

Hotel Industry Digital Plan (IDP)

A guide for enterprises in the Hotel sector to identify opportunities for digitalisation and adopt digital solutions to support their business needs.

An initiative by



SMEs GO DIGITAL

Industry lead



Supported by



Industry TAC



1. Business touchpoints

Explore the key challenges enterprises encounter throughout hotel business operations. Select each challenge below to discover relevant digital solutions.

Front Office

Concierge Services

Constant repetitive guest enquiries 24/7 overwhelm staff and lower service quality and guest satisfaction.

[Chatbots for Customer Engagement >](#)

[Digital Concierge >](#)

Check In/Out Process

Manual check-in/outs cause long queues, guest frustration, and greater compliance risks due to rushed procedures.

[Digital Check-In/Out Integrated with STB's E-Visitor Authentication >](#)

[Digital Check-In/Out with Digital Key Integration >](#)

Luggage Management

Manual tracking causes lost luggage, leading to guest compensation costs and reputational harm.

[Inventory Management & Sales Management System >](#)

[Luggage Tracking >](#)

Luggage Delivery

Delays in luggage handling inconvenience guests and burden staff.

[Single-Use Robots >](#)

[Multi-Use Robots >](#)

[Robots with Robotics Middleware Framework \(RMF\) >](#)



Housekeeping

In-room Controls

Manual room controls raise energy costs and increase staff workload.

[Smart Rooms >](#)

[Smart Rooms with Building Management System \(BMS\) Integration >](#)

Linen Management

Inefficient inventory control can result in linen loss and increased operational costs.

[Inventory Management & Sales Management System >](#)

[Linen Tracking >](#)

Amenities Delivery

Manual delivery of amenities consumes staff resources which cause delays in guest service.

[Single-Use Robots >](#)

[Multi-Use Robots >](#)

[Robots with Robotics Middleware Framework \(RMF\) >](#)

Public Area Cleaning

Relying on manual cleaning increases manpower needs and may impact guests' first impressions.

[Single-Use Robots >](#)

[Multi-Use Robots >](#)

[Robots with Robotics Middleware Framework \(RMF\) >](#)

Food & Beverage

F&B Services

Labour shortages during peak times reduce service quality and limit revenue potential.

[Single-Use Robots >](#)

[Multi-Use Robots >](#)

[Robots with Robotics Middleware Framework \(RMF\) >](#)

Waste Management

Unmonitored food and beverage waste can reduce profit margins and undermine sustainability objectives.

[Food Waste Tracker with Demand Forecasting >](#)

[Food Waste Valoriser >](#)

Engineering

Equipment Management

Manual room and equipment management can result in increased maintenance issues, higher utility expenses, and reduced guest satisfaction.

[Smart Rooms >](#)

[Smart Rooms with Building Management System \(BMS\) Integration >](#)

Energy Tracking

Manual sustainability tracking hampers ESG compliance and green certification efforts.

[Carbon Management Solution >](#)

Security



Surveillance

Manual patrols can result in security gaps and increase safety and liability risks.

[Single-Use Robots >](#)

[Multi-Use Robots >](#)

[Robots with Robotics Middleware Framework \(RMF\) >](#)

Corporate

Guest Data Management

Fragmented guest data limits personalised service and targeted marketing opportunities.

[Customer Relationship Management >](#)

Sales & Marketing

Manual content creation slows speed-to-market and limits revenue opportunities.

[Marketing & Sales Content Generation >](#)

Workforce Planning

Inefficient staff allocation can lead to service gaps and increased overtime expenses.

[Human Resource E- Scheduling System >](#)

[Dynamic Manpower Scheduling >](#)

Accounting

Manual financial reconciliation may increase audit risks and delay access to important business information and insights.

[Accounting Management & Sales Management System >](#)

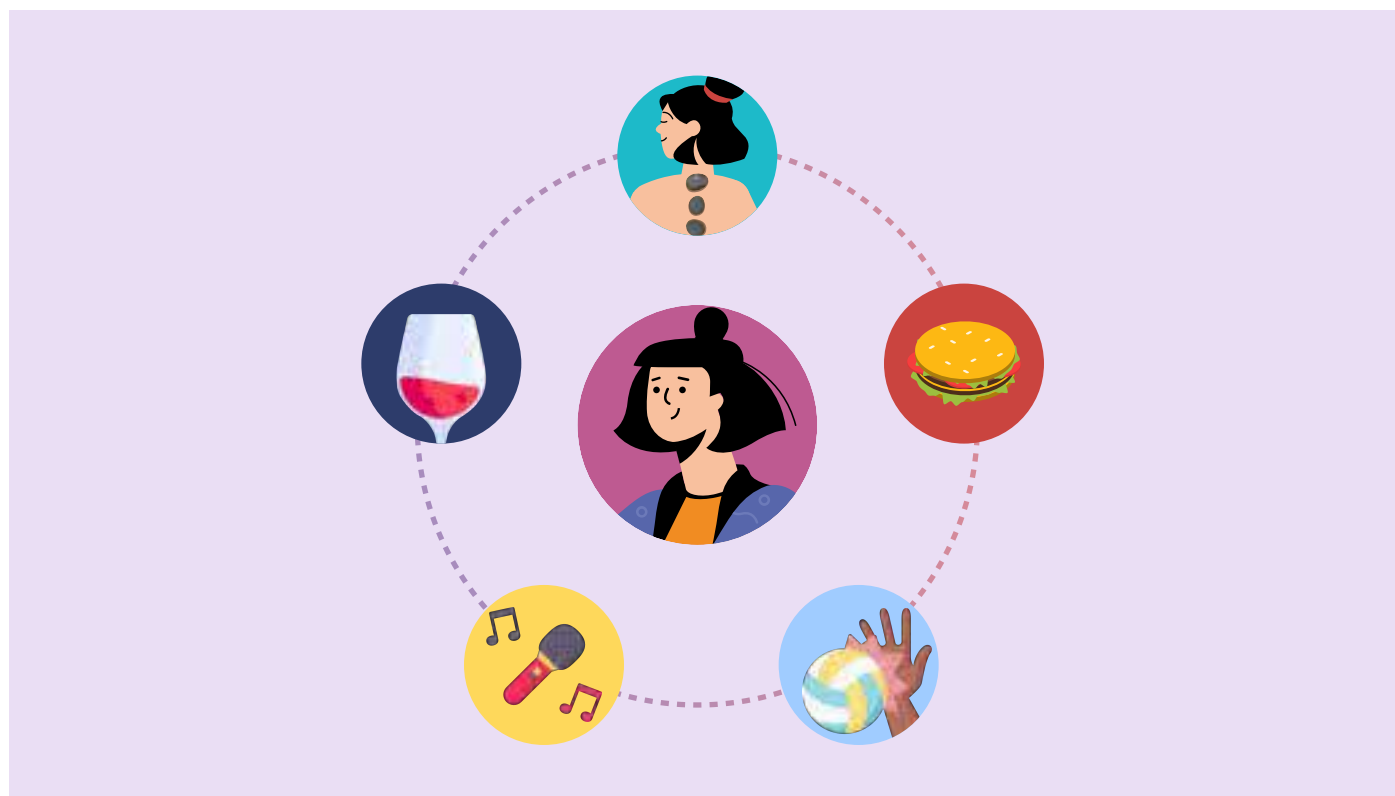
[Robotics Process Automation \(RPA\) for Finance >](#)



2. AI for Hotel

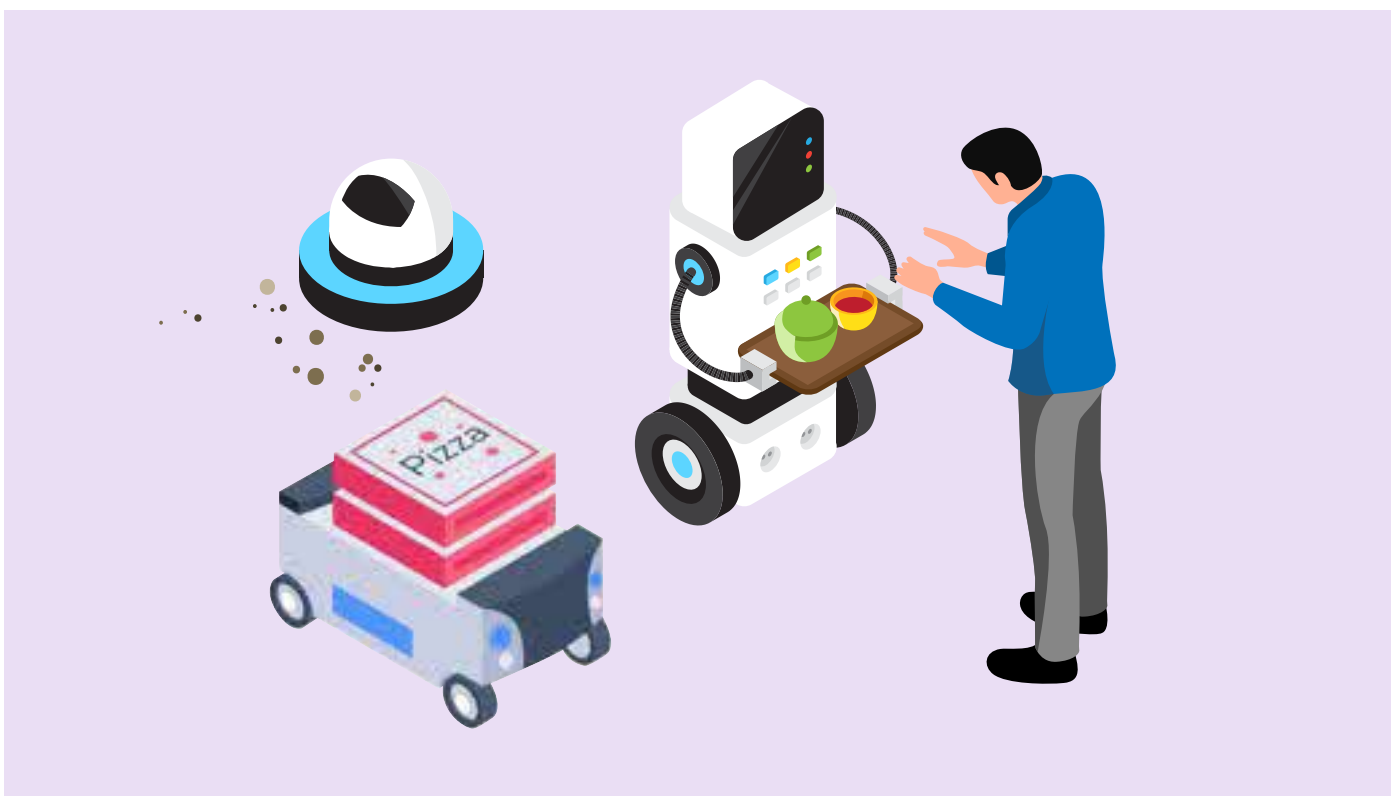
AI and Generative AI (GenAI) help elevate guest experience, improve operational efficiency, and accelerate business growth.

Guest Facing AI solutions



AI enabled Digital Concierge

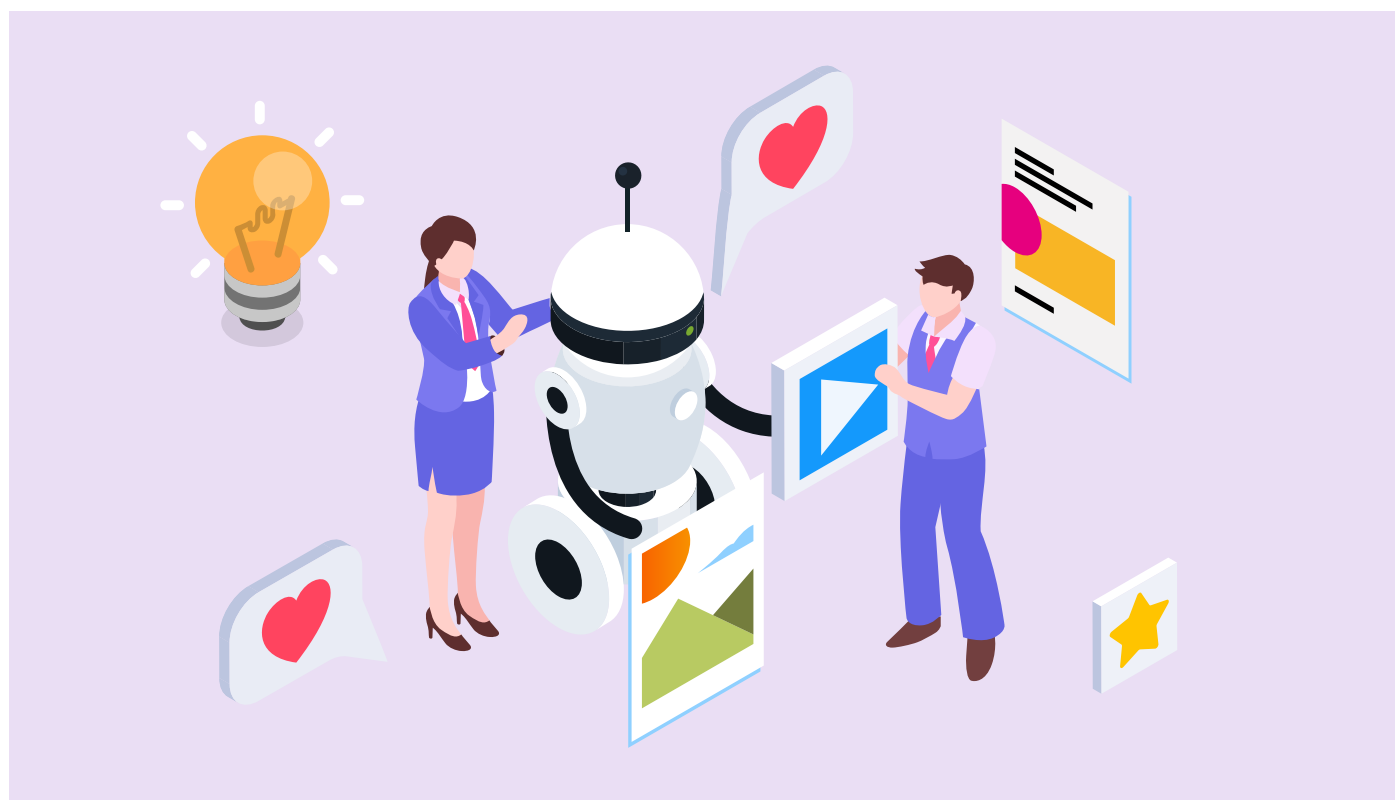
Smart digital assistants that help guests book hotel services, restaurants and activities based on their preferences. Connects with hotel systems to handle requests automatically – from dinner reservations to room service – while keeping guests updated. Helps hotel staff manage tasks efficiently.



AI enabled Hotel Robot

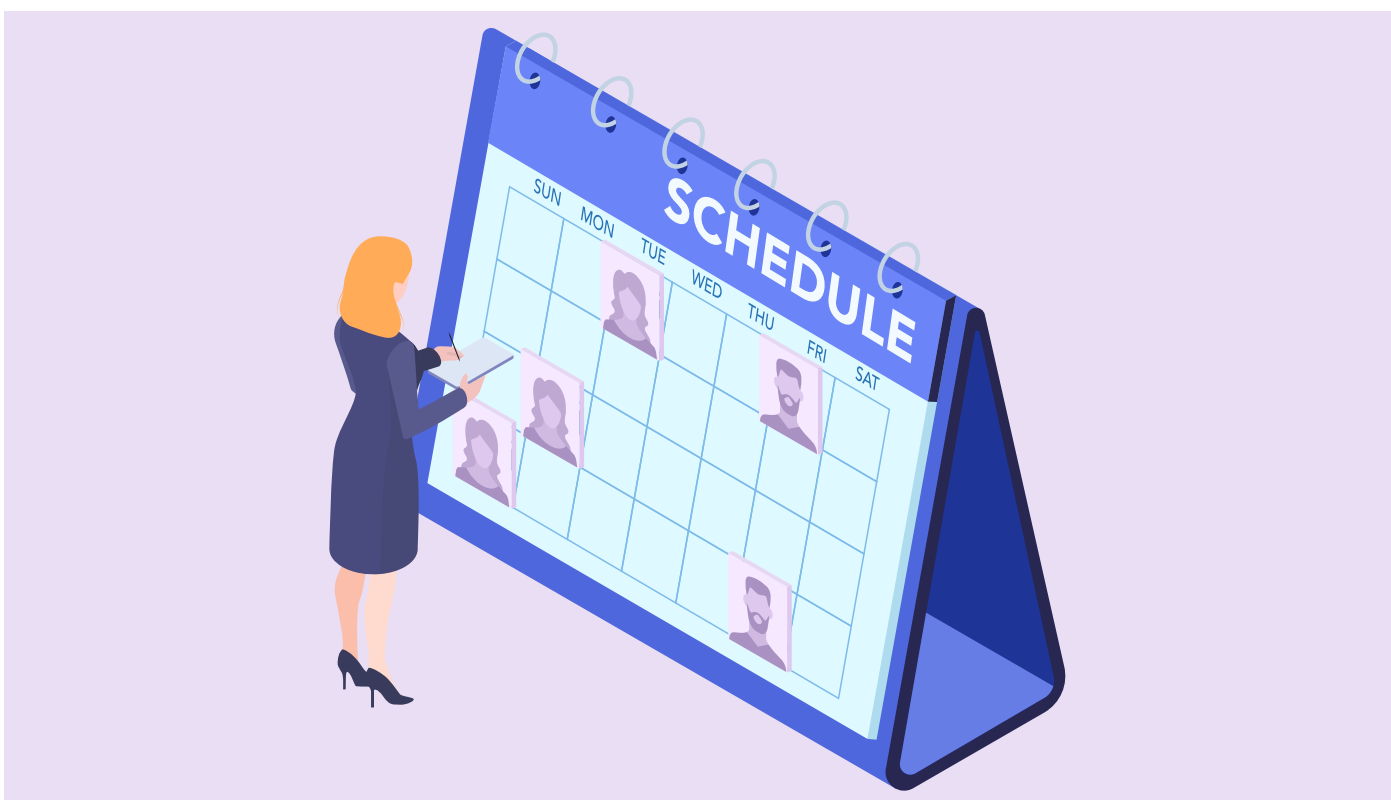
Smart robots that assist with hotel operations like room service delivery, concierge duties, and surveillance. Equipped with AI to navigate hotel spaces safely, interact with guests naturally, and connect directly with the hotel's management system for efficient service delivery.

AI for Corporate Functions



GenAI enabled Content Generation

Instantly create tailored hotel marketing content (room descriptions, promotions, packages) customised for different guest segments like business travelers, families, and luxury seekers. Helps hoteliers deliver targeted campaigns that match guest preferences and booking behaviours.



AI Dynamic Manpower Scheduling

Smart scheduling system that uses hotel data to optimise staff rosters. Predicts staffing needs based on occupancy, peak periods, and service demands, while considering staff skills and availability. Helps hotels maintain service standards and reduce costs by ensuring the right number of staff are deployed at the right time.

3. Cybersecurity and Data Protection Roadmap

What do you or your employee need to know to protect your company?



Assets

Ensure employees practise good cyber awareness, including choosing strong passphrases for access to their environment.



Secure/Protect

Review employees' or third party partners' access into their environment.

Ensure the authentication is sufficiently robust.



Update

Perform regular software updates to prevent attackers from getting into your network through software vulnerabilities.



Backup

Have regular backups of critical business data stored separately.

This allows the recovery of lost data.



Respond

The top cybersecurity incidents in construction are ransomware, cloud misconfiguration and social engineering.

Develop an incident response plan to prepare for these common incidents.

This roadmap serves as a guide to introduce SMEs to cybersecurity and data protection measures at each of the three stages of growth. For more information, please refer to CSA [SG Cyber Safe programme](#), [Data Protection Essentials \(DPE\)](#) and [Data Protection Trustmark \(DPTM\)](#).

Cybersecurity		Data Protection	
As the company increases its level of digitalisation		As the company increases its collection and use of personal data	
Cyber hygiene measures for protection against common attacks		Basic data protection and security practices to protect clients' personal data & recover quickly from a data breach	
 Cybersecurity Toolkits	>	 Data Protection Essentials (DPE)	>
 Cyber Essentials	>		
 Cybersecurity Solutions	>		
 CISO-as-a-Service cybersecurity consultants	>		
Risk assessment to assess if cybersecurity measures commensurate with enterprise risk profile		Accountable data protection practices to demonstrate compliance with the PDPA	
 Cyber Trust	>	 Data Protection Trustmark (DPTM)	>
 Cybersecurity Solutions	>		

4. Get Started Today

CTO-as-a-Service is a one-stop self-help platform that allows your company to identify digitalisation needs, access market-proven solutions and engage digital consultants for customised advice.



Take a 5-minute Digital Health Check to see if you are digitally-ready

Answer a few simple questions to receive recommendations on the right digital solutions, grants and support based on your business profile.

[Start now](#)



Looking for digital solutions with grants or support

Browse over 400 digital solutions and software with grants or support eligible for small and medium enterprises (SMEs).

[Start now](#)

Additional support

Explore hotel-specific solutions supported by Business Improvement Fund for hotels, an initiative by the Singapore Tourism Board.

[Learn more](#)



Digital Consultancy

Get complimentary Digital Consultancy and project management support to grow your business.

[Get Started](#)

Get Inspired!

Check out how some SMEs have successfully grown their business through digitalisation and keep up with the latest updates.

[Learn More](#)

5. Additional Information

Other references and valuable insights for you to get to know the sector better.

For SMEs

Business Advisory and Digital Consultancy

SME Centres managed by Trade Associations

- [Association of Small and Medium Enterprises \(ASME\)](#) >
- [Singapore Chinese Chamber of Commerce & Industry \(SCCCI\)](#) >
- [Singapore Indian Chamber of Commerce & Industry \(SICCI\)](#) >
- [Singapore Malay Chamber of Commerce & Industry \(SMCCI\)](#) >
- [Singapore Manufacturing Federation \(SMF\)](#) >

Cybersecurity and Data Protection

[CSA SG Cyber Safe Programme](#) >

[Cyber Essentials](#) >

[Cybersecurity Toolkits](#) >

[Cyber Trust](#) >

[Better Data Driven Business](#) >

[Data Protection Essentials](#) >

[Data Protection Trustmark](#) >

Industry Programmes and Resources

[Best Practices for Implementing Digital Check-in & Check-out Solutions](#) >

[Hotel Transformation Journey Playbook](#) >

[Tourism Sustainability Programme](#) >

[WSG Job Redesign Support](#) >

Industry Stakeholders

[Singapore Hotel Association \(SHA\)](#) >

For Individuals

Capability Upgrading

[SkillsFuture for Digital Workplaces \(SFDW\) 2.0](#) >

[SkillsFuture Series](#) >

[MySkillsFuture Course Directory](#) >

[WSG's Career Connect](#) >

[e2i Career Centres](#) >

For ICM Vendors

[Vendors Self-Assessment Checklist](#) >