



DIGITAL TRANSFORMATION IN HALAL



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ICCIA HOLDING LIMITED

The Islamic Chamber Holding Company (ICCIA Holding) was established by the Islamic Chamber of Commerce and Development (ICCD) in November 2022 in the United Kingdom. The company's structure is designed to support its role as the ICCD's investment arm, aligned with its broader strategic goals.

The primary mission of ICCIA Holding is to implement sustainable investment projects that achieve both financial and social returns.

It seeks to meet the needs of middle-class populations while adhering to Environmental, Social, and Governance (ESG) principles and advancing the United Nations Sustainable Development Goals (SDGs). This approach is neither purely charitable nor entirely profit-driven, striking a balance between generating value for investors and contributing to social progress.

ABOUT ICCIA HOLDING PUBLICATION

The ICCIA Holding Publication is issued regularly, featuring a rich content of showcases, market trends, industry insights, and analytical reports. It serves as an essential tool for business professionals seeking to stay ahead in today's markets. Additionally, each edition highlights investment and collaboration opportunities through dedicated promotional pages.

As part of our role in supporting businesses and enhancing trade among companies globally, this edition is dedicated to the Halal Investment Landscape in London.

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ICCIA HOLDING PUBLICATION



Publication - Islamic Chamber Holding Company

DIGITALISATION IN HALAL INDUSTRY

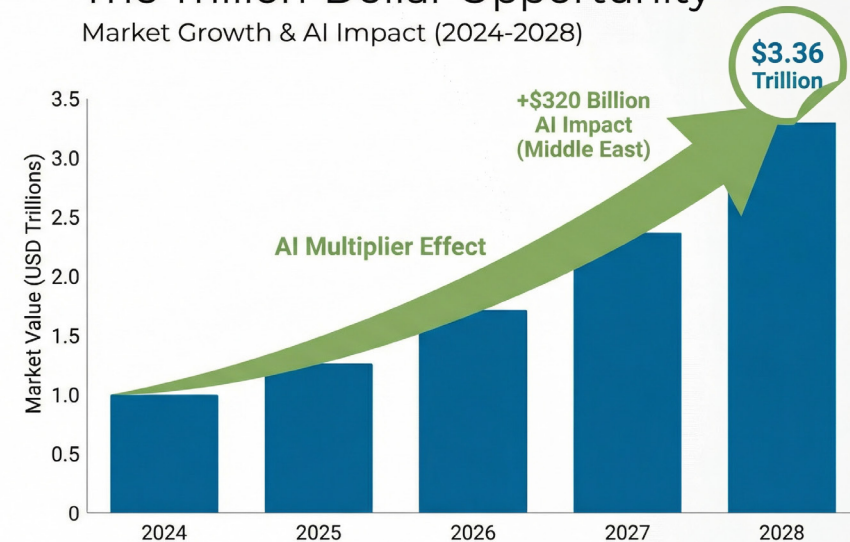
In the contemporary digital landscape, the concept of Halal extends beyond traditional food and beverage sectors to encompass the digital domain. It increasingly influences how businesses operate, communicate, and engage with their target audiences. Halal digital solutions refer to ethical practices and technological strategies that align with Islamic principles while addressing the needs of Muslim consumers.

Innovations such as digital halal certification platforms and blockchain-based traceability systems are transforming how halal integrity is monitored and maintained. This shift marks the emergence of a new digital era for the halal industry, characterized by automation, connectivity, and intelligent systems. Technology is now enhancing every stage of the halal value chain, from certification and supply-chain management to consumer engagement and trust-building.

INTRODUCTION

The Trillion-Dollar Opportunity

Market Growth & AI Impact (2024-2028)



The global demand for halal products and services continues to grow significantly, with the State of the Global Islamic Economy (SGIE) Report 2024/2025 projecting the market to reach US\$3.36 trillion by 2028. As the halal industry evolves, digital technologies are playing a pivotal role in modernizing certification processes, improving transparency, and creating new avenues for expansion.

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٤ Data Analysis and Consumer Insights

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٥ Challenges of Automation in Halal Industry

Key barriers to adopting automation and Industry in the halal sector

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ARTIFICIAL INTELLIGENCE (AI) IN ISLAMIC ECONOMY

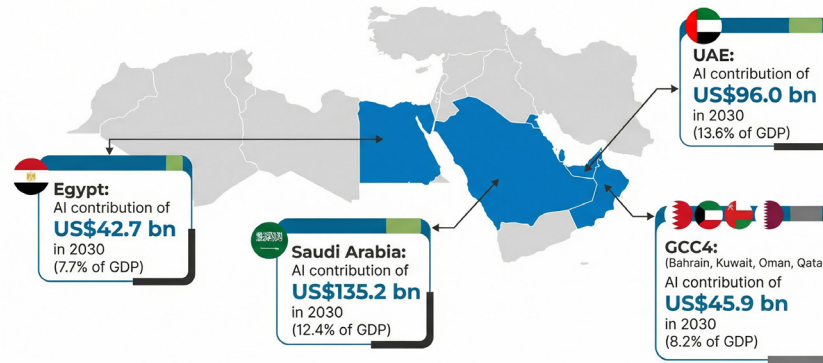


ARTIFICIAL INTELLIGENCE (AI) ROLE IN ISLAMIC ECONOMY

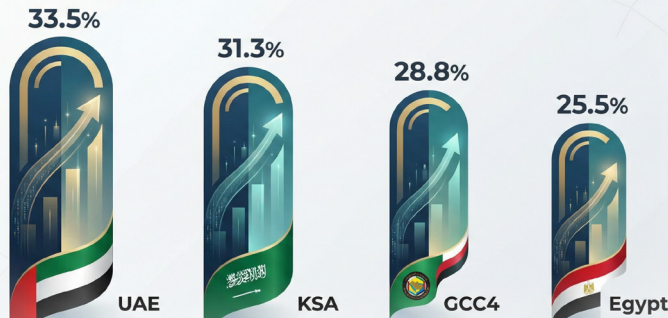
Artificial intelligence (AI) is increasingly playing an important role in the evolution of the Islamic economy, unlocking new opportunities across industries including finance, halal food, tourism, and education.

The adoption of AI supports stronger Shariah compliance, enhances user access, and enables more tailored solutions, all while remaining aligned with the ethical values that underpin the Islamic economic system.

AI's wider economic impact is considerable, with estimates suggesting it could add as much as 320 \$ billion to the Middle East's economy by 2030.



The average annual growth in the contribution of AI by region between 2018-2030



The largest gains are expected to accrue to Saudi Arabia where AI is expected to contribute over US130,2\$ billion in 2030 to the economy, equivalent to 12.4% of GDP. In relative terms the UAE is expected to see the largest impact of close to 14% of 2030 GDP.

DIGITAL SUPPLY CHAIN AND CERTIFICATION

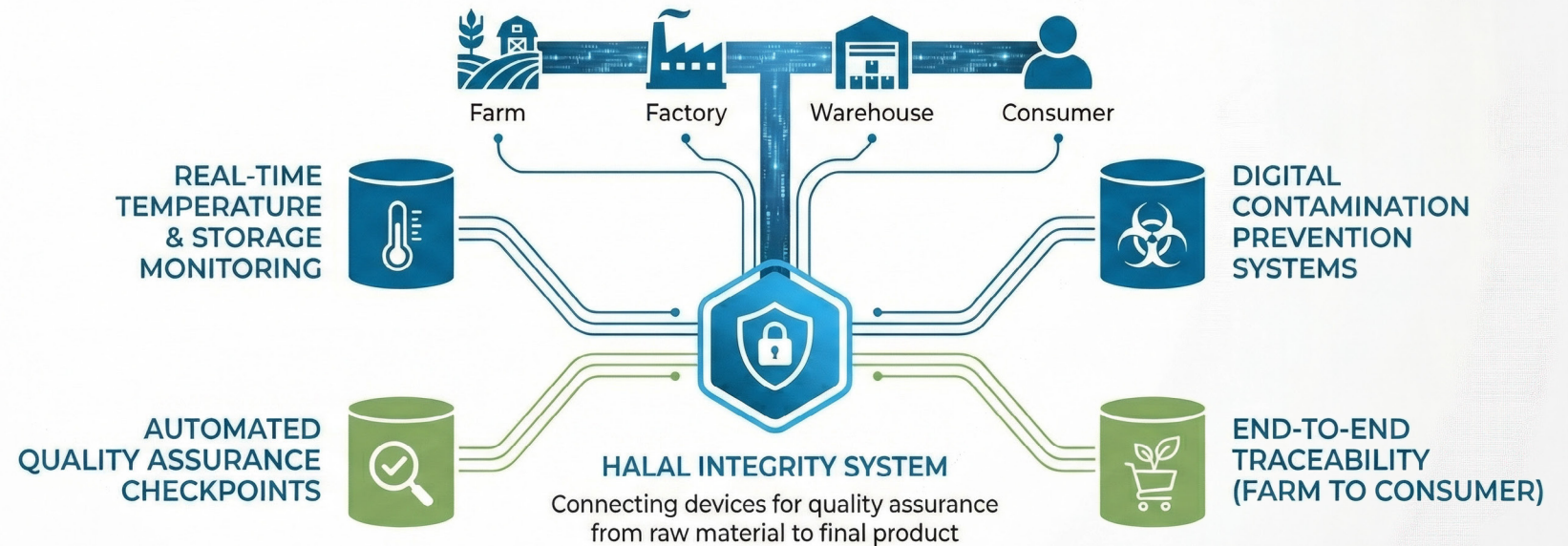


DIGITAL IN HALAL SUPPLY CHAIN

The Internet of Things enables better connections between devices throughout the halal industry supply chain, from raw material production to final product distribution. IoT technology monitors quality in real-time, ensuring products continue to meet halal standards throughout production and distribution.

For example, temperature and storage conditions can be digitally monitored to ensure that halal food products are not contaminated.

IOT IN THE HALAL SUPPLY CHAIN: REAL-TIME MONITORING & TRACEABILITY



INTEGRATED HALAL SUPPLY CHAIN MODEL

The Halal Supply Chain Management Transactions (HSCMT) model integrates data from e-commerce platforms with financial technology (fintech). **It combines sales, payment gateways, and financial transaction data within halal operational rules to ensure that the transaction process itself is compliant not just the product.** This innovative approach not only increases the efficiency of financial transactions in the supply chain but also reduces operational costs associated with verification and administration processes.




DIGITAL IN HALAL CERTIFICATES

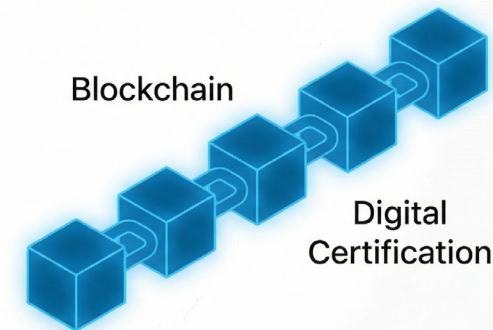
Digital certification and traceability streamline administrative processes, **allowing companies to bring halal-compliant products to market more quickly. This agility enhances brand credibility and positions firms as innovators** in an industry that increasingly prioritizes speed and transparency. Early adoption of halal-focused technologies also provides a first-mover advantage by integrating businesses with global digital compliance frameworks.

Malaysian blockchain-based halal traceability initiative reportedly boosted certification efficiency by more than 40% while increasing supply-chain transparency, enabling exporters to clearly demonstrate halal integrity to international buyers, according to a Tech for Humanity report.

Such alignment facilitates smoother entry into global markets that require digitally verified certification, helping companies differentiate themselves from competitors while supporting long-term sustainability.

40% Increase

In certification efficiency using Blockchain (Malaysia  Case Study).

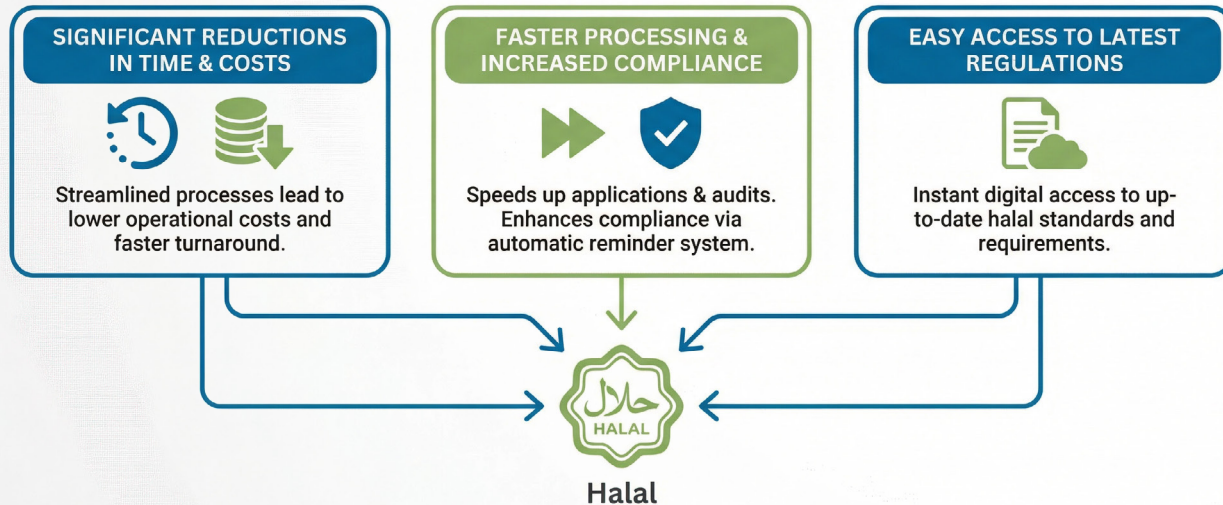


DIGITAL IN HALAL CERTIFICATES

Cloud Computing and Digital Tracking Systems

BENEFITS OF CLOUD COMPUTING & DIGITAL TRACKING FOR HALAL PRODUCT ASSURANCE (SMEs)

Results of supporting halal assurance implementation, especially for Small and Medium-sized Enterprises (SMEs).



These advantages are clearly not processed by traditional paper-based certification systems, which are often bureaucratic and time-consuming. On a global scale, the adoption of a digital approach to halal certification has the potential to standardize the integrity and recognition of halal certificates between countries, thereby providing an additional layer of trust to international consumers and facilitating cross-border trade in halal products.

BLOCKCHAIN TECHNOLOGY IN HALAL INDUSTRY

Blockchain is widely regarded as a powerful technology for enhancing transparency and integrity within the halal industry, particularly in the area of halal certification. **By leveraging blockchain, every stage of a halal product's production and distribution can be securely recorded and traced. This end-to-end visibility enables consumers to confirm the halal status of products, as the supply chain data is transparent and verifiable.**

In the context of certification, **blockchain helps mitigate risks such as certificate fraud while also streamlining and accelerating audit processes.** For instance, halal food producers can record details about raw material sources, manufacturing procedures, and distribution activities on an immutable blockchain ledger. This tamper-proof record strengthens consumer trust by assuring that products have complied with Islamic requirements throughout the entire supply chain.



- **Immutable Trust:** Ledger records every step.
- **Global Access:** Demonstrates integrity to international buyers.





THAILAND'S PREMIER VERTICALLY INTEGRATED HALAL BEEF PROVIDER, controlling the entire supply chain from breed selection to slaughter and retail.



MARKET SCALE & KEY BRANDS



MARKET SCALE: Operating **42 restaurant branches** across Bangkok under diverse brand concepts ranging from fine dining to QSR

KEY BRANDS:



The Beef Master (Fine Dining)



Nuatair (Popular Steak/Wok)



Kian Tiaw (Street Beef Noodles)



Punleone (Shawarma Restaurant)



Company B Online Butchery



100% HALAL CERTIFIED: Addressing the shortage of high-quality Halal dining options in Thailand.

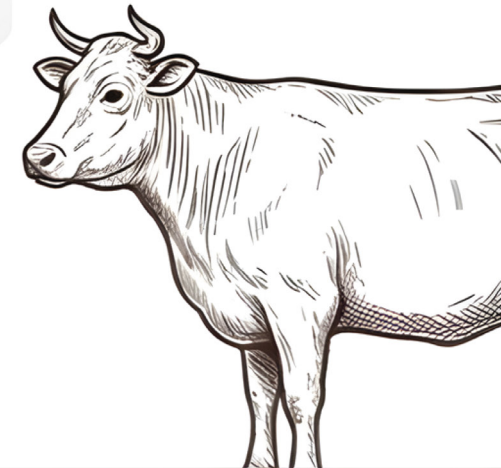


HIGH QUALITY vs. COMPETITIVE PRICE

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DIGITALIZATION IN HALAL SECTORS

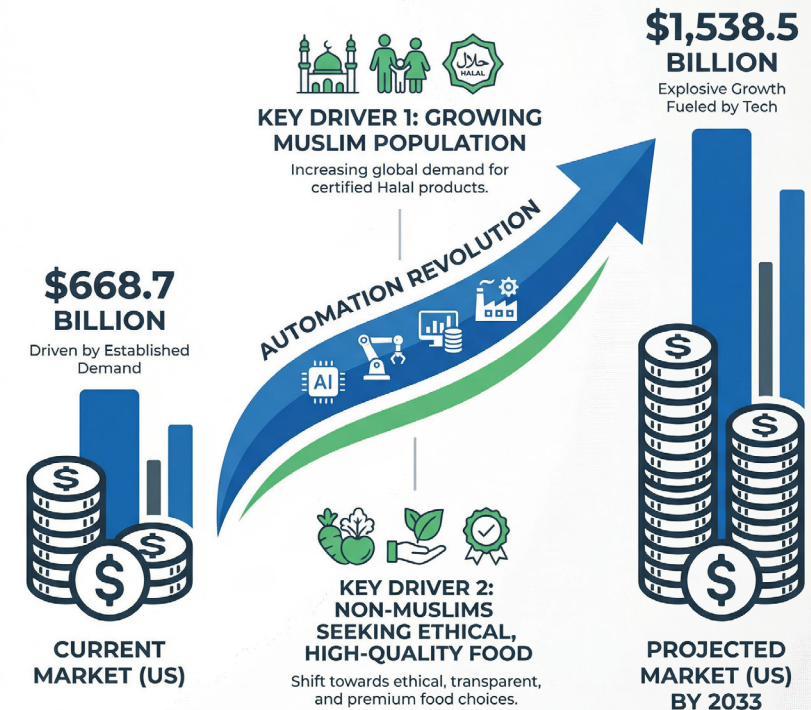


DIGITAL IN HALAL FOOD

Technological advancements have emerged as a major trend, fueled by the growing demand for halal food products. **Halal laboratories play a vital role in ensuring food safety and quality by analyzing products and detecting the presence of porcine derivatives or alcohol.**

US companies are leading the charge, integrating robotics for slaughter, IoT for traceability, and AI for quality control. In August 2022, **Fluree PBC, a U.S.-based open-source semantic graph database company, partnered with Sinisana Technologies, a Malaysia-based Web3 blockchain traceability firm, to deliver end-to-end solutions for halal food sourcing, provenance, and safety.** By leveraging Fluree's technology, the collaboration enhances transparency and integrity across the halal food supply chain.

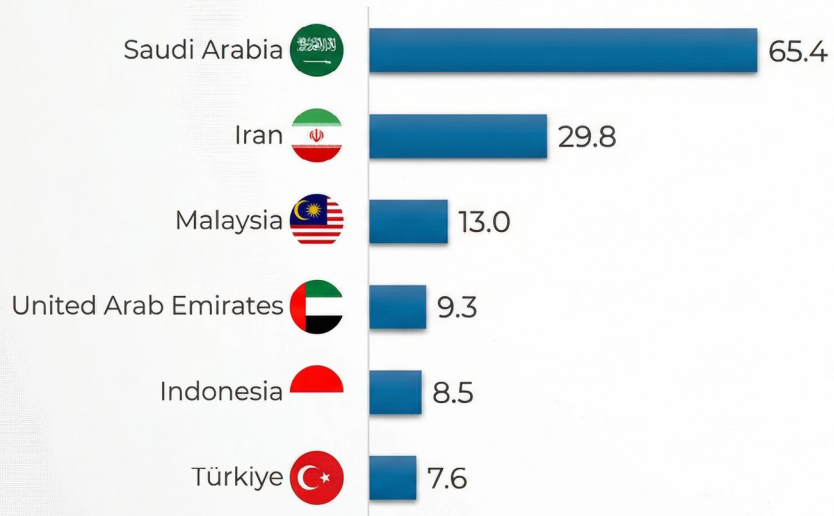
HALAL FOOD INDUSTRY TRANSFORMATION: AUTOMATION & GROWTH



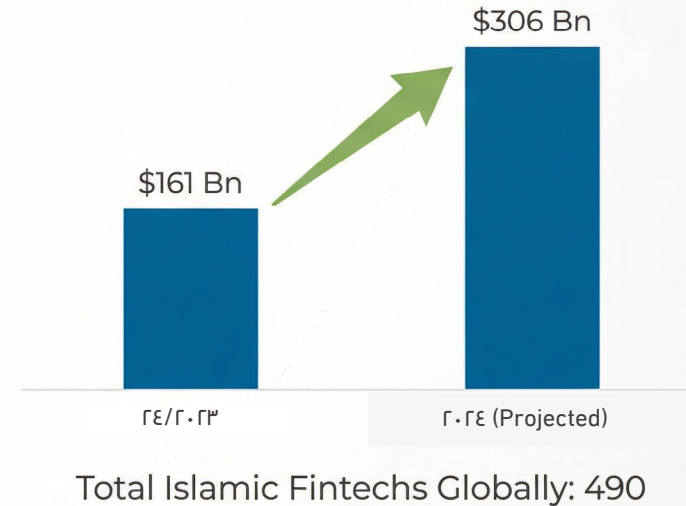
TECHNOLOGY IN ISLAMIC FINANCE

The Islamic fintech industry plays a vital role in the global Islamic finance ecosystem and continues to expand rapidly, with a market size of USD 161 billion in 2023. It is projected to reach USD 306 billion by 2028, supported by approximately 490 Islamic fintech companies worldwide.

Top 6 Islamic Fintech Market Sizes
2023/24 (USD Bn)

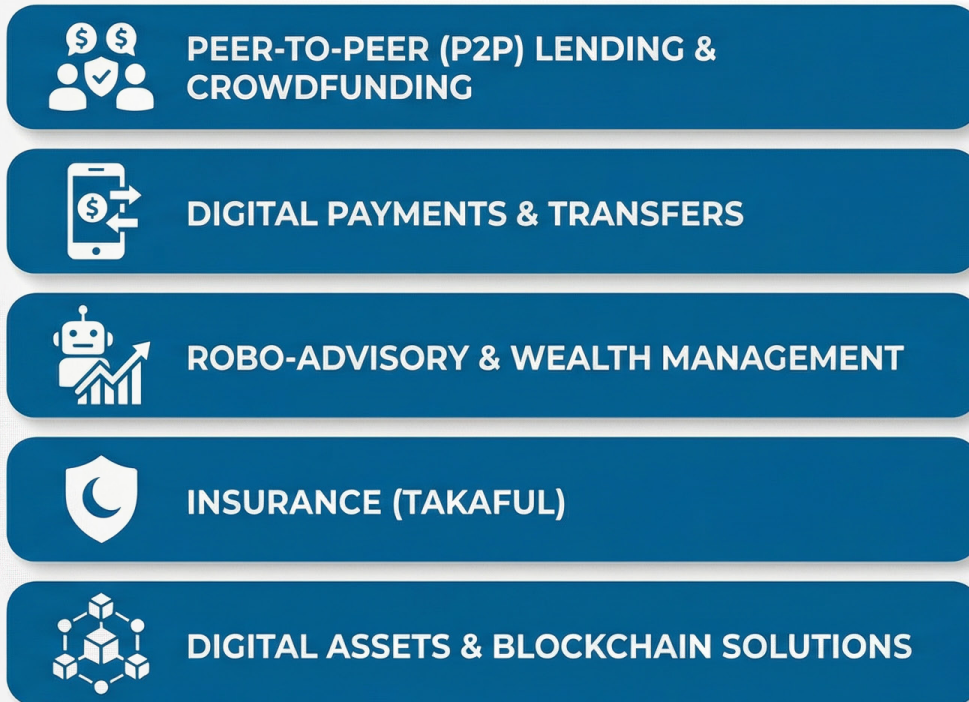


Global Islamic Fintech Market
Growth & Number of Firms

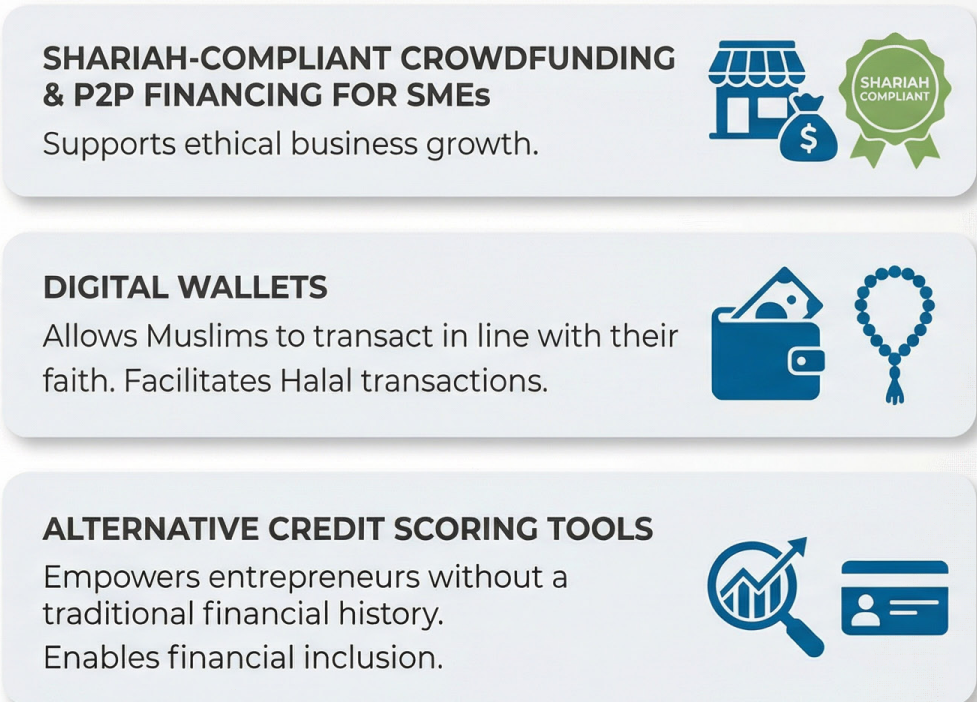


ISLAMIC FINTECH: SERVICES & BENEFITS

MAIN TYPES OF SERVICES



HOW ISLAMIC FINTECH HELPS



ARTIFICIAL INTELLIGENCE IN ISLAMIC BANKING

AI is used for **more accurate data analysis** and **automating financial processes according to Sharia principles**.

It assist in **faster and more precise risk analysis** and **decision-making based on consumer data**, allowing Islamic banks to offer more personalized and efficient products and services.



Using AI tools to assess the Shariah compliance of companies and financial instruments



Launched a digital platform offering access to more than 1,800 Shariah rulings to help simplify complex regulations and encourage industry collaboration



Bank Muamalat Malaysia has partnered with Google Cloud to deploy generative AI and advanced data analytics to help it evolve into a fully digital Islamic institution



Embraced AI to modernize and expand its services.

AI is also helping extend financial services to underserved communities. By analyzing alternative data - such as mobile payment history and social behavior - AI can help individuals with limited credit histories, including those in rural areas or small business owners, to qualify for financing. This supports Islamic finance's mission of ethical and inclusive banking.

AI ENHANCES MUSLIM-FRIENDLY TRAVEL



The Muslim-friendly travel market is experiencing AI-driven transformation. Platforms can now generate customized itineraries for Muslim travelers, factoring in prayer times, halal food, nearby mosques, and Muslim-friendly accommodations.



Virtual Tour Guides

Saudi Tourism Authority launched "Sara," offering real-time travel advice.



Tourism Data Lab

Partnership with Visa to analyze visitor behavior and spending trends.



Personalized Experiences

AI-powered customization based on Islamic requirements and preferences.

HALAL DIGITAL MARKETING: ETHICAL STRATEGIES

Halal digital solutions ensure transparency, authenticity, and trustworthiness in every aspect of the digital space. These solutions create an environment where Muslims can confidently engage with online platforms without compromising their religious beliefs.



1 Transparency

Providing truthful and reliable information builds credibility and trust among consumers



2 Privacy Protection

Respecting user privacy and data security with explicit consent and responsible data use



3 Islamic Values Alignment

Delivering content that resonates with Islamic principles across all digital platforms



4 Consumer Trust

Building long-term relationships through ethical behavior and honest communication

GLOBAL MARKET EXPANSION THROUGH DIGITAL PLATFORMS



Breaking Geographical Barriers

Digitalization empowers halal companies to penetrate markets that were previously inaccessible due to logistical or economic constraints. This opens up vast new territories for growth.



E-commerce as a Gateway

Global e-commerce platforms serve as powerful conduits, enabling companies to offer halal products to consumers across diverse countries without the need for physical branches or extensive international infrastructure.



Empowering Developing Nations

This digital accessibility creates significant opportunities for halal producers from developing countries to compete effectively on the global stage, fostering economic growth and international trade.



PROMOTING HALAL PRODUCTS AND SERVICES DIGITALLY

The digital landscape offers unparalleled avenues for promoting halal products and services, ensuring they reach the right audience with precision and impact.



Targeted Marketing

Digital tools allow for highly targeted marketing campaigns, reaching specific demographics and regions interested in halal offerings.



Social Media Engagement

Leveraging social media platforms to build communities, share product stories, and engage directly with consumers.



Content Marketing

Creating valuable content, such as blogs, videos, and infographics, to educate consumers about halal principles and product benefits.





ACME IES – Company Profile

ACME – Integrated Engineering Systems (IES)

is a leading Egyptian technology and digital transformation company established in 1983. With over four decades of experience, the company has built a strong reputation for delivering large-scale national and enterprise technology projects across multiple sectors. Headquartered in Cairo, ACME specializes in providing end-to-end digital transformation solutions that enable organizations to modernize their operations, enhance efficiency, and achieve sustainable growth.

Services & Solutions



IT Infrastructure
Design &
Implementation



Networking &
Cybersecurity
Solutions



Data Center &
Virtualization
Technologies



Custom
Software
Development



Digital
Transformation &
Systems Integration

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DATA ANALYSIS AND CONSUMER INSIGHTS



DATA ANALYTICS: COMPETITIVE ADVANTAGE

Business analytics integration provides a significant competitive advantage through more accurate and data-driven decision making. The use of artificial intelligence and big data analytics can moderate relationships between green entrepreneurship preferences and sustainable supply chain management, increasing competitiveness of halal food companies.



Traditional Approach



Relies on intuition and experience



Slower strategy adjustments



Limited market insights



Reactive decision-making



Data-Driven Approach



Evidence-based decisions



Rapid strategic pivots



Deep consumer understanding



Proactive market positioning

Digital knowledge and literacy positively influences attitudes, subjective norms, and behavioral control of halal culinary MSME actors, ultimately increasing their dynamic business capabilities.

DATA ANALYTICS: CHALLENGES AND OPPORTUNITIES

Despite its transformative potential, the integration of business analytics in the halal industry faces several hurdles.

Significant opportunities for innovation exist.

The development of centralized halal data platforms can reduce data fragmentation, while strategic partnerships with technology firms may help overcome skills shortages. Additionally, analytics-driven sustainability initiatives offer substantial potential, particularly as they align with growing global consumer demand for ethically responsible practices.



1. Data Fragmentation

Scattered data sources hinder comprehensive analysis.

2. Regulatory Complexity

Varied halal certification requirements across regions add complications.



Challenges in Halal Market Analytics



3. Cultural Sensitivity

Businesses must align analytics practices with Islamic values and privacy norms.

4. Skill Gaps

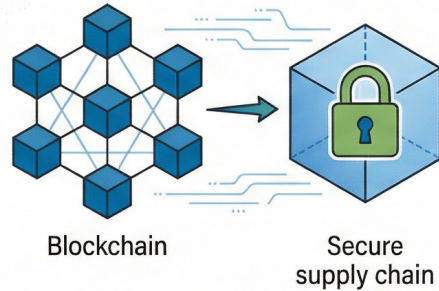
Limited expertise in advanced analytics and halal-specific needs.



DATA ANALYTICS: USE CASES



Nestlé: Uses blockchain to enhance supply chain transparency and compliance.



CIMB Islamic Bank: Employs analytics to tailor Shariah-compliant financial products, boosting customer satisfaction.

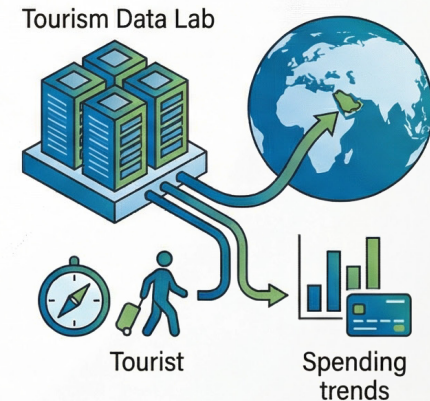


ZALORA

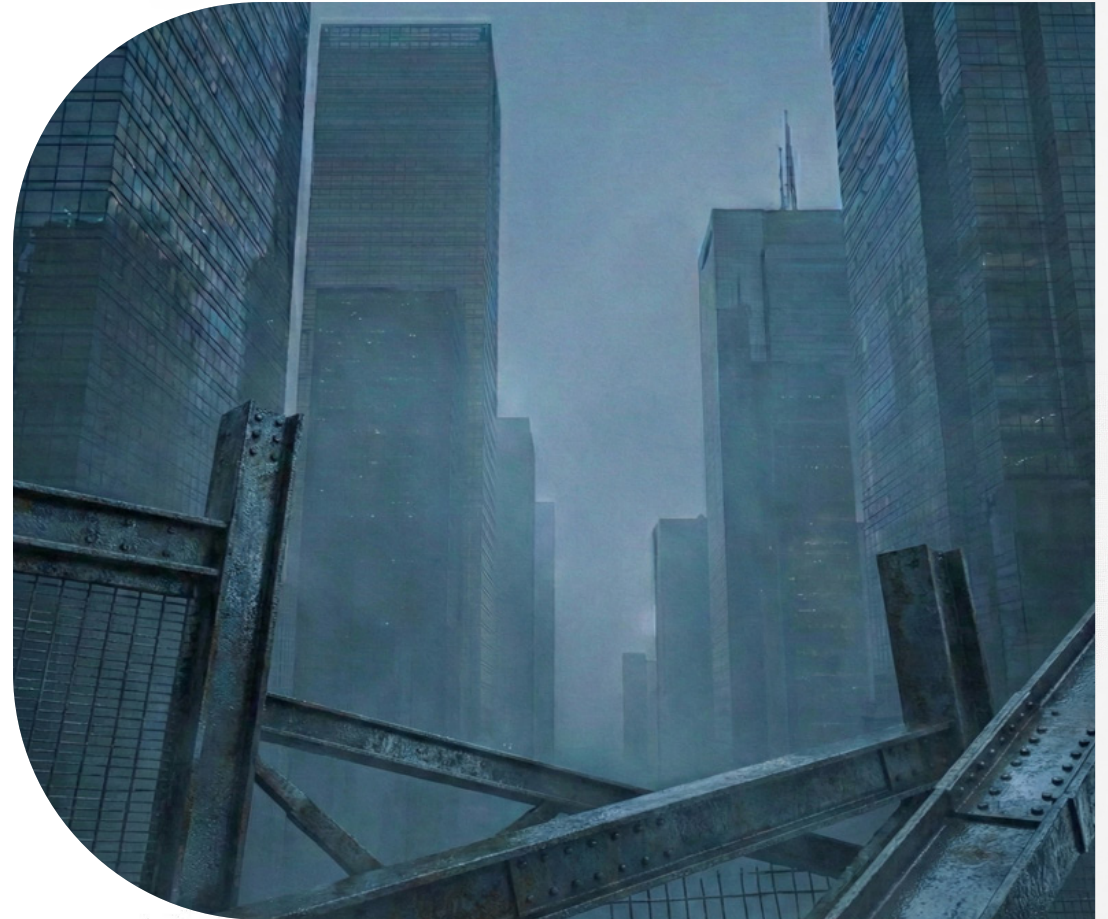
Zalora: Analyzes consumer behavior to promote modest fashion trends.



The Saudi tourism authority has also partnered with Visa to create a Tourism Data Lab to analyze visitor behavior and spending trends.



CHALLENGES OF AUTOMATION IN HALAL INDUSTRY



CHALLENGES OF AUTOMATION IN HALAL

Technologies offer many opportunities for the halal industry, but some challenges must be overcome.



High Investment Costs

Many small and medium-sized companies may find it difficult to allocate funds to adopt technologies such as IoT, blockchain, or AI, due to the high costs and lack of understanding of the long-term benefits.



Infrastructure Limitations

Limited supporting infrastructure (such as stable and fast internet connectivity) in some areas, can be an obstacle to the widespread adoption of this technology, especially for MSMEs with limited resources.



Skills Gap

Effective technology adoption depends on the availability of a skilled workforce capable of utilizing advanced systems. However, many firms within the halal industry lack adequately trained human resources, which can limit their ability to fully exploit the industry technologies.

MITIGATION STRATEGIES FOR HALAL INDUSTRY CHALLENGES



1. ADAPTIVE & GRADUAL APPROACH

More adaptive enterprises and perhaps gradual approach is needed. Evolving slowly to integrate new technologies.



2. GOVERNMENT POLICY SUPPORT

policy support from the government, to overcome practical obstacles in implementing digital technology in the halal industry sector. Crucial for navigating regulatory hurdles.



3. OUTSOURCING IT FOR MSMEs

discuss that model outsourcing IT can be an alternative for MSMEs to overcome resource limitations in digital transformation. Accessing external expertise without high costs.



4. EMPLOYEE EMPOWERMENT & TRAINING

Focus on employee empowerment through facilitate training collaborations. Building internal digital capabilities and skills.



FACILITATING GROWTH & INNOVATION THROUGH COLLABORATION & STRATEGIC ADOPTION



PARTNERSHIP OPPORTUNITY



ISLAMIC CHAMBER HALAL SERVICES (ICHS)

ICHS (Islamic Chamber Halal Services) is the global Halal Catalyst and executive arm of the ICCD, specializing in creating high-impact B2B event series that connect key Halal thought leaders, investors, and businesses worldwide. We design and execute platforms that directly translate industry connections into global market growth.

Mid two circles:

Groundbreaking Networking: Bringing the world's most renowned Halal players under one roof for business matchmaking.

Market Catalyst:

Accelerating growth, investment, and collaboration across all Halal industry verticals.

Looking for more information?

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OPPORTUNITIES OF DIGITALIZATION IN HALAL

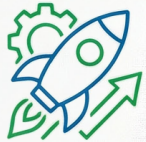


PILLARS OF AUTOMATION IN HALAL



OPPORTUNITIES OF DIGITALIZATION FOR HALAL ENTERPRISES

Having identified these transformative technologies, businesses now have the opportunity to leverage them for competitive advantage.



FASTER MARKET ENTRY & COMPETITIVE DIFFERENTIATION

Early adopters of halal technology gain a first-mover advantage by aligning with global digital compliance systems.



OPERATIONAL EFFICIENCY & COST OPTIMIZATION

Reduces manual effort, human error, and administrative costs, freeing up resources to focus on quality, R&D, and expansion.

Predictive analytics and machine learning can forecast supply disruptions or compliance issues before they occur.



ENHANCED CONSUMER TRUST & BRAND VALUE

Transparency not only boosts sales but also enhances equity. By showcasing their adherence to ethical and through verifiable data.



ACCESS TO NEW MARKETS & SEGMENTS

Digital platforms and e-commerce ecosystems enable halal-certified businesses to access previously untapped markets. With real-time halal status verification, global consumers can confidently purchase from trusted producers regardless of geography.



COLLABORATION & ECOSYSTEM PARTNERSHIPS

Technology encourages collaboration between halal product certifiers, regulators, and fintech innovators. These partnerships accelerate the development of standardized digital systems and increase market interoperability.

OPPORTUNITIES OF DIGITALIZATION HALAL FOR GOVERNANCE

Regulators play a main role in sustaining trust and uniformity within the halal ecosystem. Emerging technologies enable more efficient, transparent, and harmonized oversight.

1. Enhanced Monitoring and Compliance Oversight



- Digital dashboards and real-time analytics replace traditional manual auditing, improving efficiency and accuracy in halal supervision.
- machine learning and IoT-based inspection tools enables regulators to detect anomalies faster, reducing risks of fraud and non-compliance.

2. Data-Driven Policy and Standardization



- Digital platforms generate actionable insights on certification flow and compliance patterns, supporting evidence-based policymaking.
- This data empowers regulators to harmonize standards across jurisdictions and streamline certification reciprocity among partner nations.

3. Cross-Border Recognition and Trade Facilitation



- Digital halal systems simplify trade by enabling real-time certificate validation across borders.
- This harmonization supports mutual recognition between countries and boosts halal exports, particularly for developing economies.

Innovation within the halal sector extends beyond the digitalization of services to encompass the development of new products that adhere to Sharia principles and Islamic values. Such innovation has become increasingly critical in addressing the evolving expectations of consumers, particularly younger generations, who seek products that are not only halalcompliant but also ethically produced, environmentally sustainable, and of high quality. The halal industry is currently experiencing a wave of innovation that integrates halal principles with emerging trends in health, sustainability, and modern lifestyles.

DATA COLLECTION AND SOURCES

The data used in the “ Digital Transformation In Halal” Publication is prepared by ICCIA-Holding dedicated market research experts using Secondary research approach.

Citation:

<https://ummahdesign.com/>

<https://halalpractitioner.com/>

Reports:

<https://www.researchgate.net>

https://www.researchgate.net/publication/397870089_Competitive_Advantage_of_Digital_Business_Models_in_The_Halal_Industry_A_Comparative_Analysis_of_Traditional_Approaches

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