Deloitte.

The Digital Islamic Services landscape
Uncovering the Digital Islamic Services opportunity for the Middle East and the World

Contents

This report reflects the results of a market study which highlights how existing and new Digital Services could be applied to aid the practices and lifestyle of a Muslim.

We do not however presume that ours is the last word on any given topic: our intent is to catalyze discussions and positive developments in the area in the best interest of the Muslim community.

Religious definitions and interpretations of 'Halal' around the permissibility of prospective 'Islamic Digital Services' and associated technologies mentioned in this report are left to the reader to decide according to their own Sharia references.

Defining the Digital Islamic Services landscape for the Middle East and the World

The Middle East continues to be one of the fastest growing emerging markets in the world demographically, economically and digitally. With continuous improvements in digital connectivity and technology readiness, demand for Digital Services is starting to take hold. At the same time, extensive studies have also shown the rising significance and scale of the Global Islamic Economy, the essence and the heart of the region's future social and economic development.

Although the digital economy is still in its infancy, the Islamic Economy has been growing and developing at a rapid pace. Over the past decade, the stars have naturally aligned, with Muslim consumer needs driving innovation behind new digital solutions for the regional and international Islamic community. As such, technology is making available tools that are far more powerful and effective than anything in the past, the impact of which can be felt more throughout the Muslim community today than ever before. Through observing and following this phenomenon, we have identified a clear need for Digital Islamic Services within the overall Digital Services landscape.

Although we have witnessed unprecedented change and investment in the technology, media and telecommunications industries in general, Digital Islamic Services in particular is a segment that is largely untapped, especially given the size and growth of the Islamic Economy and the large young Muslim population's adoption of Digital Services, which shows great promise and potential for such services to flourish. This presents a wealth of opportunities for a range of key players, investors, mainstream businesses as well as governments and non-profit organizations.

It remains unclear which global advances in Digital Services and technologies will be adopted by the Middle East and which require local development. In our earlier publication, "Defining the Digital Services landscape for the Middle East", we mapped the Digital Services landscape in the Middle East region. This publication is intended to further assess the Digital Islamic Services landscape, to understand the growth drivers and to identify potential opportunities for investment.

Such an analysis is important to help the regional as well as international digital and Islamic communities in understanding and navigating through this complex, ever-changing segment.

There are many key players from various backgrounds and related sectors covering IT, media, and telecommunications, each with their own set of ideas, workings and solutions, but each also with their own challenges. As with any Digital Services opportunity, most of the services identified in the Islamic needs segment require industry players to cooperate, complement and synergize with each other.

Thus in collaboration with Deloitte, we have recognized the vast importance and fundamental need to define the Digital Islamic Services landscape, which we are bringing to you in this report.

As with our previous report, the Islamic landscape definition also seeks to be comprehensive and is structured in a way that allows present and potential Digital Islamic Services players to draw their own roadmap to exploit the opportunities in this particular segment. It will enable players to identify certain complementary and synergetic roles which they can fulfill to further expand their respective market shares and promote the Digital Islamic Services segment and Islamic Economy as a whole.

In sharing our findings from this exercise, we seek to make a contribution from our side to help organize and promote the Digital Islamic Services sector and Islamic Economy in our region, and ultimately to open the potential for coordination, partnerships, and synergies amongst the various entities in this segment. This report is also an invitation to international firms to better understand and enhance their offerings to achieve higher levels of acceptance in the Muslim world. We hope that this study will just be the first of many other studies and initiatives that seek to explore more opportunities in this direction, to further enhance the findings of this study.

We would like to thank Deloitte for their efforts and the whole team who have participated and contributed to this important exercise.

Noortel foreword

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Deloitte foreword

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We are pleased to have contributed to the development of the Digital Islamic Services landscape definition with Noortel. In this, we have expanded our study of the overall Digital Services landscape, where we have sought to define and expand on Islamic needs across nine key verticals and areas, which include the pillars of the Islamic Economy. Our in-depth study across the evolving Digital Services landscape, the Islamic Economy, and the various Islamic needs within each vertical and area, allowed us to highlight indicative applications and key developments in each.

With the home of Islam centered in the Middle East and a population of over 1.7 billion Muslims worldwide, demand in the region and beyond for new Digital Islamic Services represents a significant opportunity. This is reflected through existing services elsewhere that have exhibited great success.

As the Digital Services landscape and the Islamic Economy continue to expand at an exceptional pace, specialist services such as education, finance and marketing for the Digital Islamic Services sector are gaining ground. Even so, our findings reflect that many aspects of the Digital Islamic Services segment remain fairly nascent with few successful exemplars across the world.

While the prospects presented by the Islamic needs segment within the Digital Services landscape are noteworthy, our findings reveal that very few digital Islamic platforms have achieved a significant scale. There are pockets of excellence across a few verticals, but monetization still remains a challenge. Our review of the global and regional TMT funding landscape also revealed no venture capital funds in the Middle East specifically targeted at Islamic needs, implying a huge gap in this space that needs to be filled. Interviews with key players confirm that the digital ecosystem around Islamic needs

is still at a fledgling stage and with significant need for investment. This presents a substantial opportunity for investors, start-ups and established businesses who are seeking to assess the Digital Services market and identify opportunities for growth in the Middle East, especially given regional initiatives (e.g., Dubai's stated ambition to be the Islamic Capital of the world) that would support the development of the digital ecosystem and stimulate demand around specific Digital Islamic Services. The advent of Islamic funds in neighboring Islamic geographies (e.g., in Malaysia, especially in Halal Food) suggests increasing momentum in this direction.

In this context, the purpose of this report is to provide a framework to those with an interest in the Digital Islamic Services landscape. In looking at the landscape across multiple areas of the Islamic Economy, it is intended that this framework looks beyond areas where existing services have so far enjoyed success. Through taking a consumer needs perspective, as well as considering the broader digital ecosystem and Islamic Economy, opportunities which may be unique to the Islamic culture, tradition and needs of the Middle East may also be identified. In addition to defining a framework to describe the Digital Islamic Services landscape, we have provided some commentary on the maturity of such services in the Middle East and globally. This assessment draws on a range of case studies, and is further underpinned by insights from interviews with key players actively offering such services.

Once again, we would like to express our gratitude to those who have contributed to the research and analysis to enable the preparation of this second report. We are pleased to have continued our support to Noortel and thank them for the opportunity and for their keenness to continue the dialogue on the evolving digital landscape in the region.

Methodology and research

Methodology

This report expands on Deloitte's previous study of the Digital Services landscape, which Deloitte defined and assessed in its earlier "Defining the Digital Services landscape for the Middle East" publication.

In the first report, Deloitte described the Digital Services landscape across three layers: Consumer needs, digital services and the digital ecosystem. Deloitte then defined and followed a maturity assessment approach to narrow down the focus on the Digital Services landscape. Following this assessment, Deloitte and Noortel had identified the Social needs dimension and within it, the religion category of the Digital Services landscape as an area which would have the greatest potential for growth, investment and development.

Exhibit 1: Consumer needs landscape
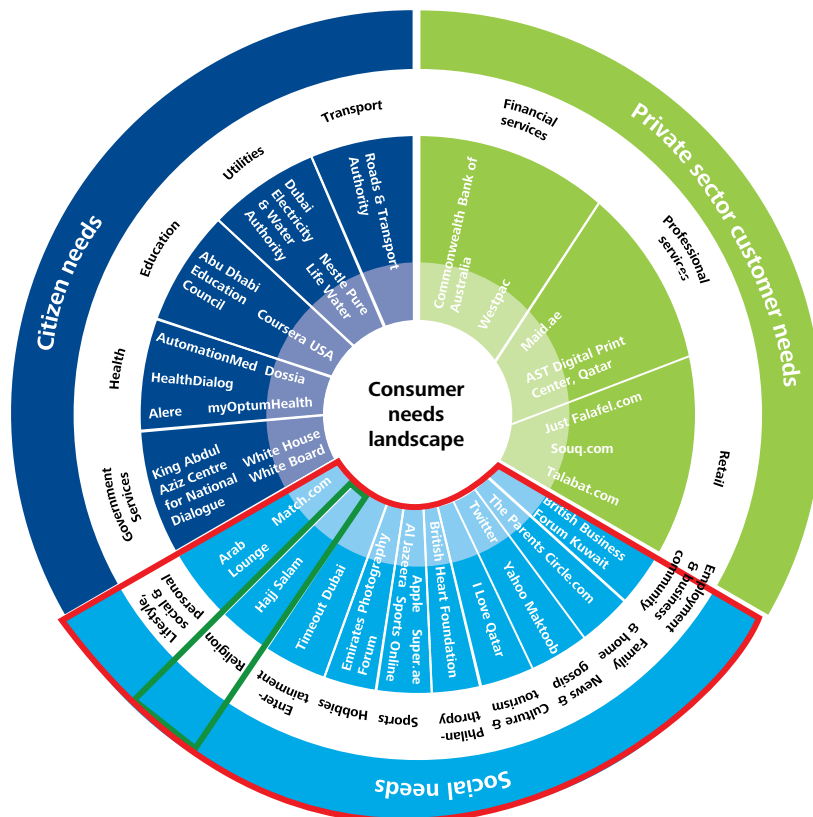
Source: "Defining the Digital Services Landscape for the Middle East", Deloitte

The Digital Services Maturity Cycle, developed for the first report, provides an indication of the relative maturity of Digital Services in the Middle East to help assess its prospects over the next 3 to 5 years. Each of the services defined in the Digital Services landscape were defined against one of the five stages of maturity: Emerging, Peaking, Stabilizing, Establishing and Optimizing. Hobbies, education, health and religion were all categories identified as unique emerging niches for the Arab world. Of these, religion was identified as the category with the greatest prospects, closest to the peaking stage, which could take off with continued activity and development.

Exhibit 2: Digital Services Maturity Cycle
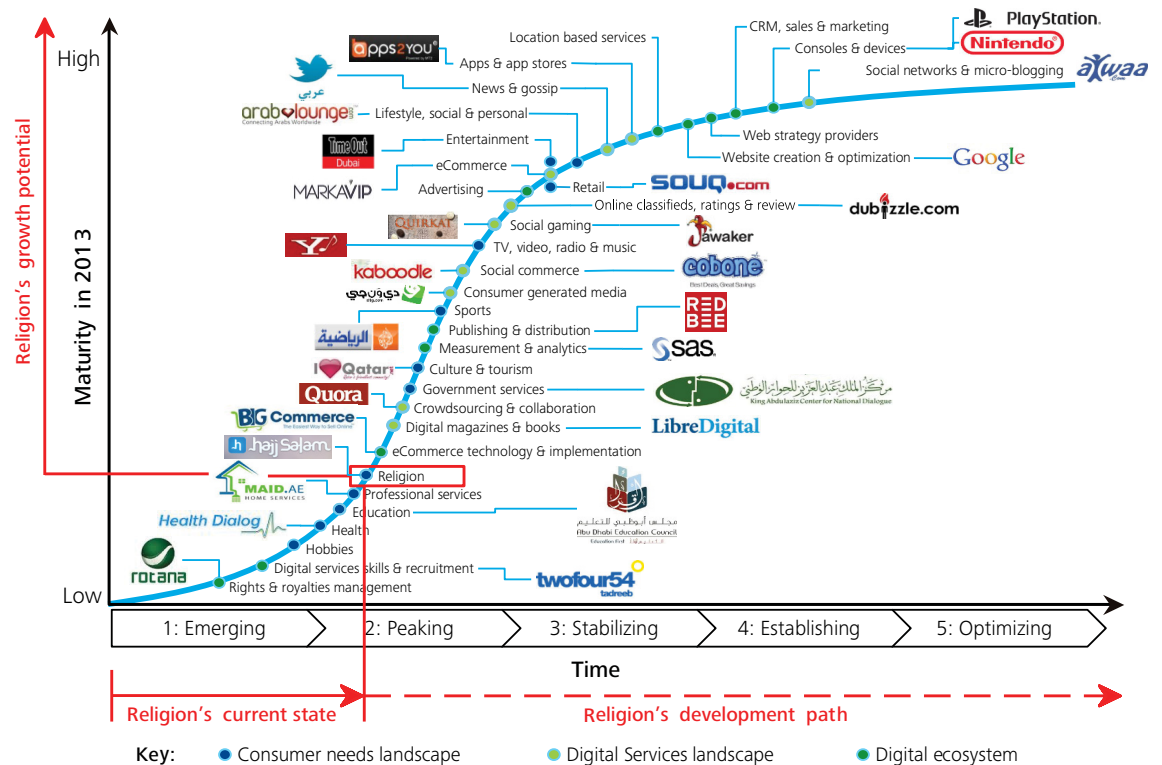
Source: "Defining the Digital Services Landscape for the Middle East", Deloitte

In this context, Deloitte has researched and written this report as part of its support to study and highlight how Digital Services can be applied to address Muslim consumer needs and aid Muslims in practicing their faith. Thus, this report seeks to define the Digital Islamic Services landscape for the local and global Muslim community.

The study begins with an assessment of the global Islamic market, which forms the basis of our understanding of the overall Islamic needs of Muslims. The macro-level overview enables us to understand at a higher level and contextualize the overall digital market potential for Islamic services. With this in mind, we have examined six key indicators of the Global Islamic Economy and the Muslim world: population, demographics, consumer segmentation, lifestyle spending, technology readiness as well as key economic growth drivers.

This is followed by the Digital Islamic Services landscape definition and assessment, which has been structured around key verticals and areas. This is based on the key pillars of the Global Islamic Economy, which was first defined by the Dubai Islamic Economy Development Centre (DIEDC) in collaboration with Thomson Reuters, Dinar Standard and the Dubai Chamber of Commerce and Industry (DCCI)[1]. According to their comprehensive study, the Global Islamic Economy consists of seven core industry verticals: Halal Food, Halal Travel, Fashion, Islamic Finance, Media, Recreation and Culture (MRC), Pharmaceuticals and Cosmetics. Deloitte's analysis of the Islamic economy includes other emerging sectors such as Islamic Art & Design and Islamic Economy Education. Our analysis of Digital Islamic Services also identified another two areas with digital activity: Smart Mosques and Standards & Certification, which are typically managed and controlled by governing and religious authorities.

In this context, the Digital Islamic Services landscape has therefore been defined under nine key industry verticals and areas (excluding Pharmaceuticals and Cosmetics), which constitute the pillars of the global Digital Islamic Economy: Halal Food, Halal Travel, Islamic Finance, Modest Fashion, Islamic Art & Design, Islamic Economy Education, Smart Mosques, Islamic Media all centered around associated Islamic Standards & Certifications.

In each of these verticals and areas, Deloitte conducted an offline and online (digital) market assessment to identify current consumer demand and technology initiatives focused on the Islamic lifestyle both in the region and across the Islamic world. This included a detailed review and documentation of existing Digital Islamic Services, covering their business model, key success factors and lessons learned. A range of potential business models and untapped areas in each vertical have also been identified, assessed and evaluated (e.g., level of funding for small-to-medium enterprises active in the space, incubation, partnerships).

The report draws upon a range of case studies, and is further underpinned by insights from interviews with various entities currently active in the Global Islamic Economy and its digital space.

About the research

The research was led by Deloitte's dedicated Middle East TMT industry team, which consists of regional industry experts, working with Deloitte's network of practitioners that service our technology, media and telecommunications (TMT) clients as well as leading figures from Deloitte's Islamic Finance Knowledge Center (IFKC), an international center of excellence in Islamic Finance.

Deloitte's research approach combines qualitative and quantitative research. Deloitte's dedicated regional team has held a range of interviews and meetings with Islamic economy experts, industry executives, existing Islamic Digital Services players, potential investors and industry analysts. We would like to acknowledge and thank the following organizations who have provided invaluable input in support of this study:

Exhibit 3: List of interviewed organizations and acknowledgements

Entity	Description
Zabihah.com zabihah	• Online portal that hosts a library of Halal Food resources (e.g., restaurants, butchers) • First Halal Food website
Make Me Believe/ Visual Dhikr	• An experienced artist and designer with a good understanding of the Islamic Art & Design vertical • Specialized in Islamic Calligraphy and Graphic Design
Wamda wamda	• Wamda is a platform designed to empower entrepreneurs in the MENA region • Extensive background knowledge of business operations and start ups in the region
Association of Chartered Certified Accountants ACCA	• The Association of Chartered Certified Accountants (ACCA) is one of the leading global bodies for professional accountants • Expert knowledge of finance and potential for the Islamic Finance industry

Entity	Description
CrescentRating CRESCENT RATING *Your Guide To Halal Friendly Travel*	• An online Halal Travel portal and accreditation platform, offering a range of Digital Islamic Services (e.g., in-flight prayer app) • Publish thought leadership on best Halal Travel destinations
Peter Gould PETER GOULD	• An experienced artist and designer in the field of Islamic Art, with deep understanding of the Islamic Art & Design vertical • Specialized in Graphic Design and Islamic Art
Five Pillars 5|FIVEPILLARS	• An advisory and investment firm specializing in private equity and venture capital transactions with an interest in the Islamic Economy
Shukr SHUKR ISLAMIC CLOTHING	• A Modest Fashion design and retail company providing contemporary Modest Fashion clothing, meeting the aesthetic and cultural needs of the new generation of Muslims living in the West

Entity	Description
Thomson Reuters	• Thomson Reuters co-authored and published the first reports on the "State of the Global Islamic Economy", widely acknowledged as the most holistic and comprehensive study to date of the global Islamic Economy • Have extensive knowledge of the offline Islamic Economy
CNBC	• CNBC is a recognized world leader in business news and provides real-time financial market coverage and business information • CNBC is a news corporation that provides business news over a range of platforms
Aquila Style	• Digital magazine aimed at 18–35 year old Muslim women residing in the Western world • Highlights Islamic lifestyle trends
Rotana Hotels	• Rotana is a Hotel chain from the UAE with hotels across the GCC and wider MENA region • Rotana Hotels have created a chain of Sharia friendly hotels — Rayhaan Hotels

Entity	Description
Dubai Islamic Economy Development Centre	• Government body dedicated to positioning Dubai as 'the Capital of the Islamic Economy' as well as to encourage the Islamic Economy's growth and development • Industry experts in Dubai for activities and initiatives pertaining to the Islamic Economy
Dubai Film and TV Commission — TECOM Investments	• The Dubai Film and TV Commission (DFTC) strives to establish Dubai and the UAE as the premier filming destination for local and around the globe productions. It assists productions in Dubai by serving as a one-stop shop for producers, crews and filmmakers
Sakina Design	• Produce gifts, furnishings and décor that reflect the rich spirit of Islamic art from around the world
Jawhara	• First hotel in Dubai offering unique family oriented hospitality within the guidelines of authentic Islamic culture

Specific programs of quantitative research that have informed this report include:
• Selected inputs from Deloitte's proprietary Middle East publications (e.g., "Defining the Digital Services landscape for the Middle East").
• Primary market surveys and interviews with a range of Middle East and international industry players (both offline players and existing Digital Islamic Services providers).
• Proprietary analysis tools and techniques to quantify additional areas of the Digital Islamic Economy (e.g., Smart Mosques).
• Specialist industry reports and trade publications.

For further information about this research please contact ayman@noortelecom.com and ssaguto@deloitte.com.

About Noortel

Noor Telecommunications Company K.S.C.C. (also known as NOORTEL) is a Sharia-Compliant, Kuwait based closed shareholding company that was established July 11, 2007.

NOORTEL's primary objective is to be a leading company in the GCC region in the Telecommunication, Media and Technology (TMT) sector.

NOORTEL's strategy takes advantage of the company's unique position taking advantage of opportunities by acting as a catalyst between the industry's main players. NOORTEL's strategy focusses on three sectors: IT system integration, Digital Media, and Strategic Telecom Projects.

To achieve success in executing its strategy, NOORTEL took a leading role in the enablement and stimulation of key areas in the industry like Entrepreneurship and e-government.

In order to achieve its objectives, NOORTEL has established a solid support foundation with a prominent international operator and many leading technology providers working in support of its group of companies. Additionally, NOORTEL is continually working to develop partnerships with companies in other regions to improve its strategic advantage in broadening its market base.

NOORTEL's devoted team of professionals with the support and leadership of the Chairman and CEO, Eng. Ayman Al-Bannaw and affiliate companies are dedicated to fulfilling the expectations of its shareholders and delivering the very best of innovative solutions available to its client's needs.

We at Noortel stand committed to its clients and employees in always maintaining a professional environment dedicated to the development of well sustained relationships with those we serve and its team members.

About Deloitte & Touche (M.E.)
Deloitte & Touche (M.E.) is a member firm of Deloitte Touche Tohmatsu Limited (DTTL) and is the first Arab professional services firm established in the Middle East region with uninterrupted presence since 1926.

Deloitte is among the region's leading professional services firms, providing audit, tax, consulting, and financial advisory services through 26 offices in 15 countries with more than 3,000 partners, directors and staff. It is a Tier 1 Tax advisor in the GCC region since 2010 (according to the International Tax Review World Tax Rankings). It has received numerous awards in the last few years which include Best Employer in the Middle East, best consulting firm, and the Middle East Training & Development Excellence Award by the Institute of Chartered Accountants in England and Wales (ICAEW).

Overview of the Global Islamic Market

Background and context

Islam, one of the world's largest faiths, is a monotheistic and Abrahamic religion, articulated primarily in the Holy Quran, a book considered by followers as a revelation and the literal word of 'Allah' (God), and also by the exemplar teachings, sayings and practices of the Prophet Muhammad (Peace Be Upon Him) during his lifetime, recorded as a collection of ahadith (reports)[2].

The religion is summarized into five overarching pillars: the 'Shahadah' (declaration in the belief that there is only one 'Allah' or god and that the Prophet Muhammad (Peace Be Upon Him) is his messenger), worship through 'Salah' (Prayer) and following Islamic law, 'Zakat' (purification of wealth through a minimum portion of its distribution to the poor and needy), 'Saum' (practice of fasting and exercising self-control in the holy month of Ramadan) and the 'Hajj' (a once in a lifetime pilgrimage, which is mandatory for those who are able)[3].

Together, the articulations and pillars cover every aspect of life and society, with guidance from banking and welfare, to family life and the environment. Followers of Islam are referred to as 'Muslim', who as a body have grown to become one of the world's largest faith communities, from which the Global Islamic Economy has emanated. As such, the Global Islamic Economy is one of the most important and integral components of the global social and economic ecosystem.

In this context, the aim of this study is to map the landscape of Digital Islamic Services, which addresses the needs of the Muslim community in the Global Islamic Economy, and which facilitates Muslims in their observance and practice of Islam.

Overview introduction

The study begins with an assessment of the global Islamic market, which forms the basis of our understanding of the overall Islamic needs of Muslims. The macro-level overview enables us to understand at a higher level and contextualize the overall digital market potential for Islamic services. With this in mind, we have examined six key indicators of the Global Islamic Economy and the Muslim world: population, demographics, consumer segmentation, lifestyle spending, technology readiness as well as key economic growth drivers.

Outlook

In recent times, the outlook of the Global Islamic Economy is very buoyant, concurred by numerous reports and detailed studies in the field, providing an ideal backdrop for Islamic Digital Services to thrive and flourish.

With Muslims representing more than 23 percent of the world's population, and expanding at a much faster pace, there is a large and continually growing addressable market for Digital Islamic Services. This is reinforced by the dominant youth demographic of the Muslim community and the significant size of the progressive Muslim "Futurists" segment, known to be educated and technology savvy, and who, in demanding more information, transparency and accountability, are most likely to shape the Muslim consumer market and Digital Islamic Services in the coming years.

Naturally with a large population amongst other drivers, the propensity to spend on Digital Services is also reasonably high, indicated by a total US $2.0 trillion in Muslim lifestyle spending (excluding Islamic Finance)[4], the highest proportion of which is in the MENA region at US $704 billion in 2013[5].

More significantly, despite the low technology readiness in countries with significant pockets of Muslim population, key Western Muslim minority countries (the 'Diaspora') and certain core "Islamic markets" (with significant domestic Muslim populations) are technology ready, offering the highest potential in the adoption of Digital Services.

With the Islamic Economy being driven by the development of Halal infrastructure, a growing global focus on ethics and quality standards (e.g., following the global financial crisis), multinationals seeking growth markets and the general development of Digital Services, there is ample room and opportunity for Islamic services to develop, grow and evolve.

Population

The first and foremost macro-level indicator is the Muslim population to quantify the total consumer market size. At 1.7 billion people, the global Muslim population represents over 23 percent of the world population[6], a significant addressable market for any service. Growing at 1.5 percent per annum, almost double the rate of the non-Muslim population at 0.7 percent per annum[7]; analysts project that the global Muslim population will expand by around 35 percent over the next one to two decades, rising from over 1.7 billion currently to more than 2.2 billion by 2030[8]. With Islam widely known as the second largest and one of the fastest growing major religions in the world, the share of the global Muslim population is also expected to increase to over 26 percent by 2030[9].

Although the Muslim population is globally pervasive, over 80 percent of Muslims are concentrated in the Asia and MENA regions at 62 percent with over 1.0 billion Muslims and 20 percent with 340 million Muslims respectively[10]. In particular the MENA region has the highest concentration of Muslims in the world, where over 95 percent of the domestic population is Muslim[11]. Other regions with significant pockets of Muslims include Central & Southern Africa at around 15 percent (263 million Muslims)[12] and even China and Russia, which both also have large Muslim minorities of 25 million[13] and 22 million[14] respectively. In contrast, the Western American and European continents represent approximately only 3 percent of the world Muslim population, with around 51 million Muslims[15]. Hence, from a population perspective, Asia and the MENA regions are the most attractive Islamic markets, with the highest base and concentration of Muslim consumers.

Exhibit 4: World Muslim population (2014)

Global Muslim population: 1.7 Billion

2–3% of total Muslim population
Large minorities: France (6m); Germany (4m); UK (3m)

Americas' largest Muslim population: U.S. (2.6m)

Less than 1% of total Muslim population

Europe 47m

Americas 4m

Central Asia 247m ~15%

South Asia 510m 30%

MENA 340m 20%

East Asia 289m 17%

Africa 263m ~15%

62% of total Muslim population in Asia

3 largest populations: Indonesia, Pakistan and India

Large minorities: China (25m); Russia (22m)

● % of total population

15.5 % of total Muslim population
Largest Muslim country: Nigeria (77m)

Highest concentration of Muslim population (95%)
3 largest markets: Egypt (80m); Iran (77m) Algeria (38m), Morocco (33m), Iraq (33m) and Saudi Arabia (29m)

Source: Pew Forum, World Bank, Deloitte research and analysis[16]

Demographics

Muslim demographics are important in understanding the Islamic market's composition. In terms of global share, the Muslim world is heavily concentrated with the top ten countries accounting for 66 percent of the global Muslim population[17]. Of these, the top four Muslim regions of Indonesia followed by Sub-Continent Asia (India, Pakistan, Bangladesh) together represent around 43 percent of the total Muslim population[18]. The remaining 5 to 10 countries from North and Central Africa (Egypt, Algeria, Morocco & Nigeria) as well as Central Asian regions (Iran, Turkey) together represent 23 percent of the Muslim population[19]. Therefore in terms of raw market size, these countries appear to be the most attractive.

It is interesting to note that the Muslim population is on average younger with a median age of 23 years across all regions, compared to a global average of around 28[20]. Not only is the Muslim population's median age lower than the MENA region's median age of 24 years, but in each continent, the regional Muslim median age is also lower than the normal median age[21]. With such a young Muslim population, and the fact that young people tend to be technology literate, we would expect the younger Muslim audience to welcome and adopt new Digital Islamic Services and initiatives.

An analysis of the Muslim world's first and second languages also reveals interesting results. The first language of the Muslim world naturally correlates very strongly with the geographic distribution of Muslims around the world. For instance Bahasa, the Indonesian national language, at 19 percent has the highest share of first language amongst Muslim countries[22]. Similarly, with the MENA region as the second biggest Muslim population center, their local language Arabic occupies the next highest share at 17 percent[23]. This is followed by Hindi at 15 percent, spoken by Muslims in India, the second largest Muslim populated country[24]. A closer examination of the second language in Muslim countries is starkly different, with 74 percent, the vast majority of Muslims, speaking English as a second language[25]. This shows that Digital Islamic Services do not have to be offered in a local language for them to be effective in reaching and being adopted by a significant number of Muslims.

Muslim segmentation

Behavioral segmentation helps us understand Muslim needs and preferences and identify potential target users for Digital Islamic Services. Consumer behavior studies by Ogilvy Noor have shown that behaviorally, Muslim consumers can be broadly segmented into two consumer groups: "futurists" and "traditionalists"[26].

Exhibit 5: Segmentation of Muslim consumers (2012)

	Thirst for information and new technologies		
High	**The Identifiers (27%)** • Wear Islam with pride • Want religion to be strengthened and defended *'Religion Identifies Me'*	**The Movers (6%)** • Internet savvy • Act as change agents *'Religion Enables Me'*	**The Synthesizers (6%)** • Pragmatic • Adapt religious practice to their needs *'Religion Individuates Me'*
Low	**The Immaculates (11%)** • Seek discipline and perfection *'Religion Purifies Me'*	**The Grounded (23%)** • Religion and Culture are inseparable *'Religion Centres Me'*	**The Connected (27%)** • Technology is positive, and compassion ranks highly *'Religion Connects Me'*
	Low	Medium	High

Level of moderation from tradition

40% The Futurists

Believes in both faith and modernity
- **Young and well-educated**: Generation Y, Z
- **Global**: seek to integrate a more globalized lifestyle; fully engaged in the world; well travelled with international exposure
- **Proud of who they are**: wear Islam with pride; strong reliance on faith and ethical values of Islam
- **Tech-savvy**: Generation C — Connected Generation
- **Unafraid to challenge**: prone to question the details behind what they buy; believes in education; drivers of change
- **Thirst for information**, **transparency and accountability**: it is 'important not to follow blindly; stamping products as Halal is not enough

60% The Traditionalists

Believes in both harmony and belonging
- **Larger proportion** of Muslims: 60% of total consumers
- **Older generation** than futurists: 35 years+
- Fall along the **more collectivist side** seeking belonging and social harmony
- **More rooted to traditions**
- **Need for safety**

Source: Ogilvy Noor[27]

The "futurists" are generally defined as consumers who believe in both faith and modernity. Generally, this segment of consumers tend to be young, well educated (Generation Y and Z), globalized in culture and mindset, more digitally connected technology users (namely Generation C, the connected generation). "Futurists" also are more adventurous, open to new ideas as they exude pride in their Muslim identity, making them unafraid to challenge (e.g., being questioned on buying choices, education, beliefs, new ideas) and also thirsty for more information transparency and accountability. This makes the "futurists" segment ideal for Digital Islamic Services providers.

"Traditionalists" are generally more conservative in nature, more comfortable with what is already familiar to them, which reinforces their focus and sense of social harmony, culture and belonging. This group includes and is more influenced by elders (aged over 35 years), tends to be more rooted in long-standing Islamic and cultural traditions, engendering a sense of safety. This group is therefore less likely to adopt change easily, making them more difficult to penetrate as potential Digital Islamic Services users.

Although "traditionalists" are the larger of the two Muslim consumer groups at 60 percent of those surveyed, the "futurists" at 40 percent of those surveyed still represent a significant pool of potential users, and represent the consumer segment that is most likely going to shape Muslim consumer markets and Digital Services in the years to come.

Muslim lifestyle spending

Following our understanding of the needs of the different Muslim consumer segments, Muslim lifestyle spending reflects the propensity of these segments to spend on Islamic compliant products. Figures show that Muslims represent one of the most powerful set of consumer purchasers in the world, who, in total, have been estimated to spend US $2.0 trillion on all lifestyle sectors (excluding Islamic Finance) in 2013[28]. Of this, the MENA region represents the largest share of global purchasing, estimated at around 35 percent (US $704 billion)[29], driven in particular by the wealthier GCC nations, which have a much higher GDP spend per capita. This indicates that the GCC region in particular is an ideal geography for commercial Digital Islamic Services. In addition, Muslim consumer expenditure is expected to continue to grow to reach an estimated US $3.7 trillion by 2019[30]. This is expected to be driven by ambitious government initiatives in the Organization of the Islamic Conference (OIC) countries including the GCC and non OIC states.

Figures show that Muslims represent one of the most powerful set of consumer purchasers in the world, who, in total, have been estimated to spend US $2.0 trillion on all lifestyle sectors (excluding Islamic Finance) in 2013.

Exhibit 6: Global Muslim lifestyle spending (2013)

Total Muslim lifestyle spending:
USD 2.0 Trillion

Muslim consumers in Western countries are trendsetters in particular on Islamic lifestyle digital solutions

Italy is expected to become the leading Halal production hub in Europe supported by the World Halal Food Council

Central Asia
$204bn

Europe
$145bn

North America
$33bn

MENA
$704bn

South Asia
$258bn

Malaysia has the ambition to become a global Halal hub through the establishment of the Halal Industry Development Corporation

East Asia
$331bn

Africa
$156bn

Dubai plans to become the worldwide capital of the Islamic Economy under the directives of DIEDC

Note: Includes spending by the Muslim community on Tourism, Food and Clothing; excludes Islamic Finance
Source: "State of the Global Islamic Economy", DIEDC, Thomson Reuters & Dinar Standard (2014–2015), Deloitte research and analysis (2014)

Technology readiness

As part of the macro-level assessment, we had also conducted a technology readiness study, to identify key Islamic markets with the highest potential for Digital Services adoption. The maturity analysis was measured by key indicators namely access to high-speed fixed broadband and mobile broadband infrastructure, but also internet, mobile penetration, online payment systems and others. Interestingly, results show that technology readiness in the markets with the largest Muslim population is the lowest. The analysis of the key pockets of the Islamic population confirms this, which revealed four key markets of focus: Diaspora, GCC, Levant and Turkey,

and Emerging Asia (Malaysia, Singapore, China, India, Kazakhstan, and Azerbaijan). Digital indicators show that these markets all have good or fast growing broadband and mobile penetration.

Of these the Diaspora (Western economies such as USA, EU) is the most mature. Although it represents only 3 percent of the Muslim population, it has a developed ecosystem and is characterized by early adoption of Digital Islamic Services, driven by the need to address pain points experienced by minority Muslim communities in those countries. Fixed and mobile broadband penetration is typically greater than 20 percent and 40 percent

respectively. This is followed by the GCC, Levant and Turkey, accounting for around 7 percent of the Muslim population, exhibiting high mobile broadband penetration greater than 40 percent and moderate levels of broadband penetration greater than 10 percent. It is important to note that in this regional cluster, high mobile broadband usage is being driven by high smartphone penetration, as the millennials segment engage regularly on digital and social media platforms. In addition emerging hubs for digital talent in this regional cluster (e.g., Jordan, UAE) serve as hot beds fostering the development of Digital Services. On the other hand Emerging Asia, which accounts for around 30 percent of the Muslim population, and with fixed broadband and mobile penetration currently low, represents a balance between mass market size and technology readiness, a strong potential market with much room for growth for Digital Islamic Services.

Whilst there is a significant Muslim population in countries such as Pakistan, Bangladesh and several parts of Africa, the level of technology readiness in these markets is quite low, with less than 5 percent fixed and mobile broadband penetration. This may not support the immediate roll-out of Digital Services as uptake is likely to be low in the near term. These "Digital Divide" markets would therefore be targeted selectively for certain categories of Digital Services. The same applies for North Africa, which has good presence and usage of communications as well as social networking services, but will require more significant business investment and support as these "Arab Spring" economies take time to recover.

Exhibit 7: Technology readiness assessment (2014)
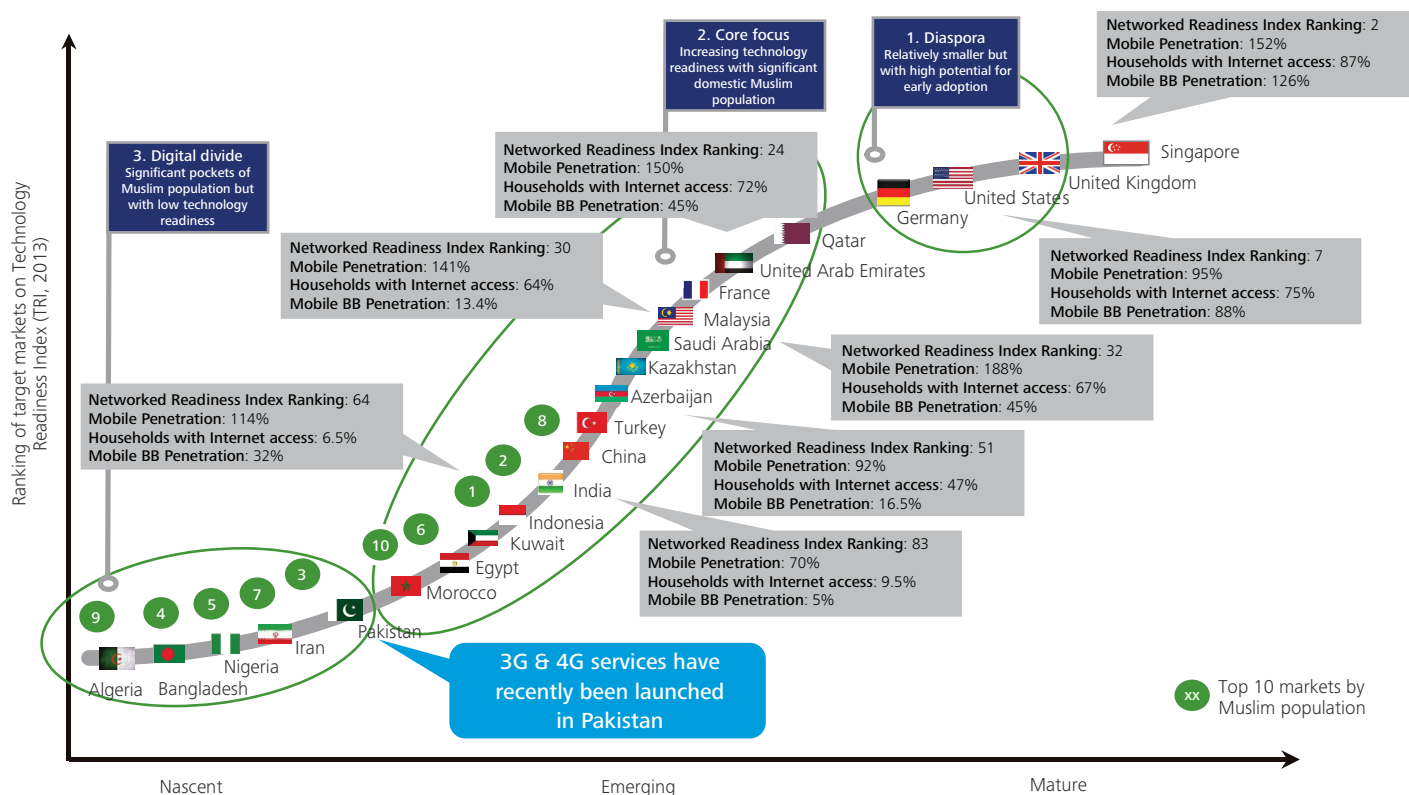
Source: World Economic Forum, Global Information Technology Report, Deloitte research and analysis

Key growth drivers

In addition to the globally fast growing Muslim demographics and technologically advancing regional clusters, a range of key overall economic growth drivers are prevalent that will shape the future of the Global Islamic Economy, and hence the market for Digital Islamic Services:

Development of Halal infrastructure: Non OIC countries are increasingly investing in Halal-friendly infrastructure. For instance, the Port of Rotterdam has created a Halal distribution park to serve more than 30 million Muslim consumers in Europe; Munich Airport has been renovated to accommodate Muslim prayer rooms and Halal restaurants. A number of countries have also expressed ambitions to develop the Islamic Economy (e.g., Malaysia, UK, and UAE). For example in the region, Dubai has announced its vision to become the capital of the Global Islamic Economy. To this end, Dubai is currently developing two large Halal zones, specifically designed to cater to the regional and international Halal product markets.

Growing global focus on ethics and quality standards: In the aftermath of the global financial crisis, there is a growing global focus on business ethics and social responsibility that is in line with the ethical base of the Islamic Economy. The success of the Islamic Finance industry, which is positioned as part of an ethical financial system that strengthens real economy sectors, is a good example of this. In other areas of the Islamic Economy such as in Halal Food, there is an increasing demand for stricter controls and transparency on food processing as well as distribution in order to be in line with Halal certification standards.

Multinationals seeking growth markets: There is an increasing participation of global multinationals in the Islamic Economy seeking growth markets, particularly in the food and banking industries. An increasing share of revenues of major food and beverage manufacturers is coming from Halal products (e.g., US $5 billion sales for Nestle, representing 5 percent of its global annual sales[31]). Most of the major global retailers have been increasingly offering Halal Foods in their stores (e.g., Wal-Mart, Carrefour, and Tesco). Equally, most of the bulge-bracket banks have increased their activity in offering Islamic Finance products and services (e.g., HSBC, Barclays).

Development of Digital Services: The global revolution in communication technology (e.g., through social media, mobile and broadband technologies, smartphones) has enabled the Islamic Economy lifestyle sectors to achieve a wider global reach and exposure. Over the last two years, this has resulted in the rising significance and popularity of the Digital Islamic Economy, exhibited through the rise and multiplication in online Islamic lifestyle magazines, Modest Fashion blogs, and Islamic lifestyle app solutions.

The global revolution in communication technology (e.g., through social media, mobile and broadband technologies, smartphones) has enabled the Islamic Economy lifestyle sectors to achieve a wider global reach and exposure.

The Digital Islamic Services landscape

Pillars of the Digital Islamic Economy

Halal Food

Halal Travel

Islamic Art & Design

Islamic Finance

Islamic Economy Education

Modest Fashion

Smart Mosques

Islamic Media

Islamic Standards & Certifications

Pillars of the Digital Islamic Economy

The Global Islamic Economy was first defined by the Dubai Islamic Economy Development Centre (DIEDC) in collaboration with Thomson Reuters, Dinar Standard and the Dubai Chamber of Commerce and Industry (DCCI)[32]. In a report commissioned by the DIEDC in November 2013, the holistic definition of the Global Islamic Economy has been widely recognized and accepted as the common point of reference in understanding the Global Islamic Economy, including its key forces, impact and opportunities[33].

The Global Islamic Economy consists of seven core areas according to the DIEDC, Thomson Reuters and DCCI[34]. In this context and in our analysis of emerging Islamic economy sectors and Digital Islamic Services, we have identified additional areas of digital activity and potential: Islamic Art & Design, Islamic Economy Education, Smart Mosques and Standards & Certification. The Digital Islamic

Services landscape has therefore been defined under nine key industry verticals and areas (excluding Pharmaceuticals and Cosmetics), which constitute the pillars of the global Digital Islamic Economy: Halal Food, Halal Travel, Islamic Finance, Modest Fashion, Islamic Art & Design, Islamic Economy Education, Smart Mosques, Islamic Media all centered around associated Islamic Standards & Certifications.

Based on this framework, the study revealed over one hundred Digital Islamic Services across the nine key verticals and areas, which included vertical specific services as well as transversal services applicable across all areas of the Islamic Economy. A large number of exemplars were also studied across each of the verticals examined.

The Digital Islamic Economy model and salient trends under each vertical are outlined below.

Exhibit 8: Pillars of the Digital Islamic Economy

Islamic Media
Islamic Media content could play a unifying role across the Islamic world addressing common values and matching target demographics. Many ventures are being developed, however there is no leading global aggregator

Smart Mosques
Primary surveys of mosque users reveal a huge need for more effective management and administration driving the need for smart solutions which can include mosque information services, multi-screen powerpoint projections for Friday sermons and eco-tech

Modest Fashion
Current digital initiatives vary from simple information portals, to local and global e-commerce platforms, and become more important in developed markets with initiatives for talent development and networking

Islamic Economy Education
This vertical in general is largely underdeveloped with a main focus on Islamic Finance and limited online platforms dedicated towards Islamic Economy Education. Digital Services providers include conventional academic institutions, Islamic Finance focused universities and certification bodies as well as pure online education suppliers

Halal Food
There is increasing demand for healthy Halal organic food both in the Muslim as well as non-Muslim segments. With more sophisticated consumer requirements there is a growing need for transparency and tracking mechanisms driving digital opportunities across the value chain

Halal Travel
There is a gap in the availability of Halal-friendly holiday amenities and services as it is a fairly new concept in OIC and non OIC states. Many countries are making efforts to fill the gap. Current digital initiatives are focused on online booking, ratings and accreditation

Islamic Art and Design (A&D)
The A&D market is fragmented but growing. Online A&D sales are expected to grow by 19% as tech-savvy consumers are attracted by online galleries, online-only auctions and bricks and clicks portals. Increased online activity is driving a need for more specialized services related to valorization and online galleries/auctions

Islamic Finance
Populous OIC countries are emerging as high growth Islamic Finance markets, but low penetration and GDP per capita is driving the need for access to digital Islamic funding services

Standards and Certifications
Efforts to create unified global Halal Standards & Certifications to manufacturers, consumers and suppliers is key to ensure the credibility of Islamic markets. Some recent initiatives are steering the industry towards a possibly better alignment but are mainly focused on Halal Food

Source: Deloitte research and analysis

Halal Food

Definition

The Islamic term 'Halal' means 'lawful'. In the context of food, 'Halal' constitutes what is permissible for consumption. In the interest of protecting health and preventing illness, many items are permitted as 'Halal' and certain items are prohibited as 'Haram' (forbidden). Halal Foods include food items which are compliant with 'Zabihah' (prescribed Islamic method of slaughter)[35]. The exception to this obligation is when there is no alternative and normally Haram items are the only option for consumption to ensure survival in extreme circumstances. Items prescribed as Haram include: pork, carnivorous animals, animals deceased before Zabihah, human flesh, intoxicants (e.g., alcohol), blood of any kind, any other impure or hazardous items (e.g., insects)[36].

Offline market overview

In terms of the offline market, Halal Food is certainly the largest industry vertical by value after Islamic Finance. Muslim consumers globally spent over US $1.2 trillion on food and non-alcoholic beverages (F&B) in 2013, 17.7 percent of global F&B expenditure (i.e., larger than F&B consumption in China)[37]. Not only is the Halal Food market very large, but it is also growing. By 2019, the Muslim F&B market is estimated to grow to over US $2.5 trillion[38], driven by the growth in the Muslim population base in key regions. This includes the largest Halal Food consuming countries Indonesia ($225 billion), Turkey ($114 billion), Pakistan ($106 billion) and Egypt (US $101 billion) based on 2014 estimates[39].

Key trends

Despite the size of the market, reports still indicate that there is a sizeable gap between Halal Food suppliers and Muslim consumer demand for quality Halal Food products[40]. Further, Muslim consumers are increasingly demanding greater transparency and information as they become more sophisticated in seeking to better understand the source of their Halal Food products. This is especially the case in countries across the Diaspora (e.g., United Kingdom, USA, Canada), where minority Muslims need to obtain Halal verification to ensure Halal Food preparations are authentic (e.g., in line with the

Zabihah practice), without any traces of Haram impurities. There is a wide diversity in awareness and adoption of the 'Halal' concept amongst the core customer base of Muslims globally, an added complexity for suppliers seeking to meet various Muslim consumer expectations, impacting their view of quality.

Digital market analysis

The sheer size of the Halal Food market makes it one of the most attractive verticals of the Islamic Economy. This is because Digital Islamic Services in this vertical are likely to impact Muslim consumers the most in terms of user base and frequency of use.

Key Digital Islamic Services helping Muslim consumers to observe this include Halal restaurant finders with ratings and reviews (using location-based services and user-generated content, e.g., Zabihah.com), Halal e-commerce stores (e.g., MyHalalMeat.com), Halal Food scanners (QR codes, RFID tags, barcode scanners for consumers to check supply source and food contents, e.g., Halal Scanner), Halal Food events websites and apps, online Halal Food videos and shows as well as central online verification and certification services (e.g., HalalVerified.com).

Key digital service trends include an increasing demand for healthy Halal organic food both in the Muslim as well as non-Muslim segments. With more sophisticated consumer requirements there is a growing need for transparency and tracking mechanisms driving digital opportunities across the value chain. Key digital insights include an increasing demand for services helping consumers to identify healthy organic food and a gap in demand for services addressing the absence of clear food supply tracking mechanisms and lack of transparency impacting consumer confidence.

In particular, we are seeing most digital exemplars in Halal Food emerging from the Diaspora markets (e.g., USA, France, UK, etc.), to address the difficulties faced by Muslim minorities who may not have as easy access to Halal Food products as Muslim consumers do by default from traditional OIC countries.

Halal Food: Digital Services categories

Digital Services in the Halal Food vertical consist of Business-to-Consumer (B2C) and Business-to-Business (B2B) services.

Business-to-Consumer (B2C) services

Online communities: Social Halal Food communities on social media or aggregator websites. Key trends include service integration with major social media platforms such as Facebook, Twitter and Pinterest. Many Halal Food services have their own pages on Facebook for example.

Information services: Online Halal Food guides and search services such as Halal restaurant, butcher, retailer guides (e.g., online review and ratings), Halal Food events, Halal Food magazines, news and links. This is the most common digital service provided. Services are provided by a range of organizations, from Halal bodies, authorities to Not-for-Profit (NFP) organizations as well as commercial entities. Examples include the Islamic Food & Nutrition Council of North America (IFANCA) online magazine with information on the latest Halal trends, nutrition news, recipes and articles. Muslim Consumer Group (MCG) is another general online portal and repository of knowledge for Muslim consumers in North America.

Location services: GPS location of nearby Halal Food providers including location-based features such as push notifications to drive consumer traffic towards Halal suppliers, retailers, restaurants, stores. This is one of the most common services available, which tend to focus on the Diaspora, with localized versions. Examples include mobile app service Halal Spot in the UK.

Group buying services: Discounted offerings for Halal Food products and meals usually with restaurants. Includes linking Muslims with similar Halal Food tastes, cuisine, or interests. In terms of revenue model, restaurants generally do not have to register themselves on the service. Instead, a revenue-sharing model could be applied or advertising if the service has a significant user base. Examples include

HalalGems, the first group buying service for Muslims in the UK. The service provides recommendations based on the user's lifestyle and preferences. Trends from user feedback on services in this category indicate that their most important requirement of the service is to have information about the food on offer.

Online videos and shows: Halal Food educational videos, cooking shows, Halal Foodie programs, recorded community discussions and video Halal Food advertising. Examples include EatHalal.com, a multi-category digital service providing news and professional commentaries not only on Halal Food but also on consumer goods and products from other industry verticals such as travel and tourism.

Halal Food blogs: Blogs dedicated to Halal Food enthusiasts to share views, recommendations, information and insights on Halal Food. Blogs and discussions are centered around topical areas, for example Halal Food events and 'how-to' guides. An example is myHalalKitchen.com, a Halal Food and cooking blog by a Halal Food enthusiast seeking to share tips, tricks and recipes in preparing delicious Halal Food dishes.

e-commerce platforms: Online stores of Halal Food suppliers, restaurants or butchers providing Halal Food products and meals. Key developments include the use of e-commerce services by suppliers upstream in the Halal Food supply chain to either benefit from additional revenue or to bypass costs of selling through intermediary retailers.

Halal Food events: Aggregated websites and apps of Halal Food events, including facilities to register attendance and manage Halal Food events. Key developments in this category include the rise in websites dedicated to major Halal Food events. Examples include the UK's HalalFoodFestival.com, HalalFest.com in the USA, Canada's HalalFoodFestTO.com and many others.

Digital Services offered:

- Information services
- Location services
- Intelligence and analytics

Service description: Established in 1998 in the USA, Zabihah.com is the world's first original and largest Halal restaurant and product guide. The service provides information for users across the world, guiding them on Halal restaurants and markets, Halal airline meals, Halal consumer products, restaurant and grocery chains, Halal manufacturers, prayer times and Halal certification authorities. As one of the pioneering Digital Islamic Services, Zabihah.com over the past +15 years has grown to list over 16,335 Halal Food restaurants and post 73,126 user reviews. Content is largely user-generated and it covers all major regions and mobile platforms. The website enjoys over 10 million users, mostly in the Diaspora, addressing the common pain point of minority Muslim groups in finding Halal Food sources.

Revenue model:

- Market data: suppliers and consumers can purchase market data and reports on Halal Food consumption patterns
- Intelligence and analytics: provide suppliers with food maps to advise on the top food retail/outlet locations, which have the most Halal Food consumer traffic and activity
- Advertising: web/app advertisements and location-based push notifications help to drive consumer traffic towards Halal Food restaurants and retail outlets
- Special listings: restaurants and suppliers subscribe to receive special listings (e.g., around 3000 restaurants are listed as offering prayer spaces)

Digital Services offered:

- e-commerce services
- Information services

Service description: Established in 2009, myHalalMeat.com is an online Halal meat store owned by NEMA Food Company. The company claims to be the only Halal Food supplier whose food plant in the US and Canada has the same slaughtering and processing facilities under one roof. The e-commerce store enables the supplier to sell directly to consumers, bypassing intermediary retailers, thus shortening the Halal Food supply chain. To ensure a fast and reliable delivery to Muslim consumers, the service has partnered with FedEx. As a guarantee of quality, their meat products are also certified by NAHF, ICNA and ICP. Aside from Halal meat, the store also offers desserts and dairy products as well.

Information services such as product comparisons and market intelligence and analytics (e.g., online consumer polls) are also provided. Online member shoppers also receive a periodic digital customer newsletter.

Revenue model: e-commerce revenues from the sale of their own Halal meat products.
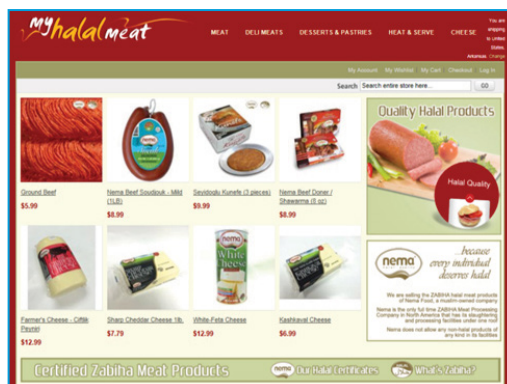
Digital Services offered:

- e-commerce services

Service description: Similar to myHalalmeat.com, Midamar Halal is an online store owned by Midamar Corporation. Originally established in 1974, the company is a global supply chain management company serving the Middle East, South East Asia and Far East regions.

It is the first company in North America to offer Halal consumers the ability to shop for their Halal Food online and have products shipped anywhere in continental US and Canada. The online store offers more than 200 Halal Food products and is also partnered with FedEx for fast and reliable delivery to customers.

Revenue model: e-commerce revenues from the sale of their own Halal meat products.

Business-to-Business (B2B) services

Matchmaking forums: Digital marketplace to actively match Halal Food suppliers and buyers. Notable examples include DagangHalal.com, which matches Malaysian small-to-medium size enterprises (SMEs) with buyers from around the world.

e-government services: Online portals providing information on national Halal Food standards, certification process, authorities, recommended websites, news and sources. Examples include Halal.gov.my from Malaysia, providing information and directions to dedicated local Halal Food authorities such as the Department of Islamic Development of Malaysia (JAKIM: Jabatan Kemajuan Islam Malaysia). HalalOffice.com from the Netherlands is another national agency specializing in the overseeing, auditing and certification of Halal Food products and productions.

Halal Food certification: Platforms enabling digital application and certification of Halal Food products. Also online verification with coded knowledge and intelligence repository of different Halal standards for cross-checking. This is a relatively new area which requires active coordination, investment and development. Examples include HalalVerified.com, the world's first global online certification system, enabling verification of Halal Food products and suppliers across the supply chain against a global proprietary database of 73 international certification bodies recognized by Malaysian authorities (JAKIM).

Online business directories: Aggregated listings with information on all Halal Food suppliers across the value chain. The service enables users to simply look up desired services from a dedicated directory. Notable examples include Malaysia's Halal Pages (see case study).

'Farm-to-Fork' (F2F) tracking: Systems tracking the flow of Halal products from source to end users monitoring the Halal status of products at each part of the value chain. Very few services exist; hence this category is fairly immature. There is still a large gap in this category as supply chain transparency remains an issue for retailers and Muslim consumers who wish to track the original source of their supplies.

Halal Food scanners: Scanning of coded Halal Food products (e.g., bar codes, QR codes, RFID tags) to compare and verify the Halal status of ingredients against online Halal and Haram ingredient food code repositories. This service in particular can be used both by businesses and consumers alike. Examples include Halal Scanner, a mobile application which enables the scanning of ingredient labels on food products and verifies their Halal status against a proprietary Halal Food item database.

Digital marketing: Development of digital marketing material (e.g., logo development), website/app user interface design, digital marketing plans, campaigns, advice, listings. The Muslim Ad Network is a leading service provider in this area, specializing in advertising not only for Halal Food but in other industry verticals as well. Aside from this, not many other services have been found, implying this category is still largely immature, which needs to be addressed.

Intelligence and analytics: Includes provision of proprietary raw data (e.g., on users), online poll data, reports, customized analysis (e.g., food heat maps, user location density). This service acts as the monetization enabler for many B2C services who obtain user intelligence from their free B2C offerings and sell it to businesses that stand to benefit from this information. Examples include Zabihah.com.

There is still a large gap in 'Farm-to-Fork' (F2F) tracking as supply chain transparency remains an issue for retailers and Muslim consumers who wish to track the original source of their supplies.

Mini case study: HalalPages.com.my

Digital Services offered:
- Online business directories
- Information services

Service description: Introduced in 2002, Halal Pages is widely seen as the reference guide for Halal certified companies. The service is essentially a yellow pages type of guide but only with listings of Halal products and suppliers. Categories include: beverages, drinks, herbal drinks, condiments, spices, seasonings, confectionery, candy, bakers, fish products, fillets, frozen food, meat, health supplements, herbs, medicines, ointments, pharmaceuticals, processed food, foodstuff, restaurants, cooking and edible oils. Other categories include Halal: banking, insurance, re-insurance, leasing, cosmetics, beauty-care and Muslim trade organizations.

The service has been successful with 30,000 print copies distributed throughout Malaysia in addition to the online service.

Information services such as product comparisons and market intelligence and analytics (e.g., online consumer polls) are also provided. Online member shoppers also receive a periodic digital customer newsletter.

Revenue model: Similar to traditional listing directories. Monetization could be from multiple streams, either through premium listings or possibly through advertising
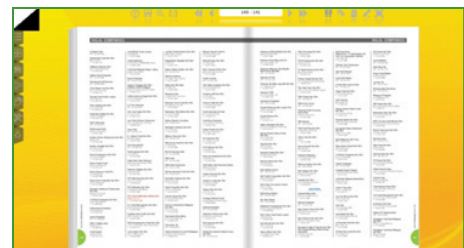
Mini case study: Fahim Science and Technology Co. Ltd. (Fahim Technologies)

Digital Services offered:
• 'Farm-to-Fork' (F2F) tracking

Service description: Established around 2011, Fahim Technologies is a Malaysian provider of an integrated Halal Food integrity management system. It is an integrated monitoring system that enables tracking the inflow of Halal Food products from source to end, verifying the Halal status of food products at each stage of the value chain against a coded knowledge and intelligence repository of various Halal standards to ensure its safety and product quality.

The proprietary system was developed in partnership with IBM, by an IBM team in Melbourne, which was sponsored by Fahim Technologies over a three-year period.

As a first mover in offering this kind of service, Fahim Technologies has reportedly deployed its Halal integrity solution in China's Ningxia province, a predominantly Muslim populated region, in a Sino-Malaysian joint

venture with Ninxia Agricultural Comprehensive Investment Co. Ltd. (NACI), with plans to expand to other provinces in China and globally.

Revenue model: Sale of the integrated Halal integrity management and safety control solution to Halal Food companies around the world. Reportedly the company is also targetting non-Muslim geographies in China (and therefore also globally), where Halal Food products are preferred to allay food safety concerns.

In addition to its tracking system, the company also aims to support key aspects of the Halal Food value chain, while promoting and enhancing Halal integrity through a range of other services. This includes consultancy services involving intelligence and analytics (i.e., online market research), Halal Food certification support services, matchmaking forums (of potential Halal Food buyers and sellers) and digital marketing (see company graphic below illustrating its full range of activities).

Digital makeup

Islamic Media
Social Halal Food communities on social media or aggregator websites

Intelligence and analytics
Proprietary raw data (e.g., on users), online poll data, reports, customized analysis (e.g., food heat maps, user location density)

Information services
Online Halal Food guides and search services such as Halal restaurant, butcher, retailer guides (e.g., online review and ratings), Halal Food events, Halal Food magazines, news and links

Digital marketing
Development of digital marketing material (e.g., logo development), website/app user interface design, digital marketing plans, campaigns, advice, listings

Location services
GPS location of nearby Halal Food providers including location based features such as push notifications to drive consumer traffic towards Halal suppliers, retailers, restaurants, store

Halal Food scanners
Scanning of coded Halal Food products (e.g., bar codes, QR codes, RFID tags) to compare and verify Halal status of ingredients against online Halal and Haram ingredient food code repositories

Halal Food blogs
Blogs dedicated to Halal Food enthusiasts to share views, recommendations, information and insights on Halal Food

'Farm-to-Fork' (F2F) tracking
Systems tracking flow of Halal products from source to end users monitoring Halal status of products at each part of the value chain

e-commerce platforms
Online stores of Halal Food suppliers, restaurants or butchers providing Halal Food products and meals

Online business directories
Aggregated listings with information on all Halal Food suppliers across the value chain (e.g., Halal Pages)

Group buying services
Discounted offerings for Halal Food products and meals usually with restaurants. Includes linking Muslims with similar Halal Food tastes, cuisine, or interests

Halal Food certification
Platforms enabling digital application and certification of Halal Food products. Also online verification with coded knowledge and intelligence repository of different Halal standards for cross-checking

e-government services
Online portals providing information on national Halal Food standards, certification process, authorities, recommended websites, news and sources

Halal Food events
Aggregated websites/apps of Halal Food events, including facilities to register attendance, manage Halal Food events

Online videos and shows
Halal Food educational videos, cooking shows, Halal foodie programs, recorded community discussions and video Halal Food advertising

Matchmaking forums
Digital marketplace to actively match Halal Food suppliers and buyers

■ Business-to-Business (B2B) Digital Services

■ Business-to-Consumer (B2C) Digital Services

Halal Travel

Definition

Halal Travel is defined as any activity that enables a Muslim individual or family to perform daily Islamic rituals and Halal activities (e.g., prayer, Halal Food) whilst on holiday, business or medical travels[41]. It is a relatively new service in the travel industry catering to the specific Muslim lifestyle travel drivers which include Halal Food, family-friendly environments, accommodation of religious practices (e.g., Wudu and prayer facilities), gender separation (e.g., separated swimming, sports and spa facilities), and other areas (e.g., Islamic-heritage based travels to historical sites such as mosques)[42]. In this context, religious tourism (pilgrimage and visits to holy places) has been excluded from the study given its unique nature and specialized focus, primarily on one destination. Halal Travel is therefore not considered to be exclusive to Muslims, but positioned also as a family-friendly concept, catering to the needs of non-Muslim travelers and families who could benefit from Halal Travel as well. In terms of providers, Halal Travel, as with any kind of travel, includes travel agents, operators and tour packages offering transportation, accommodation and destination services.

Offline market overview

Halal Travel has strong growth potential as this segment is a new addition to the travel industry with a large addressable market. For instance, expenditure in the global Muslim travel market alone was reportedly worth US $140 billion in 2013, representing 11–12 percent of the travel industry's overall global expenditure in 2013[43]. With the overall tourism industry growing at a +4 percent CAGR, by 2020, the Muslim segment, according to industry estimates, is naturally anticipated to grow to US $238 billion by 2019[44].

Geographically, Muslim consumer expenditure on tourism is more concentrated across 20 key driving markets, which represent almost 80 percent of total Muslim travel expenditure[45]. Of this, the GCC region has the highest share, representing around 32 percent of overall Muslim travel spend in 2013[46]. This is followed by the key markets of Iran and South-East Asia (Indonesia, Malaysia, Singapore) which each represent 10–11 percent of spend[47]. Western Europe (Germany, France, UK) is not far behind accounting for 6 percent of spend with other key markets of Russia, Turkey and Nigeria each representing

around 3–4 percent of Muslim travel spend[48]. In terms of consumer preference, key Halal holiday destinations include Malaysia, UAE, Egypt, Saudi Arabia and Turkey[49]. The most popular of these amongst Muslim consumers in particular is Malaysia, a destination which has consistently and is increasingly being seen as the most Halal-friendly[50].

Key trends

Although the addressable market is large, there is a significant gap in the availability of Halal-friendly holiday amenities and services as it is a fairly new concept. However, many countries are making efforts to bridge the gap.

Over the past five years, a number of non OIC countries have been heavily investing in Halal-friendly facilities, where attracting Muslim tourists has been high on their agenda. For instance, Japan has been launching campaigns to attract Asian Muslims from Indonesia and Malaysia[51]. Similarly, Australia is also positioning itself as a Muslim-friendly place to attract tourists from Indonesia and the Arab world (e.g., the state of Victoria has launched a major tourism campaign in the Middle East, including Arabic/English visitor guides)[52]. China's Muslim Ningxia province is targeting Muslim tourists from the Middle East and South-East Asia[53]. Taiwan's Tourism Bureau hopes to increase its number of Halal certified eateries to attract more visitors from Muslim nations[54]. The European Commission has also called for greater promotion of inward Muslim tourism thinking, specifically about Islamic historical sites as an attraction for tourists[55]. The World Halal Development Council is also training the European hospitality training industry on Halal practices[56].

In the Islamic world, OIC states such as Turkey, Malaysia and Egypt are also investing their own efforts, but to be perceived as key destinations offering an authentic Halal holiday and Islamic travel experience (e.g., via Islamic heritage, events such as the International Quran Festival).

Governments through tourism agencies have also been very active in attracting Muslim guests (e.g., Thai Tourism Authority, New Zealand Tourism Board), exhibited through the success of various Halal and Ramadan festivals as well as increased Islamic heritage based travel package offerings[57].

With such efforts taking place, activity in the Halal Travel vertical is plentiful, but still fragmented and immature. For example, there is a lack of and growing need for training Halal Travel industry staff on Halal practices in order for them to adequately advise and service Halal Travel consumers. In addition, there currently is no official body that certifies hotels or other places of interest as Halal or Muslim-friendly.

Digital market analysis

The most pervasive Digital Services seen in this vertical are online bookings, ratings platforms, accreditation platforms and also Halal Travel smartphone applications. In particular the strongest demand has been seen for travel mobile apps, stemming from their utility and ability to be used on-the-go (e.g., in-flight prayers, mobile travel guides, Muslim pro).

The Halal Business, MICE and medical travel segments also offer significant digital potential, given the number of applications that can be made for them, but remains untapped. For example the HKTDC Product Magazines app, although not a pure Islamic app, is a pure MICE event app for all trade events and fairs organized by the Hong Kong Trade & Development Council designed to increase productivity for visitors at the event by smart in-app facilities (e.g., map of the event floor and floor plan, ability to exchange business cards electronically, linking buyers and suppliers, event information services)[58]. Similar Digital Services could also be provided for Islamic events.

Structurally, the digital market is mainly occupied and driven by small dedicated Halal Travel players. However, global tourism players and online travel giants such as Kuoni group and Booking.com have started to enter the market through partnerships and alliances[59]. Larger providers such as Fairmont Hotel and Qantas are also entering the market through more customized offerings catering to specific Muslim needs[60]. Partnerships are also being formed by existing Halal Travel players, with a multiplication of partnerships between Halal Travel authorities and Halal Travel operators (e.g., CrescentRating.com and Halal India)[61].

Further, in the absence of official Halal Travel authorities and regulators, CrescentRating.com has recently emerged as one of the first online Halal Travel rating platforms, specialized in assessing and evaluating the ability of hotels, resorts and other tourism services to meet Halal Travel standards that they have defined. In being one of the first to address this standards gap, CrescentRating.com via their online ratings platform have positioned themselves as one of the leading standard-setters in the Halal Travel industry[62].

Halal Travel: Digital Services categories

Digital Services in the Halal Travel vertical consist of Business-to-Consumer (B2C) and Business-to-Business (B2B) services.

Business-to-Consumer (B2C) services

Muslim event information services: Online travel news information service which may include user-generated ratings, reviews and recommendations. Examples of such services include live events coverage on social media, particularly on mainstream platforms such as Twitter and Facebook, usually used for posts on live events.

Online booking (tour packages): Websites containing Halal tour packages which can be booked online. This is a pure booking service. This and online travel site services are the most prevalent digital platform dedicated to Halal Travel. Major players are HalalBooking.com, HalalTrip.com and IslamicTravels.com targeting mainly Muslim tourists from UK, US and South-East Asia. In this category many partnerships are emerging to expand and drive the Halal Travel industry forward, as they have with the traditional tourism industry. For instance, HalalTrip.com is working with partners such as Booking.com to offer accommodation choices, WeGo.com to power its flight search and Kuoni Group Travel Experts to offer specialized tour packages. Developments also include the emergence of local online platforms in countries such as China and Vietnam, catering specifically to the needs of their own minority but strong Muslim communities.

Peer-to-Peer rating platform: Communities dedicated to Halal Travel interests where users can rate holiday experiences. Examples include Crescent Travel and even TripAdvisor.com, which as a popular mainstream service is also used by Muslim consumers.

Halal Travel apps: Apps which enhance or aid Muslim tourists in practicing their religion whilst on the move. This may include in-air prayer calculators, Islamic historical places of interest. CrescentRating.com has created Crescent Trips, the world's first in-flight prayer and prayer direction mobile app for Muslim travellers. They also launched a travel guide mobile application to provide information on Halal-friendly hotels, holiday packages, and restaurants as well as destination and airport guides.

Muslim-friendly medical tourist guide: Online guide which lists Halal certified hospitals. Examples include India's Global Healthcare City.

Digital magazines: Magazines dedicated to Halal Travel and recreational activities. In this category Islamic lifestyle magazines are increasingly offering articles on Halal Travel. Successful examples include Emel Magazine and Aquila Style. There is also an emergence of local tourism-specialized Islamic online magazines such as Islamic Tourism Media.

Online travel sites: Travel websites containing Halal holiday packages which can not only be booked but also reviewed through a user feedback forum. This is a much more interactive offering in the Halal Travel industry. Larger players offering this kind of service include HalalBooking.com and HalalTrip.com.

Social Muslim travel community: Digital platform to actively match Muslim travelers with each other. This service is more akin to Contiki style tours, where people looking to do tours in other countries find travel buddies online. As a relatively novel concept, there are very few or no providers offering this kind of service specifically for the Muslim community. Adoption of this particular service is likely to appeal to the younger, more globalized and adventurous "Futurists" Muslim consumer segment, which would be more open to using such a service.

Business-to-Business (B2B) services
Halal Travel advisory services: Portal for tourism businesses to find information on Sharia compliance and procedures to adapt existing tourism facilities such as accommodation, tours, restaurants to be Sharia-compliant. This category will experience rising demand and is fundamental in the development of the Halal Travel industry, as providers will need to be given proper guidance in catering adequately to Muslim consumer needs. This is a relatively nascent category, but one which has much potential. Few providers exist such as the New Zealand Tourism Authority portal, but over time more may emerge.

Accreditation/certification guide: Online accreditation guides for Islamic friendly hotels and other tourism services. Hardly any players offer this much needed service given the lack of official bodies or authorities adequately regulating and setting standards for Halal Travel, which presents a huge gap. CrescentRating.com, a first mover in this category, is a global rating and accreditation standard for Halal-friendly travel services covering hotels, travel operators and agents, tourism agencies and travel destinations (countries). Currently, they are expanding their ratings to include shopping malls, attractions, theme parks, convention centers, spas and hospitals.

CrescentRating.com has created Crescent Trips, the world's first in-flight prayer and prayer direction mobile app for Muslim travellers.

Mini case study: CrescentRating.com

Digital Services offered:
- Muslim event information services
- Peer-to-Peer rating platforms
- Halal Travel apps
- Accreditation/certification guide

CRESCENT ™
RATING
Your Guide To Halal Friendly Travel

Service description: CrescentRating.com is an online Halal Travel web portal that highlights Islamic-friendly travel destinations for those of the Islamic faith. The service originally emerged as one of the first and leading online Halal Travel rating platforms, specialized in assessing and evaluating the ability of hotels, resorts and other tourism services to meet Halal Travel standards that they have defined.

As a B2B service, CrescentRating.com evaluates Halal Travel providers who wish to be recognized as providers of choice for Muslim consumers, who use their website as the best available reference point. As a first mover, CrescentRating.com is positioned as one of the leading accreditors of Halal Travel compliance in the industry.

To assess, evaluate and describe the Halal compliancy of destinations, accommodation and other services provided, the company has defined its own seven point proprietary rating system. The rating system is based on four key criteria: Halal Food facilities, Salah (prayer) facilities, services during Ramadan and level of non-Halal activities in the hotel.

As one of the most comprehensive multi-service offerings, CrescentRating.com also offers a suite of other Digital Services to consumers such as Crescent Trip. The website is an essential Halal Travel portal and reference site, essentially a Halal version of TripAdvisor.com or Booking.com, showing Islamic-friendly travel, tour and package listings. CrescentRating.com also offers travel apps for Muslims. For example Crescent Trips (described earlier under the apps category) is claimed as the world's first in-flight prayer and prayer direction mobile app for Muslim travelers.

Revenue model:
- Charge tourism businesses for rating and listing services
- Training services (e.g., extensive suite of workshops, training and accreditation programs to enable travel, tourism and hospitality professionals to better service Halal-conscious Muslim travelers)
- Research and consultancy services
- Destination marketing services
- Online bookings of hotels, flights and tour packages (HalalTrip.com B2C platform)

Digital makeup

Muslim event information services
Online travel news information service which may include ratings and reviews and recommendations (e.g., Twitter, Facebook post for live events)

Social Muslim travel community
Digital platform to actively match Muslim travelers with each other (e.g., Contiki style tours)

Online booking (tour packages)
Websites containing Halal tour packages which can be booked online (e.g., Turkey Travel Bazaar)

Halal Travel advisory services
Portal for tourism businesses to find information on Sharia compliance and procedures to adapt existing tourism facilities such as accommodation, tours, restaurants to be Sharia compliant (e.g., New Zealand Tourism Authority portal)

Peer-to-Peer rating platform
Communities dedicated to Halal Travel interests where users can rate holiday experiences (e.g., Crescent Travel, TripAdvisor.com)

Accreditation/certification guide
Online accreditation guides for Islamic-friendly hotels (e.g., CrescentRating, directory of hotels with none/limited Haram activities)

Halal Travel

Halal Travel apps
Apps which enhance or aid Muslim tourists in practicing their religion whilst on the move. This may include in-air prayer calculators, Islamic historical places of interest (e.g., CrescentRating in-air prayer calculator app)

Online travel sites
Travel websites containing Halal holiday packages which can be booked and reviewed through a user feedback forum (e.g., HalalBooking.com, HalalTrip.com)

Muslim-friendly medical tourist guide
Online guide which lists Halal certified hospitals (e.g., India's Global Healthcare City)

Digital magazines
Magazines dedicated to Halal Travel and recreational activities (e.g., Travel and Leisure magazine, Aquila style)

Business-to-Business (B2B) Digital Services

Business-to-Consumer (B2C) Digital Services

Islamic Art & Design

Definition

Islamic Art & Design (A&D) includes the art and design of the rich and varied cultures of Islamic societies. It is the visual arts form developed by craftsmanship across the entire Islamic world. This definition covers Calligraphy, Glasswork, Metalwork, Wood Carving, Arabesque, Ceramics, Marquetry, Rugs & Carpets, Painting and Architecture[63].

Offline market overview

Islamic Art & Design as an industry vertical is relatively smaller in size when compared to other verticals in the Islamic Economy. The market is also fragmented but growing. Global art sales, although having fluctuated over the years as a result of various economic trends including the global financial crisis and its ripple effects, has been growing at a CAGR of 7 percent to 8 percent since 2005, reaching US $56.6 billion in 2012[64]. The most significant distribution platform for art sales is auctions, which accounted for 48 percent of total art sales in 2012[65]. This is followed by private and retail dealers at 33 percent as well as events (fairs and exhibitions) at 19 perent[66].

Compared to the overall market, Islamic Art & Design is still a very small segment, accounting for a 0.1-0.2 percent share of the global market[67]. However, it has shown tremendous sales growth of a 22 percent CAGR since 2001 to reach US $78.9 million in 2011[68]. Islamic Art & Design items are mostly accessible through the major auction houses such as Christie's and Sotheby's. In view of anticipated market growth, these auction houses are expecting considerable activity in the years to come[69].

Key trends

The Islamic Art & Design market is fragmented, with traditional art and craftsmen spread across the Islamic world. With an increased global interest in this area, we notice the proliferation of numerous auction houses, private retail, dealers, fairs and exhibitions conceding dedicated efforts for events about the Islamic culture. For instance, both Christie's and Sotheby's have set up auction centers in Dubai and Doha respectively, with the intention of showcasing local artists with better access to a global network of art enthusiasts, and allowing them to showcase art from the Islamic world[70].

More so, many prominent museums have also dedicated departments for Islamic Art (e.g., LA County Museum of Art[71], NYC Metropolitan Museum of Art[72], Louvre museum[73]) and fully dedicated museums have started or are being built (i.e., Qatar Museum of Islamic Art[74]) as corner stones for the growing interest in this art form.

Digital market analysis

Global interest in art is reflected in sales via digital platforms (including online Islamic Art & Design sales), which is expected to grow by 19 percent per annum to reach an estimated US $3.8 billion by 2018[75]. The activity is driven by tech-savvy consumers who are attracted by online galleries, online-only auctions as well as bricks and clicks portals. This increased online activity in turn is driving the need for more specialized services such as artist networking and B2B sites (e.g., Saatchi Online), online repositories of art collections (e.g., digital museums, online research), professional authentication, valorization and rating services, and online galleries and auctions, to name a few.

A recent global study for purchases based on a survey of 506 art buyers[76] defines the growing trend of online transactions: returning customers constitute the top category and top destinations are online galleries and auctions.
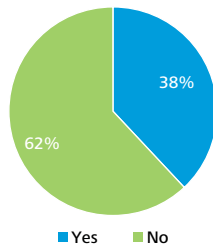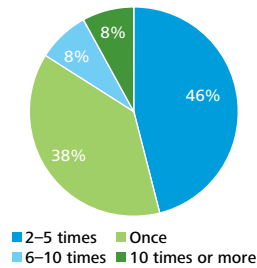
Global interest in art is reflected in sales via digital platforms (including online Islamic Art & Design sales), which is expected to grow by 19% per annum to reach an estimated US $3.8 billion by 2018.
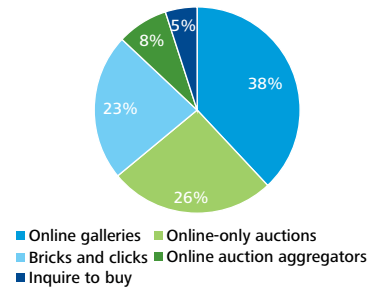
Exhibit 9: Online Art Consumption Survey (2014)

Have you bought art and/or collectibles directly online through a click-and-bid site?

How many times have you bought an art or collectible object online in the last 12 months?

What types of online art websites/platforms have you bought from?

- ■ Yes
- ■ No

- ■ 2–5 times ■ Once
- ■ 6–10 times ■ 10 times or more

- ■ Online galleries ■ Online-only auctions
- ■ Bricks and clicks ■ Online auction aggregators
- ■ Inquire to buy

Source: "The Hiscox Online Art Trade Report", Hiscox (2014)

Online searching and discovery of new art is another demand driver for digital art platforms, which as a business proposition has struck the interest of private equity firms, who have provided second round financing to several online art portals ranging from US $3–7 million[77].

Islamic Art & Design: Digital Services categories
The identified Digital Services in the Islamic Art & Design vertical consist of Business-to-Consumer (B2C) and Business-to-Business (B2B) services.

Business-to-Consumer (B2C) services
Online auction/aggregator: Web-based listing and sales of Islamic art work by offering visitors the option of bidding for the highest price to purchase the artwork of interest. Traditional houses such as Sotheby's as well as online-only houses such as Invaluable.com see the opportunity of providing web based auctions on researched art work.

Online valorization network: Online network dedicated to art and design fans to allow the rating of artists and their art work, with the target of recognizing prominent artists and allowing them to connect with their audience and collecting feedback to enhance their work. ArtBusiness.com is a consulting service for collectors and artists who are looking for a valuation of artwork and other research or information. The site is supported with a group of experts with extensive exposure to the art world.

Peer-to-Peer services: Digital platform intended for artists to connect directly with their fans. Interaction happens

through the display and sales of artists' work, with the possibility of providing direct interaction through chatting and/or messaging. Examples of such services include ArtViatic and Expertissim.

C2C network: Consumer-to-consumer sites enabling art fans and collectors to sell their art possessions to other potential buyers. Amazon Art is an extension of the Amazon model to artwork, where users can post and check posts of others for the purpose of sales and purchase of relevant works.

Inquire to buy: A digital service that allows a customer to inquire about the items on sale. Inquiry is handled by art professionals who provide detailed knowledge about customer needs and provide tailor-made recommendations. eBay Art is an example which allows its users to communicate with the sellers and other professionals to get advice.

Online galleries: Galleries for the promotion of artist creations across online networks in order to allow a wider reach, especially for the global Muslim population. This is the most common digital service provided in this vertical, with notable examples including Mica Gallery, Artsy and VisualDhikr.com.

Art philanthropy: Service to leverage the art fans' and collectors' network potential into philanthropic causes. Examples which could also provide this service for Islamic Art include ArtsFundRaising.org.uk.

Business-to-Business (B2B) services
e-research portal: These websites act as an information repository for Islamic Art & Design showcasing their content for the purpose of education, conservation of heritage and digitization of the world's treasure in Islamic artwork. Initiatives such as Archnet and IRCICA (Research Center For Islamic History, Art and Culture) are developed through prominent societies of the Art & Design world such as the Agha Khan Trust for Culture and its documentation center at MIT, and those who are interested in referencing and promoting the Muslim culture globally.

Initiatives such as Archnet and IRCICA are developed through prominent societies of the Art & Design world such as the Agha Khan Trust for Culture and its documentation center at MIT, and those who are interested in referencing and promoting the Muslim culture globally.

Museum apps/video tours: Major museums are developing digital renditions of their collections in order to keep up with the growing need for online access to art. Museums such as the LACMA and the Louvre propose mobile apps designed to provide offsite virtual tours of museums, a calendar of events, and onsite guiding information that interacts with the displayed artwork, and other services. Similar services can be extended for Islamic art.

Online art fairs: Online events for the display and discussion of Islamic art work through webinars and live streaming of panel discussions, with the possibility of interactive participation. ArtSpace.com is an example of a leading website that promotes the sales of art work and provides an online showcase of important art fairs and other events. This covers Islamic art as well.

Islamic artists networking portal: A specialized social network for Islamic Art & Design professionals to allow a seamless interaction between artists with the objective of creating a worldwide community that share a common appreciation of Islamic values and culture. ArtistNetwork.com allows professionals to meet and to share ideas and advice. Along with numerous resources that keep visitors up to date with their interests. This website can also be utilized by Islamic artists as well.

Dealer-to-Dealer (D2D) network: Web-based information center for Islamic Art & Design dealers to share business propositions and offers. ArtRegisterNetwork.com defines itself as a group of proprietary web portals offering a global marketplace to the professional in the arts, which, in summary, is a destination for all who want to deal with artwork, including Islamic art.

Mini-case study: CreativeUmmah.com

Digital Services offered:
- e-learning and e-research
- Islamic artists networking portal
- Online galleries (showcasing creative talent)
- Peer-to-Peer services (via e-learning and student feedback)
- Art philanthropy (community and open collaborative projects)
- Online valorization network (via online creatives directory)

Service description: Recently funded from LaunchGood (a dedicated Muslim crowdfunding portal), CreativeUmmah.com is a multi-service offering which primarily aims to promote the global Muslim creative community by connecting potential Muslim talent and others (e.g., buyers, talent seekers) via e-learning, networking and other services with established Muslim artists, designers and creators.

As the first creative online learning platform, the website claims to have aggregated the most rich and diverse wealth of creative expertise across a range of traditional and contemporary disciplines (e.g., visual arts, graphic design, calligraphy to business development, life coaching, cooking and architecture), much of which is not otherwise easily available without face-to-face interaction. Courses are developed and delivered by industry professionals and global icons who sign up as teachers. Courses and lessons are charged at affordable rates, typically around US $30. User pricing surveys prior to course launch are also used to determine appropriate price points. Learning is delivered via video tutorials, online lessons and an interactive social media learning environment, where users can recommend teachers to be featured. Upon registration, users are invited to a closed Facebook group, where fellow students can discuss the course and ask the instructor questions. In future, the platform aims to partner with educational institutions to enable students to be accredited and certified by universities. Creative tools, guides and resources are also freely available to encourage talent and foster quality works.

The website also features an online directory and network of creative talent listing the best emerging and established talent, enabling Muslim-run initiatives, brands, events, campaigns, entrepreneurs and companies to connect with skilled creative Islamic artists and designers for their projects (Islamic artists networking portal). Users and teachers alike can showcase their artwork to improve their exposure and notoriety (online galleries and valorization).

Similarly, the platform also facilitates community and open collaborative projects (art philanthropy) by matching creative volunteers seeking experience with non-profit programs and projects in need of creative talent.

The initiative has so far proven to be quite successful, illustrated through its partnership with Al Jazeera Media Training & Development Centre, which is supporting the websites first Community Challenge (a visual A&D competition for individual creative talents).

With six languages, including Arabic, French, Bahasa (Indonesian) and Urdu, the website aims to capture and cater to the global Muslim community. The website launched with 5 courses readily available and reportedly has another 36 to be added soon.

Revenue model: The service is primarily a social initiative. The website states that course fees are entirely earned by the teachers who develop and deliver them.

Digital makeup

e-research portal
Information repository for Islamic Art & Design showcasing content for the purpose of education, conservation of heritage and digitization of the world's treasure in Islamic artwork (e.g., Archnet, IRCICA)

Online auction/aggregator
Web-based listing and sales of Islamic art work by offering visitors the option of bidding for the highest price to purchase the artwork of interest (e.g., Sotheby's, Invaluable)

Online valorization network
Dedicated to art & design fans to allow the rating of artists and their art work, with the target of recognizing prominent artists and allowing them to connect with their audience and collecting feedback to enhance their work (e.g., ArtBusiness)

Museum apps/video tours
Mobile apps designed to provide offsite virtual tours of museums, and onsite guiding information that interacts with the displayed artwork (e.g., LACMA, Louvre)

Peer-to-Peer services
Digital platform intended for artists to connect directly with their fans: interaction happens through the display and sales of artists' work, with the possibility of providing direct interaction through chatting and/or messaging (e.g., ArtViatic, Expertissim)

Islamic Art & Design

Online art fairs
Online events for the display and discussion of Islamic art work through webinars and live streaming of panel discussions, with the possibility of interactive participation (e.g., ArtSpace)

C2C network
Consumer-to-consumer sites allow art fans and collectors to sell their art possessions to other potential buyers (e.g., Amazon Art)

Islamic artists networking portal
A specialized social network for Islamic Art & Design professionals to allow a seamless interaction between each other with the objective of creating a worldwide community that shares a common appreciation of Islamic values and culture

Inquire to buy
A digital service that allows a customer to inquire about the items on sale. Inquiry is handled by art professionals who provide detailed knowledge about customer needs and provide tailor-made recommendations (e.g., eBay Art)

Dealer-to-Dealer (D2D) network
Web-based information center for Islamic Art & Design dealers to share business propositions and offers (e.g., ArtRegisterNetwork)

Online galleries
Galleries for the promotion of artist creations across online networks in order to allow a wider reach, especially for the global Muslim population (e.g., Mica Gallery, Artsy)

Art Philanthropy
Service to leverage the art fans' and collectors' network potential into philanthropic causes (e.g., artsfundraising)

■ Business-to-Business (B2B) Digital Services

■ Business-to-Consumer (B2C) Digital Services

Islamic Finance

Definition

Islamic Finance is a system of banking and finance which is based on a set of fundamental principles from Islamic law (Sharia)[78]:
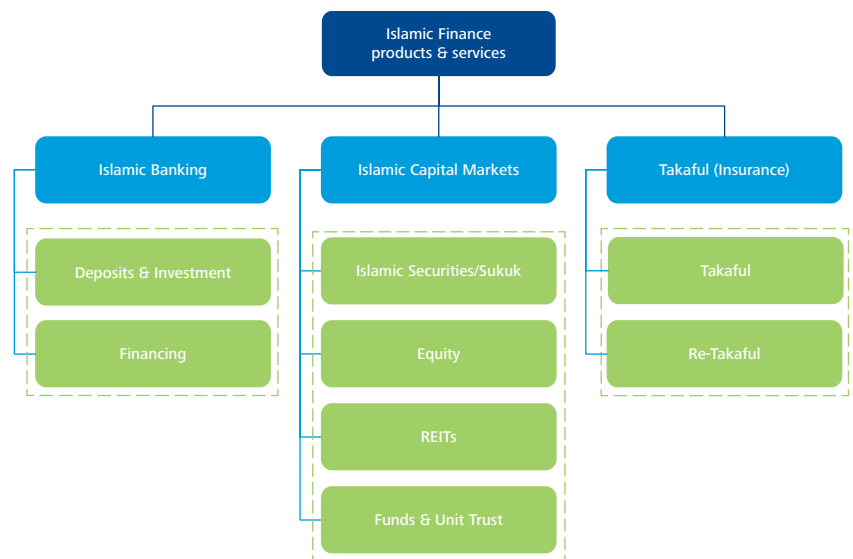
- **Gharar** (contractual uncertainty): No ambiguity in any terms.
- **Riba** (interest): Money earned solely by the passage of time (i.e., increases over the principal in a loan transaction) is prohibited.
- **Financing model**: Money cannot be sold or loaned for profit as a commodity. It must be employed in real economic activities (e.g., assets, goods, investment in businesses and infrastructure).
- **Purification**: Banks must ensure revenues generated comply with Sharia standards. Non-compliant sources must be segregated and employed in a 'Donation Account' to fund projects that benefit the public.
- **Ethical investments**: Investments are not allowed in gambling, tobacco, alcohol, pork, financial institutions and arms.
- **Asset-based banking system**: Unlike conventional banking, money cannot be a tradable commodity in itself. Money is 'a store of value' only to finance goods and services, real assets and economic-based activities which promote social welfare, justice and the growth in the wealth of individuals and societies.

Exhibit 10: Islamic Finance products and services

Source: Deloitte Islamic Finance Knowledge Center (IFKC, 2011), and Accounting & Auditing Organization for Islamic Financial Institutions (AAOIFI)

Offline market overview

In terms of dollar value, Islamic Finance is by far the largest industry vertical. With over 38 million Islamic banking customers around the world, an estimated total global asset size worth over US $1.6 trillion[79] and a healthy CAGR growth at 16.4 percent[80], the global Islamic Finance industry is the most attractive industry vertical for investors and potential Digital Services opportunities.

Globally there are approximately more than 250 full Islamic banks and more than 110 Islamic banking windows[81]. Geographically, most of the activity and value of the Islamic Finance industry are in 'rapid growth markets' defined by customer concentration, the number of large banks headquartered in these markets and resulting growth potential. These markets are primarily based in South-East Asia (Malaysia, Indonesia), the GCC (UAE, Saudi Arabia,

and Qatar) and include Turkey[82]. Of these, the top two markets by asset size are Malaysia and Saudi Arabia with asset sizes valued at US $423 billion and US $338 billion respectively in 2013[83]. Together they hold around two thirds of the world's Islamic banking customers and host the headquarters of 14 out of 17 Islamic banks with US $1 billion or more in equity and sufficient regulatory capital[84].

Key trends

With Islamic banking assets worth US $1.66 trillion in 2013[85], the most popular Islamic Finance segments by far are Islamic banks (worth US $1,214 billion in 2013), followed very distantly by Sukuks (worth US $280 billion in 2013), Islamic funds (worth US $51 billion in 2013), Takaful (worth US $29 billion in 2013) and Micro-finance (worth US $6 billion in 2012)[86].

Significant developments bolstering industry growth include the launch in October 2013 of the World Bank's first ever center of Islamic Finance in Istanbul, Turkey[87]. This signifies the Islamic Finance industry's rising prominence and growing need for global institutions to oversee, monitor and help sustain its growth. Aside from Islamic Finance institutions, more commercial banks from the conventional banking system are also increasingly offering Sharia-compliant banking services to service Muslim customers, another significant growth driver[88]. This is especially the case in the GCC, where there is a high concentration of high-net-worth individuals (HNWI)[89]. The fact that more conventional banks are offering Islamic banking and finance services is now eroding Sharia compliance as a differentiator for traditional Islamic banks.

Even so, competition is not likely to increase in the near-term as there is still much room for growth. This is evident when comparing the total asset size of all Islamic banks globally against conventional banks in key economies. For example, the asset size per capita of conventional banks in key economies such as the UK at around US $200,000 per capita, France around US $160,000 per capita, Germany around US $135,000 per capita, Japan around US $80,000 per capita, US around US $43,000 per capita and China around US $18,000 per capita are all much larger by a factor of 100 or more versus the asset size per capita of Islamic banks globally, which are collectively less than US $750 per capita (2012–2013)[90], a considerable gap.

Hence, the Islamic Finance industry has made great progress over the past decades but it is still not mature. More time over the next one to two decades will still be needed.

Digital market analysis
Given ample room for growth and development, populous OIC countries most notably Turkey, but also Pakistan and Indonesia, are now also emerging as high growth Islamic Finance markets[91]. But low asset penetration and GDP per capita in these countries[92] is driving the need for access to digital Islamic funding services, especially those which can open up access to financing for the wider rural population (e.g., via micro-financing, crowdfunding, mobile payments).
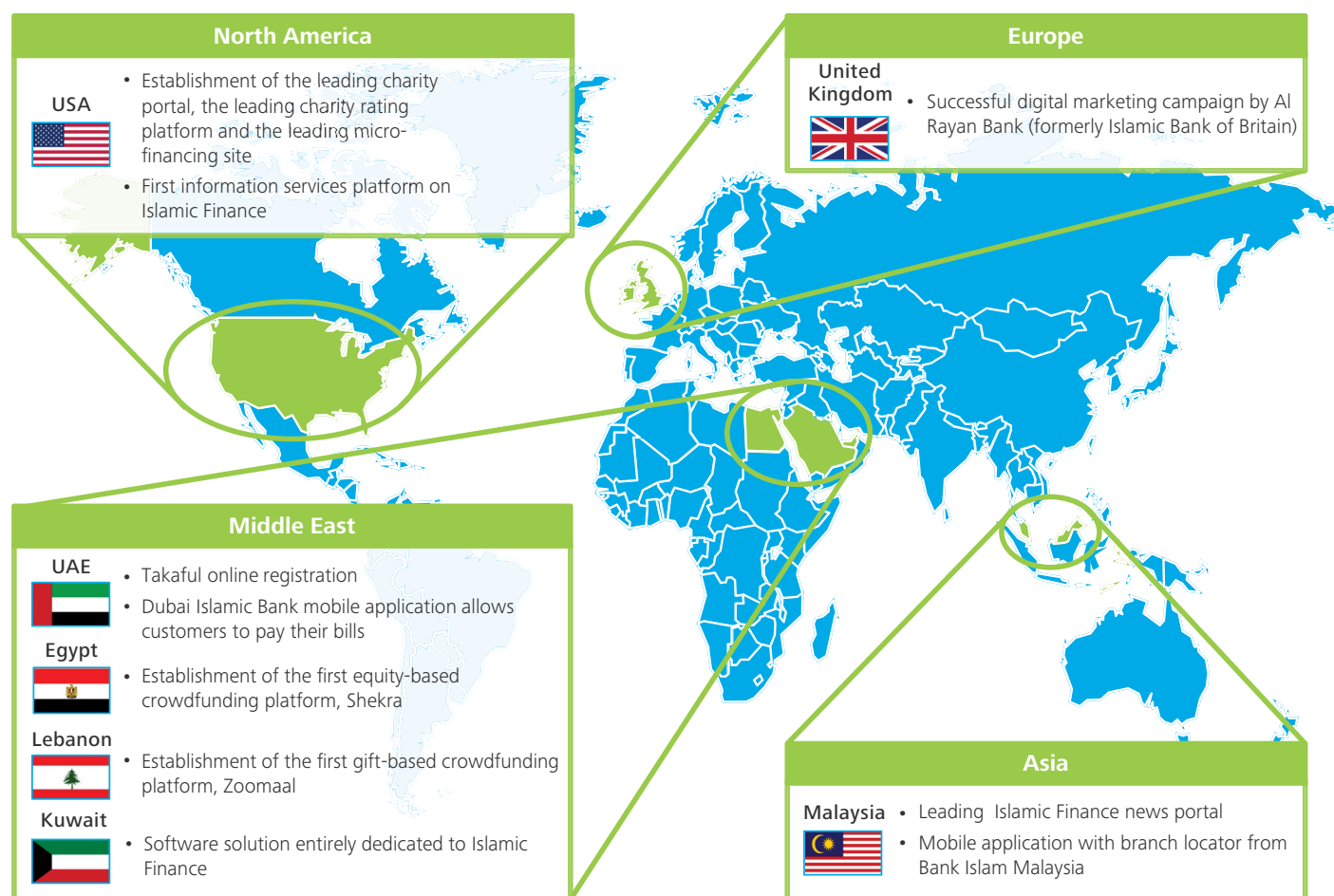
Across the world, there are multiple pockets of Digital Services activity and innovation. In the US (North America), various new digital Islamic financial services have been established including a charity portal, a charity rating platform and a micro-financing website, all of which are leading Digital Services.

The first information services platform on Islamic Finance was also created in the US[93]. Across the Atlantic in the UK, digital marketing of Islamic financial services by Al Rayan Bank (formerly the Islamic Bank of Britain) has proven to be highly successful. With a 70 percent increase in website visitors, and a resulting 80 percent increase in sales leads received via their online channel, digital marketing has no doubt had a massive impact[94]. The scale of this impact reveals the true potential of the Muslim consumer base, which so far stands largely untapped with the underutilization of digital marketing solutions and services.

The MENA region has also experienced a lot of digital Islamic financial services activity across a range of countries from each area. In the UAE (GCC), Takaful online registration services and mobile bill payment applications from Islamic banks have emerged (e.g., Dubai Islamic Bank). In Kuwait (GCC), new services include software solutions dedicated to Islamic Finance. In Egypt (North Africa), the first equity-based crowdfunding platform Shekra has been established. Similarly Lebanon (Levant) has also seen the establishment of the first gift-based crowdfunding platform Zoomal.

Further in Malaysia (South-East Asia), new services from Bank Islam Malaysia include a leading Islamic Finance news portal and mobile application with a branch locator.

Exhibit 11: Analysis of Digital Services for Islamic Finance around the world[a]

North America

USA
- Establishment of the leading charity portal, the leading charity rating platform and the leading micro-financing site
- First information services platform on Islamic Finance

Europe

United Kingdom
- Successful digital marketing campaign by Al Rayan Bank (formerly Islamic Bank of Britain)

Middle East

UAE
- Takaful online registration
- Dubai Islamic Bank mobile application allows customers to pay their bills

Egypt
- Establishment of the first equity-based crowdfunding platform, Shekra

Lebanon
- Establishment of the first gift-based crowdfunding platform, Zoomaal

Kuwait
- Software solution entirely dedicated to Islamic Finance

Asia

Malaysia
- Leading Islamic Finance news portal
- Mobile application with branch locator from Bank Islam Malaysia

Source: Deloitte research and analysis

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[a] Indicative but not exhaustive

With such a wide variety of digital Islamic financial services scattered across the world, the digital space for this vertical is quite fragmented with no clear dominant or mainstream service. The level of activity, however, is encouraging and indicates a positive outlook, in which we can see the growth in digital Islamic financial services evolving hand in hand with the growth of the entire industry vertical itself.

Islamic Finance: Digital Services categories

Digital Services in the Islamic Finance vertical consist of Business-to-Consumer (B2C) and Business-to-Business (B2B) services.

Business-to-Consumer (B2C) services
Information services: Repository of Islamic Finance news, reports, information, articles, events and any other related information. Examples include Malaysia's Islamic Finance news website, the leading online new portal on Islamic Finance and the US's Global Islamic Finance Magazine, which claims to be the world's leading Islamic Finance magazine. The service is fairly successful, with a readership rate of +50,000 and +250,000 newsletter recipients.

Crowdfunding: Online funding from the mass Internet population for a Sharia-compliant project, company, production of media, software or research. Financially, it can represent the sale of equity to many Sharia compliant investors. Examples in this category include Shekra from Egypt (closed equity-based crowdfunding), Zoomal from Lebanon (open gift-based crowdfunding) and LaunchGood.com.

Location services: Navigation services to help customers find nearby Islamic bank branches on their connected laptop or mobile device and to track delivery and drop-off points for related services (e.g., location services for micro-finance customers). An example is Bank Islam Malaysia's mobile application, which has a branch locator service, indicating the nearest branch based on the user's current position.

Micro-financing: Sharia-compliant financing via mobile platforms for low-income individuals without access to Islamic banking systems. Includes Islamic micro-credit facilities, online Sharia structuring, focused towards Halal projects. Examples include the US's Kiva, a charity platform enabling small interest-free loans for development projects. Another example is Musoni, a Dutch mobile micro-finance application launched in Kenya with Grameen Foundation and MasterCard to expand financing access to world rural populations. The company has lent over US $15 million to Kenyan entrepreneurs.

Website service options: Enhanced online customer services, including product catalogues, customer acquisition (online account opening), and virtual advisory. The Al Rayan Bank (formerly Islamic Bank of Britain) is an example of an Islamic bank which improved its online service options.

Online Zakat (charity): Online platforms (e.g., web, mobile) for electronic Zakat (charity) donations. Examples include Singapore's Zakat.SG app by the Islamic Religious Council of Singapore and Malaysian E-ZakatPay service. Other international services include Charity Navigator, a service which provides ratings on charity organizations based on strict criteria: financial health, transparency and accountability. Network for Good is another example that allows users to donate funds to any registered charity including Islamic ones. The company receives 3–5 percent fees for charity transactions as well as subscription fees from charities.

Financial management aides: Financial planning tools, graphically reported account statements, aggregation of financial information across multiple accounts, Zakat calculator. Examples of applications in this category include the Al Islami Mobile Banking application by Dubai Islamic Bank. The application allows users to manage their accounts and their credit cards on their mobile device.

Social banking: Secure banking services through social media portals. Includes interaction with friends for opinions on products, sharing banking experiences, following their investments or co-investing. ZuluTrade is a social network as well as a financial investment platform for the foreign exchange market. Users can share their investment strategies and their investment profile, including following and replicating investment strategies of other users.

Family banking: Management of accounts belonging to family members through online banking (e.g., parental control of children's accounts, including monitoring, inquires, transactions, restrictions). Extendable to facilitate online family budgeting.

Payments and collections: Single online portal (e.g., web and mobile) to centralize payments of obligations such as fines, taxes, utilities bills, including remote deposits with banks, online Takaful, collection alerts. The UAE's mPay service is a noteworthy example of a single mobile application which can be used to make all types of government payments. Regional telecom operators, airlines and utilities companies (e.g., DEWA) are also following suit with similar mobile payment applications and account management services for customers. This is driven by smart government initiatives, most notably Dubai's ambition for all government services to eventually be provided via mobile.

Business-to-Business (B2B) services

Online incubators: Online portal for Halal entrepreneurs, SMEs, start-ups to connect with private equity and venture capital firms (looking to invest in new Sharia-compliant opportunities) and receive online support (e.g., virtual training, coaching, work space and cloud resources). Aside from crowdfunding platforms such as Shekra and Zoomal, there are not many online incubators acting in this space, dedicated specifically to Halal SMEs through Islamic financing. There are services, however, which provide training and learning material for those seeking to learn about the industry. For example, The Institute of Islamic Banking and Insurance provides online learning material and information on Islamic Finance and Takaful. Learning materials include an online test, video, publications, and other resources. The Institute also organizes events and seminars to raise awareness of Islamic Finance principles.

ICT solutions: Includes back-end operational IT systems (e.g., transaction, accounting, CRM systems) and multi-channel banking solutions (anytime anywhere banking for Islamic banking customers e.g., web, mobile, PlayStation, Smart TV platforms). Path solutions provides ICT software solutions for the Islamic banking industry as well as tailored information systems solutions, consulting services, project management and training. Software solutions include iMal (integrated system for front, middle and back office), iWindow (Islamic window operation of conventional banks) and iShraq (investment and financing management models).

Digital marketing: Includes search engine optimization, official pages and pay per click campaigns (on social media, Bing and Google), online ad campaigns (e.g., Google Display Network, Google Adwords, and Facebook sales app), online comparison aggregators and partnerships. The digital marketing campaign of Al Rayan Bank (formerly Islamic Bank of Britain) is an interesting case in point, which illustrates the power and great need for digital marketing services not only in Islamic Finance but across other industry verticals as well. Their digital campaign to increase the number of sales

and leads generated via the online channel was centered around the concept of improving online accessibility to the bank's products and services, raising awareness of Al Rayan Bank's Sharia-compliant, ethical offering and engaging interactively with its target audience. The results achieved were astounding. The campaign led to a 70 percent increase in website visitors with an 80 percent increase in sales leads received via the online channel. More than double the number of sales were completed online, and through online advertising, Al Rayan Bank's reach increased to over 8 million consumers.

Intelligence and analytics: Involves services providing insights on Islamic lifestyle and financial needs of customers (on segments, demands, monitoring sales, service, targeted products design). This is a relatively untapped category with no significant providers. As Islamic Finance becomes more competitive in the long-run, this service will become more crucial for Islamic Finance institutions to have. In the short-run this presents a market opportunity for any in the industry who seek to attain a better understanding of the market, make decisions and improve performance (e.g., in terms of market share or financial growth through acquisition of new customers).

Through online advertising, Al Rayan Bank's reach increased to over 8 million consumers.

Digital Services offered:
- Digital marketing
- Intelligence and analytics (campaign results)
- Campaign advisory

Service description: Reportedly founded in 2008 in the US, Muslim Ad Network is one of the world's leading online marketing and advertising services, dedicated to helping businesses reach Muslim consumers.

The service is based on enabling businesses to reach a large aggregated list of publisher websites, which experience high traffic of Muslim consumers. The service reportedly has exclusive reach of the +100 top Muslim websites, including key publishers such as Zabihah.com (which has over 10 million users), UmmahJobs, UmmahBuzz! and Islam.net. To date, Muslim Ad Network has made over 178 million advertisements to Muslims in over 190 countries (not just in Islamic Finance but in other verticals and areas as well).

As experts in the Muslim consumer market, Muslim Ad Network also works with and advises advertisers on launching campaigns to maximize the return on investment (ROI). As a consolidated advertising channel with exclusive pricing agreements with its publishers, the service also claims to be cheaper and more efficient than advertisers selecting, approaching and dealing with publisher websites directly themselves. Instead, Muslim Ad Network executes campaign plans for advertisers with its publishers (e.g., start date, advert banner placements, metrics and data from each publisher) and guarantees reach levels (e.g., 2014 Muslim Reach PREMIUM Package for 1,000,000 impressions on top Muslim websites).

The service includes Intelligence and analytics for the results of the advertising campaign. This includes detailed weekly reports about campaign performance (e.g., number of impressions on Muslim consumers, resulting website visits).

Revenue model:
- Offers tiered self-service advertising packages, priced based on the level of impressions required (e.g., around US $1,000 for 135,000 impressions, around US $2,500 for 350,000 impressions and around US $10,000 for 1,000,000 impressions)
- Tailored campaigns have tailored pricing schemes.

[b] Digital marketing is a transversal service which is applicable across other verticals. This case study is therefore not limited to advertising Islamic Finance businesses only, but may also include Halal Travel businesses for example.

Digital Services offered:

- Crowdfunding
- Online incubators (connecting solution-seekers with innovators who have the right skills and knowledge to solve problems)

Service description: Launched in 2012 in Cairo, Yomken ("It's Possible" in Arabic) is a hybrid open innovation and crowdfunding platform. It is Shariah-compliant crowdfunding, combining Bay al-Salam (forward sales) with a crowdfunding model, where fund contributors pledge a certain amount and receive the product once it has been developed.
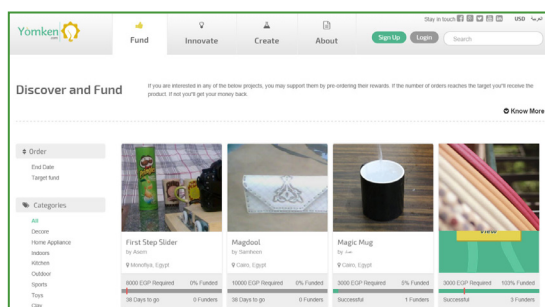
The platform acts as a forum for users to post ideas for free on new innovations or "challenges" to solve problems. Users can be individuals, small or micro enterprises (SMEs or MSEs), offering a reward for the solution. Solutions themselves can be wide ranging, from an idea, design sketch, to prototype or even direct supply of a finished product. Entrepreneurs can design a product or solution to solve the problem and submit it online for a small registration fee. The service shows the amount of funding achieved and displays solutions or products for sale that have achieved the target funds required.

Unlike other platforms such as Kickstarter, Yomken as a social enterprise temporarily finances the challenge until the crowdfunding stage is complete, placing faith in these businesses first, encouraging other users to follow and contribute funds. Contributors can track the progress of products or solutions they invest and if it fails to reach the target funding amount, contributors can retrieve their funds. Whilst the company absorbs the risk of unfunded solutions, it encourages contributors to compete to fund projects, presented as a 'low-hanging fruit'. Contributors can be university students, researchers, specialists and companies that perceive potential benefits of partnership.

The platform has seen quick success to date, having received over 100 product ideas and challenges, acquired over 35 local partners (e.g., government agencies, NGOs, multinational companies), and launched 25 campaigns with a 70 percent success rate. Off the back of this success, the platform plans to franchise its model in other OIC countries, leveraging on the experience and expertise acquired to date.

Revenue model:

- A fixed 7 percent success fee is charged on the total money collected from any successful campaign (or from the total rewards offered in the case of a challenge).
- The website mandates fees to cover the managerial costs (e.g., registration fees from entrepreneurs posting solutions).

Digital makeup

Intelligence & analytics

Insights on Islamic lifestyle and financial needs of customers (on segments, demands, monitoring sales, service, targeted products design)

Information services

Repository of Islamic Finance news, reports, information, articles, events

Crowdfunding

Online funding from mass Internet population for a Sharia-compliant project, company, production of media, software or research. Financially, it represents the sale of equity to many Sharia-compliant investors

Digital marketing

Search engine optimization, official pages & pay per click campaigns (on social media, Bing & Google), online ad campaigns (e.g. Google Display Network, Google Adwords, Facebook sales app), online comparison aggregators partnerships

Location services

Navigation services to help customers find nearby Islamic bank branches on their connected laptop or mobile device and to track delivery & drop-off points for related services (e.g. location services for micro-finance customers)

ICT solutions

Back-end operational IT systems (e.g. transaction, accounting, CRM systems), multi-channel banking (anytime anywhere banking for Islamic banking customers e.g. web, mobile, PlayStation, Smart TV platforms)

Micro-financing

Sharia-compliant financing via mobile platforms for low-income individuals without access to Islamic banking systems. Includes Islamic micro-credit facilities, online Sharia structuring, focused towards Halal projects

Online incubators

Online portal for Halal entrepreneurs, SMEs, start-ups to connect with PE & VC firms (looking to invest in new Sharia-compliant opportunities) and receive online support (e.g. virtual training, coaching, work space and cloud resources)

Website service options

Enhanced online customer services: Product catalogues, customer acquisition (online account opening), virtual advisory

Islamic Finance

Payments & collections

Single online portal (e.g. web mobile) to centralize payments of obligations such as fines, taxes, utilities bills, including remote deposits with banks, online Takaful, collection alerts

Online Zakat (charity)

Online platforms (e.g. web, mobile) for electronic Zakat donations

Family banking

Management of accounts belonging to family members through online banking (e.g. parental control of children accounts, including monitoring, inquires, transactions, restrictions). Extendable to facilitate online family budgeting

Social banking

Secure banking services through social media portals. Includes interaction with friends for opinions on products, sharing banking experiences, following their investments or co-investing

Financial management aides

Financial planning tools, graphically reported account statements, aggregation of financial information across multiple accounts, Zakat calculator

■ **Business-to-Business (B2B) Digital Services**

■ **Business-to-Consumer (B2C) Digital Services**

Islamic Economy Education

Definition

Islamic Economy Education constitutes offline and online education programs pertaining to Sharia-compliant economic activities. Currently, the education industry mainly covers Islamic Finance. However, education on all aspects of the Halal economy (e.g., related to the production and delivery of Halal products and services) is starting to emerge as an important segment. Hence the definition for Islamic Economy Education can be split into two key education areas: Islamic Finance and Halal Economy Education.

For Islamic Finance, education areas include Wadiah (safekeeping of deposited money), Sukuk (Islamic bonds), Takaful (insurance) and Islamic Accounting. For Halal Economy Education, education areas include Halal Sectors (e.g., Halal Food, Halal Travel), Halal Marketing & Branding (advertising of Halal products and services) and Halal Management (e.g., Halal products sourcing, production, transportation, delivery).

Offline market overview

The Islamic Economy Education vertical is largely nascent, but growing quite quickly. There are currently around 750 Islamic Financial Education & Human Knowledge Service Providers (IFEKSP) across the globe (2013)[95]. This is expected to grow to 1,250 in 2016, driven by an anticipated 20 percent CAGR growth in the number of Islamic Finance education platforms[96]. Asia is the most active region in Islamic Economic Education with 43 percent of global IFEKSP[97]. As of 2013, Pakistan offers the highest number of institutions (88) followed by Malaysia (86), the UK (86), the US (44) and the UAE (43)[98]. 61 percent of IFEKSP are academic institutions (universities and higher learning institutions), and the vast 95 percent majority of the programs are delivered in English, followed by 2 percent in Bahasa (Indonesian), 1 percent in Turkish and 0.5 percent in Arabic[99]. Specifically in Islamic Finance education, the United Kingdom, representing 53 percent of total Islamic Finance education providers, is widely regarded as the leader of this education area in Europe, with Malaysia leading in Asia[100]. In the MENA region, the UAE is widely regarded as the leader in Islamic Finance education, representing the remaining 30 percent of providers in this education area (2013)[101].

Key trends

Growth in this vertical is being driven by a few key areas, mainly in the Islamic Finance area as it is more mature than the Islamic Economy Education area. For instance, an increasing number of UK-based and US-based universities are now offering Islamic Economy and finance courses as part of their curriculum. This includes the top US business schools such as Harvard, Stanford, Wharton, MIT, Northwestern, which are now all offering programs in or related to Islamic Finance[102]. With such development and growth, industry experts expect around one million professional Islamic Finance jobs to be created worldwide by 2020[103]. Growth also includes the emergence of Islamic scholar and research programs (e.g., CISI scholar and CPD program in the UK)[104].

Despite the vertical showing promising growth, Islamic Economy Education is largely unorganized and fragmented outside of the leading UK and Malaysia markets. Currently there is no consensus on courses and limited quality control of the current teaching offers. This coupled with the absence of a global independent accreditation body and international standardized curricula could be an inhibitor limiting the vertical's sustainable growth. Another key challenge is the placement of graduating students from Islamic Economy Education institutions in industry. Even in the Islamic Finance education area, this is the case[105]. However, specialist Islamic Economy recruitment companies are emerging to address this challenge. For example, Jardine Human Capital, the first recruitment company specialized in the Islamic Economy in London, is expected to partner with Islamic Economy Education providers in placing their students[106].
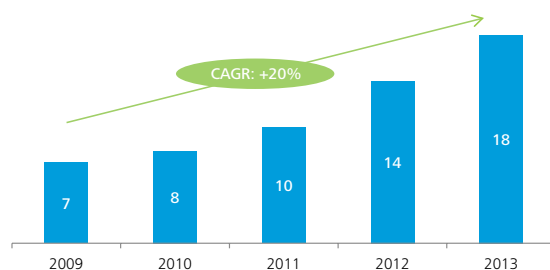
Digital market analysis

In the digital space, the Islamic Economy Education vertical in general is largely underdeveloped. As with the offline market, the main focus is in online Islamic Finance courses with limited online platforms dedicated towards the Islamic Economy Education area. Further, over the past five years, online Islamic Finance programs in particular have been on the rise in academic and professional programs. The number of Islamic Finance Education platforms has been growing at a CAGR rate of 20 percent since 2009[107], driven by the boom in the Islamic Finance industry.

Generally, there are four main types of online Islamic Economy Education providers:

- Conventional academic institutions offering some of their Islamic Finance courses online (e.g., online MSc in Islamic Finance at London Business School).
- Islamic Finance-focused universities proposing digital materials and courses (e.g., International Centre for Education in Islamic Finance).
- Islamic Finance certification bodies offering online educational materials and certifications examinations (e.g., CISI, CIMA, IIBI, and AAOIFI).

- Pure online education suppliers: this type of provider is mainly focused on Islamic Finance, and limited in the wider Islamic Economy Education area. Major players are currently Islamic Online University (offering not only online education in Islamic Finance but in education, psychology, linguistics), ETHICA (offering professionals courses and certifications in Islamic Finance through partnerships with banking corporations) and Yurizk (portal with information on more than 400 Islamic Finance education programs across the globe, who have also recently started to offer online Islamic Finance coaching).

Exhibit 12: Online Islamic Economy Education market analysis

Number of e-learning platforms (2009–2013)

Distance learning vs. Traditional classroom learning (2013)

CAGR: +20%

7 — 2009
8 — 2010
10 — 2011
14 — 2012
18 — 2013

10%
90%

= 75 online Islamic Finance providers — Out of which only one is offering online Halal economy programs

■ Distance learning ■ Classroom learning

Source: "Islamic Finance Education Report", Yurizk (2013); Deloitte research and analysis
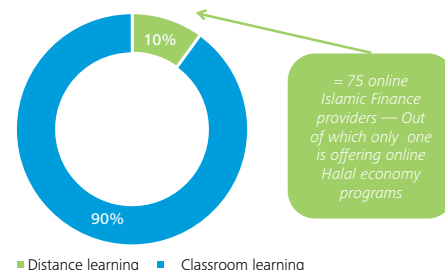
With demand expected to grow significantly, Halal business education is untapped. In terms of Digital Services, the industry is fairly nascent, as most of the new education technologies and digital solutions (e.g., MOOCS, social learning platforms) are underdeveloped. There is a strong need for students and professionals to have access to a central repository of Islamic Economy research and educational resources. Given the challenge of placing students, an online placement platform will be a key opportunity. DIEDC is currently developing a portal on business intelligence news dedicated to the Islamic Economy[108].

Islamic Economy Education: Digital Services categories

Digital Services in the Islamic Economy Education vertical consist of Business-to-Consumer (B2C) and Business-to-Business (B2B) services.

Business-to-Consumer (B2C) services

Online accredited courses: These are usually subscription-based services that allow students to take accredited and general education courses online. Examples include the Al Huda Distance Learning Programs from Pakistan, offering certified training programs in Islamic banking, micro-finance, fund management, Takaful and Sukuks. Another example is the Bahrain-based Accounting & Auditing Organization for Islamic Financial Institution (AAOIFI), which offers online courses and examinations for certified accountants and auditors.

Online courses: This includes non-accredited courses that help students to learn new skills or consolidate basics in Halal business. Coverage can include courses on Halal markets (e.g., food, cosmetics, and fashion), Halal management and marketing. Examples include CreativeUmmah.com, which is focused on the Islamic Art & Design vertical.

Gaming platform/apps: This includes game-based learning platforms and applications (e.g., offered by San Jose State University). This is a growing trend, as more of these services are continuing to spread.

DIY degree: Self-education service to earn a bachelor's degree. The most notable example in this category is the Islamic Online University (IOU). The institution provides online academic courses on Islamic Studies, Education, Psychology, Islamic Economics and Linguistics, programs which can lead to a bachelor's degree. Another example is the International Center for Education in Islamic Finance (ICEIF), a Malaysian university offering Masters and PhD programs in Islamic education online. Many other examples are prevalent in this area. It is important to note that many Islamic studies (not Islamic Economy) degree courses are provided by many online providers.

Peer-to-Peer review rating: Evaluation of education programs by users. Yurizk is a notable example from the US, an online information platform on Islamic Finance education, which provides listings and rankings on both offline and online Islamic Finance programs globally.

MOOCs: Massive Open Online Courses involves thousands of students around the globe coming together online to learn for free. International examples include edX and Coursera. Local examples include Skill Academy from Egypt and Rwaq from Saudi Arabia. In particular, Rwaq provides courses on religion. These platforms could be used to deliver Islamic Economy and finance courses.

Open courseware: OCW consists of academic course materials created by universities and that are shared freely online. This includes social learning platforms such as the Educational Social Network and LMS platforms that use social media to create learning communities (e.g., TedEx).

Open education resource: Freely accessible, openly licensed documents and media that are useful for teaching, learning, educational, assessment and research purposes. Examples include research works posted by the Islamic Development Bank Group's (IDB Group) Islamic Research & Training Institute (IRTI) through websites such as IESJournal.org. IslamicBanker.com is another example of an open education resource.

Learning record stores: New generations of data stores that serve as a repository for learning records. Examples include Saltbox, an analysis and visualization platform tailored for learning and development.

e-learning apps: Mobile learning apps (e.g., Google Apps). Apps covering Islamic Economy Education can also be provided by major Islamic Economy learning providers such as online Islamic Economy universities.
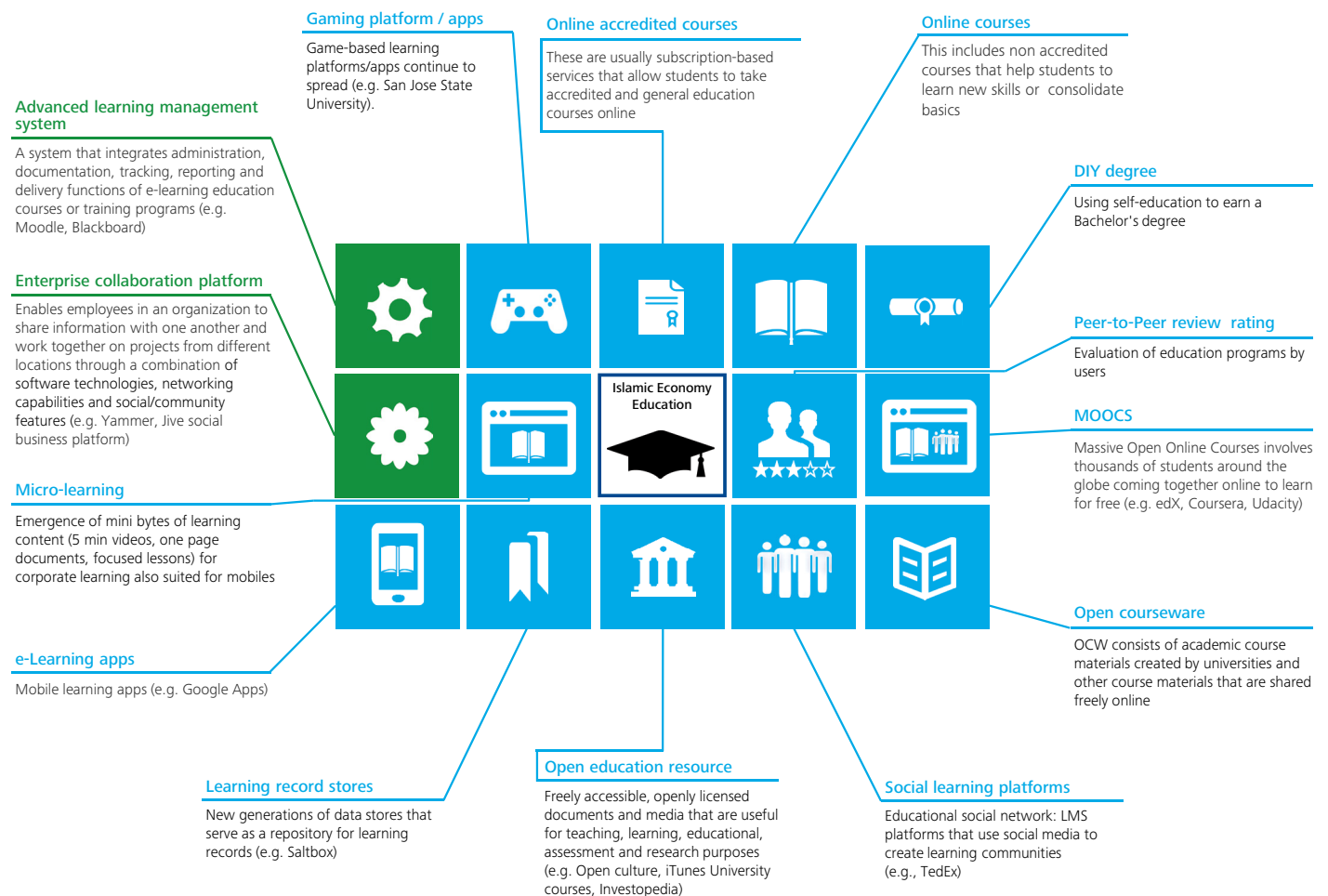
Micro-learning: Emergence of mini bytes of learning content (5 min videos, one page documents, focused lessons) for corporate learning, suited for mobiles. Mainstream sources such as YouTube can be used, which can be used as a quick reference for a particular Islamic Economy topic. Otherwise not many Islamic Economy Education services have been seen in this area.

Business-to-Business (B2B) services:
Enterprise collaboration platform: Enables employees in an organization to share information with one another and work together on projects from different locations through a combination of software technologies, networking capabilities and social/community features (e.g., Yammer, Jive social business platform).

Advanced learning management system: LMS that integrates administration, documentation, tracking, reporting and delivery functions of e-learning education courses or training programs (e.g., Moodle, Blackboard). Ethica Institute of Islamic Finance is an example. They offer training solutions and software for banks. The institute also offers online certified professional training programs in Islamic Finance. The service is very successful with over 20,000 paid users in more than 40 countries.

Digital makeup

Advanced learning management system

A system that integrates administration, documentation, tracking, reporting and delivery functions of e-learning education courses or training programs (e.g. Moodle, Blackboard)

Enterprise collaboration platform

Enables employees in an organization to share information with one another and work together on projects from different locations through a combination of software technologies, networking capabilities and social/community features (e.g. Yammer, Jive social business platform)

Micro-learning

Emergence of mini bytes of learning content (5 min videos, one page documents, focused lessons) for corporate learning also suited for mobiles

e-Learning apps

Mobile learning apps (e.g. Google Apps)

Gaming platform / apps

Game-based learning platforms/apps continue to spread (e.g. San Jose State University).

Online accredited courses

These are usually subscription-based services that allow students to take accredited and general education courses online

Online courses

This includes non accredited courses that help students to learn new skills or consolidate basics

DIY degree

Using self-education to earn a Bachelor's degree

Peer-to-Peer review rating

Evaluation of education programs by users

MOOCS

Massive Open Online Courses involves thousands of students around the globe coming together online to learn for free (e.g. edX, Coursera, Udacity)

Open courseware

OCW consists of academic course materials created by universities and other course materials that are shared freely online

Islamic Economy Education

Learning record stores

New generations of data stores that serve as a repository for learning records (e.g. Saltbox)

Open education resource

Freely accessible, openly licensed documents and media that are useful for teaching, learning, educational, assessment and research purposes (e.g. Open culture, iTunes University courses, Investopedia)

Social learning platforms

Educational social network: LMS platforms that use social media to create learning communities (e.g., TedEx)

■ **Business-to-Business (B2B) Digital Services**

■ **Business-to-Consumer (B2C) Digital Services**

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Modest Fashion

Definition

Modest Fashion is the clothing industry catering to Muslim women who want to engage with contemporary fashion trends while also expressing their faith[109]. The industry vertical tends to cater to a young female Muslim clientele, typically under but not limited to the age of 25[110]. It is important to note that Modest Fashion and Islamic fashion is interpreted differently across the Islamic world. Modest Fashion is also not exclusive to Muslims only, but caters also for the needs of non-Muslims that adhere to the concept of modesty[111].

Offline market overview

Modest Fashion has a large, growing addressable market at home and abroad, which is now attracting mainstream fashion interest. Key players in Modest Fashion design come from a wide range of countries, from, but not limited to, Bulgaria, Mexico, Russia, MENA countries, the United Kingdom, and United States to Indonesia, Malaysia, China and Australia[112]. Of the US $266 billion that Muslims around the world are estimated to have spent in total on fashion in 2013, the UAE, Saudi Arabia and Egypt spent a significant 19–20 percent share[113]. If the same share of expenditure is applied to the Modest Fashion industry, estimated to account for 43 percent of total Muslim fashion spending[114], expenditure across these three countries on Modest Fashion would have been over US $18 billion[115]. This is expected to grow to US $26 billion by 2018, assuming a 6 percent CAGR in line with recent industry reports[116].

In terms of trade, OIC countries have a positive trade balance, indicating that they are a major source of Modest Fashion goods to the global Muslim world. However, exports of Modest Fashion goods are led by South and Central Asian countries such as Bangladesh (almost 90 percent of South Asian exports) and Kazakhstan[117]. GCC countries, mostly the UAE and KSA, are the major importers of these products as they account for almost 48 percent of total OIC imports[118]. OIC countries and particularly the GCC therefore show opportunities to develop their trade in terms of production where a major gap exists with a high reliance on imported products.

As such, the outlook for Modest Fashion is promising, especially for the region, as the growth and gaps present a major opportunity for investors.

Key trends

Although Modest Fashion primarily was conceived to cater towards the needs of contemporary Muslim women, it also caters to the needs of a significant non-Muslim population interested in and adherent to the concept of modesty. For instance, Capsters, a modest multi-purpose headscarf accessories brand, was created by a reputable non-Muslim Dutch designer. Originally created for the young female Muslim community in the Netherlands, Capsters' Modest Fashion products quickly gained traction and notoriety not only amongst the target Muslim community, but also amongst non-Muslim women and men across the world[119].

World renowned fashion designers such as Valentino, DKNY, Armani, Nina Ricci and John Galliano have also introduced their own modest fashion clothing lines (e.g., DKNY's Ramadan Summer 2014 Collection, Armani's Modest Dresses Collection)[120].

Further, Modest Fashion designers are now also expanding to cater for the male segment. Designer and retailer brands such as Emaan from Australia and East Essence from the United States are offering Thobes for men for example[121,122]. The broadening proliferation and market appeal of Modest Fashion is therefore a significant trend. Many brands recognize this and are often prepared to adapt their offering and their web presence to welcome cross faith and male consumers.

Although there is a wide diversity in the interpretation and adoption of 'modesty' amongst Muslims across the world, geographic and cultural heritage plays a strong role in its conception, design and adoption at a local level. As Modest Fashion is inter-twined within the individual roots and history of each country in the MENA region, core items in Arab Modest Fashion consist of a variation of traditional headscarves, abayas and dresses, essential cultural items that are industry-led by local designers. For instance Egypt is much more culturally focussed on and specialized in hijab-wear[123], whereas in the UAE and Saudi Arabia, there is much more emphasis and specialism in jalabiyas (Emirati national dress) and abayas, especially given that full covering is mandatory by law in Saudi Arabia.

A prominent example of this is DAS Collection from the UAE, widely reputed to be one of the region's top jalabiya and abaya designer brands, which became the first abaya-wear to be stocked online at harrods.com[124] and Julea Domani, offering traditional Arabic dresses to large populations across the region[125]. Well known Saudi abaya designer brands such as Dal by Dareen[126], Manar Alrawi[127], Ta Marbota[128], Hania Luxury Abaya[129] among many others, have also attracted global fashion houses such as Saks Fifth Avenue, Harvey Nichols, Fitaihi and other names across the Gulf[130].

Other popular Modest Fashion trends include the "hijabista", a fusion of the hijab and fashionista styles, along with the successful launch of specialized modest garments such as the burqini (a full body covering swimwear) pioneered by AHIIDA, a Lebanese Australian modest sportswear design company)[131] and Islamic nursing clothing (maternity abayas and dresses) by a range of designers such as Abaya Addict from the UAE[132].

Digital market analysis

Interestingly, it is important to note that the proliferation of Modest Fashion over the past decade has also coincided with the growth of Digital Services across the world. This has helped Modest Fashion designers to set up low-cost shops online (e.g., ShukrOnline.com, InayahCollection. com), engage with consumers directly through social media (e.g., via individual Twitter, Facebook, Pinterest pages), market themselves through online blogs and magazines (e.g., Aquila-Style.com) as well as to build their own business network and knowledge base online (e.g., SheikhaHub.com).

In particular, the rise of e-commerce and its low-cost aspects has had a great impact on new and emerging Modest Fashion designers. Currently, Muslim consumer expenditure on e-commerce is estimated by Islamic Economy industry experts to be US $4.8 billion in 2013[133]. Though not as mature as Western economies, e-commerce in particular in the MENA region has picked up to be remarkably successful, having grown by 45 percent from 2011–2012, with the GCC estimated to have grown by a 23 percent CAGR from 2012–2014[134]. Hence the majority of Modest Fashion stores in the region such as Balqees and Rabia Z are online, with new designers following suit.

Social media has also played a pivotal role as it has enabled designers to engage and cooperate directly with their customers and serve as a more effective testing forum for new designs. For example new Modest Fashion brand Hijabik from Jordan was established online following astounding feedback given by customers on pictures of sample designer headscarves that the founders had posted on Facebook[135]. Success was not only at home, but also abroad, with the online designer start-up attracting clientele from as far as Japan and the US[136].

Fashion blogging is another extensive online trend in the Middle East, as the region's population is bubbling with creative ideas and energy. For example, Modest Fashion blogger Acsia AKF in Kuwait now has over 1 million followers on Instagram, after over a year of blogging[137]. Further, the Islamic Fashion & Design Council (IFDC) has also introduced an online magazine and a networking portal to encourage the Modest Fashion industry and further developmental activity[138].

Digital Services across the world will only continue to expand, and with these trends Modest Fashion will continue to grow and flourish as a key accelerator for the global fashion industry going forward.

Modest Fashion blogger Ascia AKF in Kuwait now has over 1 million followers on Instagram, after over a year of blogging.

Modest Fashion: Digital Services categories

Digital Services in the Modest Fashion vertical consist of Business-to-Consumer (B2C) and Business-to-Business (B2B) services.

Business-to-Consumer (B2C) services

Online Modest Fashion design award: Web-based voting platform for the selection of exceptional fashion designs and designers. Examples in this category include the Fashion20Awards, an online website, which awards the best Modest Fashion portals across several criteria such as best social media, best e-commerce, best online video, best online campaign, best fashion start-up, best wearable tech and top innovator.

Digital Modest Fashion magazine: Digital magazine offering quality content about Modest Fashion, designers and events in the global Muslim world. Notable examples include Aquila-Style, an online magazine for Modest Fashion containing the latest news and other related content, aggregated from other websites. The Islamic Fashion & Design Council (IFDC), aiming to support and develop Islamic fashion, also offers its own digital Islamic fashion magazine.

e-commerce mobile apps: Sales portal for Modest Fashion apparel and accessories through mobile applications allowing easier and faster access for online shoppers. This is the most predominant and fastest growing digital service. E-commerce in general is the most popular platform as many Modest Fashion designers have used this service to start small and scale up their businesses. Hence, most Modest Fashion designers have their own online stores. Examples include Capsters, Rabia Z, Balqees, Abaya Addict, DAS Collection and many more.

Peer-to-Peer e-commerce: Direct sales website that allows customers to interact with the designer and share ideas and feedback. Designers are increasingly communicating directly with consumers. Notable examples include SheikhaHub.com and SHUKR Clothing,

where SHUKR Clothing has a dedicated chat service to communicate directly with customers not only to serve them better, but also to collect their views and feedback. Websites such as eBay and Amazon.com are also used, not only by individuals but also by Modest Fashion designers themselves to increase and diversify their sales channels (e.g., SHUKR Clothing).

C2C network: Forum for Modest Fashion customers to review the latest trends and share opinions and comments about the latest news, events and designs. Much of Modest Fashion has been influenced by the social interaction amongst Modest Fashion enthusiasts online. This is a great source of market intelligence and development, particularly for designers as it provides a rich source of information on consumer tastes, demands and identifyies any gaps they could fill through new and more innovative designs. Notable examples include Inayah Collection and SHUKR's stand-alone blog service, StyleDon.com, as well as mainstream social media websites such as Facebook, Twitter and Pinterest, used by many designers to pilot sample Modest Fashion items and collect customer ideas and feedback.

The Islamic Fashion & Design Council (IFDC), aiming to support and develop Islamic fashion, offers its own digital Islamic fashion magazine.

Mini case study: Shukr Clothing

Digital Services offered:
- e-commerce
- Online catalogue
- C2C network/blog
- Intelligence and analytics (used)

Service description: Launched in 2001, SHUKR is an international Modest Fashion design store which started online. Using their own designers to design their own original clothing range, SHUKR was the first company to provide contemporary modest clothing specifically for Muslims living in the West. The company also prides itself with ensuring that their business operations and best work place practices are run on Islamic principles.

Off the back of very successful sales from their online store, SHUKR now also have physical offline outlet stores in other countries such as Jordan and specific stores for Turkey, US and Canada to meet rising Muslim consumer demand in core Islamic markets and key countries from the Diaspora. In addition, SHUKR employs a multi-channel distribution system retailing its clothing products on eBay as well as Amazon.com. The store website also offers live chat feed services to customers, enabling them to understand their customer requirements better, a key success factor in their sales growth. As the company has developed, it has also attracted a loyal non-Muslim customer base.

Aside from e-commerce, SHUKR also has a standalone Modest Fashion blog, which along with their main website is expected to be made available on mobile devices. SHUKR also conducts customer analytics via customer e-surveys communicating with customers through emails designed to be mobile compatible, used as internal market intelligence.

Overall, SHUKR aims to be a model Islamic business, by applying sacred Islamic values to a contemporary, multinational company, across all areas of their business (e.g., using Islamic financial and investment principles, avoiding interest-based financing in their business operations).

Revenue model:
- Sales of their own Modest Fashion products via online (e-commerce) and offline (physical store) channels.
- Cross-platform multi-channel sales and distribution by retailing clothing on eBay as well as Amazon. Social media is also used to drive sales.
- Customer intelligence and analytics services are used internally to optimize sales by conducting and sending surveys to customers. Social media is also incorporated into product development.
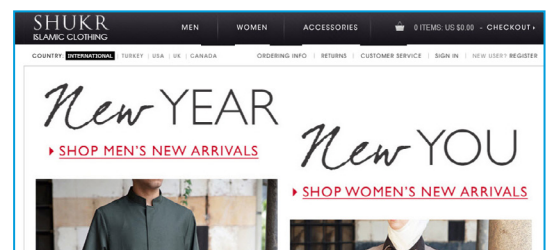
Business-to-Business (B2B) services

Modest Fashion incubator: Digital destination for emerging Modest Fashion designers and professionals who are looking for business support for the launch of new ventures. Notable examples of this service include Fashion-Incubator.com, an online incubator more focused towards apparel manufacturers to resolve difficulties they face. The website provides a comprehensive range of incubation support services and information akin to an encyclopedia of skills and knowledge. The website is popular, enjoying half a million visitors every month.

Modest Fashion advisory services: Web-based services for the delivery of consultancy and advisory for Modest Fashion professionals. Private services are not as prevalent in Modest Fashion given that it is a relatively newer segment of the overall fashion industry. HodaMallone.com is a noteworthy example though, started by an American-Egyptian fashion industry professional. Consulting service covers A-Z advisory throughout the process of initial concept development to end business realization such as in-store displays. However, Modest Fashion design councils are particularly active in this area, both regionally and internationally. Internationally, the US's MDIFC (Modesty Defined Islamic Fashion Council of America) offers a boutique consulting and training facility targeting American-based Modest Fashion designers. The UAE's IFDC also provides similar services to promote and enable local Modest Fashion designers offering a range of services covering retail and commerce, marketing, research, events, consulting and education services.

Professionals networking portal: Networking platform to facilitate the interaction between different Modest Fashion professionals: designers, manufacturers, suppliers, event organizers and others. FashionUnited.info's network is a global example of such a service, which covers the overall fashion industry. The service is very successful with web hits from more than 1.6 million industry professionals per month, designed to enable fashion professionals to connect and share ideas. Modest Fashion councils are also very active in this area, connecting emerging Modest
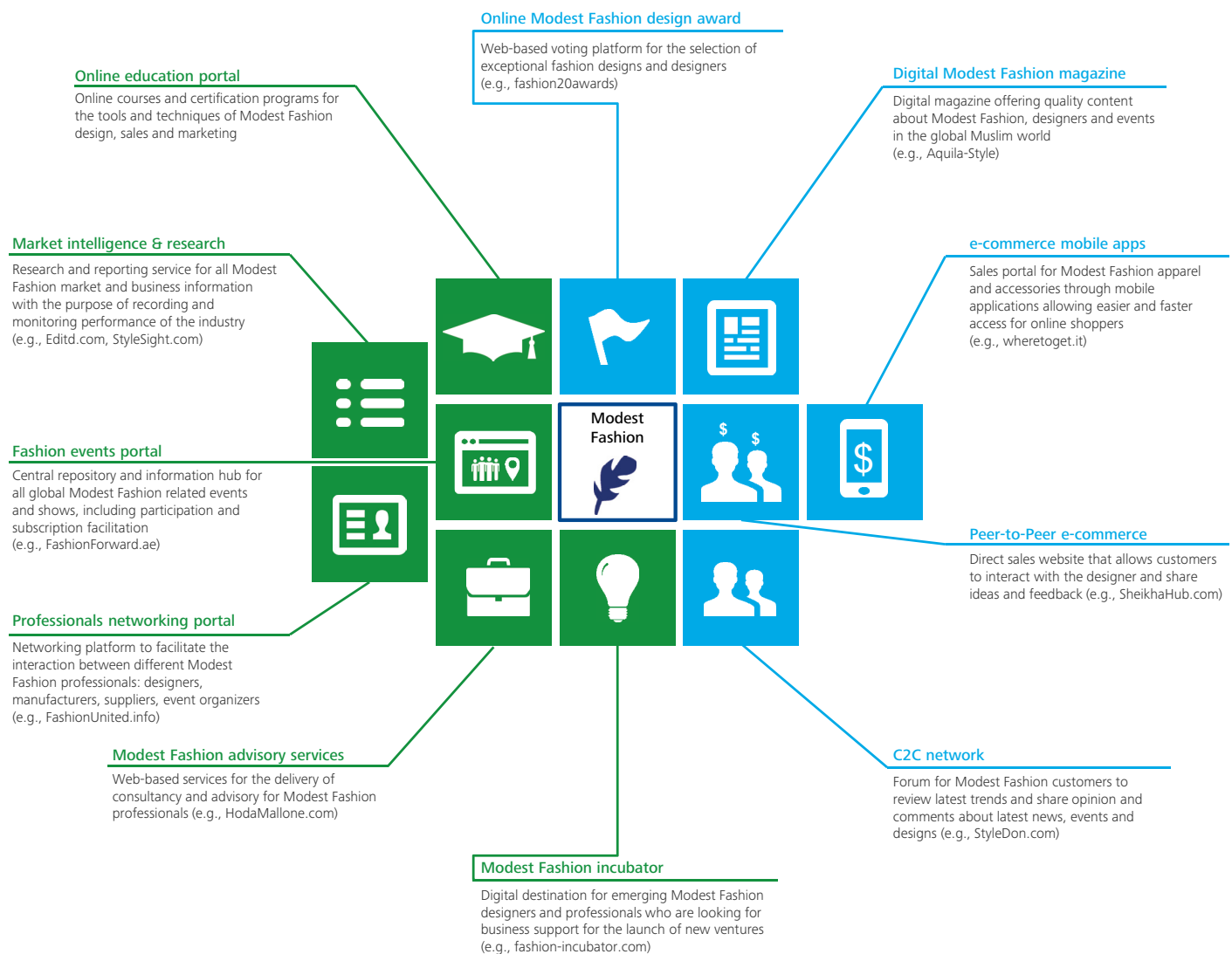
Fashion designers with the right people and resources. For instance, the MDFIC provides online resources and networking facilities for aspiring Muslim designers and also can enable access to major events such as the Islamic Fashion Week in New York, which they hosted for the first time. The IFDC is another example of a valuable Modest Fashion network designers can tap into.

Fashion events portal: Central repository and information hub for all global Modest Fashion related events and shows, including participation and subscription facilitation. FashionForward.ae (FFWD) is a notable example in this category. The website is positioned as the main platform for fashion events in the Middle East, seeking to promote the entire local fashion industry. Events include catwalk presentations from top regional designers, talks and panel discussions led by global fashion industry experts, including social and entertainment engagements.

Market intelligence and research: Research and reporting service for all Modest Fashion market and business information with the purpose of recording and monitoring performance of the industry. Leading services covering the overall fashion industry can be leveraged to obtain advanced market information about the Modest Fashion industry. Editd.com is an example of a noteworthy provider that can be used for this. StyleSight.com (WSGN) is another well-known global industry provider. Data can be provided via consulting services or through an electronic subscription service.

Online education portal: Online courses and certification programs for the tools and techniques of Modest Fashion design, sales and marketing. SheikhaHub.com is a good example, which assists designers and entrepreneurs in promoting their businesses in Islamic Fashion (online, offline and through educational assistance). The MFDIC is also another example, which organizes several webinars and online conferences. Other services highlighted also cross over into this category as part of their overall offerings.

Digital makeup

Online Modest Fashion design award

Web-based voting platform for the selection of exceptional fashion designs and designers (e.g., fashion20awards)

Online education portal

Online courses and certification programs for the tools and techniques of Modest Fashion design, sales and marketing

Digital Modest Fashion magazine

Digital magazine offering quality content about Modest Fashion, designers and events in the global Muslim world (e.g., Aquila-Style)

Market intelligence & research

Research and reporting service for all Modest Fashion market and business information with the purpose of recording and monitoring performance of the industry (e.g., Editd.com, StyleSight.com)

e-commerce mobile apps

Sales portal for Modest Fashion apparel and accessories through mobile applications allowing easier and faster access for online shoppers (e.g., wheretoget.it)

Modest
Fashion

Fashion events portal

Central repository and information hub for all global Modest Fashion related events and shows, including participation and subscription facilitation (e.g., FashionForward.ae)

Peer-to-Peer e-commerce

Direct sales website that allows customers to interact with the designer and share ideas and feedback (e.g., SheikhaHub.com)

Professionals networking portal

Networking platform to facilitate the interaction between different Modest Fashion professionals: designers, manufacturers, suppliers, event organizers (e.g., FashionUnited.info)

C2C network

Forum for Modest Fashion customers to review latest trends and share opinion and comments about latest news, events and designs (e.g., StyleDon.com)

Modest Fashion advisory services

Web-based services for the delivery of consultancy and advisory for Modest Fashion professionals (e.g., HodaMallone.com)

Modest Fashion incubator

Digital destination for emerging Modest Fashion designers and professionals who are looking for business support for the launch of new ventures (e.g., fashion-incubator.com)

Business-to-Business (B2B) Digital Services

Business-to-Consumer (B2C) Digital Services

Smart Mosques

Definition

There is no widely set or agreed upon definition of what constitutes a Smart Mosque. For the purposes of this study, we have defined Smart Mosques as any mosques which employ modern ICT technologies enabling them to interact with users in a way that enhances their understanding and improves their prayer experience (e.g., projection and simultaneous translation of live prayers and Friday sermons into multiple languages, online mosque information services and access to Islamic education). This also includes mosques which apply smart technologies to resolve practical issues to improve their efficiency, effectiveness, sustained operation and maintenance (e.g., automatic lighting, temperature and water control systems to prevent wastage, automatic security locking systems, centralized mosque management systems).

Offline market overview

Our research and estimates show that there are approximately 3.6 million mosques around the world, which translates to around 500 Muslims for every mosque[139]. The number of mosques is proportional to the Muslim population size as the top 4–5 countries with the most number of mosques also have the largest Muslim populations. Muslim population growth is therefore the key mosque growth driver. With a 1.3 percent CAGR, the number of mosques around the world is expected to reach 3.85 million by 2019[140].

Key regions with the largest mosque base include Indonesia, Sub-Continent Asia (India, Pakistan and Bangladesh), the Middle East (Saudi Arabia and Egypt), Central Asia (Iran, Afghanistan) as well as Turkey. However, at a global level, there is a gap in mosque supply as it is growing at a slower rate than the Muslim population, which is growing at a 1.5 percent CAGR[141].

Exhibit 13: Analysis of mosques around the world[c]

Estimated number of mosques around the world (2010–2019)
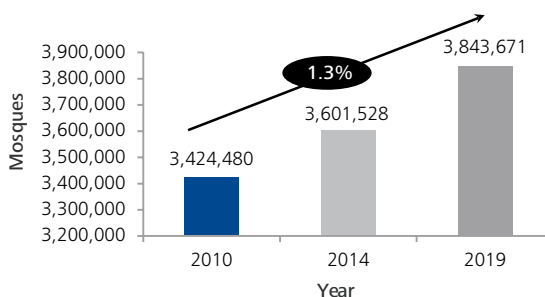
Estimated number and share of mosques by country (2014)

Fast growth of the Muslim population in North America and Europe has driven fast growth in the number of mosques in those countries over the past 10 to 20 years
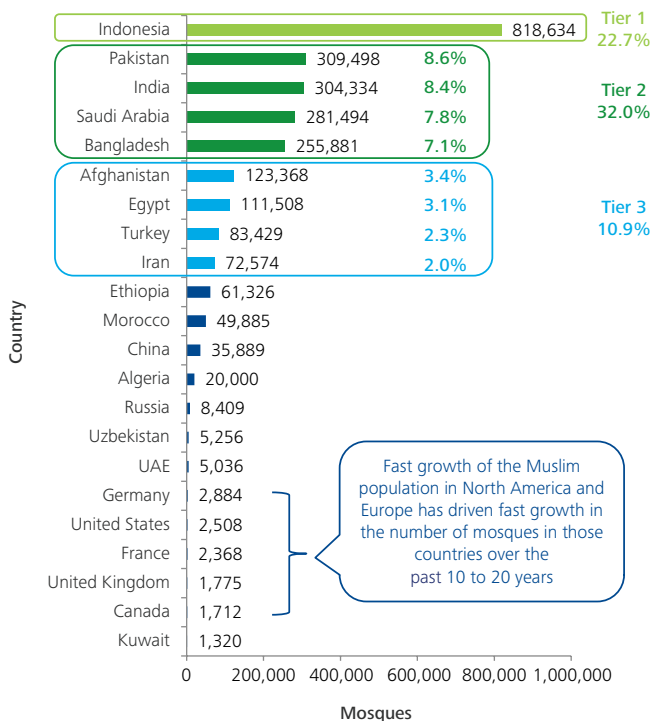
Source: Deloitte research and analysis[142,143,144]

[c] Estimated number of mosques by country is indicative but not exhaustive. Only salient Muslim markets representing a range of regions are shown. Ranking of countries (by number of mosques) shown in the chart is therefore not exact as it is not a complete list of countries.

Key trends

Primary surveys of mosque users and those working in mosques reveal a huge need for more effective mosque management and administration, which is driving the need for smart solutions. Many primary reports and anecdotes indicate a wide range of issues which mosques suffer from. Such issues include wastage of water (e.g., through Wudu taps not being turned off), unsecured mosque premises (e.g., doors not being locked), electricity wastage (e.g., lights left on), maintenance and cleaning, locating mosques (for traveling users), understanding the Friday sermon (which tends to be in the local language of the base country) amongst others.

However, implementation of modern technology to resolve such issues in mosques must be done carefully, and in consultation with key stakeholders, especially those who govern and operate the mosques. A stakeholder analysis of mosques reveals how they are governed and operated in different ways, depending on the region. For instance, in OIC countries such as in the MENA and South-East Asia regions, mosques tend to be governed by dedicated central government authorities responsible for all mosques in the country. This includes their funding, operation and maintenance. However, in the Diaspora areas such as the EU and Americas, governance of mosques is more decentralized, where local city councils, Islamic councils and non-profit organizations tend to operate mosques at a more local or even an individual level. Hence, the process of approval and consultation to implement new technological changes in mosques is also different and region-dependent. In any case, Imams, community members, the general public, religious authorities as well as technology and service providers all need to be involved in wider decision-making processes affecting mosques.

Digital market analysis

The concept of Smart Mosques is still quite novel and in its infancy. Developments in this space are generally led by key OIC markets. Although overall there are very few designated Smart Mosque initiatives, there are a range of services that are being provided and more have been identified which could be provided in further Smart Mosque projects. These include mosque information services (e.g., via QR coding), multi-screen projections for Friday sermons and eco-tech solutions. The GCC and South East Asia countries are leading Smart Mosque initiatives, with very large scale mosque networks and portals. Authorities behind such initiatives in the South East Asian countries reportedly aim to expand globally in neighboring countries (e.g., China) as well as in Western economies. In turn Western economies have reportedly expressed interest (e.g., EU and North America). In the GCC, there is a greater prevalence of eco-friendly or 'green' mosque solutions.

The GCC and South-East Asia Countries are leading Smart Mosque initiatives, with very large scale mosque networks and portals.

Exhibit 14: Key Smart Mosque initiatives around the world

Middle East (GCC)

UAE
- QR Coded and tagged mosque
- Multi-screen powerpoint projected Friday sermons and mosque activities
- Eco-friendly mosques

KSA
- Two-holy mosques are smartest
- Eco-friendly mosques (90,000 plan)

South-East Asia (SEA)

Malaysia
- Online mosque portal (+5000 mosques) with international plans
- Crystal Mosque (first with IT and internet facilities)

Indonesia
- Broadband power line project (linking 400,000 mosques)
- May expand to China, U.S. and EU

Singapore
- Multi-screen powerpoint projected Friday sermons and mosque activities
- Eco-friendly mosques

Source: Deloitte research and analysis

While it is encouraging to witness the emergence of these new initiatives, it is important to note that there are many challenges involved. The largest of which is the fact that most Smart Mosques are inherently offline or disconnected. For instance, it is rare to find a mosque which has its own internet connectivity. Coupled with the scale of mosques around the world, it is unlikely that many mosques would even be able to be upgraded to become 'smart'. As such, ICT infrastructure in mosques is lacking and with associated costs, funding Smart

Mosque initiatives also becomes another challenge. ICT infrastructure is also the basis upon which Digital Services can be provided. Without this, it is difficult for such services to be provided, at least from the mosque itself. Currently, these initiatives are funded by governments, particularly those which are economically wealthier. It is likely that this will continue, unless significant donations to develop these initiatives arise from the private sector. Special Smart Mosque initiatives will continue to emerge, but more on an experimental case-by-case basis.

Smart Mosques: Digital Services categories

Digital Services in the Smart Mosques vertical consist of Digital Services and Supporting Technologies.

Digital Services

Internet connectivity: High speed broadband Internet access to smart and other connected devices enables mosques to connect with their users. Malaysia's Crystal Mosque in Kuala Terengganu is an example of a Smart Mosque which opened in February 2008 and was the first mosque in the world to be equipped with IT facilities and WiFi coverage.

Multi-lingual services: Translation of prayers, Friday sermons in multiple languages including sign language. An example is Malaysia's Crystal Mosque, which is also equipped to stream sermons on the Internet, to enhance understanding of the sermon of that mosque.

Islamic education: Online sharing and streaming of Islamic courses and classes offered by the mosque such as Quran Tafseer (technical interpretation of the Quran's meaning).

Advertising and awareness: Promotion of Islamic products, events, initiatives, charities, and other services either on site or through push notifications.

Mosque tagging: Enables mosques to be highlighted as a place of interest on navigation systems for easy identification (e.g., for new community members). Dubai's Islamic Affairs & Charitable Activities Department (IACAD) has its own website and mosque database. Users can access this IACAD mosque database on their website and search for any mosque by name, location or assigned code. Another example of this service is Salatomatic, the world's largest global online mosque guide. Users can access a database of 5,715 mosques and even 354 schools, with 3,440 reviews. As the website is an offshoot of Zabihah.com, its user base is likely to stay the same at 10 million.

Mosque management: Administration and management, possible centrally through cross-links to other mosques or municipal systems. This is the most common issue faced by most mosques around the world. Currently no dedicated stand-alone mosque management services have been found, presenting a gap which needs to be addressed. However, larger mosques such as the Holy Mosques in Makkah and Madinah in Saudi Arabia both use their own mosque management solutions.

Digital suggestion box: Users can provide suggestions and complaints quickly through smart touch screen devices. Dubai's Sheikh Mohammed bin Rashid Mosque, the UAE's first Smart Mosque in Jumeirah 3 includes a digital feedback channel used to obtain feedback from users for better enhancement and control of mosque services.

Tracking services: Quran inventory, mosque capacity, parking spaces, lost and found. Dubai's Sheikh Mohammed bin Rashid Mosque also provides capacity information to its users.

Islamic financial services: Payments, donations, remittance, insurance, micro-finance. Mosques from the "Masjid Pintar" project provide a smart card to worshippers, which acts as an ID, payment, remittance, insurance, micro-finance for Islamic banking and financial services.

Mosque information: Web portals, applications, digital notice boards providing information about a mosque's history, nature, area, capacity, prayer timings, Friday sermons and activities. Dubai's Sheikh Mohammed bin Rashid Mosque provides users with information about Dubai mosques (e.g., history, nature, area, capacity, prayer timings, Friday sermon) and services (e.g., donations, courses) any time. Another example is Malaysia's Masjid Al Jamiul Badawi in Kepala Batas, Penang, which includes a digital signage solution for real-time information sharing.

Community networking: Utilization of social network platforms for Islamic discussion forums, blogs and community building (e.g., organization of Quran classes, charities).

Digital Services offered:
- Information services
- Location services
- e-commerce

Service description: An online Mosque portal which holds a large database of over 5,000 mosques. Contains information about mosques including photographs, location maps and information about service offerings and available facilities including local businesses around mosques. The website has indicated that it will add other countries by partnering with country agents around the world to achieve one worldwide central mosque information center. Other services provided include a mosque e-book, digitized Khutbahs (sermons), and publishing of basic Islamic knowledge and facts; for instance about Salah (prayer) or Dhikr (remembrance of God).

Revenue model:
- Advertising (i.e., Muslim business listings in local mosques and online on the mosque portal)
- e-commerce sales of products and services offered by listed Muslim businesses. Also includes sales of proprietary services (e.g., running educational, sporting, Islamic Tourism activities) and products (exclusive Camel club merchandise)

MALAYSIAN MOSQUES

A web community portal which focuses on mosques around Malaysia and the main site in this network.

READ MORE »

MYMUSLIMBIZ

A network of Muslim businesses which are located around certain mosques.

READ MORE »

CAMEL CLUB MALAYSIA

A club directed to youth community which is managed by Mosques.com.my.

READ MORE »

Supporting Technologies

TVs and projection screens: Enables display of Friday sermons across multiple sections of the mosque, inside and outside. Smart Mosques in Singapore use multi-screen PowerPoint presentations to project Friday sermons and mosque activities.

IT infrastructure: Includes modems, satellite links (for super high speed internet and broadcast links), PCs, smart touch screens, fixed fiber optic lines, sensors. This supporting technology is essential in Smart Mosque development as it represents the first step in a Smart Mosque upgrade/facility. This supports many services such as internet connectivity, information services, and mosque networks. Design, supply and installation of ICT equipment for mosques including fixed fiber optic lines (for ultra-high speed internet), PCs, touch screens, digital notice boards and displays.

Camera technology: Facilitates live feeds, online streaming and sharing of photos, virtual tours. After sound systems, this is the most common supporting technology included in most main mosques for security reasons (e.g., Masjid Al Haram in Makkah, Saudi Arabia).

Translation systems: For simultaneous translation of prayers and Friday sermons.

Sound systems: For noise and volume control (acoustics) as well as multiple channels for different languages. With camera technology, this is the most common supporting technology included in most main mosques to hear the Imam more clearly and also to perform the Adhan (i.e., call to prayer) more effectively.

Eco-friendly technology: More power efficient and automated climate control (temperature, lighting, natural, fan ventilation and cooling, scent control, smart utility meter systems) to improve comfort. Saudi Arabia is reportedly planning on developing 90,000 eco-friendly mosques. Smart Mosques in the UAE and Singapore already contain eco-technology capabilities.

QR coding: Quick Response (QR) codes are an array of black and white squares typically for storing Uniform Resource Locators (URLs) or other information. QR coded mosques enables information about mosques to be read by smartphone cameras. A notable example is Dubai's Sheikh Mohammed bin Rashid Mosque, which uses QR Code technology to enable two-way interaction with mosque users.

Smart cards: For ID and membership services (e.g., electronic transactions, credits). Mosques from the "Masjid Pintar" project provide a smart card to worshippers, which acts as an ID, payment, remittance, insurance, micro-finance for Islamic banking and financial services. Each mosque as part of this project is to be equipped with satellite connection, BPL modems and PCs. The project sponsors are reportedly looking to expand this project to China, with an interest reported in US and Europe.

Saudi Arabia is reportedly planning on developing 90,000 eco-friendly mosques.

Digital makeup

Community networking
Utilization of social network platforms for Islamic discussion forums, blogs, community building (e.g., organization of Quran classes, charities)

Internet connectivity
High-speed broadband Internet access to smart and other connected devices enables mosques to connect with their users

Multi-lingual services
Translation of prayers and Friday sermons into multiple languages including sign language

Mosque information
Web portals, applications, digital notice boards providing information about a mosque's history, nature, area, capacity, prayer timings, Friday sermons, activities

Islamic education
Online sharing and streaming of Islamic courses and classes offered by the mosque (e.g., Quran Tafseer)

Smart cards
For ID and membership services (e.g., electronic transactions, credits)

TVs and projection screens
Enables display of Friday sermons across multiple sections of the mosque (inside and outside)

QR coding
Quick Response (QR) codes are an array of black and white squares typically for storing Uniform Resource Locators (URLs) or other information. QR coded mosques enables information about mosques to be read by smartphone cameras

IT infrastructure
Includes modems, satellite links (for super-high speed Internet and broadcast links), PCs, smart touchscreens, fixed fiber optic lines, sensors

Advertising and awareness
Promotion of Islamic products, events, initiatives, charities, other services either on site or through push notifications

Eco-friendly technology
More power efficient and automated climate control (temperature, lighting, natural, fan ventilation & cooling, scent control, smart utility meter systems) to improve comfort

Camera technology
Facilitates live feeds, online streaming and sharing of photos, virtual tours

Islamic financial services
Payments, donations, remittance, insurance, micro-finance

Mosque tagging
Enables mosques to be highlighted as a place of Interest on navigation systems for easy identification (e.g., for new community members)

Sound systems
For noise and volume control (acoustics), multiple channels for different languages

Translation systems
For simultaneous translation of prayers and Friday sermons

Tracking services
Quran inventory, mosque capacity, parking spaces, lost and found

Digital suggestion box
Users can provide suggestions and complaints quickly through smart touchscreen devices

Mosque management
Administration and management, possibly centrally through cross-links to other mosques or municipal systems

Supporting Technologies

Digital Services

Islamic Media

Definition

A comprehensive definition of "Islamic Media" refers to all content that is created with the purpose of spreading information, awareness and understanding about Islam, its concepts and principles. This includes any media which is used for promoting and celebrating the Islamic culture, values and celebrating Islamic events (e.g., Eid Al Fitr, Eid Al Adha)[145]. This section will focus on the opportunities of its digital distribution. In this context, different types of Islamic Media include:

- **Infotainment:** Infotainment is a reference to information-based media content that can also qualify as entertainment. In Islamic Media, it covers news, current affairs, lifestyle and other general interest written content that discusses the Islamic world in OIC and Diaspora countries.

- **Music and Nasheed:** Islamic music relates to the contemporary pop culture of the Islamic world through music that celebrates the lifestyle of a global Muslim. 'Nasheed' is a lyrical expression of religious belief, history and current events without the use of musical instruments.

- **Filmed content:** Also referred to by the term 'Halalywood', it is the film industry that creates feature films, which discuss and illustrate Islamic culture and the religion of Islam.

- **TV & radio channels:** Includes live Islamic shows and programs, typically educational around the study of the Holy Quran and lessons learned from it.

- **Games and applications:** Islamic games and apps are programs that are created with the purpose to entertain the users while promoting Islam. This type of media is appealing to younger generations looking for new methods of entertaining and educational content.

Offline market overview

The global media and entertainment industry is quite large and growing. Worldwide, the overall media and entertainment market is currently valued at an estimated US $1.9 trillion[146]. At an average 6 percent per annum, this is expected to reach US $2.1 trillion by 2016[147]. Geographically, this is fairly distributed across most regions, namely EMEA, North America and Asia-Pacific. Amongst the OIC and Diaspora countries, entertainment and media activity is driven by US and China, representing more than 56 percent of the overall industry's market value[148]. The

large activity seen across the US, China and other Diaspora nations should therefore be exploited by the Islamic Media market with a focus on also addressing the needs of minority Muslims who live in these countries. This is best achieved through leveraging digital assets and services, to maximize Islamic Media's reach across the global Muslim community as well as non-Muslims interested in learning about Islam.

Interestingly, emerging markets are also growing at a much faster pace. Of these, the fastest growth is taking place in major Islamic markets such as Indonesia, MENA, Pakistan, Turkey, India and Malaysia, all with an estimated growth of around 10–15 percent CAGR, more than double the global rate in many cases[149]. This suggests a strong base and potential for Islamic Media penetration and consumption.

Key trends

Islamic Media is developing globally and becoming a reference for Muslim culture. In this light, Islamic Media content could play a unifying role across the Islamic world addressing common values and matching target demographics. However, public perception and understanding as to the format of Islamic content is widely skewed towards a "religious" only educational perspective, thus limiting funding opportunities for other categories and areas[150]. Consequently, a gap in quality talent and entrepreneurs is also prevalent, needed to provide a wider variety of Islamic Media content[151].

Nevertheless, gaps in Islamic Media are starting to be addressed. For instance rising content productions that showcase Islam are acting as another force to rebalance common misconceptions of Islamic values and lifestyle trends. Such services are also addressing rising demand from the Muslim community for feature films that discuss the culture and religion of Islam[152]. Addressing this rising trend has a dual purpose of promoting Muslim artists and entertainment as well as educating the masses about Muslims and Islam[153]. Marketing partnerships with other Islamic Economy sectors can also be a key sales point for Islamic Media[154].

Digital market analysis

In general, media and entertainment has the most applications and penetration in the digital domain, especially compared to other industry verticals of the Islamic Economy. Currently, digital media and entertainment, valued at US $646 billion, represents about a third of the overall industry[155]. Further, the share of digital has increased every year since 2012 with a 12 percent CAGR, double the growth rate of the overall industry and four times that of the remaining offline market[156]. At this rate, the share of digital is expected to rise further on average by 8–9 percent per annum to reach US $795 billion by 2016[157].

In terms of digital Islamic Media, precise industry estimates vary, although it is clear that there has been significant growth in activity that has been taking place. For instance, Islamic Media entrepreneurship is on the rise, addressing the rising demand for Islamic Media content, in particular for TV content, news, music, e-learning and games, the most popular types of media amongst the general audience[158].

Although there is much activity in this space, digital Islamic Media as an industry vertical is still very much fragmented. Many ventures are being developed, however there is no leading global aggregator. Aggregation sites are not leveraging as much considerable traffic as they can from the vast Muslim population compared to mainstream global platforms such as YouTube, which also displays popular Islamic content (e.g., talks from various world renowned Islamic scholars). Specialized distributors of Islamic Media content are also more focused on providing dedicated platforms to the Diaspora, a key gap which needs to be filled but also one which represents the

minority of Muslims worldwide. Whilst this is an agent of fragmentation, it is also a driver behind the advancement of new digital Islamic Media services. Islamic content consumption is currently driven by the Diaspora and aggregators are generally more active in North America compared to other areas of the Muslim world. This indicates a very high interest in the understanding and learning of Islam in this region, stemming from the challenges that minority Muslims face when prompted by misconceptions and differences between Islam and mainstream Western cultures and social norms.

Aside from the Diaspora, technology ready regions such as the GCC and those with rising technology readiness through the development of ICT infrastructure are also enabling new entrants to provide Islamic Media services on a more global level. For example OTT/SVOD services are becoming more accessible with an increasing worldwide broadband penetration. With better technology readiness and penetration, the reach of Islamic Media content will only increase, raising their commercial value proposition with monetization models including subscription, pay-per-view, advertising and pay-to-own.

The exhibit on the next page summarizes the trends and highlights the importance of addressing OIC and Diaspora countries adequately with Islamic Media content.

Islamic Media entrepreneurship is on the rise, addressing the rising demand for Islamic Media content.

Exhibit 15: Global offline and digital Islamic entertainment and media market (2012–2016)

Global entertainment and media market by region (USD billions)

	2012	2013	2014	2015	2016	CAGR 6%
	1,691	1,782	1,890	1,994	2,120	
Latin America	92	101	115	121	134	10%
Asia Pacific	493	530	568	608	651	7%
North America	537	558	590	619	658	5%
EMEA	569	592	618	646	678	4%

■EMEA ■North America ■Asia Pacific ■Latin America
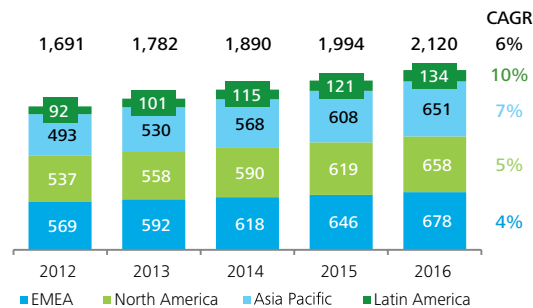
Digital share of global entertainment and media spend (USD billions)

	2012	2013	2014	2015	2016	CAGR 6%
	1,691	1,782	1,890	1,994	2,120	
Digital	512	581	646	720	795	12%
Non-digital	1,179	1,201	1,244	1,274	1,325	3%

■Non-digital ■Digital
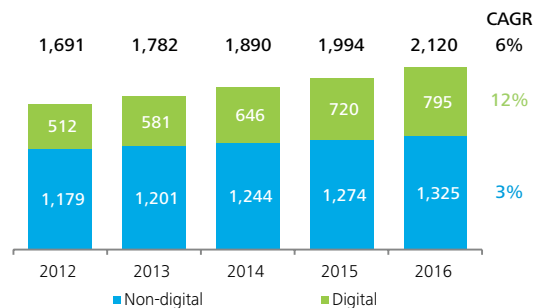
Entertainment and media market by OIC or major Islamic Diaspora country (USD billions)
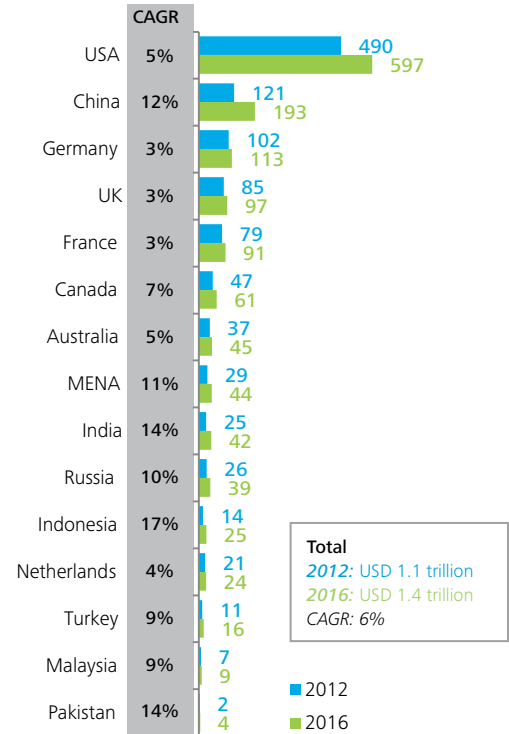
Country	CAGR	2012	2016
USA	5%	490	597
China	12%	121	193
Germany	3%	102	113
UK	3%	85	97
France	3%	79	91
Canada	7%	47	61
Australia	5%	37	45
MENA	11%	29	44
India	14%	25	42
Russia	10%	26	39
Indonesia	17%	14	25
Netherlands	4%	21	24
Turkey	9%	11	16
Malaysia	9%	7	9
Pakistan	14%	2	4

Total
2012: USD 1.1 trillion
2016: USD 1.4 trillion
CAGR: 6%

■2012 ■2016

Islamic Media: Digital Services categories
Digital Services in the Islamic Media vertical consist of Business-to-Consumer (B2C) and Business-to-Business (B2B) services.

Business-to-Consumer (B2C) services
Islamic Economy digital magazine: Islamic Economy is not currently portrayed through a global information portal. A digital magazine discussing the Islamic business and lifestyle of Muslims worldwide will facilitate the communication between the different communities. MuslimVillage.com is an example of such a magazine which started out from the Muslim community in Sydney, but has grown regionally and globally since.

OTT/(S)VOD services: OTT/(S)VOD is a key driver for spreading Islamic culture and values, it also reaches the Muslim Diaspora which is constantly looking for its original identity. Islambox, Bayyinah.tv and Istikana.tv are Digital Services that offer quality audio visual content to regional communities as well as to the Diaspora. Online Quranic audio services are also highly pervasive. Examples include QuranicAudio.com, Quran.com, Tanzil.net, Listen2Quran.com amongst many others.

User-generated music portal: Web portal that promotes Islamic music composers and musicians through the sharing of their original amateur or professional work. SoundCloud is a social network that hosts user-generated music, used by Muslims to promote Islamic music.

Islamic social network: Social network for the global Muslim community to promote shared values and facilitate communication between the different regions within the Islamic world. Islamtag.com is a profile-based social network that requires users to input personal information and create a digital identity for them.

Islamic e-book/e-learning: Digital library for reading and audio-visual material and references about Islamic culture and values. With the general rise in digital as an increasingly alternative platform to print, and with the advent of tablets, the proliferation of Islamic e-books is increasing markedly with e-books in general. Many Quranic audio services such as Tanzil.net also enable users to follow recitations with an online interactive e-book of the Quran.

Islamic music aggregator: Aggregator service for digital Islamic music from across the Muslim world. Anghami and Sultn are MENA-based services that offer streaming of popular music including artists who promote Islam through their music. Assabile.com offers a collection of over 100 different recitations of the Quran.

Online game production firm: Development company to provide Sharia-compliant online games. Online games are a major attraction to the young population which constitutes a major part of the Muslim community. A notable example of multinational gaming companies servicing this need is Ubisoft, which also has operations in the MENA region.

Mini case study: The 99

Digital Services offered:
- Multi-platform and multi-format digital content
- Networking portal
- Web store for merchandise

Service description: In October 2006, The 99 was launched as a monthly comic book published in Arabic and English and sold throughout the GCC, Jordan, Egypt and Lebanon.

In 2007, a US edition was also launched. Almost 50 books have been published to date. The 99 has appeared on television screens throughout the world. More than 70 countries from the US to China have already viewed the 52 episodes that spread over two seasons over the past two years.

Recently, The 99 has successfully created cross-platform offerings available via smartphones, tablets and computers and proposes different license and merchandising products through its web store and a portal that engages the young population in a collection of games and other family-friendly entertainment.

Revenue model: Revenues from the sale of rights, advertising and merchandise.
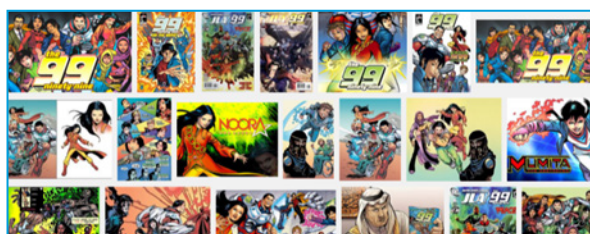
Mini-case study: Hadith Of The Day (HOTD)

Digital Services offered:
- Multi-platform infotainment
- Online magazine (e.g., features, key Islamic articles)
- Islamic e-learning (e.g., daily HOTD emails, messages)
- Blog and social network pages

Service description: HOTD is a multi-faceted infotainment service, which seeks to inspire better understanding of Islam through providing small doses of educational knowledge. The website does this in a variety of ways, through daily emails, tweets, social media posts, smartphone app messages and website updates.

Content ranges from articles of members who have reverted to Islam, to stories of the Prophets, the companions, famous women in Islam and interviews with famous Muslim figures.

The website also runs its own 'ask a question' service, where users can post questions and have them answered by staff knowledgeable in the area in question. The website also features its own blog where users can discuss certain Islamic topics.

The website is very popular, with over 9 million members worldwide across its various platforms. In addition, HOTD has 9.5 million Facebook likes, around 400,000 followers on Twitter and around 3 million hits on their website each month. The website has also been endorsed by some of the world's leading scholars (e.g., Mufti Ismail Menk, Ustadh Nouman Ali Khan, Shaykh Yusuf Badat and many more).

Revenue model: Revenues are primarily earned through advertising and donations received by members.

Mini-case study: Alchemiya

Digital Services offered:
- Digital TV/movie production
- Subscription video-on-demand (SVOD)

ALCHEMIYA

Service description: Alchemiya is an online SVOD TV service delivered across any connected device (TV, desktop, laptop, tablet or smartphone). The company seeks to build, develop and leverage a global network of high caliber producers to become the premium TV service, showcasing the best content around Muslim life.

This includes feature Muslim films, documentaries and lifestyle content that features art, history, architecture, culture, science, business, education, spirituality and children's programmes.

The service's target audience is 'Global Urban Muslims', described as intelligent, educated, cultured, socially and politically aware Muslims who generally reside in cities across the world (i.e., from the "Futurists" demographic segment). The target demographic is typically concerned with raising young families, including issues around education, health and child development.

Currently the company is raising funds through advance subscriptions and crowdfunding through its website. The company's target is to raise 10,000 advance subscriptions at US $160 each (for 2 year subscriptions), based on Islamic Finance principles of shared risk and ownership. The company continues to search for investors.

The channel launches online this year and aim to earn revenues of US $1.3 million in its first year, growing quickly to US $120 million by its fifth year.

Although it is too early to judge the success of this venture, the service has reportedly been described as the future Netflix for Muslims, already attracting many subscribers amongst the Diaspora countries (e.g., United Kingdom, Japan, Sweden, Australia and the United States). The project has also been endorsed by global Muslim scholars such as Sheikh Hamza Yusuf and Professor Tariq Ramadan of Oxford University.

Revenue model: Revenues from user subscriptions, which are normally around US $90 per year. Future revenues could follow a Netflix business model.

ALCHEMIYA IS AN ONLINE TELEVISION PLATFORM THAT PRESENTS THE WORLD'S BEST CONTENT ABOUT MUSLIM LIFE

Business-to-Business (B2B) services

Digital TV/movie production: Islamic content offering is developing as demand becomes more focused. Current players constitute a strong basis to cater for the need for Islamic content, creating a possible barrier to entry for specialized content producers. Examples of companies providing such services include Teshkeel Media Group.

Media research services: Research and reporting service for all Islamic Media market and business information with the purpose of recording and monitoring performance of the industry, and providing intelligence and thought leadership on development potential. Notable examples include Zawya.

Mobile apps developers: Specialized mobile apps development initiative for Islamic-centered content to cater for the needs of the global Muslim community. Examples include foo.mobi, qanawat and bitsmedia.

Mini-case study: Islam On Demand

Digital Services offered:
- e-commerce
- Digital TV/movie production

Service description: Islam On Demand is a video production company and provider of audio and video Islamic content. Since 1995, the company has been professionally recording and distributing audio and videos of Islamic talks and lectures given by world renowned Muslim scholars. All media content offered on their online catalogue is professionally produced and recorded by the company, with full ownership and content rights.

The Islam On Demand e-commerce website was setup in 2004, used to sell MP3 discs, CDs and DVDs of its original content productions. Since 2008, the company has been distributing its content to customers through various 'on demand' service providers.

Islam On Demand's content library includes over 200 original productions. Content is available through multiple platforms, including mobile apps, app stores, audio downloads from the main website, physical USB and disc orders. Once an order is placed the portal directs the user to the appropriate website to download the purchased content.

Revenue model: Revenues from e-commerce sales of proprietary media content.

Digital makeup

Online game production firm

Development company to provide Sharia-compliant online games. Online games are a major attraction to the young population which constitutes a major part of the Muslim community (e.g., Ubisoft)

Digital TV / movie production

Islamic content offering is developing as demand becomes more focused. Current players constitute a strong basis to cater for the need for Islamic content, creating a possible barrier to entry for specialized content producers (e.g., Teshkeel Media Group)

Islamic music aggregator

Aggregator service for digital Islamic music from across the Muslim world (e.g., Anghami, Sultn)

Media research services

Research and reporting service for all Media market and business information with the purpose of recording and monitoring performance of the industry, and providing intelligence and thought leadership on development potential (e.g., Zawya)

Islamic e-book / e-learning

Digital library for reading and audio-visual material and references about Islamic culture and values

Islamic Media

Mobile apps developers

Specialized mobile apps development initiative for Islamic centered content to cater for the needs of the global Muslim community (e.g., foo.mobi, qanawat)

Islamic social network

Social network for the global Muslim community to promote shared values and facilitate communication between the different regions within the Islamic world (e.g., Islamtag.com)

Islamic Economy digital magazine

Islamic Economy is not currently portrayed through a global information portal. A digital magazine discussing the Islamic business and lifestyle of Muslims worldwide will facilitate the communication between the different communities (e.g., MuslimVillage.com)

User-generated music portal

Web portal that promotes Islamic music composers and musicians through the sharing of their original amateur or professional work (e.g., SoundCloud)

OTT / (S)VOD services

OTT / (S)VOD is a key driver for spreading Islamic culture and values, it also reaches the Muslim diaspora who is constantly looking for its original identity (e.g., Islambox, Istikana.tv)

■ **Business-to-Business (B2B) Digital Services**

■ **Business-to-Consumer (B2C) Digital Services**

Islamic Standards & Certifications

Definition

Islamic Standards & Certifications encompass all of the guideline policies, procedures and best practices governing trade and consumption across the entire Islamic Economy[159]. By definition, Islamic Standards & Certifications cover all offline and Digital Islamic Economy areas.

Current trends around Islamic Standards & Certifications

The Islamic Economy collectively has a very large number and variety of standards and certifications. This is mainly due to the absence of a single international regulatory framework and centralized body leading to discrepancies in accreditation and certification. With more than 300 Halal certification bodies across 48 countries for consumer products and various schools of thought guiding Islamic Finance standards, confusion amongst consumers and authorities has increased[160]. Standardization bodies do exist but the adherence to their standards varies from country to country. This illustrates the wide spectrum and variety across the Muslim community as to what is perceived to be permissible as 'Halal' and what is acceptable in terms of adequate quality.

Exhibit 16: Islamic Standards & Certifications analysis by vertical and key area (2014)

Verticals & Areas / Challenges	Halal Food	Halal Travel	Islamic Finance	Islamic Media	Modest Fashion	Islamic Art & Design	Islamic Economy Education	Smart Mosques
International regulatory framework and centralized body	+300 Halal certification agencies worldwide 30% are legal entities An International Halal Council is working towards a single standard	No official Halal Travel accreditation or certification body (CrescentRating only provides a rating system which is used as an indicator for Halal Travel)	No central global authority – ISFB, ACCA, CIMA, AAOIFI are international and trying to accommodate all schools 5 thought schools (4 Sunni, 1 Shia)	No official centralized authority or body	Absence of any accreditation or certification body	There is currently no standardized curation board that can value and assess Islamic art (in terms of permissibility and quality)	No international centralized authority – however there are 4 main certification bodies: CISI, CIMA, IIBI and AAOIFI	Religious authorities regulate mosques (with loose control) in OIC. Non-OIC countries' local councils have the final say on mosque matters
Definition	Most clearly defined vertical but varies by country (e.g. SASO in KSA, British Halal Council in UK, Muslim Consumer Group in US and Canada)	No clear agreed definition	No unifying definition across the schools Schools of thought vary by region between UK, GCC & SEA	No clear definition. Players within the Islamic Economy are still trying to understand the basic market. Dubai aims to have Islamic initiatives fully articulated	No clear definition	No clear definition	No clear definition	No detailed definition or signs on mosques regarding code of conduct. It is considered as understood amongst Muslims
Standards for corporate governance	Islamic standards for corporate governance within the Islamic Economy do not exist (with the exception of some financial services and Halal Food standards & customs authorities). This limits the development of the Islamic Economy going forward							Governance of mosques usually limited to content of Friday prayers
Infrastructure, skills and expertise	Lack of transparency across the supply chain. Few companies found engaged in F2F Halal Food tracking	Lack of talent & entrepreneurship. No good recruiting agencies (e.g. Yahoo! struggles to find an agency that understands the industry, skills)	Huge shortage in financially qualified Islamic scholars who can best examine & certify Islamic Finance products	Dubai can create an ecosystem by providing the resources, facilities and support needed	Lack of large commercial stores & brands Lack of understanding on how to address Muslim consumers	There are a lack of institutions that support religiously inclined art No centralized outlet or platform to advertise	There are 750 Islamic Financial Education & Human Knowledge Service Providers (IFEKSP) globally, but +20% focus in Islamic Finance	Mosque ICT infrastructure needed to enable better monitoring, administration, management and control of mosques

Source: Deloitte research and analysis

Key challenges

In the analysis of the standards and certifications, many key challenges have also been identified which need to be addressed:

Consumer products: The main challenge of the Halal Food and consumer products market is the fact that there are currently no global standards for Halal Food or an international regulatory framework for the Halal market. As per research conducted by the International Halal Integrity Alliance, there were 300 Halal certification agencies worldwide in 2011, of which only 30 percent were legal entities[161]. The need for international standardization is required given the number of high profile global cases of meat integrity issues (e.g., horse meat and pork traces in the global meat production chain) or other fraud Halal labelling cases globally. The definition and certification of many other consumer products such as pharmaceuticals, fashion and cosmetics have so far also been neglected.

Competition over cooperation: There is limited cooperation between various certification bodies around the world. Initiatives are arising, but are more stand-alone and competitive rather than inclusive and cooperative. Without closer cooperation, international standardization and certification cannot truly take place.

Islamic Finance: Islamic banking is dependent on varied interpretations of Sharia as well as local laws over the absence of an authoritative centralized body to frame rules. For instance, AAOIFI has 41 accounting guidelines for Islamic financial institutions that have been made mandatory in Bahrain, Qatar, Syria and Sudan but are merely considered advisable in nations such as Malaysia, Saudi Arabia and the United Arab Emirates[162]. In Malaysia there is a national Sharia council that sets rules for Islamic financial institutions, but Malaysian interpretation of Sharia is considered to be more liberal than the views of Saudi scholars, making it difficult to reach consensus on deals between the two nations[163].

Lack of definition: There is also no definition or standards for activities related to Modest Fashion, Islamic Art & Design and Islamic Media. Media depends on the level of censorship of each country. Islamic Economy Education is underdeveloped and overshadowed by Islamic Finance Education. The Halal Travel industry is currently more related to family-friendly tourism and does not offer clear standards that could be expected by the Muslim community.

Lack of infrastructure, skills and expertise: Expertise in Halal markets is very limited and is not adequately supported by the education system — there is a lack of Halal market education programs. In non-Muslim countries, many Halal meat certifying bodies are not following proper Halal processed food requirements[164]. There is generally among Muslim and non-Muslim countries a lack of testing capacities (e.g., testing methods and laboratories, lack of accredited Halal testing laboratories) that limits the transparency and traceability of products across the value chain (e.g., from farm to consumers, integrated logistics chain) required by the Muslim consumers[165].

Key developments

As such, there have recently been many announcements from various OIC countries to lead the development of global standards for Sharia-compliant products and services.

Currently, Malaysia is considered as the global center for Sharia-complaint certification and is very advanced in terms of accreditation and certification processes with advanced infrastructure across many verticals (e.g., financial services, food, cosmetics).

However, Dubai (in the UAE) has recently announced its ambition to become the capital of the Global Islamic Economy and is working on developing globally accepted Sharia-compliant standards across various Islamic Economy sectors and functions[166]. The implementation of these unified global standards will be supported by a comprehensive infrastructure such as an international accreditation center, Halal clusters situated in designated 'free zones', as well as Sharia-compliant corporate governance certification centers[167].

Elsewhere, India has also recently initiated a certification process, specifically for Sharia-compliant hospitals in order to attract medical tourists from neighboring Muslim countries[168].

Some recent initiatives by major bodies are steering the industry towards a possibly better alignment but are mainly focused on Halal Food and Islamic Finance. Key organizations include the Standards and Metrology Institute for Islamic Countries (SMIIC), the Emirates Standardization and Metrology Authority (ESMA), Malaysia Department of Standards (MDOS) and the International Halal Integrity Alliance (IHIA).

SMIIC has been mandated by the OIC to introduce a Halal standard that would be acceptable to all Muslims. It developed one universal Halal standard called, "OIC-SMIIC Halal standards" for Halal manufacturing units, certification bodies and accreditation agencies[169].

ESMA aims to be the global authority for the certification of Halal products. To this end, they are currently formulating a comprehensive framework of standards and regulations that will not only cover food but will also regulate cosmetics and personal care products as well as textile and leather products across their supply chain[170].

MDOS has created the highest standard for Halal Food, in line with ISO-compliant standards for good manufacturing and hygiene practice[171].

IHIA aims to provide standardized accreditation/certification process knowledge and training to various people[172].

In addition, the Dubai government has also planned to establish an Islamic corporate governance center that will develop standards for corporate governance based on Islamic values, guiding companies in both financial and non-financial activities[173]. The standards will not be compulsory for firms but the center will issue Sharia-compliance certificates to companies meeting them.

Significant investment is also expected on Halal-friendly transport and warehousing services to ensure the integrity of the value chain. The emergence of Halal production and distribution dedicated zones (e.g., Malaysia, Dubai) will also reinforce this[174].

Digital market analysis
From a digital perspective, the Islamic standards and regulations market is untapped, with very few online players. The largest and most obvious need is for online platforms which can be used to facilitate accreditation, certification and verification processes. Given the confusion around Sharia-compliant standards and the lack of online information, the development of a regional and global accreditation and certification guide or platform for Islamic Economy professionals is a key need and gap which also needs to be addressed. From a public service value point, the creation of a global portal of information on Islamic standards and a consumer online feedback reporting mechanism can also support the enforcement and integrity of Sharia-compliant standards.

Currently, the focus is on the implementation of technology ensuring Halal-compliant food preservation and packaging technologies. The use of technology for Halal traceability is limited.

The largest and most obvious need is for online platforms which can be used to facilitate accreditation, certification and verification processes.

Islamic Standards & Certifications: Digital Services categories

Digital Services in the Islamic Standards & Certifications vertical consist of Business-to-Consumer (B2C) and Business-to-Business (B2B) services.

Business-to-Consumer (B2C) services

Online business directory: Central repository providing information on Halal business including accreditation, certifications and peer-to-peer rating system. CrescentRating.com is an example of a multi-service offering that has pioneered accreditation services in the Halal Travel vertical.

Information portal on Islamic standards: Online certification and accreditation information portal designed to explain to the customer the main standards and to help them decide which Islamic standard is best suited to their personal beliefs.

Digital marketing awareness: Digital marketing campaign designed to promote Halal certification and awareness of Islamic standards. There are many digital marketing providers that can be used to provide this service. The Muslim Ad Network can be used specifically for any kind of Islam or Halal business or economy marketing.

Consumer rights and feedback: Online platform gathering feedback and consumer insights on Halal businesses, providing information to consumers, answering questions, gathering remarks. A few governments in the MENA region offer consumer protection apps such as Saudi Arabia and Oman. These apps can be expanded for the above purposes as well.

Business-to-Business (B2B) services

Islamic web domain approver: Management of a unified Islamic Internet domain designed to enhance online visibility and recognition of Islamic businesses. Currently there are no websites which have the domain name ".Islam" or ".Halal". Such domain names can be used as a means to certify or qualify businesses as "Halal" as well as to make them easily identifiable to Muslim consumers as trustworthy businesses.

Matchmaking forums: Online platform for professionals to enhance networking and partnership between Islamic businesses according to relevant requirements. There are not many services provided in this category at an overall Islamic Economy level. Verticals may have their own specific networks, but nothing spanning the entire Islamic Economy.

Location services: GPS location of relevant nearby registered companies sorted by relevant accreditation and certification.

Certification systems: Platform helping professionals to apply for relevant certifications through an online application form. Examples include FoodReg and HalalVerified.com.

Islamic business advisory services: Online advisory services providing insight on a wide range of activities in order to help companies become Sharia-compliant and apply to obtain the relevant certifications required. Examples include the Global Support Halal Centre in Malaysia and Halal-Accreditation.com, an international organization which provides consultancy and training solutions for the development of Halal Accreditation Schemes for Accreditation Bodies/Councils, Halal Advisory & Consultancy Services and Halal R&D.

Accreditation/certification guide: Global website providing information on recognized Halal certification and accreditation bodies, application advice, and comparison of certifications. Examples include Halal-Accreditation. com. Organizations such as SMIIC, ESMA and IHIA also have their own websites, which can be used to obtain information on accreditations and certifications.

Mini-case study: HalalVerified.com

Digital Services offered:
- Certification systems
- Verification systems
- Information portal on Islamic standards

Service description: Launched at the end of 2013, HalalVerified.com is the world's first global online certification and verification system, created by JAKIM (Malaysia's Department of Islamic Development) in collaboration with DagangHalal (DHB, one of the world's largest online Halal market places).

The Halal Verified Engine (HVE) certification system enables applicant companies and suppliers to apply online to obtain Halal certification for its products and services. Using Microsoft cloud technology, the Halal certificate application and renewal process is simplified from months to just a few clicks, by allowing applicants to search, view, and download genuine Halal certification of products and ingredients in the supply chain (instead of manually contacting product and ingredient manufacturers to physically verify the authenticity of its Halal certificates).

The system is based on an extensive database of 73 international certification bodies across +30 countries that are recognized by JAKIM. It includes over 100,000 ingredients, products and services from the food and beverage (F&B), logistics, pharmaceuticals and cosmetics sectors. To maintain trust in the Halal certificates issued online, several security measures are built in to prevent forgery. This includes two-level password safeguards for certificates, a secure watermark for applicant companies and a QR code checker to verify validity of the Halal certificate file.

The website also enables Muslim consumers to access the HVE database to verify the Halal status of products and ingredients, without having to contact the manufacturer. The website acts as an information center for users, with product lists, services and Halal certification bodies that

have been certified as Halal by JAKIM. The HVE system also applies self-learning technology to recommend the best alternative products to users based on their behavior and preferences. Eventually, the website aims to enable the public to access the most accurate information of Halal products worldwide.

The service was reportedly developed at a cost of around US $1 million and has proved to be quite successful, with more than 260 companies registered at the beginning of 2014. The website reportedly aims to increase its registered base to 10,000 applicant companies within the next one to two years.

Revenue model: Fees are charged for successful Halal certifications. Applicant companies need to purchase credits to download Halal certificates. Each certificate requires one credit to download. Credits are sold in tiered packages (e.g., US $232 for 100 credits, US $35 for 10 credits).

Digital makeup

Online business directory

Central repository providing information on Halal business including accreditation, certifications and peer-to-peer rating system

Accreditation / certification guide

Global website providing information on recognized Halal certification and accreditation bodies, application advice, comparison of certifications (e.g. Halal-Accreditation.com)

Information portal on Islamic standards

Online certification and accreditation information portal designed to explain to the customer the main standards and to help them decide which Islamic standard is best suited to their personal beliefs

Islamic business advisory services

Online advisory services providing insight on a wide range of activities in order to help companies become Sharia-compliant and apply to obtain the relevant certifications required (e.g. Global Support Halal Centre in Malaysia)

Digital marketing awareness

Digital marketing campaign designed to promote Halal certification and awareness of Islamic standards

Standards & Certification

Certification systems

Platform helping professionals to apply for relevant certifications through an online application form (e.g. FoodReg)

Consumer rights & feedback

Online platform gathering feedback and consumer insights on Halal businesses, providing information to consumers, answering questions, gathering remarks

Location services

GPS location of relevant nearby registered companies sorted by relevant accreditation and certification

Islamic web domain approver

Management of a unified Islamic Internet domain designed to enhance online visibility and recognition of Halal businesses

Matchmaking forums

Online platform for professionals to enhance networking and partnership between Halal businesses according to relevant requirements

Business-to-Business (B2B) Digital Services

Business-to-Consumer (B2C) Digital Services

Promoting Digital Islamic Services

This is an exciting time for those with an interest in the Digital Services landscape, in particular the niche Digital Islamic Services landscape. With over 1.7 billion Muslims around the world, a multi-trillion dollar world Islamic Economy, and emerging technology readiness for potentially 30–40 percent of the Muslim population, there is great potential for the emerging Digital Islamic Economy. With most services in the B2C space, addressing Muslim consumer needs and pain points is critical in driving Digital Islamic Services opportunities, adoption and growth.

Digitally and commercially, Islamic Finance, Islamic Media, Halal Travel, Modest Fashion and Halal Food stand as the most attractive industry verticals, with the greatest Digital Services activity and online market potential.

In Islamic Finance, micro-financing and information services are amongst the most prevalent, whereas there are still large gaps in online incubation funds.

A number of Digital Services opportunities have also been uncovered in the Islamic Media and Halal Travel verticals, both of which are still developing and in need of support from investors and authorities. Islamic entrepreneurship in the Islamic Media vertical is on the rise as demand for Islamic Media content (e.g., TV, magazines, games, apps and music) is increasing. Halal Travel is also exhibiting growth, where both OIC and many non OIC countries have been heavily investing in Halal-friendly facilities over the last five years, which has encouraged strong demand for mobile Halal Travel apps, Halal Travel booking and TripAdvisor.com style ratings systems.

The rise of Modest Fashion over the past five years has been unlocked through e-commerce and social media, which has enabled many new designers to enter the market at relatively lower cost, with many eventually scaling up to multinational operations.

In particular, we are seeing most Digital Services in Halal Food arising from the Diaspora regional cluster (i.e., Western economies), addressing the pain point of Muslim minorities who may not have as easy access to Halal Food products as Muslim consumers do from traditional OIC countries. In addition, Muslim consumer needs are becoming more sophisticated as they are demanding healthier organic food, as well as more information and transparency behind the origins and integrity of the Halal Food they consume.

Search and discovery of new art has also driven demand for Islamic Art & Design Digital Services, with increasing private equity interest in online art platforms.

Select opportunities have also been identified in the Islamic Economy Education and Smart Mosque areas. The virtually non-existent number of providers in the Islamic Economy Education area presents a large gap that needs to be filled with more digital online service offerings. Both at home and in neighboring South-East Asia, governments and authorities are also investing in the development of Smart Mosques to raise the level of interaction between the user and the mosque, as well as to enhance their experience.

Across all industry verticals, there is also a clear underutilization of digital marketing services, which could help many existing service providers maximize their Muslim consumer reach and penetration. A large gap and need to unify standards and certifications in all areas of the Islamic Economy also persists, with over 300 Halal certification bodies in around 48 countries, causing increased confusion in both consumers and authorities.

In any case, we anticipate that the Digital Islamic Services landscape will grow and continue to proliferate across the Middle East and the world over the next few years, in some areas following global trends and in others carving out a unique path for the region. This will provide interest for global, regional and local players and stakeholders alike.

In each vertical, a range of Digital Services are prevalent, with many pain and development points that still stand to be addressed. This is reinforced by the growing number of non-Muslims in key markets also demanding Halal products and services. Although still nascent as a whole, the Digital Islamic Economy does present many opportunities for investors, especially given the level of development work that still needs to be done and the large growth potential. Interviews also confirm that the digital ecosystem around Islamic needs is still at a fledgling stage, with significant need for investment.

The MENA region benefits from an active investor community, particularly in the technology, media and telecommunications (TMT) sectors. Since 2006, the region has seen around a 22 fold increase in the cumulative number of venture capital (VC) transactions with a 60 fold increase in cumulative funds raised, reaching 244 transactions and US $594 million respectively in 2013 (up from 11 transactions and US $10 million funds raised in 2006)[175]. Throughout this period, the TMT sectors have not only maintained, but also increased its vast majority of local VC activity to around 64 percent of all MENA VC transactions in 2011–2013, up from around 48 percent in 2007–2009[176]. Of these, information technology has been the dominant sector, increasing from 32 percent of all MENA VC transactions in 2007–2009, to almost half (49 percent) in 2011–2013[177]. The impressive growth,

sustained throughout turbulent economic and political changes in the region over the past decade, demonstrates a resilient, strong and positive TMT investment community and business environment for Digital Islamic Services to flourish.

Despite this, our review of the global and regional TMT funding landscape, however, reveals no VC funds in the Middle East (although Sharia-compliant) specifically targeted at Islamic needs and Digital Islamic Services, implying a huge gap in this space that needs to be filled. Internationally, movement in this direction has started to take place, with new funds and initiatives dedicated to investing in the Islamic Economy, especially in Malaysia, a key Islamic market.

Exhibit 17: Examples of Private Equity (PE) and Venture Capital (VC) funds investing in the Islamic Economy

Name	Base country	Investment focus/portfolio	Description	Activity	Size
1 PNB Ethical Fund **PNB** Permodalan Nasional Berhad		• Funding Japanese companies looking to obtain Halal certifications and build sales networks in Muslim countries	• Fund set up by Japan's Inspire Corp in partnership with Malaysia's Permodalan Nasional Bhd (PNB) • Helps SMEs outside the OIC to penetrate otherwise unreachable potential Muslim markets for their products	Launched in April 2014	US $49 million
2 Halal Opportunities Fund **AZKA CAPITAL**		• Global opportunities in the Halal or Islamic Economy • Objective is to acquire, convert (non-Halal companies) and grow companies in the food and agri-business sectors to have a global reach	• Azka Capital is a private equity advisory firm focused on Halal or Islamic Economy initiatives • Specialized in global Halal Food • Work with certifying industry bodies from 55 countries through a strategic partnership with the International Halal Integrity Alliance (IHIA)	Launched in 2014	US $500 million
3 Halal Industry Fund **SME BANK**		• Invests in SMEs to add value or improve their Halal products	• Help SMEs to add value and improve their Halal products • Aim is to also assist youths aged 18–30 years to venture into entrepreneurship • Formed in collaboration with Islamic Development Bank (IDB), Malaysia External Trade Development Corp (METDC), Halal Industry Development Corp (HIDC) and the Young Entrepreneur Fund (YEF)	Bank has disbursed around US $4 billion in financing to help more than 8,700 SMEs	US $60 million

Source: Press clippings[178], Deloitte research and analysis

We are yet to also see interest from global players such as Google and Yahoo! in the Digital Islamic Services space. With no funds in the region specifically targeting the

Islamic needs sector, the Digital Islamic Economy largely remains untapped.

End notes

1. "Dubai To Launch State Of The Global Islamic Economy Report 2014", The Halal Times (27 Sept 2014): http://www.Halaltimes.com/dubai-Islamic-economy-development-centre-launch-state-global-Islamic-economy-report-2014/

2. This definition and understanding has been derived from various authentic sources, public sources, interviews with internally and externally qualified experts

3. This definition and understanding has been derived from various authentic sources, public sources, interviews with internally and externally qualified experts

4. "State of the Global Islamic Economy", DIEDC, Thomson Reuters & Dinar Standard (2014-2015)

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141. Pew Forum, World Bank, Deloitte research and analysis

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144. Pew Forum, World Bank, Deloitte research and analysis

145. Definition has been formulated from primary industry interviews as well as Deloitte research from various sources (e.g., Islamic Media websites)

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175. Growth multiples are based on cumulative figures reported in 2006 and 2013. The cumulative number of transactions was calculated based on reported annual transactions figures for 2006-2013. It is important to note that the number of MENA VC transactions outperformed the wider private equity industry (140 transactions in 2011-2013 compared to 77 in 2008-2010), where the wider MENA private equity industry was relatively flat (260 transactions in 2011-2013 compared to 267 in 2008-2010). Source: "Venture Capital in the Middle East & North Africa", MENA Private Equity Association, Thomson Reuters, KPMG (3rd 2013 report and 4th 2014 report): http://www.menapea.com/research-association.php

176. The estimated share of TMT sector VC activity is calculated by adding the shares of VC transactions reported for Information Technology, Media and Telecoms for the periods stated. The share of VC activity in the telecoms sector has been assumed to remain at 9% since 2006, which was actually reported and shown separately as 9% in the 2008-2010 period, but accounted for in Others in other periods (e.g., 2007-2009 and 2011-2013). Source: "Venture Capital in the Middle East & North Africa", MENA Private Equity Association, Thomson Reuters, KPMG (3rd 2013 report and 4th 2014 report): http://www.menapea.com/research-association.php

177. There have been 103 information technology transactions since 2006, of which 69 took place in 2011-2013. Source: "Venture Capital in the Middle East & North Africa", MENA Private Equity Association, Thomson Reuters, KPMG (3rd 2013 report and 4th 2014 report): http://www.menapea.com/research-association.php

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