills may also be relevant across other tourism sectors.	Workforce Singapore (WSG)	Jobs Transformation Map: Hotel Industry WSG
CSA's Guidelines and Companion Guide on Securing AI Systems provide a comprehensive framework to help organisations identify and mitigate security risks unique to AI, such as adversarial attacks and data poisoning. They offer practical guidance for both developers and end-users to ensure AI systems remain secure, resilient, and trustworthy throughout their lifecycle.	Cyber Security Agency of Singapore (CSA)	Guidelines and Companion Guide on Securing AI Systems CSA
The Personal Data Protection Act (PDPA) establishes baseline standards for the protection of personal data in Singapore, governing the collection, use, and disclosure of guest and employee information. Compliance is critical for tourism businesses to build consumer trust and ensure that digital transformation initiatives remain legally robust and guest-centric.	Personal Data Protection Commission (PDPC)	PDPA Overview PDPC

Glossary of Terms

A handy guide to understand common AI-related terms.

Term	Definition
Agentic AI	An AI system that can accomplish a specific goal with limited supervision.
Algorithm	A set of rules or instructions that AI systems follow to process data and make decisions or predictions.
Application Programming Interface (API)	A set of rules and protocols that enables different software applications to communicate with each other to exchange data, features, and functionality.
Artificial Intelligence (AI)	Systems that analyse data and automate specific tasks based on predefined rules or learned patterns.
Cloud Computing	The delivery of computing services over the internet, allowing businesses to access AI tools and store data without maintaining physical servers.
Data Governance	The framework of policies, procedures, and controls that ensure data is managed securely, accurately, and in compliance with regulations while maintaining quality and accessibility.
Generative AI (GenAI)	AI that creates new content such as text, images, code, or audio based on prompts and training data.
Hallucination	A response generated by GenAI that contains false or misleading information presented as fact.

Term	Definition
Interoperability	The ability of different systems or applications to exchange data and use that data effectively.
Large Language Model (LLM)	A type of machine learning model trained on large amounts of text data to understand and generate human language.
Model Context Protocol (MCP)	An open protocol that allows AI applications to connect to external tools, data sources, and systems.
Natural Language Processing (NLP)	A form of AI that allows computers to understand, interpret, and generate human language.
Predictive Analytics	Predicts future outcomes by using historical data combined with statistical modelling, data mining techniques, and machine learning.
Software as a Service (SaaS)	Cloud-based software delivery model where individuals or organisations subscribe to applications rather than purchasing and installing them locally.
Traditional AI	AI that follows pre-programmed rules or learned patterns to perform specific tasks, typically focused on analysis and decision-making.
Training Data	The information used to teach AI systems how to make predictions, recognise patterns or generate content.