

Defining the
Digital Services
landscape for the
Middle East

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The Middle East is one of the fastest growing emerging markets in the world. As the region becomes more digitally connected, demand for Digital Services and technologies is also becoming more prominent. With the digital economy still in its infancy, it is unclear which global advances in Digital Services and technologies will be adopted by the Middle East and which require local development. In this context, identifying how, where and with whom to work with in this market can be very challenging. In our effort to broaden the discussion, we have prepared this report to define the Digital Services landscape for the Middle East, to help the region’s digital community in understanding and navigating through this complex and ever-changing space.

Today, we are witnessing an unprecedented change in the technology, media, and telecommunications industries. These changes, driven mainly by consumers, are taking place at a pace that is causing confusion, disruption and forcing convergence. This has created massive opportunities for Digital Services in the region, which has in turn led to certain industry players entering the space in an incoherent manner, for fear of losing their market share or missing the opportunities at hand.

In light of these major developments and their potential impact, it is important for us to be proactive in this sector, especially in our region.

In Digital Services, there are many key players who have come from various backgrounds and related sectors including IT, media, and telecommunications. Most are attempting to bring their own methods and way of work to this sector, however only to find that it is completely different in landscape and characteristics. Unlike many other traditional sectors and industries, most of the opportunities identified in this sector require industry players to cooperate, complement and synergize with each other.

For this sector to reach an attractive mass threshold ratio, certain platforms and supply chain services must be defined and established. Currently, no such definitions exist to enable us to sufficiently navigate, appreciate and operate in providing Digital Services in the Middle East.

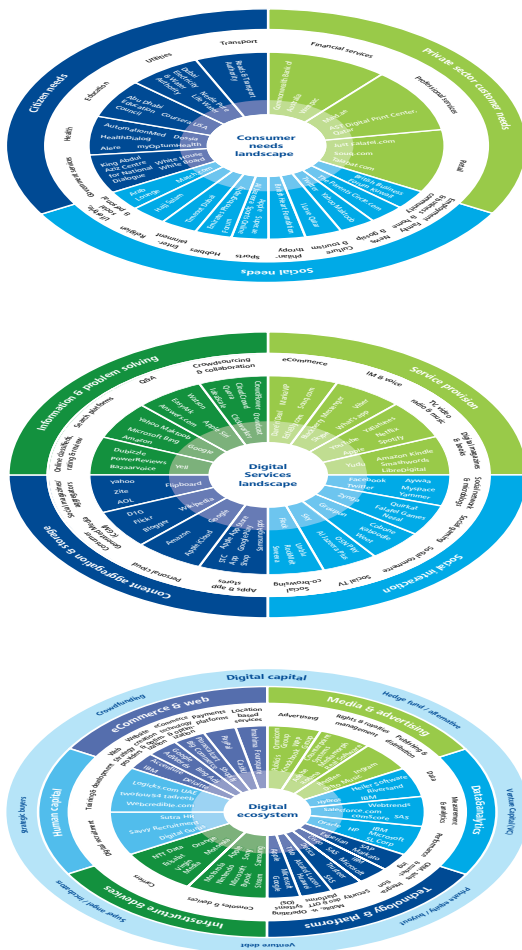
Thus in coordination with Deloitte, we have recognized the vast importance and fundamental need to define the Digital Services landscape, which we are bringing to you in this report.

The landscape definition in this report seeks to be comprehensive and is structured in a way that allows present and potential Digital Services players to draw their own roadmap to exploit the opportunities in this sector.

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 Services sector as a whole.

In sharing our findings from this exercise, we seek to make a small contribution from our side to help organize and promote the Digital Services sector in our region, and ultimately to open the potential for coordination, partnerships, and synergies amongst the various entities in this sector.

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





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We are pleased to have contributed to the development of the Digital Services landscape definition with Noortel. In this, we have sought to define the various dimensions across the evolving landscape, and the various categories within each dimension, allowing us to highlight indicative applications and key developments in each.

The Digital Services sector continues to change and evolve at an exceptional rate. At the same time as the enabling technologies are evolving, so too is the application of these technologies to meet emerging consumer needs. As the sector expands, specialist support services such as recruitment, training and marketing for the Digital Services sector are becoming established.

Compared with global trends, many aspects of Digital Services are underserved in the Middle East region, with many services either absent or immature. Demand in the region for new services – even those which have been successful elsewhere globally – is unproven; particularly consumer willingness to pay for services.

In this context, investors, start-ups and established businesses are seeking to assess the Digital Services market and identify opportunities for growth in the Middle East. Such an assessment is complicated by the ever-expanding scope of needs which can be served through the digital sector across the various dimensions of the landscape.

The purpose of this report is to provide a framework to those with an interest in the Digital Services landscape in the Middle East. In looking at the landscape across multiple dimensions, it is intended that this framework looks beyond areas where Digital Services have so far enjoyed success. By also taking a consumer needs perspective, as well as considering the broader ecosystem, opportunities which may be unique to the culture and needs of the Middle East may be identified.

In addition to defining a framework to describe the Digital Services landscape, we have provided some commentary on the maturity of Digital Services across the Middle East. This assessment draws on regional case studies, and further substantiated by insights from interviews with key players in the region.

We would like to express our gratitude to those who have contributed to the research and analysis to enable the preparation of this report. We are pleased to have supported Noortel and thank them for the opportunity to work on this project as well as their commitment and support.

The Digital Services landscape

We have defined the Digital Services landscape across three layers: Consumer needs, Digital Services and the digital ecosystem.

Consumer needs landscape

In this dimension, we categorize the users of Digital Services in terms of citizen, customer and social needs. This seeks to provide an understanding of potential areas of 'vertical' focus, e.g. eGovernment, sports or religion.

A number of sources have been referenced in developing these categories, including government online services sites, search engine interest categories and services provided by financial and private sector companies.

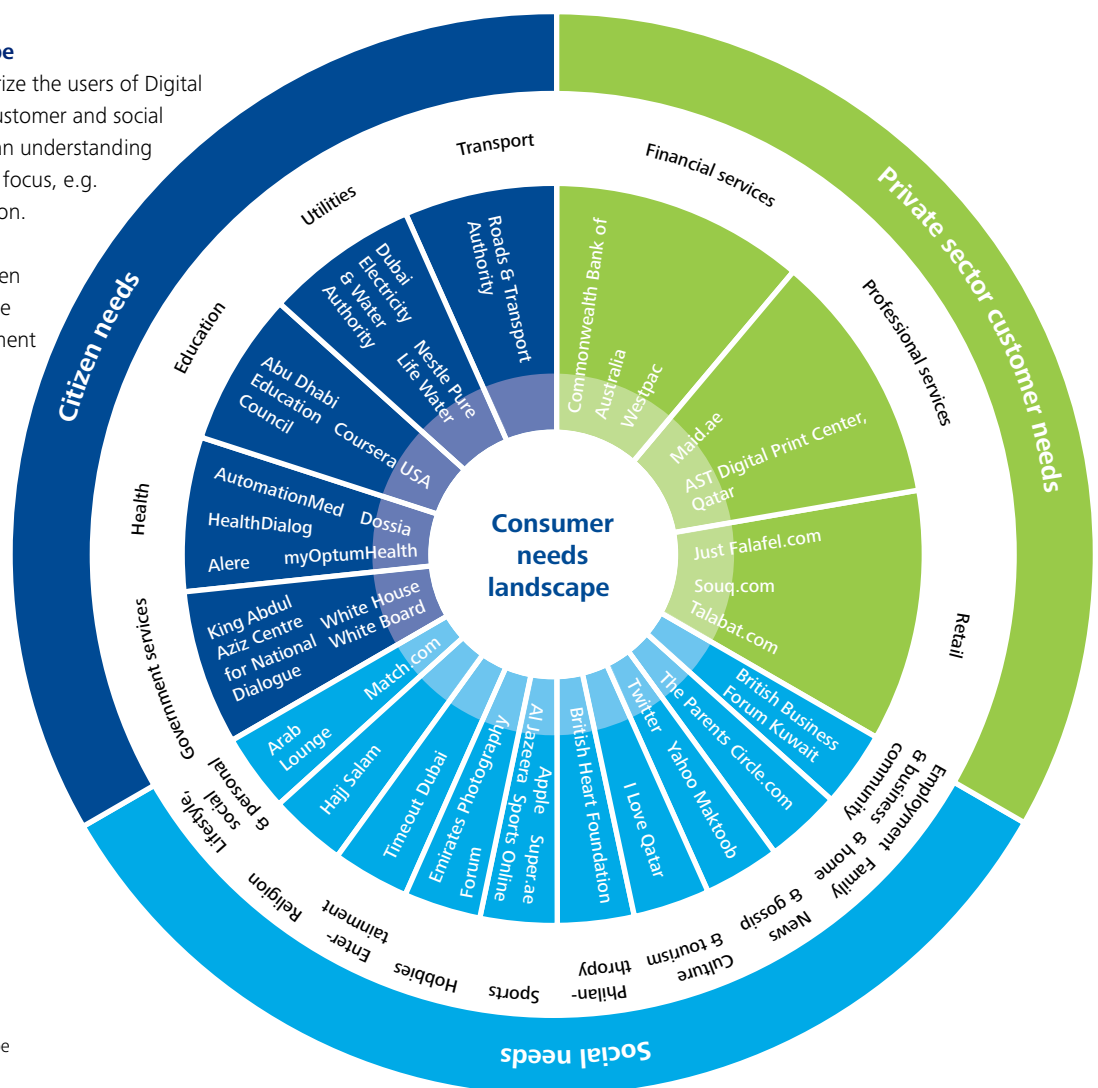


Figure 1: Consumer needs landscape
Source: Deloitte research & analysis

Citizen needs

Government services: Government services relate to those provided by local and regional government and national and international government. They include citizen services such as issuing driver's licenses and other forms of identification.

Latest developments in the digital space include platforms for political engagement (e.g. Google or Twitter pages for key representatives) and for members of government to interact with citizens, as well as forums for citizens to report issues with public services and track resolution progress.

Examples include:

- The White House White Board, created by the Obama administration to publish videos to better explain its policies
- Google+ page for Canadian Prime Minister Stephen Harper
- Ministry of Finance in Kenya publication of draft budget on Facebook, inviting comment
- King Abdul Aziz Centre for National Dialogue, providing citizen engagement communication tools

ME category insights: Maturity of Government services

Maturity in 2013: Peaking – Attention drawn by national and international eGovernment awards has driven significant interest in digital service delivery. Further, the hype surrounding the critical role of social media during and post Arab Spring has raised awareness of the importance of governments being able to follow and have an active voice in discussions.

Expected maturity in 2018: Establishing / Optimizing – With increasing funds made available for citizen engagement and eGovernment, best practices from around the globe are likely to be sought for investment.



Health: The healthcare provider industry includes hospitals and hospital systems, as well as ambulatory service and physicians' practices.

Digital applications include remote consultations or treatment and medication management, as well as the provision of online information about drugs, conditions and patient histories. Administrative process support may also be provided digitally. Digital administrative capabilities include eClaims and billing, and remote monitoring of the health of patients with data sent to clinicians through mobility services.

Examples include:

- myOptumHealth – personal healthcare tools and apps, and patient decision aids
- HealthDialog – patient decision aids
- Dossia – personal health records
- AutomationMed – patient self-service kiosks
- Alere (Welllogic) – patient portals
- Athenahealth – healthcare provider e-visits

Education: The education industry includes primary, secondary education and higher education, and spans both public and private schools such as GEMS Education and Aldar Academies.

Services include the digitization of student and teacher resources and ICT training, eLearning resources for school students as well as life-long learning resources. For instance, modular eLearning programs that help citizens acquire enhanced skills or new skills may be delivered through various media including audio and video. Digital techniques may also be used to enhance exploratory learning using augmented reality, educational games, collaboration and project work, e-books, surveys, tests, data gathering, real-time feedback, and simulations.

Examples include:

- Vittra Telefonplan program Sweden – each student starts the year with a MacBook, and all teaching happens through the platform
- OpenCourseWare – access to free lecture notes, exams and videos
- Cisco – technology hardware and training for schools and teachers
- Abu Dhabi Education Council – moving towards online school registrations and publication of school timetables and policies

Utilities: The utilities industry includes electricity, gas and water segments.

Digital Services increasingly include outage notifications and updates, helping customers understand utility bills, providing energy efficiency tips to meet regulatory mandates and smart metering on consumer premises to track and provide information on consumption and billing. The Dubai Electricity & Water Authority (DEWA) for instance, enables online bill enquiries on their website.

Transport: The transportation industry is composed of rail and water, motor freight, air transport, pipelines, warehousing, couriers and support services.

Digital Services allow customers to buy and use transportation tickets, boarding passes and more. Mobile devices may also be enabled to allow customers to buy tickets and provide proof of purchase. Formats for a mobile ticket range from Short Message Services (SMS) to bar codes and Near Field Communication (NFC) systems. For example, the Roads & Transport Authority (RTA) enables taxi bookings to be made via SMS.

Private sector customer needs

Financial services: This sector includes retail and investment banks, insurance companies, brokers and financial advisors.

Digital Services for this sector include personal banking applications providing details of recent or pending transactions, account balance checking, market intelligence, online and mobile money transfer between accounts and sending and receiving money. Other applications include ATM or branch locators, online and mobile bill payments, aggregator comparison sites to compare prices and conditions of multiple finance and insurance companies and Digital Payment Advisors advising on best choice of payment solution for higher-value purchase transactions.

Examples include Westpac and its Cash Tank application, and the Commonwealth Bank of Australia and its CommBank Property Guide app.

Professional services: This sector includes - but is not limited to - advertising agencies, photocopying services, interior cleaning services, computer and data processing

services, security services, management consulting and public relations services, personnel services, photography, art and graphics services. Providers in this space include Maid.ae and Qatar's AST Digital Print Center.

Retail: The retail industry includes general retailers, specialty retailers (including telecoms and real estate), grocery, restaurants and hotels. Regional success stories include Souk.com and Justfalafel.com.

Digital applications in the retail space include engagement platforms with online or offline retailers, online catalogues and eCommerce and price comparison sites. More recent developments include the use of augmented reality allowing consumers to view detailed information when purchasing complex products, or to get information when trying on apparel in a virtual dressing room.

Other extensions of digital retail purchasing capabilities include social coupons, real-time customer offer engines and Facebook commerce (F-commerce). Digital methods are also available for initiating or authorizing payments. These include mobile payment acceptance with card readers, Near Field Communication (NFC) payments, Over The Air (OTA) payments and Unstructured Supplementary Service Data (USSD).

Social needs

Employment & business community: Activities in this sector include entrepreneurs, investors, small businesses and business associations such as Kuwait's British Business Forum.

Family & home: This category includes family and parenting support, cooking, gardens and home improvement. For instance, TheParentsCircle.com is an online support community for bereaved families.

News & gossip: Services focused primarily on current affairs, including up to the minute news and information about the wider world.

Applications include the digital publication of content produced by traditional TV and print broadcasters such as Yahoo Maktoob, as well as social networks such as Twitter, allowing consumers to share their news and post commentaries.

Culture & tourism: Covering culture, languages, history and arts as well as travel and tourism. Regional examples include I Love Qatar.

Philanthropy: Includes charities and other non profit organizations.

Digital Services in this category typically focus on increasing inclusion and access by offering information and support through websites, social media and web chat. Sites may allow users to gather information, complete self-assessments or perform web chat with staff.

Examples include:

- Health for Work – self help through several advice guides, support via social media, web chat and email, as well as telephone
- Family Lives – digital self-help guides and life advice
- The British Heart Foundation’s app, ‘BHF PocketCPR’, explaining how to carry out hands-only Cardiopulmonary Resuscitation (CPR)

Sports: Content for sports and fitness enthusiasts, including education, viewing, supporting and participation.

Digital applications include the publication of sports related content produced by TV and print broadcasters such as Al Jazeera Sports Online or Super.ae, including commentary, results and analysis. Social networks may also be established, allowing consumers to share their news and post commentaries. Digital content for sports communities may include game overviews and rules, and tips and tricks and how to get involved.

Health and fitness applications include mobile ecosystems for tracking and monitoring sports and health-related efforts, and pulse readers that connect wirelessly to PCs. Other applications use short-range wireless technology such as Bluetooth to gather data on heart rate and distance run.

Such applications are offered by Apple, Nokia, Omron, Samsung and Wayfinder Systems.

Hobbies: This category covers recreational interests such as pets, antiques, cars, aviation, nature, crafts, gardens, guns and photography such as the Emirates Photography Forum.

Entertainment: The entertainment category includes live events for music, dance and theatre. This category also includes content traditionally produced by print and broadcast companies, including magazines, movies, TV and music. For example, Timeout Dubai, one of the most widely known entertainment magazines is available online.

Religion: Covering religious and spiritual topics.

Digital applications for this category include mobile phones with religious ring tones and caller tunes, devices supporting religious texts and solutions supporting religion-based banking and financial services.

Also increasing in this sector is the use of social media, such as Twitter, YouTube and Facebook by religious bodies to offer counseling services, advising and guiding people according to their religious doctrines. Another example is Hajj Salam, an app which provides a step by step guide and facilitation for pilgrims performing the Hajj, built from expertise of Islamic scholars and past experiences of former pilgrims.

Other examples include eLearning resources such as Certified Islamic Professional Accountants and Certified Shari’a Advisors and Auditors.

Lifestyle, social & personal: This category covers age group or gender specific topics, community groups, personal classifieds and dating.

This includes online dating sites which allow individuals to make contact and communicate with each other over the Internet, usually with the objective of developing a personal or romantic relationship.

As the online dating population increases, sites with specific demographics are becoming more popular as a way to narrow the pool of potential matches. Some successful niche sites pair people by race, sexual orientation or religion.

Examples include Match.com, Christian Mingle, ChristianCafe, Love From India and Asian People Meet.

Digital Services landscape

This layer describes the primary interaction methods for digital consumers. It includes web and mobile sites that use technology beyond the static pages of earlier websites, allowing users to interact and collaborate.

Over time, the use of the term 'social network' has expanded from platforms such as Facebook and Twitter to include the applications and capabilities that build on these or similar applications. The same landscape is referred to as 'Web 2.0'.

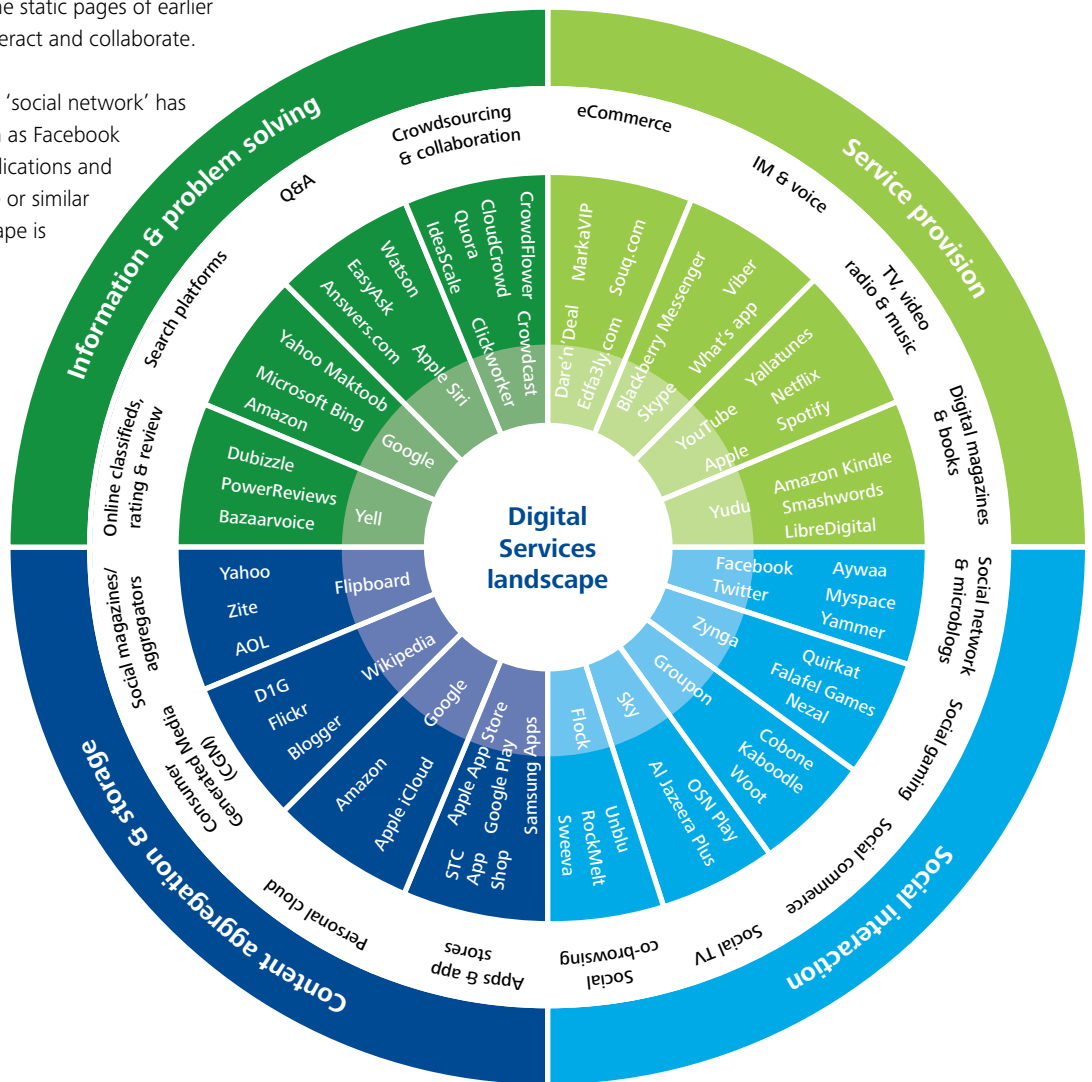


Figure 2: Digital Services landscape
Source: Deloitte research & analysis

Service provision

eCommerce: eCommerce platforms enable online sales for Business-to-Business (B2B) and Business-to-Consumer (B2C) commerce. Common eCommerce functions include creation and management of web storefronts, shopping cart management, personalization, transaction management and product visualization.

Latest developments in eCommerce include Automatic Content Recognition (ACR), allowing identification of an item of merchandise from a camera shot and offering an immediate discount.

Virtual assistants can be used to provide a conversational, computer-generated character that simulates a conversation to deliver voice or text-based information to a user via a web, kiosk or mobile interface.

Regional examples of eCommerce sites include:

- Dare'n'Deal: Egyptian site allowing online credit card payment for cosmetics orders, and collection in-person at a store
- Edfa3ly.com: allows customers to make purchases from other sites for a certain fee, with shipping from the US to the Middle East
- MarkaVip: Jordanian internet shopping site offering payment on delivery
- Souq.com

Middle East category insights: Maturity of eCommerce

Maturity in 2013: Stabilizing – Whilst there has been hype surrounding individual success stories, there are few established sites with clear expansion capabilities or strategies. The market continues to be held back by lack of digital skills and capabilities, high cross-border taxes and restrictions on international providers entering the online payment and distribution market.

Expected maturity in 2018: Optimizing – We expect that markets with high retail spend and digital adoption (e.g. KSA and UAE) will drive demand for greater choice and competitiveness of eCommerce offerings, and major retailers will identify alternative approaches to by-pass payment and distribution barriers.



IM (Instant Messaging) & voice: Allows users to connect with real-time text based conversations, voice calls, video chat and peer-to-peer file sharing.

Emerging developments in this category include Mobile IM, mVoIP and WebRTC. Mobile IM refers to the use of an online IM application, including presence and buddy lists, on a mobile device and a wireless network. Mobile voice over Internet Protocol (mVoIP) offers packet-switched voice communications over a radio access network. Web Real-Time Communication (WebRTC) is expected to facilitate the fundamental building blocks for high-quality communication for business use of browsers in broad based networking, audio, video and collaboration components. The use of High-Definition (HD) voice, or wideband voice is also increasing.

Applications associated with IM and voice include Skype, Microsoft Instant Messenger, Mozilla (Firefox with Greasemonkey), Viber and Blackberry Messenger (BBM).

TV, video, radio & music: This category includes streaming and upload/download of media content online and through mobile devices.

Quality and cost of content ranges from consumer generated, through to low-end indie production, TV broadcast content, and premium content such as recent cinema releases and billboard content. “Long tail” describes back catalogue content which can be cheap to own, market and purchase.

Globally, emerging trends include:

- Transmedia: exemplified by the hit TV show Lost, which spawned online communities, games, websites for fictional entities in the show, a series of mobisodes (mobile episodes), a Lostpedia wiki and a novel written by a character
- Automatic Content Recognition (ACR): allowing consumers to purchase content that their digital device has recognized. Example applications include music recognition app Shazam

Other applications in this category include:

- Podcasting: radio-like broadcasts of spoken word content that can be consumed on any device that supports audio playback
- Music streaming: accessing music that is streamed from a service provider to a user’s connected device and enables users to cache tracks for offline listening
- Internet TV and video streaming: the delivery of licensed professional content (typically TV shows, live events and movies) via streaming or progressive download technology over HTTP to a connected device. Content may include both live TV and catch-up TV
- TV recognition apps: include social-oriented consumer TV check-in apps, such as IntoNow (owned by Yahoo), GetGlue, Miso and yap
- Optimized download: solution for distributing media content to consumers and enterprises using the most optimal networks and times available. Media content is cached on a user’s device and can be viewed in an offline mode, and during network congestion

Examples of digital service providers in the music space include Rhapsody, Spotify and iTunes. Providers of TV and video applications include YouTube and Yallatunes which supports peer-to-peer sharing of Arabic songs and video clips. Online TV distributors include Netflix, Hulu, Apple, Shahid.net, OSN Play, Al Jazeera Plus and icflix.

ME category insights: TV, video, radio & music

Maturity in 2013: Peaking – Penetration of mobile devices, and media generation and consumption over those devices is world leading in the region. Broadcasters are so far slow to adopt digital solutions for TV and premium content. There is little in the way of rights management, and little support for emerging regional independent production.

Expected maturity in 2018: Optimizing – Given demonstrated demand and investment in infrastructure, we expect the market to follow global trends.



Digital magazines & books: Digital replicas of physical books and magazines that can be created in whole or from parts of published content, as well as content formatted for consumption on mobile devices such as smartphones, media tablets and eBooks. These may include interactive features, such as video or ancillary content.

Self-publishing refers to tools that allow authors to bypass the typical channels for book distribution, and handle all aspects of the value chain from editing and physical or digital printing, through to distribution. Examples include LibreDigital, Olive Software, Amazon Kindle, Fast Pencil, Smashwords and Yudu.

Social interaction

Social networks & microblogs: Social-networking sites (e.g. Facebook) enable individuals to connect to their social communities online. Members share experiences, interests, presence information and personal content either via social network apps or through socially-enabled mobile apps. Microblogging (e.g. Twitter) is short messages that are delivered to consumers who have chosen to follow or subscribe to a given microblogging feed. Globally emerging trends include integration of social networks and social gaming, and social shopping sites where members are shoppers who “friend” each other based on similar shopping interests, such as taste in fashion.

Observers of online activity in the region (Google, Yahoo) note that whilst social-networking use is relatively reserved, there is significant appetite for forums connecting communities with common interests rather than social connections, e.g. soccer and women’s forums.

Other examples in this category include Instagram, Myspace, Yammer and Aywaa – an Arab-only social network with a user interface similar to that of Facebook.

ME category insights: Social networks & microblogs

Maturity in 2013: Establishing – Significant and increasing adoption of social networks such as Facebook and Twitter. Hype around posting of comments on politics and current affairs during and post Arab Spring; initial demand not yet converted into a sustainable business model.

Expected maturity in 2018: Optimizing – Increasing presence and popularity of community specific forums, such as social shopping sites, likely to increase attractiveness to targeted advertising and other business models.



Social gaming: Social gaming refers to social games that users play with friends on mobile connected devices such as smartphones, media tablets and connected handheld gaming consoles. Revenue models can be both paid or free to download and play, with hybrid models including freemium (free games with in-game purchasing and billing) or paid tournament variations.

Globally emerging trends include creating mobile virtual worlds (simulated environments where subscribers inhabit and interact via avatars), and embedding social elements (such as integrating social networks and multiplayer) into game play.

A further trend is for gamification; the use of game mechanics to drive engagement in non-game business or educational scenarios and to change behaviors in a target audience to achieve business outcomes.

Examples include Rovio (Angry birds), Epic Games (Infinite Blade), Zynga ("With Friends" franchise), BitRhymes (Bingo Bash), Mobage (Japanese mobile social gaming network), Chillingo ("indie" games publisher) and EA (The Simpsons: Tapped Out).


- Social coupons: a form of e-coupons found on membership sites that offer a local retailer's products/ services to consumers at steep discounts
- Group buying: a type of social commerce in which an offer is made by an organization using socially based techniques and capabilities to potential customers. However, the offers are contingent on a certain number of buyers partaking in the offers, as well as other participation conditions

Examples include Facebook's F-Commerce, Groupon, Cobone, 1SaleADay.com, LivingSocial, Woot, PowerReviews, ShopIgniter, Shopvisible and Kaboodle.

ME category insights: Social gaming

Maturity in 2013: Stabilizing – Since 2008, the region has seen a rapid growth in gaming startups producing games such as Quraish (Falafel Games), Crowds: Voices of Tahrir (Nezal) and Arabian Lords (quirkat). Generating money from users is a bigger challenge.

Expected maturity in 2018: Optimizing – Reports state that publishers will support alternative regional and mobile social gaming platforms in an effort to hedge their risks. Increased access to games targeted to the region, combined with more convenient payment methods such as prepaid cards, should continue to stimulate demand.



Social TV: This category covers digital communication and social interaction services in the context of watching television or related to TV content through broadband connected TVs, or through the use of companion screens such as media tablets.

Example applications include the incorporation of Twitter in programming, such as media personalities responding to live tweets on camera and the adoption of Twitter metrics, such as pseudoratings for TV show popularity on Broadband connected TVs.

Social co-browsing: Social co-browsing is the collaborative sharing of the same web space with one or more parties from a social network regardless of the physical location of the two parties. Through social co-browsing, the parties can share a browser view and simultaneously browse a website. Social cobrowsing differentiates itself from screen sharing because it is not achieved by sending a high number of screen shots of the presenter's screen to one or more participants, rather it distributes the URL visited by one person to the other person or party's browser.

Examples include Flock, RockMelt, Sweeva and Unblu.

Social commerce: Social commerce is the use of social software tools and user-generated content within an eCommerce context. Social commerce is used to create sales lift by providing customers with information and content from other customers to assist with the evaluation of a product or service.

Key trends and developments include:

- Social shopping sites: community websites where members are shoppers who "friend" each other based on similar shopping interests, such as taste in fashion. These communities enable shoppers to exchange information and opinions and, in some cases, to shop together

Content aggregation & storage

Apps & app stores: Application stores allow users to search for and download apps through a local storefront client or browser. Apps are typically categorized into games, travel, productivity, entertainment, books, utilities, education, travel and search, etc., with ratings and comments.

Globally emerging trends include TV app platforms which enable applications designed to run in a digital television environment and display on a TV screen.

Whilst apps designed within a region tend to be successful within that region, there are few niche stores able to compete with the likes of Apple and Google. An example is Appchina.com that provides a platform and developer support for the Chinese market, where Google's services are censored.

Other examples include Google's Android Market, Microsoft's Windows Marketplace for Mobile and RIM's BlackBerry App World.

Personal cloud: Personal cloud refers to an individual's collection of digital content, services and apps when made seamlessly accessible across any device using cloud-based storage.

Personal Cloud Entertainment Platforms (PCEPs) are cloud-based services comprising applications, devices and download stores or services that enable consumers to subscribe to or purchase premium content, as well as content from their existing libraries. Cloud lockers are designed to allow consumers to upload their personal libraries and access them via a connected device.

Providers of personal clouds include Apple, Amazon and Google.

ME category insights: Apps & app stores

Maturity in 2013: Stabilizing – A number of apps developed in the region have achieved success, including Kashef (Saudi traffic monitoring), Anghami, InstArabic and Es'al Mjarreb (Kuwait services review). These are most typically offered through localized versions of the major players, e.g. AppStore.

Expected maturity in 2018: Establishing – As success stories increase for regionally developed apps, the developer market is likely to grow. Finding a route for regional apps stores to compete is likely to be a challenge.



Consumer Generated Media (CGM): Media that is created by end users, using basic or semiprofessional tools. CGM can include one-consumer-to-many applications, such as photo sharing, publishing via blogs, podcasting and social network videoblogging, as well as "auteurs" looking to get their content to an audience. Socialcasting is the use of lightweight, portable tools for the creation of scheduled and ad hoc live broadcasts.

Applications supporting CGM include Flickr, Blogger and Wikipedia.

Social magazines / aggregators: Social magazines are web or native applications that render content primarily from the social web in a graphical, magazine-like format.

The user interface of the application is predominantly designed for intuitive flipping through content on a tablet device. Once the feeds have been set up, the application launches a visual list of the content subscribed to by an individual consumer.

Examples include Flipboard, AOL, Yahoo and Zite.

Information & problem solving

Online classifieds, rating & review: Online classified ads are small advertisement messages that are listed usually in newspapers, online directories or magazines. Community review technologies allow retailers to capture their customers' opinions of products and services that are sold. Such sites typically allow users to provide ratings and tagging where customers describe their opinion of the product by tagging the product with a set of suggested attributes.

Online classifieds can be found on Yell, I Love Qatar, Timeout, dubizzle.com, Bazaarvoice and PowerReviews.

Search platforms: Applications in this category allow people to search for information online. This includes mobile search which lets people search for information on mobile devices, and uses a number of techniques to make the result relevant to the user's context. Techniques include location, image, voice, audio, time of the day and user preferences to provide personalized results. Other services include in-app search which is typically customized for the app (for the specific content and formats) and is usually limited to the service provider's content library.

Examples of search platforms include Amazon, Apple, Google, Microsoft and Yahoo.

Q&A: Q&A applications are those which provide users with a means of asking a question in plain language that a computer or service can answer with a meaningful response in a reasonable time frame. More sophisticated answer engines convert queries to mathematical values and involve some natural-language analysis.

Examples include answers.com, Apple's Siri, EasyAsk and IBM's Watson.

Crowdsourcing & collaboration: This describes the processes for sourcing a task or challenge to a broad, distributed set of contributors using the web and social collaboration techniques.

The tools to establish a crowdsourcing environment, particularly those involving recognition incentives or micropayments, are becoming widely available. Still more is to be learned and experienced regarding where the practice is most effective compared with other approaches.

Examples include Clickworker, CloudCrowd, Crowdcaster, CrowdFlower, IdeaScale, InnoCentive, Quora and TopCoder.

Digital ecosystem

Each of the categories described in the previous layer the Digital Services landscape - has its own diverse and complex ecosystem of companies delivering specific capabilities.

This view of the digital ecosystem attempts to categorize the key players across all key sectors; not all will be relevant for all sectors.

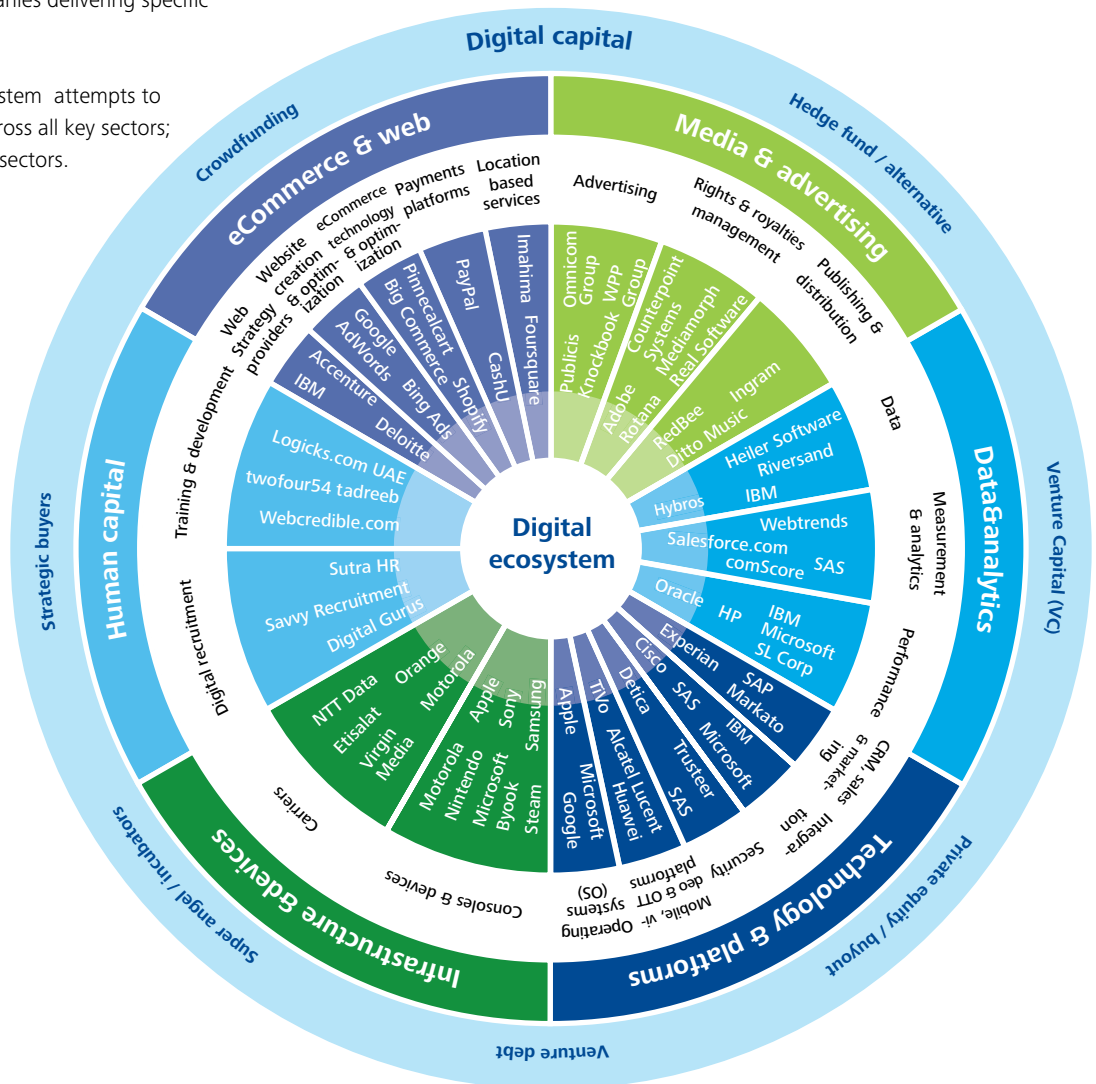


Figure 3: Digital ecosystem
Source: Deloitte research & analysis

Media & advertising

Advertising: Creating, planning, and handling advertising (and sometimes other forms of promotion) for clients.

Digital advertising includes email marketing, search engine marketing, social media marketing, many types of display advertising (including web banner advertising), and mobile advertising.

Addressable TV advertising technologies enable advertisers to selectively segment TV audiences and serve different ads or ad pods within a common program or navigation screen

Mobile advertising and addressable TV advertising technologies are key aspects of this category. Mobile advertising describes advertising or other paid placement on mobile device screens, most notably smartphones and media tablets. Mobile ad formats include search-, web-, app-, stream- and message-based placements. Addressable TV advertising technologies enable advertisers to selectively segment TV audiences and serve different ads or ad pods (groups of ads) within a common program or navigation screen.

2D bar codes and phone bar code readers are key developments in this space, enabling people to download content onto mobile phones. These can be used to encode URLs, business cards and product information.

Examples include Omnicom Group, WPP Group, Publicis and Knockbook.

Rights & royalties management: This category covers management of the rights and royalties associated with the distribution of media content.

Intellectual Property Rights and Royalties (IPRR) systems and management is a key segment within this category. This enables rights holders to index and associate specific business rules (including distribution rights information) with each piece of content under their control.

Consumer Digital Rights Management (DRM) technologies are also part of this category, allowing control of how consumers use copyrighted material that is distributed in digital form, such as music, video files or text in e-books.

Providers of these systems include Counterpoint Systems, Mediamorph, Prodigio Software, Real Software, Adobe and Apple.

Publishing & distribution: This includes the production and dissemination of media content, including film, literature, music or information.

Key capabilities in this category include online video publishing platforms, online advertising data exchange and “rich media – live streaming”. Online Video Publishing Platforms (OVPPs) are integrated software and hardware solutions for publishing and monetizing a video asset via distribution to PCs, mobile devices and other Internet-connected devices. Online advertising data exchanges are web-based trading platforms that enable members to buy and sell consumer data that can be associated with ad media through a device such as a cookie ID. Such data is intended to boost targeting effectiveness for digital advertising, predominantly web display ads. “Rich media — live streaming” is the live, streamed, one-to-many delivery of digital media, especially video and audio, to desktops or room systems in an organization.

Examples of publishing and distribution providers include RedBee, Ditto Music and Ingram.

Data & analytics

Data: This category describes the capture and management of data associated with digital consumer interactions, including customer details and navigation history.

A key aspect of this category is Master Data Management (MDM) and social data. MDM focuses on identifying relevant entities, such as customers, products and brands, that are being mentioned, or are doing the mentioning, in social networks and then storing the links to and the key social networking attributes about those entities to extend an organization's single view of that entity.

Examples include Heiler Software, Hybris, IBM, Riversand and Stibo Systems.

Measurement & analytics: Analysis of data captured associated with customer online behaviour, used to understand the success of the user experience in driving the intended result (e.g. to find a solution and/or make a purchase).

This covers:

- Cross-channel analytics: The process of tracking, integrating and analyzing the way that customers use a combination of available channels to interact most effectively with the organization
- Content analytics: Defines a family of technologies that processes content, and the behavior of users in consuming content, to derive answers to specific questions.
- Social analytics: Describes the process of collecting, measuring, analyzing and interpreting the results of interactions and associations among people, topics and ideas
- Predictive campaign analytics: involves the analysis of customer behavior in campaign management for the purpose of forecasting or projecting specific patterns, trends or outcomes
- Web analytics: Specialized analytic applications used to understand and improve online channel user experience, visitor acquisition and actions, and to aid optimization efforts in digital marketing

Players in this category include Attensity, IBM – Unica, Salesforce.com, SAS, Trampoline Systems, Adobe, comScore, Google and Webtrends.

Performance: Ongoing tracking and reporting of performance against key metrics in order to trigger remedial actions.

This includes monitoring the functional dimensions of the digital consumer experience performance, including end-user experience monitoring (EUM), runtime application architecture discovery modeling and display, user-defined transaction profiling, component deep-dive monitoring in application context and analytics.

Examples include CA Technologies, HP, IBM, Keynote Systems, Microsoft, Oracle and SL Corp.

Technology & platforms

CRM, sales & marketing: Technologies to manage the primary interfaces with customers throughout their lifecycle.

Applications in the digital environment include:

- Community Peer-to-Peer (P2P) support systems
- Social feedback management
- Online product recommendation engines
- Campaign segmentation functionality
- Sales order management
- Persona management
- Context-enriched content
- On-demand campaign management
- Social marketing

Providers include Oracle, salesforce.com, Experian, IBM, Oracle Siebel CRM, SAP, SAS, Marketo and Teradata-Primo.

Integration: This category describes capabilities which link together the various components of the systems and functional architectures to operate as a whole. Key players include Cisco, IBM and Microsoft.

Components of particular relevance for the digital ecosystem include User Experience Platforms (UXPs) and eCommerce platforms. The term UXP is used to describe the integrated set of technologies used to provide interaction between a user and a set of applications, processes, content, services or other users. eCommerce platforms integrate with other areas of CRM, ERP and supply chain management with functionality, including campaign management, locator and matching, warranty/returns management, analytics/reporting, distributed order management, configure price and quote, management of certified partners and product entitlement, internationalization and multisite management, partner management, product entitlements, payment services, and integration with other back-office functions.

Security: Consumer mobile security applications protect mobile devices against security threats and help users manage their privacy and device performance. Typical features include antivirus scans, privacy management, device performance optimization and theft protection.

This category includes fraud detection aimed at protecting customer and enterprise information, assets, accounts and transactions through the real-time, near-real-time or batch analysis of activities by users and other defined entities (such as kiosks). Mobile fraud detection is a key area of development, providing the specific endpoint-centric fraud detection and prevention technology required to protect users, accounts and information accessed through mobile computing.

Key players include 41st Parameter, Detica (BAE Systems), Iovation, Oracle, RSA, The Security Division of EMC, SAS and Trusteer.

Mobile, video & OTT platforms: This category includes integrated software and hardware solutions for publishing and monetizing media assets via distribution to PCs, mobile devices and other Internet-connected devices.

Key areas of development include mobile web platforms and Rich Communication Suite (RCS/RCSe). Mobile web platforms typically use HTML and Ajax and are not limited to the underlying platform for deployment. RCS/RCSe is a Global System for Mobile Communications Association (GSMA) initiative, aiming to develop specifications for rich communication services.

Key players include TiVo, Verizon, Alcatel-Lucent, Huawei and Google.

Operating Systems (OS): This describes the underlying software that provides common services for delivery of programs and applications.

Cloud and web platforms use web technologies to provide programmatic access to functionality on the web, including capabilities enabled not only by technology, but also by community and business aspects. This includes storage and computing power. They have ecosystems similar to traditional platforms, but the concept originally emerged as a result of market and technology changes collectively known as Web 2.0.

Key players include Apple, Google and Microsoft.

Infrastructure & devices

Consoles & devices: This category includes the physical hardware used to operate computers or to receive and interact with media content.

The range of devices includes e-readers, enhanced e-books (with supplementary audio, video and features), smartphones, electronic paper, media tablets, network digital video recorders, game consoles, broadband-connected televisions and Over-The-Top (OTT) Set-Top Boxes (STBs).

Products include Amazon kindle, Motorola, Samsung, Sony, Apple iPad, Motorola Xyboard, Samsung Galaxy Tab, Nintendo, Microsoft, Steam, Byook, E Ink & Magink.

Carriers: This category covers providers of telecommunications services including mobile, broadband and satellite services. Some providers partner with mobile carriers to give access to their mobile communities to the carrier's subscribers through a link on the default page of mobile phone browsers.

Key technologies provided by carriers include:

- Next-generation voice: supports Voice over Internet Protocol (VoIP), and provision of enhanced voice functions and applications in both fixed and mobile networks
- Long Term Evolution (LTE) networks: high quality networks; will ultimately enable all calls to become mVoIP
- Internet Protocol (IP) broadband access network: enables IPTV by connecting to an end user's TV set via a Set-Top Box (STB)
- Ultra-high-speed broadband Internet: residential services that support download speeds of more than 50 Mbps

Key players include Ericsson, Motorola, Nokia Siemens Networks, NTT Data, Orange, Verizon, Virgin Media, Etisalat, STC, Ooredoo & Zain.

Human capital

Digital recruitment: Digital recruitment agencies specialize in matching skilled resources to roles typically in the digital media space. Roles tend to be associated with Search Engine Marketing (SEM), Search Engine Optimization (SEO), social media, affiliate marketing, ad operations, data, analytics and technology and in digital planning and buying.

Key players include Digital Gurus, Savvy Recruitment, S2M Australia. Sutra HR operate in the Middle East.

Training & development: This category includes providers of web development training covering user experience, website optimization, online copywriting, web development and online marketing. Digital marketing training is also an important field, covering social media marketing, mobile marketing, marketing automation, email marketing, web analytics and testing, search engine marketing, content marketing and digital advertising and affiliates.

Key providers include Animation, gaming, TV production, Webcredible.com and the Institute of Marketing Academy. Providers in the Middle East include Digital Marketing Institute Middle East, Institute of Sales and Marketing, twofour54 tadreeb and Logicks.com UAE.

Customer-centric web strategies are a key proposition area, focusing on tying the customer, prospect or partner deeply into the enterprise or organization, and harmonizing the interaction channels

eCommerce & web

Customer centric web strategy providers: Players in this category have developed offerings underpinned by a cohesive approach to ensuring that a website is intuitive to visitors, placing the customer at the center of the relationship.

Customer-centric web strategies are a key proposition area, focusing on tying the customer, prospect or partner deeply into the enterprise or organization, and harmonizing the interaction channels.

Customer Experience Management (CEM) is also a key area of focus, describing the practice of designing and reacting to customer interactions in order to meet or exceed customer expectations, and to increase customer satisfaction, loyalty and advocacy.

Website creation & optimization: This category includes players providing support in Search Engine Optimization (SEO) and Pay-Per-Click (PPC) marketing. SEO is an approach for making sure that a website appears at or near the top of results returned by search engines, such as Google or Yahoo. PPC marketing involves payment to website owners to display adverts, where payment is made based on the number of clicks potential customers make on the adverts displayed.

Key players in this category include Google AdWords and Bing Ads.

eCommerce technology & implementation: Players in this category support in the provision of shopping cart software which allows the processing of orders, issuing of invoices and calculation of VAT, payment platforms and invoicing. This includes electronic invoicing (e-invoicing) which is the interchange and storage of legally valid invoices in electronic format only among trading partners.

Providers of shopping cart technology include Shopify, Big Commerce and Pinnecart. Payment platforms include PayPal and CashU.

Location based services: Services in this category make use of mobile search capabilities, enabling users to search for information on their mobile devices, based on a number of techniques to make the result relevant to the user's context. Techniques used to provide personalized results include location, image, voice, audio, time of the day and user preferences. In-app search can be customized for the specific content and formats of an application.

Specific applications include Location-Based Advertising (LBA) which refers to advertisements that appear on a mobile device, including banner or text ads on a mobile internet site or mobile application. Location-Based Marketing (LBM) addresses the user directly. Usually, the consumer receives a message on their mobile device containing a call to action (such as enter a competition, visit a website or order a product) and an incentive, such as a coupon.

Location based service applications include Foursquare, Shopkick, Geomium, Skout, Imahima and Facebook Places.

Digital capital

Hedge fund / alternative: This category includes collective investment schemes, often structured as a limited partnership, that invests private capital speculatively to maximize capital appreciation.

Examples include Legg Mason and Marathon Asset Management.

Venture Capital (VC): This category describes financial capital provided to early-stage, high-potential, high risk and growth startup companies. The venture capital fund makes money by owning equity in the companies in which it invests.

Well known VCs investing in the digital space include Palo Alto Venture Partners, Bloomberg BETA and Andreessen Horowitz. Examples of Middle East Venture Partners (MEVP) include Shawarmanji, Saffar Holding (Zawya) and Lumia Capital (Markavip).

Private equity / buy-out: This category typically involves an investment manager that makes investments in the private equity of operating companies through a variety of loosely affiliated investment strategies, including leveraged buyout, venture capital and growth capital.

Key players include ABRY Partners, TPG and JP Morgan (namshi.com). Other examples in the Middle East include BECO capital (propertyfinder.ae).

Venture debt: This category covers debt financing provided to venture-backed companies by specialized banks or non-bank lenders to fund working capital or capital expenses, such as purchasing equipment. Venture debt providers combine their loans with warrants, or rights to purchase equity, to compensate for the higher risk of default.

Examples include Silicon Valley Bank, Pinnacle Ventures and Silverlake.

Super angel / incubators: This concept is designed to support the successful development of entrepreneurial companies through an array of business support resources and services, developed and orchestrated by incubator management and offered both in the incubator and through its network of contacts. International examples include New York Angels and MediaCorp Singapore.

Examples in the Middle East include Oasis500 Jordan, Seeqnce Lebanon, Seedstartup UAE, Tenmou Bahrain, I360HUB UAE, Bedaya Center Qatar, FirstMisr Egypt and twofour54 ibtikar.

Strategic buyers: A strategic buyer is a type of buyer in an acquisition that has a specific reason for wanting to purchase the company. Strategic buyers look for companies that will create a synergy with their existing businesses.

Examples of strategic buyers in the digital space include Salesforce (Technology), Facebook (Network / Commerce), EA (Media), WPP (Marketing), Publicis (Flip Media) and Naspers (Dubizzle). Other examples in the Middle East include the acquisition by Souq.com of Suqar.com.

Crowdfunding: This involves sourcing of funds from the mass Internet population for any initiative such as a project, company or the production of media, software or research. Financially, it represents the sale of equity to many investors.

Examples of platforms include Crowdcube and Seedrs, Sellaband and Kickstarter. In the Middle East examples include Entelek and Zoomal.

2. Peaking: Significant activity has been observed, but it is not yet clear whether this will continue, or how to convert the enthusiasm to sustainable business models.

Peaking Digital Services in the Middle East

In the wake of the Arab Spring, consumer online activity indicates a great appetite for news, current affairs and consumer generated media.

Key question: What business models will allow digital service owners to benefit from this demand?

3. Stabilizing: Cautious optimism as capabilities receive attention and investment.

Stabilizing Digital Services in the Middle East

Whilst regional advances in eCommerce and digital advertising have been celebrated, maturity remains some way behind international standards.

Key question: What changes or interventions are required to stimulate advancements in these areas?

4. Establishing: Increasing presence and influence of global players, and adoption of commercial methods and tools.

Establishing Digital Services in the Middle East

Advanced capabilities for building and supporting Digital Services are being led by international organizations establishing local offices. For instance, customer relationship management sales and marketing providers, web strategy providers and website creation and optimization providers.

Key question: How can these capabilities be made accessible to established offline services, entrepreneurs and digital start-ups?

5. Optimizing: Consumers and businesses are familiar and confident with the services, and seeking to adapt to their own needs.

Optimizing Digital Services in the Middle East

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Investing in Digital Services in the Middle East

This is an exciting time for those with an interest in the Digital Services landscape in the Middle East. Appetite for social media and customer generated media relating to news and current affairs is unique to the region, and emerging niches such as religious Digital Services present opportunities for regional entrepreneurs. Other services such as eCommerce and key elements of the digital ecosystem such as digital advertising are well established internationally, but have so far lacked the stimuli or the supporting infrastructure to mirror this success in the region.

Certain categories which typically feature in a more mature market, such as rights and royalties management and Digital Services skills and recruitment, have limited presence in today's market. It is expected that these categories will rapidly follow international trends and become well established over the next 5 years.

The current market for many services is fragmented. Many small to medium scale services in categories such as retail and eCommerce, social networks and microblogging may have been started by entrepreneurs or established offline service providers. Market leaders and other stakeholders who are able to offer economies of scale, as well as providing a louder voice with which to lobby governments may be able to offer a helping hand in stimulating growth.

Other services such as government services and TV, video, radio and music have significant growth potential, but will require investment and/or a substantial customer base in order to succeed. Established organizations offering 'adjacent' services (e.g. TV broadcasters) may have the appetite for joint ventures to stimulate the market or provide a platform for their own expansion.

In any capacity, we anticipate that the Digital Services landscape will grow at pace in the Middle East over the next 3 to 5 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.

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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 its group of companies. Additionally, NOORTEL is continually working to develop partnerships with companies in other regions to improve its strategy 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.

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