

MENA Design Education Outlook

2016

Contents

I	Foreword: Dubai Design Fashion Council	2
II	Foreword: Dubai Design District, d3	3
III	Foreword: Knowledge and Human Development Authority	4
IV	Foreword: Monitor Deloitte	5
V	Foreword: American University of Dubai	6
VI	Acknowledgements	7
VII	Executive Summary	9
1	MENA Design Market Outlook	12
1.1	Architecture	14
1.2	Visual Arts	16
1.3	Interior Design	18
1.4	Communication Design	20
1.5	Product Design	22
1.6	Fashion Design	24
1.7	Experiential Design	28
1.8	Social Design	30
1.9	Food Design	31
1.10	Design Education Demand Forecast	32
2	Regional Design Education Landscape	36
2.1	Student Perspectives	38
2.2	Industry Perspectives	44
2.3	The United Arab Emirates	51
2.4	Qatar	56
2.5	Lebanon	58
2.6	Egypt	62
2.7	Jordan	64
2.8	Kuwait	66
2.9	Role of Infrastructure	70
2.10	Fabrication & Prototype Labs	71
2.11	3D Printing Facilities	73
3	Design Hubs: Lessons Learnt from International Benchmarks	76
3.1	The United Kingdom	78
3.2	Singapore	82
3.3	United States	86
3.4	Eindhoven	90
4	Closing the Regional Design Skills Gaps	92

Foreword: Dubai Design & Fashion Council

Dr Amina Al Rustamani

Chairperson, Dubai Design & Fashion Council

Group CEO, TECOM Group



I am delighted to introduce you to the MENA Design Education Outlook report, which provides insight into the design education landscape across the MENA region.

In recent years, the design sector has been a subject of growing importance globally, with stakeholders recognising the value of design within local communities and its significance as a key driver of economic prosperity and stability. In order to create an ecosystem that enables talent development, it is critical to foster an environment that promotes collaboration and knowledge sharing. The Dubai Design and Fashion Council (DDFC) was founded with the mandate to establish Dubai as an international emerging design hub, and the MENA Design Education Outlook offers regional findings and identifies both challenges and opportunities to develop clear and consistent policies to support the industry.

Supplemented by international best practices, this study is a valuable resource for educators, students and design professionals towards shaping the future of design education in the region. I hope that all members of the design industry are able to leverage its unique insights.

I would like to thank everyone who was involved in developing this pioneering report and look forward to witnessing its impact across the region.

Foreword: Dubai Design District, d3

As COO of Dubai Design District, or d3 as we're more widely known, I am proud to support the MENA Design Education Outlook report, a comprehensive review and analysis of the region's design education landscape.

At d3 we share and support Dubai's vision to become a global design hub, attracting both emerging talents from the local and regional markets as well as leading international designers and brands. By supporting the need to enable a skilled and dynamic workforce, we are helping to drive the development of Dubai's innovation-led economy and achieve the ambitions of the Innovation Strategy.

This comprehensive study establishes education as the driving force in achieving the prosperous and sustainable growth of the MENA Design industry. As the UAE is the fourth most popular destination for higher education in design, we clearly demonstrate the need for a design district like d3, to develop the region's creative community by educating, inspiring and nurturing emerging talent.

Relevant to students, educational institutes and corporations alike, this report has been collated to assess the future of the MENA Design Education industry through its evaluation of the MENA Design Market Outlook, review of the Regional Design Education landscape and analysis of the leading Design Education Hubs. I would like to thank everyone responsible for developing this valuable report and I hope that you enjoy reading this study, utilising this information to further progress our thriving design education industry.

Mohammad Saeed Al Shehhi

Chief Operations Officer,
Dubai Design District (d3)



Foreword: Knowledge and Human Development Authority

Dr Abdulla Al Karam

Director General and Chairman of the Board of Directors

Knowledge and Human Development Authority (KHDA)



I'm very happy to contribute to the first MENA Design Education Outlook and I congratulate the Dubai Design and Fashion Council on its achievement.

Design is a topic close to our hearts at KHDA. By changing our working practices (as well as our furniture) to include more design-thinking, we find we are becoming a more innovative, more creative team.

Working in education, I am lucky to meet and talk to many schoolchildren. Through my conversations with them, I have learned that children are, in a way, the best design-thinkers. When children first learn to speak, it's often to ask questions, and usually, that question is "why?"

We know that curiosity is the starting point of good design, just as human-centred design is the starting point of good education. That design education is becoming more prominent within existing university programmes is a positive example of how this sector is better preparing students to lead happy and productive lives.

The minds of designers are open; they welcome change, they are empathetic, and recognise that failure has its own value beyond the success it can bring. The skills which come with such a mindset – the willingness and ability to solve problems, to think critically, and to be creative – can form the basis of all education, and become the focus of how, why and what we teach at schools and universities.

By highlighting the best of what is happening in this field, the MENA Design Education Outlook better enables educators and policy-makers to build on and improve not just design education, but also education design.

Foreword: Monitor Deloitte

We are delighted to support the release of the first edition of the MENA Design Education Outlook. We believe this report complements the MENA Design Outlook released in 2015 and will stimulate rich conversations around design and the creative industries.

The UAE's strategy of fostering innovation and knowledge-driven growth is firmly set out in its Vision 2021 strategy. When design principles are applied to strategy and innovation, the success rate for innovation increases significantly. The level and standard of education and research are the building blocks of the innovation capacity of a nation. As such, the innovation scorecard of countries should consider human capital development as a critical enabler.

The region's creative industries still lag behind their counterparts in Europe and the United States in terms of their contribution to Gross Domestic Product. The lack of educational facilities and regional talents are intertwined. They are widely seen as the major barriers to the growth of the design industry and, consequently, the region's capability to innovate.

We see the 2016 edition of the MENA Design Education Outlook as a blueprint for policy makers and academia to work together to shape design education offerings which are aligned with the needs of the workforce over the long term. This will support an increase in both the number and diversity of design graduates and lay the foundation for the transition to a knowledge driven economy.

Emmanuel Durou

Partner, Monitor Deloitte



Foreword: American University of Dubai

Ali M. Jaber

Dean, Mohammed Bin Rashid School of Communication at American University of Dubai (AUD)

Group TV Director, Middle East Broadcasting Corporation



Education is the cornerstone of progress and fundamental for the positive development of both society and individuals. Any country seeking to achieve sustainable economic development must invest in human capital, with the end benefits of raising productivity and creativity, promoting entrepreneurship and technological advancements.

As we move towards a diversified economy, design plays an increasingly significant role as a key catalyst for innovation, economic growth and job creation. The need to develop this sector has never been more prevalent, and it is through investing in education that we can empower our future design leaders and equip them with the knowledge and skills necessary to flourish.

As the region's design industry gains ground, there is a need to map this sector's full potential: The MENA Design Education Outlook is a groundbreaking study that demonstrates

the importance of harnessing the breadth of design talent in MENA. Through evaluating the design industry in the region, providing insights into the state of design education today and analysing feedback from design students and corporations, this study serves as a key resource, clearly representing both the opportunities and challenges that lie ahead.

As we work towards a sustainable creative ecosystem, it is clear that we need professionals across all sectors, with design education being central to nurturing commercially astute and internationally competitive designers.

We hope this study helps educators and policymakers to identify industry trends and supports them in curating curriculums, programmes, courses and policies that will offer a solid educational foundation for budding talent, ultimately galvanising the design industry.

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- Design Days Dubai
- DMY Engineering Consultants Inc.
- Fashion Design Center (Egypt)
- Fikra Design
- FJ Consultants
- Gabriel Skelton
- Gulf Craft Inc.
- HBA
- HBA Graphics
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For Monitor Deloitte

- Emmanuel Durou, Partner, Middle East
- Gareth Pereira, Director, Middle East
- Richard Barrett, Director, Middle East
- Elan Habib, Senior Consultant, Middle East

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Executive Summary

Design is increasingly recognised as a fundamental pillar for economic competitiveness. Design provides businesses with opportunities to increase productivity and create value in products and services, which is particularly relevant in the face of intensifying international competition. Companies that invest in their design capability and develop a reputation for innovation can avoid competing on price alone¹.

The linkages between design and the education sector are less firmly established. The design sector has been a subject of growing importance globally as governments and organisations across numerous cities, regions and countries are realising the value and potential of design within their local economies. While design industries themselves have been drivers of wealth and jobs for centuries, there has not been a universal and standardised view of design as a distinct sector of the economy.

In MENA, the Creative Industries have played a prominent role in cultural and economic development for centuries, renowned for the region's unique aesthetic in art, calligraphy, music, poetry and literature, Arabic style architecture, woodworking and a range of crafts and jewellery. In 2015, the MENA Design Outlook, developed in collaboration with Dubai Design and Fashion Council, defined for the first time the design sector and projected its growth for the next five years.

The MENA Design Outlook projected that the design industry in the region will grow at a compound annual rate of at least 6% over the next five years to reach USD55 Billion by 2019. These growth rates are strongly underpinned by the need to develop design education as a positive lever for sustainable growth of the industry. The lack of educational facilities and

the lack of regional talents are intertwined, together receiving the greatest consensus as the major barriers to the growth of the design industry. Based on an analysis with other mature design economies, the region would need close to 30,000 design graduates across key streams such as Architecture and Interior Design, Fashion Design and other design segments² to achieve the growth ambition in an indigenous manner. This would suggest the need for a nine fold increase in the number of design graduates currently being produced in order to make the growth ambition self-sustainable. A large part of this talent is currently imported, however regional economies would need to focus their attention on creating additional pathways into the design sector, such as strengthening vocational education to create diversity in the graduate marketplace. It must be noted that the Creative Industries in the region lag behind more developed markets in terms of contribution to GDP, accounting for roughly 1.5% of GDP contribution compared to 5 to 6% in more developed markets. As a result, harnessing the true potential of design should be firmly on the agenda of governments across the MENA region.

A number of global cities have built an international reputation as design education hubs by recognising the importance of education planning and early learning experiences,

¹ DTI (2005), Economic Paper No. 15; Creativity, Design and Business Performance

² Includes Lighting Design, Graphic Design, Emerging Design segments such as Experiential Design, Design for Social Change and Visual Arts

Executive Summary

through to providing a structured career path and aligning education skills with the needs of the economy. Good international practices in design education include defining a National Design Strategy with strong linkages to Design Research and Education, multiple pathways to education, vocational education training, collaboration between industry and academia, multidisciplinary programs enabling designers to develop broad skills (e.g. management and economics) and world-class infrastructure to support the development and growth of designers. Finally, funding for skills development is important for both growth in the design sector and to facilitate design research.

There are opportunities for the region to learn from international cities that have established global reputations for the quality of their design education. An examination of design education offerings across the region suggests several 'white spaces' and an overemphasis on architecture and interior design, particularly in the GCC countries. This is strongly reflective of the importance of the construction sector in these countries. If these countries, however, are keen to diversify their economies, they need to expand their design education offering to include Industrial and Product Design, Fashion Design and emerging design concepts such as Experiential, Culinary and Social Design. There are few design education offerings in these areas currently in the region. Private educational institutions are largely focused on Architecture and Interior Design programs. Digital & Multimedia Design, along with Communication & Graphic Design programs are on the rise in unison with the rise of these segments in the market. Only two out of the six countries studied offer Industrial and Product Design degrees, namely Egypt and Jordan – fittingly, countries which are heavily

engaged in manufacturing. Fashion Design programs are prevalent in Lebanon, a region that is home to several globally acclaimed fashion designers.

Multi-disciplinary design education is emerging as a consistent theme across developed markets such as the UK and the US, with the objective of developing graduates with the right combination of skills for innovation. Schools in the UK and US have been integrating design and business education for several years, and Finland has inaugurated the first multi-disciplinary university. In the future, companies will need individuals that have had exposure to disciplines outside their individual area of specialisation and are comfortable with deploying their creativity and flexibility within such teams. Multi-disciplinary courses were found to be few and far between in the Middle East region, representing a tremendous opportunity for regional educators. Other initiatives include incorporating design into early learning programs, as seen in the UK and Singapore, which serves to build an interest in design from a young age and helps to overcome traditional stereotypes around careers in the design sector. Greater alignment with the needs of the economy should ensure that design graduates are equipped with the skills required to succeed in the globalised economy.

The region has some important strengths to build upon in terms of perception amongst the student community. In the 2015 MENA Design Education Study, a market research student survey was conducted amongst more than 900 students across 13 markets and various design sub-segments, which revealed a strong positive perception of design education in the region. The United States emerged as the preferred destination for design higher education, followed

by France. The UAE creditably stood 4th as the preferred destination for higher education, scoring lower than mature design markets such as the US, France and the UK. Across the GCC, Levant, North Africa and the Indian subcontinent, the international reputation of an institution appears to be the single most important factor driving the selection of a destination for design higher education. The second top reason for selecting a country/city to study in was the local reputation of the educational institutions, followed by affordable tuition fees.

The gap in qualified designers is reflected in hiring plans of the design companies interviewed as part of this study. Corporates surveyed are anticipating at least a 20% increase on an annual basis in their designer headcount at junior levels over the next two to three years. At middle and senior levels, the increase in headcount is estimated to be between 7 to 14%. Anticipated increase in head count at junior levels was highest in the Architecture and Fashion segments, standing between 15 to 30%. Corporates reported a key barrier being difficulty in hiring at senior management levels. Large retail groups such as Landmark are keen to explore collaborations with regional design education institutions but often face challenges in assessing the quality of design programs as these are not marketed or promoted adequately. Learning starts in schools and universities but must not end there in the drive to enable lifelong design education. An entire ecosystem of support and technologies must be available to allow the design industry to prosper freely. The region has successfully attracted many designers and firms, but in order to transform into a market that leads innovation in the field, the first steps lie in providing the right infrastructure and supporting continuous education. Students

and practitioners must not only have access to equipment such as 3D printing, but also Fab Lab-type spaces that allow for both the creation of new designs and access to new design equipment.

In order to retain and nurture regional talent it is important to provide an environment in which upcoming talent can flourish. This environment also needs to promote collaboration within the design community and with the wider economy. There is some evidence of this within the MENA region, particularly in Beirut where a culture of co-working spaces and collaboration amongst designers has developed. There are several challenges to pursuing a creative career in the MENA region, including the lack of early stage involvement in design as well as unclear career pathways, with many programs that are available in international design education hubs not being available in this region.

In conclusion, the anticipated growth in the design sector over the next few years represents both a challenge and an opportunity for educators to adopt long term policies aimed at enhancing the relevance of design education to the design industry, and increasing the number and diversity of design graduates from the region. This will ensure that growth will be sustainable and limits the need to import talent from outside the region. Furthermore, broadening the mix of skills within teams and individuals represents a strategic imperative for innovation.

MENA Design Market Outlook

Introduction

While there is a growing consensus globally on the need to define and classify the design sector, there is as yet no consensus on an international scale as to what segments are included in the sector and how to account for their economic value. At present there is no common framework or classification for the design sector across the MENA region. According to most established or formal classifications of the design sector, there are four segments which are common across all or most classifications, namely: Interior Design, Industrial and Product Design, Fashion Design and Graphic Design. In order to capture the trends and market data across segments, and considering their relevance in MENA, both Architecture and Visual Arts have also been included as part of the MENA design sector classification.

This report includes all digital design and graphic design activities under the umbrella of Communication Design. For this edition of the report, Industrial and Product Design has been intentionally limited to two sub-segments which have been deemed particularly relevant for the MENA region: Furniture Design and Lighting Design. Lastly, emerging design trends such as Social Design, Experiential Design and Food Design are covered in this report as a space to be watched going forward.

In this section we highlight the industry trends within these main design segments to enable education providers to review their offer against future trends.

1.0 MENA Design Market Outlook

1.1	Architecture	14
1.2	Visual Arts	16
1.3	Interior Design	18
1.4	Communication Design	20
1.5	Product Design	22
1.6	Fashion Design	24
1.7	Experiential Design	28
1.8	Social Design	30
1.9	Food design	31
1.10	Design Education Demand Forecast	34

Architecture

The MENA architecture market is expanding at a faster pace than the global market

The MENA architecture market is inherently tied to the health of the construction sector, which has been characterised by public sector projects for a number of countries, primarily in the GCC. While the construction market has started to gain confidence since the real estate slump in 2009, the market has seen some volatility. In the GCC, which felt the impact of the financial crisis in its real estate sector, the value of real estate contract awards steadily decreased from 2010 to 2012 from USD 148 billion to USD 119 billion³, and only significantly picked up in 2013 by over 30%, bringing the market to higher levels than 2009. The 2014 edition of Cityscape was testament to regained investor confidence in the sector with over 40% growth in attendance year-on-year and 27 mega projects⁴ announced during the event.

We have estimated that the MENA region accounted for 6% of the global architecture industry in 2013. Saudi Arabia and the UAE dominate the MENA market, with 33.3% and 25.3% revenues respectively, and Qatar being the next largest market with a 5.6% MENA market share.

Architecture firms are moving towards cost optimisation, outsourcing and new technology adoption such as 3D printing

Regardless of their appetite to integrate new services and disciplines, industry leaders have highlighted a trend to outsource parts of the architecture value chain. Outsourcing is a growing trend in the region whereby large firms are offshoring their design production to take advantage of lower labour costs in markets such as India and the Philippines. Together with the economies of scale gained from diversifying

across the value chain, this is enabling larger players to bid for work at a lower cost, increasing price pressure on the medium and smaller sized pure-play architecture companies.

Technology innovations are also transforming the cost structure of architectural firms across the world. Middle-East firms are increasingly catching up with technology adoption. The democratisation of 3D printing and modelling is disrupting traditional business processes, reducing the time to deliver and costs over the long term. The integration of various technology solutions is increasingly relevant for architecture firms, with the need to seamlessly integrate ERP applications with CAD and 3D printing. Integration allows architecture firms to link and automatically update product data (e.g. component, subassembly or assembly data), bills of materials and routing instructions between the CAD and ERP systems. In parallel with decreasing prices of 3D printers, a number of solutions are coming to the market allowing translation of CAD directly into 3D printable STL files, considerably reducing the delivery times of the architecture design phase.

Sustainability and Smart design are the most prominent demand trends in the region

The most prominent demand trend in architecture in the MENA region is the growth of sustainability and SMART architecture which, although behind more mature markets in terms of pervasiveness, is consistently highlighted by industry leaders as being increasingly relevant to this region. Sustainable architecture seeks to minimise the negative environmental impact of buildings by providing efficiency through the materials used and the use of energy and space. SMART design goes a step further by applying digital technology to the design of buildings, so

Middle-East firms are increasingly catching up with technology adoption. The democratisation of 3D printing and modelling is disrupting traditional business processes, reducing the time to deliver and costs over the long term.



that buildings' subsystems can share information to optimise total building performance. For example, air-conditioning, heating ventilation and shade lighting may all be automatically controlled digitally to minimise energy use and to ensure minimal carbon footprint.



1. View of Dubai skyline from Dubai Design District, d3
2. NBK Tower, Kuwait: Nigel Young/ Foster + Partners
3. Sheikh Zayed National Museum, Saadiyat Cultural District, Abu Dhabi: Foster + Partners

³ MEED – GCC Construction Project Market 2015

⁴ Cityscape Global

Visual Arts

The art market across the MENA region has benefitted from a number of large-scale annual art events. These events and fairs have seen a steady increase in the number of visitors, participating artists and galleries, and sales.

The prominence of high net worth individuals in the region has been driving the purchases of art as a new asset class for investment purposes. A number of shifting regional dynamics are shaping demand for visual art in the Arab world. Changing wealth patterns throughout MENA have boosted the appetite for new asset classes and investment vehicles, particularly among the elite families in the region. According to the 2014 Wealth Report Attitudes Survey, 58% of respondents representing High Net Worth Individuals (HNWI) in the Middle East reported a growing interest in art, with art listed as the fastest growing collectible in this investment category. For Ultra High Net Worth Individuals (UHNW1) with investable assets of over USD 30 million, the Middle East boasts the strongest growth figures in the world, with its UHNW population growing by 15.3% and wealth growing by 23.9% in 2013⁵. Saudi Arabia leads the group with 1,360 UHNW individuals worth USD 285 billion, followed by the UAE, which experienced a growth rate of UHNWIs of 20.7% last year. Barclays reports that wealthy individuals in these two countries hold between 17–18% of their total wealth in treasure assets such as tapestries and jewelry⁶.

The growth of art fairs and events in the region has been stimulating local talent through art weeks, workshops and educational programs. The art market across the MENA region has benefitted from a number of large-scale annual art events. These events and fairs — which include Art Dubai, Abu Dhabi Art Fair, Beirut Art Fair, Jeddah Art Week and the non-commercial Sharjah and Marrakesh biennales — have seen a steady increase in the number of visitors, participating artists and galleries, and sales.

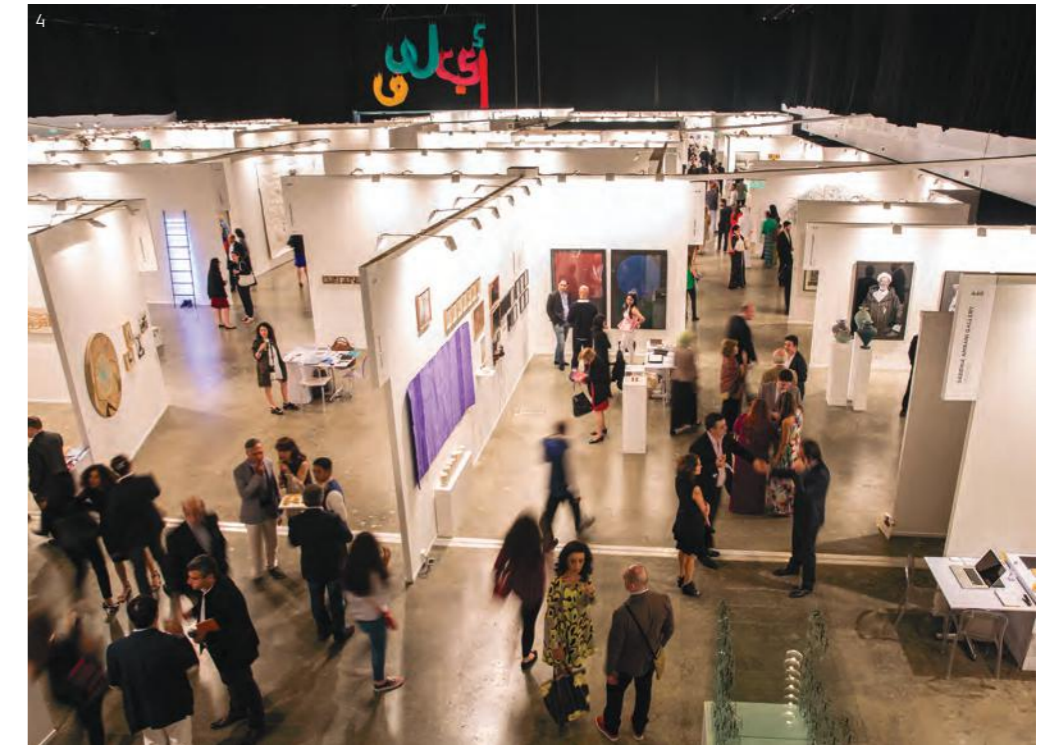
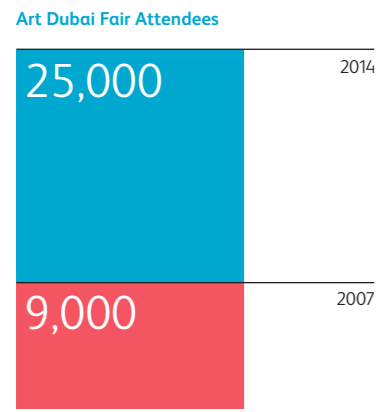
With over 25,000 visitors and artwork from 500 artists valued at USD 45 million at its 2014 event, the Dubai Art Fair has experienced impressive growth since its 2007 inception. The Fair is part of the larger Art Week which features over 40 gallery exhibitions, as well as the Sikka fair dedicated exclusively to new work by UAE-based artists. The event has matured over the years to include residencies, educational programs and, most notably, the Abraaj art prize for MENA artists worth USD 100,000.

Abu Dhabi also holds an annual Art Fair which has completed six editions at Saadiyat Island, the emerging culture and arts hub in the Emirate. The 2013 Fair featured 400 artists and 50 global galleries.

MENA countries have been heavily investing in the development of new museums to promote contemporary, Islamic and modern art in the region

Globally, the number of museums has grown from around 23,000 two decades ago to over 55,000 today⁷. In the MENA region, a renewed public sector patronage of the arts is manifested in a number of large-scale plans for museums. GCC countries are undertaking significant development projects, often partnering with world renowned architects to expand the amount of museum space in the region.

Abu Dhabi has focused on partnering with major international art museums and institutions, working with the French government to secure art loans and art consulting services worth more than USD 750 million. The two major developments at Saadiyat Island are the Louvre, designed by Jean Nouvel, and the largest ever Guggenheim, designed by Frank Gehry.



- Art Dubai 2015, Dubai, United Arab Emirates:
- 1. Gallery Hall 2, Contemporary
- 2. Gallery SKE, Bharti Kher, Virus V, 2014
- 3. Bookshop
- 4. Gallery Hall 1, Contemporary
- 5. Gallery Hall 1, Marker
- 6. Onsite Events; Campus Art Dubai Graduation
- 7. CAD CORE Onsite Visit

⁵ Wealth-X and UBS World Ultra Wealth Report 2013
⁶ Barclays
⁷ <http://econ.st/IXzao8>

Credit: The Studio, Dubai

Interior Design

The interior design market is anticipated to see positive spillover effects from tourist infrastructure to support the Qatar World Cup 2022 FIFA event, the UAE World Expo 2020, and other attractions projected to double tourist arrivals in Dubai between 2012 and 2020.

The MENA region has expanded at a significant pace since 2010, driven by growth in the residential and hospitality segments

The value of the MENA interior design market reached approximately USD 7.1 billion in 2014. Saudi Arabia and the UAE dominate the landscape with 34% and 25.7% of revenues respectively, followed by Qatar with 5.7% of the MENA market share. The MENA revenues for interior design services have grown at a significantly faster pace than the global industry since 2010, with a Compound Annual Growth Rate (CAGR) of 20.4% vs. a global CAGR of 3.6%, increasing its share of the global market by 1.9 percentage points from 3.5% in 2010 to 5.4%.

Construction drives the interior design market, in particular the hospitality segment

Construction is the key driver of interior design services in the MENA region as new projects require interior services and refurbishments require advice regarding better space management and flexibility, as well as environmental and sustainability factors. The interior design services spend is broadly aligned with the sectorial share of spend of the construction market, although some notable exceptions reflect the nature of the requirements of subsectors, particularly in hospitality and retail.

Hospitality is identified by a number of MENA interior design experts as a critical and growing sector for the segment. Hospitality projects account for a disproportionate share of interior design spending compared to construction projects (11% vs. 5%). The interior design market is anticipated to see positive spillover effects from tourist infrastructure underway to support the World Cup 2022 FIFA event in Qatar, the World Expo 2020 in the UAE, and a number of other attractions that are projected to double

tourist arrivals in Dubai between 2012 and 2020 for the events. Furthermore, the region's luxury hotel segment is booming with over 40% of hotels listed as 5 star or 4 star in the UAE, and major brands such as Starwood, Rotana and Four Seasons launching expansions in the region, all of which are likely to drive demand for high quality interiors.

Smart homes are the dominant trend in this sector as technology plays an increasingly important role in interior design

Smart homes, in which electronics and appliances can be controlled remotely by smartphones or computers, is already widespread in mature markets. Demand is growing in the Middle East, which is estimated to be the second fastest growing region for M2M (machine-to-machine) connections globally⁸. Technology is increasingly being integrated into design to create flexible and convenient living and working spaces for residential and commercial buildings, a trend illustrated by the selection of technology as the focus for Downtown Design's second season (October 2014) in Dubai. An interactive show home at the fair, exhibited by Ikonhouse Dubai, illustrated the capabilities of an automated home, including window-blinds that roll up and down at sunset and sunrise, high-tech bulbs that turn themselves off, mirrors that transform into TV or computer screens, and cooking appliances that can be preheated remotely.

Interior automation is already a prerequisite for all new-build high-end residential developments. Telecoms and technology companies are also taking advantage of this appetite to launch Smart home solutions for existing homes; du and Etisalat have both announced the arrival of new products to the market. With the region's prevalent youth demographic and internet



penetration levels of up to 86% in Qatar and 71% in the UAE⁹, Arab citizens are increasingly expecting digital and Smart appliances to be part of their daily lives. In 2013, 70% of GCC households and 33% of North African households were estimated to own a tablet, with an average of 49% for the MENA region. Furthermore, digitalisation of appliances is already commonplace, with two thirds of households in the MENA region connected to digital television in 2014¹⁰.



1. THE NOMAD by Khalid Shafar, installed at Chelsea College, London, United Kingdom
2. Emirati furniture and product designer Khalid Shafar
3. CITY's seating installation project at the Meet d3 event at Dubai Design District, d3, a collaboration between Khalid Shafar and the American Hardwood Export Council (AHEC)

⁸ Emirates 24/7 – <http://bit.ly/1ujQJPr>

⁹ Deloitte TMT Middle East Predictions 2015

¹⁰ Digital TV World Household Forecasts Report (May 2015): digitaltvresearch.com

Communication Design

The Communication Design segment groups a range of companies offering services from strategy to execution, both on traditional and digital platforms

The industries and firms covered in the Communication Design segment have been the most impacted by the movement towards convergence. Convergence of platforms (Digital vs. Traditional) and convergence of services (Strategic vs. Execution) have shaped this segment into a complex mix of companies from pure play graphic design boutiques to fully integrated advertising and creative agencies, as well as hybrids offering both consultancy and design services.

From a service point of view, many companies have diversified from traditional graphic design services which focus on the execution of a design whether it is a corporate logo, an advertisement or a web site. Strategic advice is emerging as a growing service of focus in the industry, whether it is linked to corporate branding consulting or more experiential design domains, such as retail experience redesign.

From a platform point of view, graphic design was a skill set specialising in the development of printed materials, such as packaging, advertising, signage systems and logos. Digital design agencies emerged as the audience focus and advertisers' spend started to migrate towards digital platforms, offering services such as web design and digital marketing. With the convergence of the offline and online worlds, and as clients look to increase their digital presence, the required skill sets of graphic design companies have evolved with graphic design agencies now providing both traditional and digital design as well as other services under one roof, such as marketing, branding and consulting.

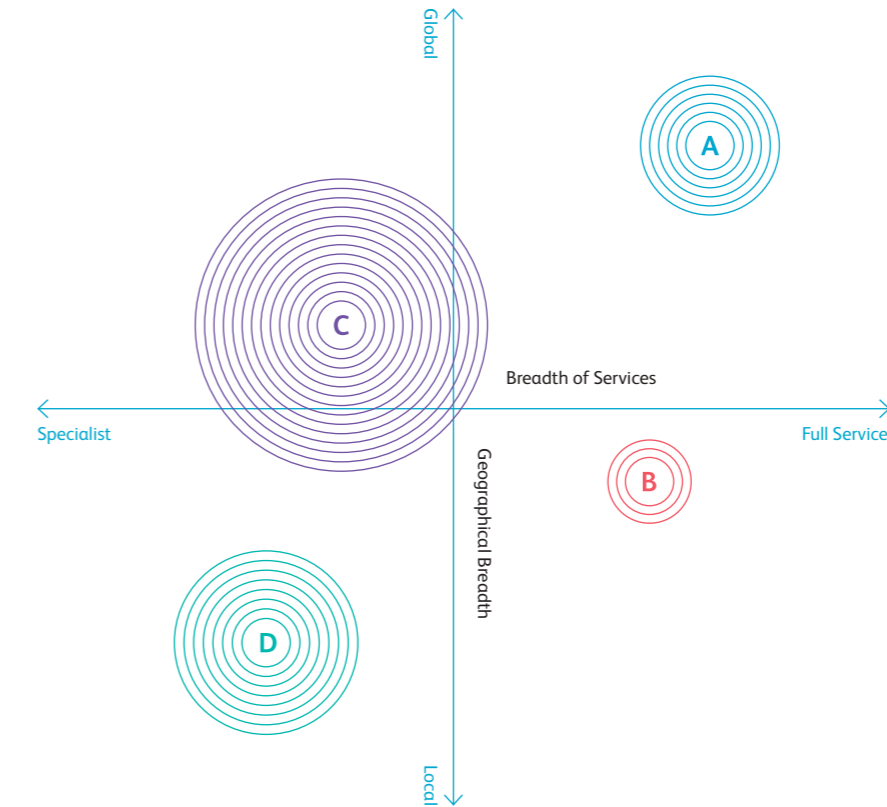
The MENA Communication Design market reached a value of USD 600 million in 2014, with digital design increasing its proportion of total revenues

The MENA region is estimated to account for 1.3% of the global graphic and digital design industry in 2014. The UAE and Saudi Arabia dominate the MENA market with 50.4% and 17.7% revenues respectively, with Qatar being the next largest market with 4.1% MENA market share. The majority of graphic and digital design companies are based in the UAE, even if they carry out much of their work elsewhere in the region. According to the companies interviewed, the UAE is viewed by clients as a dynamic and culturally-close market. Lebanon is considered by many industry experts as a hub for graphic and digital design talent in the region, with a large number of freelancers.

The market for graphic and digital design is broad and can be segmented into four main groups, categorised by geographic breadth and range of services

Industry experts point to the fragmented nature of the industry in the region, with the vast majority of Communication Design companies in Dubai employing fewer than 15 employees and regularly hiring freelancers for specific skills. The market for communication design is composed of a wide variety of agencies providing graphic and digital design as a skill set, usually supporting other services such as advertising, branding, or design consultancy, and can be segmented into four main groups: Global full service advertising agencies; regional generalists; global specialists; and regional specialists. See Exhibit 1 p21.

Exhibit 1: Illustrative communication design supply segmentation



- A** Global full service advertising agencies, such as Leo Burnett and M&C Saatchi
- B** Local companies expanding regionally and providing a variety of creative services (e.g. Moloobhoy & Brown)
- C** Global specialists, that specialize in specific services (e.g. Digital) or specific platforms (e.g. JCDecaux with outdoor)
- D** Local specialists, generally 'boutique' digital agencies or agencies specialized in the 'execution' part of the communication design (e.g. printing)

Digital design is an increasingly significant contributor to the Communications Design market as clients recognise the importance of building online presence

The increasing penetration of the internet throughout the MENA region presents a significant opportunity for brands in terms of communicating with customers online and growing their e-commerce sales. E-commerce in the region is relatively nascent as the MENA region is still a cash-based society, although growth in online sales in the MENA region between 2011 and 2012 was 45%, more than double the global average of 20%¹¹.

The growth of MENA internet users has led to a rise in demand for local Arabic digital content that relates to customers' culture and lifestyle, and has supported the growth of a number of application developers within the

region. Prominent developers include Ertica, its application Lamsa provides access to a wide range of digital Arabic literature, and Rufoof, a digital e-book platform that launched in 2011, growing to over 11,000 titles and over 100,000 users by 2014.

Opportunities for localised Arabic content are sizeable as smartphone penetration grows in the MENA region, with Saudi Arabia and the UAE currently leading the way with 63% and 78% penetration levels respectively. Mobile applications are becoming increasingly popular with 70% of Smartphone users already downloading applications in Lebanon¹². Furthermore, less than 1% of total global online content and less than 0.2% of global digital content hosted in the Middle East and North Africa is Arabic, despite native Arabic speakers representing approximately 4.5% of the world population¹³.

¹¹ PayPal Insights e-commerce in the Middle East, 2012-2015

¹² Nielsen – <http://bit.ly/1Q2Iphn>

¹³ The Guardian, Why increasing digital Arabic content is key for global development, April 2014

Product Design

Furniture

Furniture design and production has experienced steady growth over the past three years on the back of an upturn in the residential construction market

The furniture design and production segment has seen promising growth on a global scale for the third consecutive year, reaching a compound annual growth rate of nearly 5% for the 2010-2013 period¹⁴. As demand for housing, retail and office space is on the rise, furniture producers and manufacturers have fared well and the global furniture manufacturing industry now generates roughly USD 400 billion in revenue annually.¹⁵ Measured in terms of production and annual output, furniture is the second largest design segment after fashion with around 18% of the design sector global market.

'Modern arabesque' designs have been trending among local furniture designers looking to maintain cultural aesthetics while incorporating modern techniques

Acknowledging the importance of culture and heritage in the Middle East, furniture designers are leveraging the traditional Islamic and arabesque design aesthetics which have been popular for centuries into fresh new designs. A number of regional furniture designers have experimented with modern arabesque designs that sustain the authentic and traditional aesthetics of their products while adding modern touches to their creations. Furniture designers such as Nada Debs, Dina Gildeh, Marcos Cain and Linnea Forslund have created a new trend that pursues the Arabian inspired interior while incorporating foreign elements to create more contemporary designs.

Acknowledging the importance of culture and heritage in the Middle East, furniture designers are leveraging the traditional, Islamic and arabesque design aesthetics which have been popular for centuries into fresh new designs.

Lighting

The lighting industry has seen a shift from energy consuming installations to sustainable solutions

The lighting industry has been highly fragmented with numerous companies occupying different segments of the global lighting market. Companies are embracing the high demand for environmentally friendly lighting systems and the need to replace high-energy lighting installations, such as incandescent light bulbs, with energy-preserving, sustainable and eco-friendly lighting systems such as LEDs. This progressive shift from traditional lighting systems to LED lighting is expected to continue over the next decade. Estimates show that by 2016 the share of LED usage in general lighting will be approximately 45%, reaching 70% by 2020.¹⁶

Events in the Middle East promote the use of LEDs and encourage design through these new solutions

The annual Light Middle East Fair aims to attract international lighting brands and companies to generate better business for the industry in the region. In 2014, the Fair took place in Dubai under the Dubai Municipality, with over 325 lighting companies from around the world participating.

The Light Middle East Fair featured Future Zone, a design concept focused on innovative and futuristic designs. This show involved some of the newest lighting technologies and most prominent designers showcasing crafted lighting systems. The adoption of LED lighting systems in the region has contributed to the aesthetics of installations as well as the environment. The use of LEDs has become very popular among lighting designers due to the flexibility of compatible materials, and in terms of brightness, dimness and colouring.¹⁷



1. Viktor Udzenija Architecture + Design, based at Dubai Design District, d3, Dubai, United Arab Emirates
2. Pallavi Dean Interiors, Dubai, United Arab Emirates
3. Supernova by Petra Krausová, Lasvit, based at Dubai Design District, d3, Dubai, United Arab Emirates

¹⁴ Deloitte Research

¹⁵ "Furniture Manufacturing" - First Research

¹⁶ McKinsey & Company – Lighting the Way: Perspectives on the Global Lighting Market

¹⁷ Light Middle East – <http://bit.ly/1SYn4uP>

Fashion Design

Global industry overview

Fashion is one of the most ubiquitous industries within the design sector, given its high brand visibility in the public sphere as well as its familiarity with the majority of consumers worldwide. In fact, fashion falls just behind food in terms of the biggest expenses over a lifetime. In mature markets, a woman will purchase an average of 3,000 fashion items in a lifespan, making the fashion industry one of the most pervasive of the design segments¹⁸.

Industry consolidation

Industry consolidation is continuing in the fashion industry, with Mergers and Acquisitions (M&A) on the rise following the financial crisis. 2012 alone saw USD 1.6 billion worth of M&A deals affecting the fashion market¹⁹, with a significant focus on the high-end luxury market²⁰.

Digitisation

The rise in digital services, such as e-commerce and social media, continues to impact growth in fashion sales. Online sales channels for the clothing and footwear markets are expected to continue growing at three to four times the pace of offline retail channels. Although online is still building upon a relatively low base, the scale of growth over the past five years positions it as a serious retail channel for fashion going forward. This is particularly true in established Western markets such as the US, where online sales of apparel and accessories already has the highest share of total US e-commerce sales at around 22% (with computer and consumer electronics also standing at approximately 22%). Moreover, category sales are expected to grow at 14% per annum over the longer term²¹.

The rise in digital services, such as e-commerce and social media, continues to impact growth in fashion sales. Online sales channels for the clothing and footwear markets are expected to continue growing at three to four times the pace of offline retail channels.



Fashion meets wearable technology

Wearable technology is still in an experimental stage but has sparked the interest of the fashion industry, with collaborations between technology firms and fashion designers (e.g. Fitbit & Tory Birch, Ralph Lauren & OM Signal, NuMetrex & Adidas). Wearables are devices that can be worn or integrated with clothing, shoes and accessories, usually to track information related to health and fitness, which sync with mobile devices. As the industry is still in its infancy, many wearables are in prototype stage but technology firms, fashion and product designers are teaming up to create a variety of apparel, accessories and fitness wear.

Revitalised interest in Haute Couture

In recent years, Haute Couture has made a notable comeback. Its clientele has not only expanded but has also shifted in demographic from the traditionally older, more mature female segment, to a more youthful and geographically diverse clientele²². The boost in Haute Couture demand has primarily stemmed from young high net worth clients in the emerging BRIC (Brazil, Russia, India and China) economies,

Middle East and Africa, representing a shift away from the traditional niche-European client base. The MENA region is estimated to represent up to one third of global Haute Couture clientele²³. As a result, global fashion brands have been very active in this space with Dior announcing double digit growth in Haute Couture revenues^{24, 25} as well as Chanel showing a record 20% growth in Haute Couture in 2014^{26, 27}. Smaller specialist boutiques have also experienced a strong surge, most notably Ralph & Russo which has reportedly grown 400% year-on-year, albeit off a lower base²⁸. This success has also attracted a range of prominent designers who are expressing interest in this sector, namely Valentino, John Galliano, Carolina Herrera and Nina Ricci, among others. In the MENA region, Elie Saab and Zuhair Murad have introduced Haute Couture lines, and modest Haute Couture has also entered the market with companies such as Haute Arabia.

1. Lebanese fashion designer Zayan Ghandour, founder of Zayan the Label and co-founder of Dubai-based multi-brand boutique concept, s'uce

2. Fashion Forward Season 6, Spring Summer 2016, Dubai, United Arab Emirates

18 MENA Design Outlook Report 2015

19 "Taking Stock: An Inventory of Consolidation in the Luxury Industry", Luxury Society (Sep 2013): <http://bit.ly/1UXhB6w>

20 "Taking Stock: An Inventory of Consolidation in the Luxury Industry", Luxury Society (Sep 2013): <http://bit.ly/1UXhB6w>

21 "Retail Ecommerce Set to Keep a Strong Pace Through 2017", eMarketer (Apr 2013): <http://bit.ly/1mva8eD>

22 "Younger Customers Are Keeping Haute Couture Alive", StyleCaster, Fashion (Jul 2014): <http://bit.ly/1L8sT64>

23 "The Middle East Fashion Industry", Arabia Style (Apr 2013): <http://bit.ly/1po2y7n>

24 "Dior Announces Annual Revenue, Growth in Couture", Business of Fashion (Jul 2014): <http://bit.ly/1W5645B>

25 "Younger Customers Are Keeping Haute Couture Alive", StyleCaster, Fashion (Jul 2014): <http://bit.ly/1L8sT64>

26 "Fashion Means Business I Haute Couture", Business of Fashion (Apr 2013): <http://bit.ly/1pzXD7T>

27 "Younger Customers Are Keeping Haute Couture Alive", StyleCaster, Fashion (Jul 2014): <http://bit.ly/1L8sT64>

28 "Reinventing Haute Couture For A Global Consumer: Ralph & Russo", Luxury Society (Mar 2014): <http://bit.ly/1Q4zIPs>

Fashion Design

Key regional drivers

Dubai now competes with London and Tokyo in terms of fashion retail sales, and has a number of large scale retail infrastructure projects underway, which should help the Emirate fare positively in terms of tourism-based leisure spend.

Rising significance as a global fashion market
The region's growing prominence as an emerging fashion market is attracting many global retail brands to enter, particularly in the GCC where strong purchasing power, tourism growth and leisure spend bode well for fashion retail. Over the coming years, fashion in the MENA region is expected to continue growing to 2017 at a CAGR of 6.1%, and subsequently by a CAGR of 7.5% to 2019, outpacing global growth to increase its market share by a further 0.6% percentage points to 6.0% by 2019.

The UAE in particular has been very proactive in the fashion industry, establishing the new Dubai Design & Fashion Council in 2013 prior to announcing Dubai's plans to become a global fashion hub by 2020²⁹. Dubai now competes with London and Tokyo in terms of fashion retail sales, and has a number of large scale retail infrastructure projects underway which should help the Emirate fare positively in terms of tourism-based leisure spend.

Proliferation of retail space

The region continues to develop retail space at a faster pace than most mature markets, and boasts a number of existing and planned retail spaces which aim to serve the ever growing fashion tourism market. Fashion retail has become a key attraction in the GCC with Dubai leading the way in attracting both brands and shoppers, hosting 59% of global fashion brands³⁰. New unique concepts are emerging, such as Mall of the World, an all-year-round walkable district designed to reflect the principles of the most vibrant urban environments around the globe. It will feature 44.1 million square feet of retail, hospitality, residential and commercial space including a retail precinct with urban malls, flagship stores, stand-alone department stores,

street retail and eight kilometers of climate-controlled pedestrian streets, entertainment and leisure attractions.

MENA Fashion events on the rise

The last five years have seen a wave of new fashion events hosted throughout the MENA region, attesting to growing interest in this segment from both local industry as well as government bodies, which have backed a number of events. In the UAE alone, the number of fashion events has more than doubled between 2006 and 2010³¹. This includes regional events such as Arab Fashion Week (hosted in Dubai) and Middle East Fashion Week (also in Dubai), as well as Fashion Forward (Dubai-based fashion events for regional designers), Vogue Fashion Dubai Experience, and the Dubai Islamic Fashion Week dedicated to Islamic and modest fashion. Abu Dhabi also launched the region's first Eco-Green Fashion show to promote socially responsible and environmentally friendly fashion brands.

Growth in modest fashion

Contemporary modest fashion has grown to become a prominent segment of the world fashion industry. Based on Islamic principles, modest fashion traditionally caters to a female Muslim clientele. With a population of over 1.7 billion Muslims worldwide³² spanning 57 countries, modest fashion has a significant addressable market base³³. Estimated at USD 224 billion in 2012, this segment is anticipated to grow to USD 322 billion by 2018³⁴. Although modest fashion was primarily conceived to cater towards the needs of contemporary Muslim women, modest fashion brands have seen success outside of their target market. For example, Capsters, a modest multi-purpose headscarf accessories brand, was created by a



reputable non-Muslim Dutch designer³⁵, and brands such as Emaan and East Essence have focused on modest and traditional menswear³⁶, signaling a growing designer and consumer base for the industry.

3 – 4. Mall of the World concept, Dubai, United Arab Emirates

5. Fashion Forward Season 6, Spring Summer 2016, Dubai, United Arab Emirates

6. Behind the scenes at Fashion Forward Season 6, Spring Summer 2016, Dubai, United Arab Emirates

²⁹ "Dubai Establishes Design and Fashion Council", Gulf Business (Aug 2013):<http://bit.ly/1UXipbM>

³⁰ "Re-positioning Dubai", Not-Just-a-Label (Oct 2013): <http://bit.ly/1PvKiUq>

³¹ "The Value of the Fashion Industry", The British Fashion Council & Oxford Economics (2010) <http://bit.ly/1Q4zMt1>

³² Pew Forum

³³ "State of the Global Islamic Economy 2013", Thomson Reuters (2013)

³⁴ "State of the Global Islamic Economy 2013", Thomson Reuters (2013)

³⁵ Capsters Online Store: <http://bit.ly/1oJTEw3>

³⁶ Emaan Online Store: <http://bit.ly/1Q2JtSp>

³⁷ East Essence Online Store: <http://www.eastessence.com/#>

Experiential Design

Experiential design appears to be emerging in the MENA region as brands increasingly seek to build emotional connections and lasting relationships with customers, particularly with the rise of social media and the youth demographic.

Experiential design in the simplest form is the design of user experiences and interfaces. It draws on a number of disciplines such as behavioral psychology, information architecture and marketing to understand how users will encounter, perceive and interpret an experience associated with a brand, product or service. This is then applied to the design of products, services, events and physical spaces. Experiential design uses carefully arranged touch points and interactions to elicit reactions, emotions and responses from a user or user group. Many experiential designers view their practice as taking an audience or participant through a curated experience to create the desired reaction and feeling.

One of the main ideas behind this movement is the premise that most of a company's focus is on the sale and the quality of the product, rather than the experiences it generates. Companies and brands have focused much of their analysis and spend on the design of a product or service, being reliant on analytical marketing and branding to drive volume or price premiums. In experiential design, the experience and interaction of goods or services is as important as the item itself.

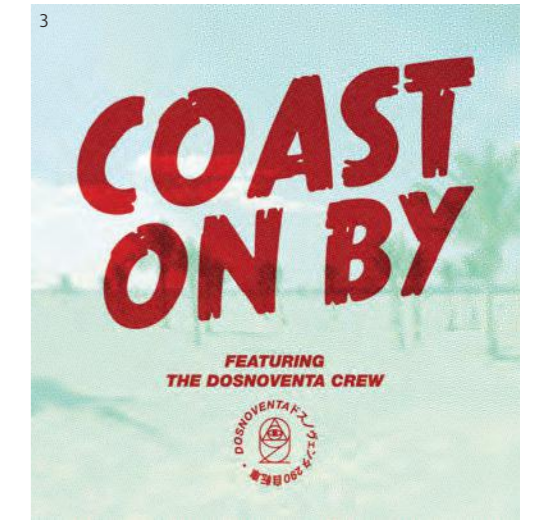
Generally, experiential design is a cross-discipline approach that can be applied to, for example, architecture and interior design (understanding how people perceive and experience physical spaces), communication design (looking at how content and information can be presented to elicit reactions), and product design (focusing on how users experience and create connections with products). Experiential design has been implicit in both art and fashion design, given the highly sensory nature of both, but is increasingly

being used in the curation and presentation of art and fashion pieces, from the gallery to the catwalk and through to the retail space.

Apple is one of the most iconic brands to rely on experiential design principles, which can be seen across their campaigns, retail spaces and locations, customer service approach, product interfaces and packaging and launch events.

This type of design appears to be emerging in the MENA region as brands increasingly seek to build emotional connections and lasting relationships with customers, particularly with the rise of social media and the youth demographic. Experiential retail outlets and marketing campaigns are some of the few notable examples.

The UAE has been one of the first MENA countries to use experiential design services to enhance customer interactions and brand perceptions. UAE-based telecom service provider Etisalat launched a new concept store in Al Ain in 2014 with the aim of reimagining the overall customer interface and experience. It called upon the multichannel brand agency StartJG to design the customer experience through the interactions with physical retail space, the staff, the product and the overall brand. Customers receive a 'triage' upon arrival to determine the nature of their request and to be directed to the appropriate part of the store, which is divided into express consultation areas and a private space for more complex requests, with a comfortable café-style lounge to entertain customers while they wait, including iPads with browseable content. Furthermore, the brand's products and services are showcased as 'mini-experiences' via hotspots, providing customers with an interactive experience.



International brand PUMA has used experiential design to make an impactful user experience in the local market. PUMA Fishtail Rides paired up with brand agency Moloobhoy & Brown to build PUMA's status as a lifestyle brand. One aspect to this was building a fixed-gear community cycling experience in Dubai, with bike rides organised on a monthly basis under the brand positioning 'ride a different side of your city'. A brand video was developed to showcase the activities along with bespoke soundtrack. Overall, the user experiences the PUMA brand through live and active events which encourage a sense of participation, community, and healthy activity.



- 1 – 2. Behind the scenes PUMA Fishtail Rides brand film
- 3. Coast On By ride #3 identity
- 4. Dosnoventa team Rider and PUMA ambassador Juan Guadalajara at Umm Suqeim Open Beach

Social Design

Awareness around issues of sustainability and social responsibility has increased in the MENA region, with a number of movements and initiatives gaining traction, such as ethical purchasing and organic sourcing.

Social design focuses on the impact of sustainability and social responsibility on design choices. The idea being that the design of products or services can be altered to reduce negative impacts on the environment and society, and to encourage socially responsible choices and behavior. The view often shared in this community of designers is that brands and products need to provide sustainable solutions that appeal to both consumers and communities in order to affect changes in the way products and services are produced and consumed. Social design is influenced by the environmental or green movements, as well as trends toward corporate and social responsibility. This can be seen from how raw materials are sourced and produced, how goods are packaged, leveraged and consumed, and how services are presented and experienced by consumers. Social design tends to take into account the full supply chain of goods and services, based on working conditions, environmental impact, and the social behavior of consumers who experience these products and services.

This form of design is prevalent across more mature design markets, with community initiatives employing designers to develop new tools to improve social cohesion through to governments employing designers to improve the delivery of public services.

Awareness around issues of sustainability and social responsibility has increased in the MENA region, with a number of movements and initiatives gaining traction, such as ethical purchasing and organic sourcing. Social design principles are also evident in the growing number of farmers markets, organic produce stores, and product and clothing lines supporting local workers. This is especially true in the handicrafts sector, which is specific to the region and benefits from government provision and support.

Still, social design as a commercial service is relatively nascent in the MENA region, with limited examples of corporate or government spend on social design services to improve products and offerings. A few projects have been established in Beirut and Dubai, one being DESMEEM, a multidisciplinary social design project in Beirut that facilitates collaboration between designers and architects, aiming to address social issues such as urban living and sustainable consumerism in Lebanon.

Food design

Food design involves the designing of a food product in terms of the surrounding context and environment, and creating an experience for the end consumer. It can also involve creating tools for the eating experience. An example of this is Open Chocolate, an interactive chocolate bar that is stamped with a graphic code providing access to nutritional information about the product and a database of chocolate recipes.

Food design in the MENA region is very much in its infancy although Beirut and Dubai appear to be leading the way on this front. At the 2013 Beirut Design Week, the Beirut 2090 was a collaborative workshop in food design that re-interpreted traditional recipes and re imagined them in futuristic form in recognition of the country's evolving identity within the region. In addition, the Carwan Gallery opened in late 2013 in Beirut with a food design installation by Chef Charbel El Hachem and designer Carlo Massoud. In Dubai, the Department of Tourism and Commerce Marketing commissioned an art installation depicting Dubai's famous skyline and iconic buildings made entirely out of food, which was exhibited at the World Travel Market in London and the Dubai Food Festival in February 2015.



Food design in the MENA region is very much in its infancy, although Beirut and Dubai appear to be leading the way on this front.

Design Education Demand Forecast

In this section we detail the potential for design education based on the projected growth of the design sector over the next five years.

Evolution of the design market across the MENA region

In order to assess the future demand for design graduates in the workplace, a structured approach was taken to assess the future requirements based on the projected growth of the various design segments up to 2020.

In absolute numbers, the UAE and Saudi Arabia are by far the largest overall design markets in the region, respectively totaling USD 27.6 billion and USD 21.9 billion in design revenues in 2014. The third and fourth largest markets are Qatar and Egypt, both representing around half of the Saudi market. From a growth perspective, Saudi Arabia and Qatar are the fastest growing design markets in the region, having respectively experienced a growth rate of 9% and 11% between 2010 and 2013.

The exhibit opposite details the size of the design market by country in 2013. See Exhibit 2 p33.

Based on projections of the MENA Design Outlook, the potential evolution of each of the key design segments has been projected up to 2019.

Currently, the MENA Design sector is a predominantly import-oriented industry where locally produced design goods and services account for approximately 35% of the total

market size. In specific design segments, particularly Fashion and Furniture, 80% of the demand is satisfied through imports instead of local production. Compared with more mature countries such as Denmark, US, UK and France, the MENA Design sector has still a relatively small contribution to the region's GDP (1.5%) suggesting room for growth and production opportunities.

For the purpose of assessment of the evolution of the design market, we have excluded the retail value of fashion which accounts for 80% of the size of the fashion segment.

The exhibit on the facing page details the size of the design market by segment and its expected evolution up to 2019 based on the MENA Design Outlook. See Exhibit 3 p34.

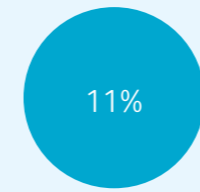
In order to derive the estimated demand for design graduates needed to sustain this growth, we have considered the relationship between growth in the size of the design industry and its correlation with growth in the corresponding number of design graduates across three markets i.e. United States, Australia and United Kingdom. Based on analysis across these three markets,³⁸ it appears that the size of the design sector is strongly correlated with the number of design graduates produced by educational institutions in the country.

³⁸ Correlation coefficient of 0.92 between the size of the architecture market and number of design graduates in the United States and 0.99 between the size of other design segments and the number of design graduates

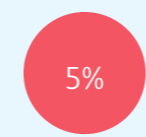
Exhibit 2: Design market size by country – 2013

Compound Annual Growth rate by segment

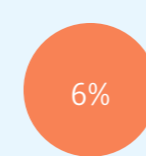
KSA - Architecture and Interior Design - large scale social infrastructure programs



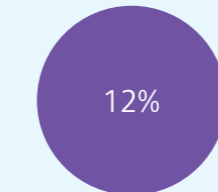
UAE - Fashion - driven by Dubai as a retail capital of MENA



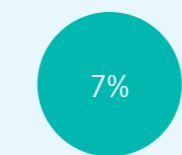
Lebanon - Craftsmanship - strong furniture segment



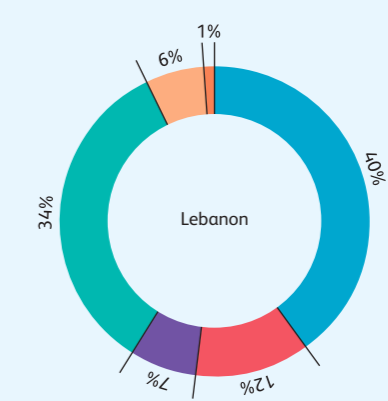
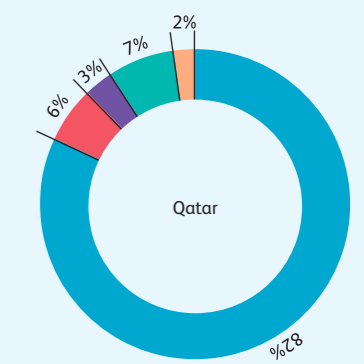
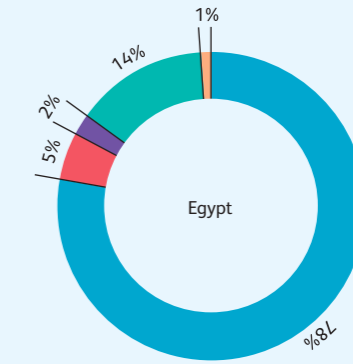
Qatar - Fashion is dominant segment - retail driven



Egypt - Furniture - hand-carved wooden objects

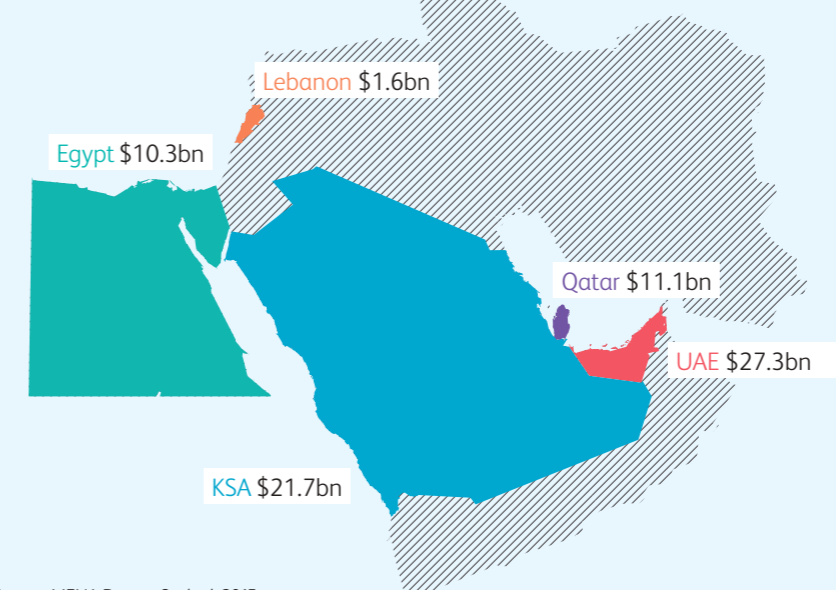


Breakdown of market size by segment



- Fashion
- Architecture
- Interior Design
- Furniture
- Lighting
- Graphic Design
- Visual Arts

Design Market Value by country



Source: MENA Design Outlook 2015

We estimate that the region requires at least 30,000 design graduates by 2019 to achieve sustainable growth projections. This suggests the need for a nine-fold increase in the number of design graduates currently being produced.

Design Education Demand Forecast

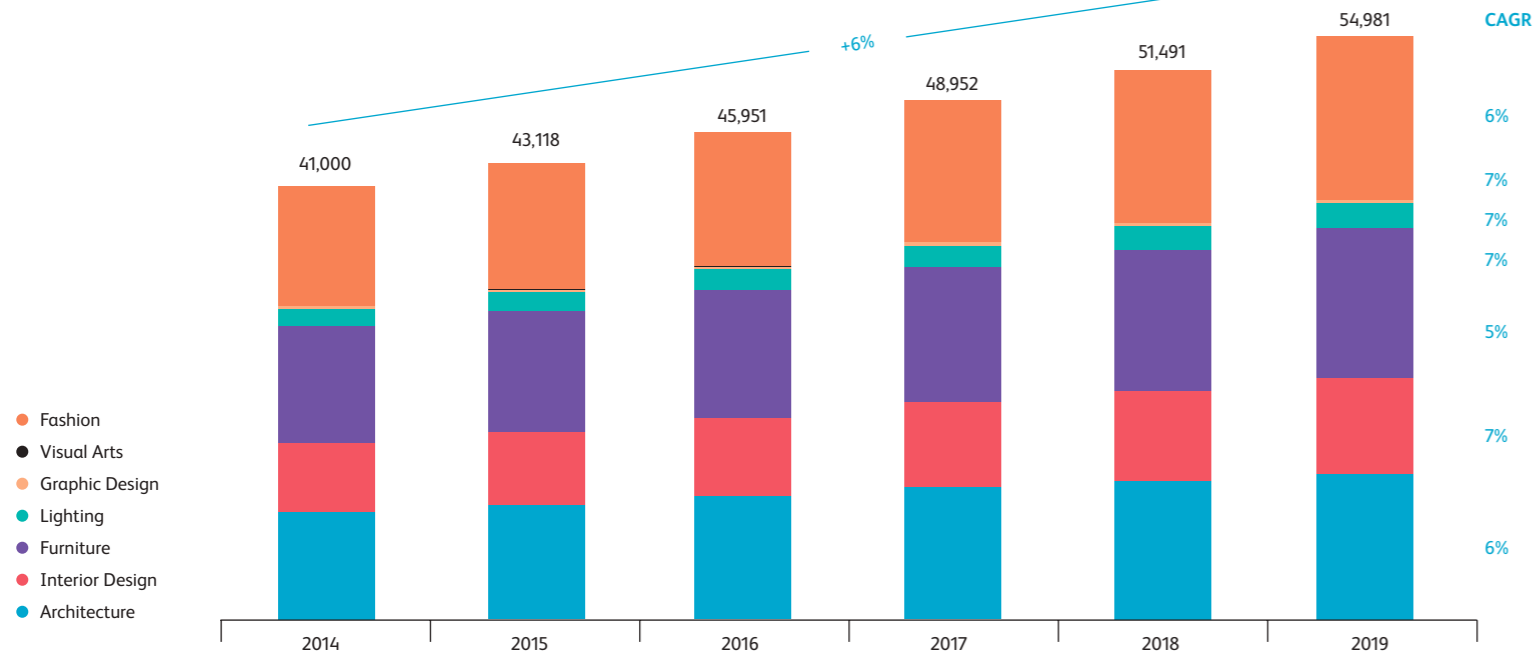
The exhibit opposite details the approach to the analysis. See Exhibit 4 p35.

Based on the projections for the growth of the design sector in the MENA region, we have estimated that the region would require at least 30,000 design graduates by 2019 to achieve the growth projections in a self-sustainable manner i.e. without importing skills from outside the region. This would require a nine-fold increase in the number design graduates currently being produced in certain design segments in order

to ensure that the region's design growth is indigenous. See Exhibit 5 p35.

This suggests a tremendous opportunity for design schools and universities across the MENA region to work closely with the design sector and draw out a workforce planning roadmap to address the potential gap in skill sets across various segments over the next few years.

Exhibit 3: Evolution of design market across MENA for key segments (USD Millions)

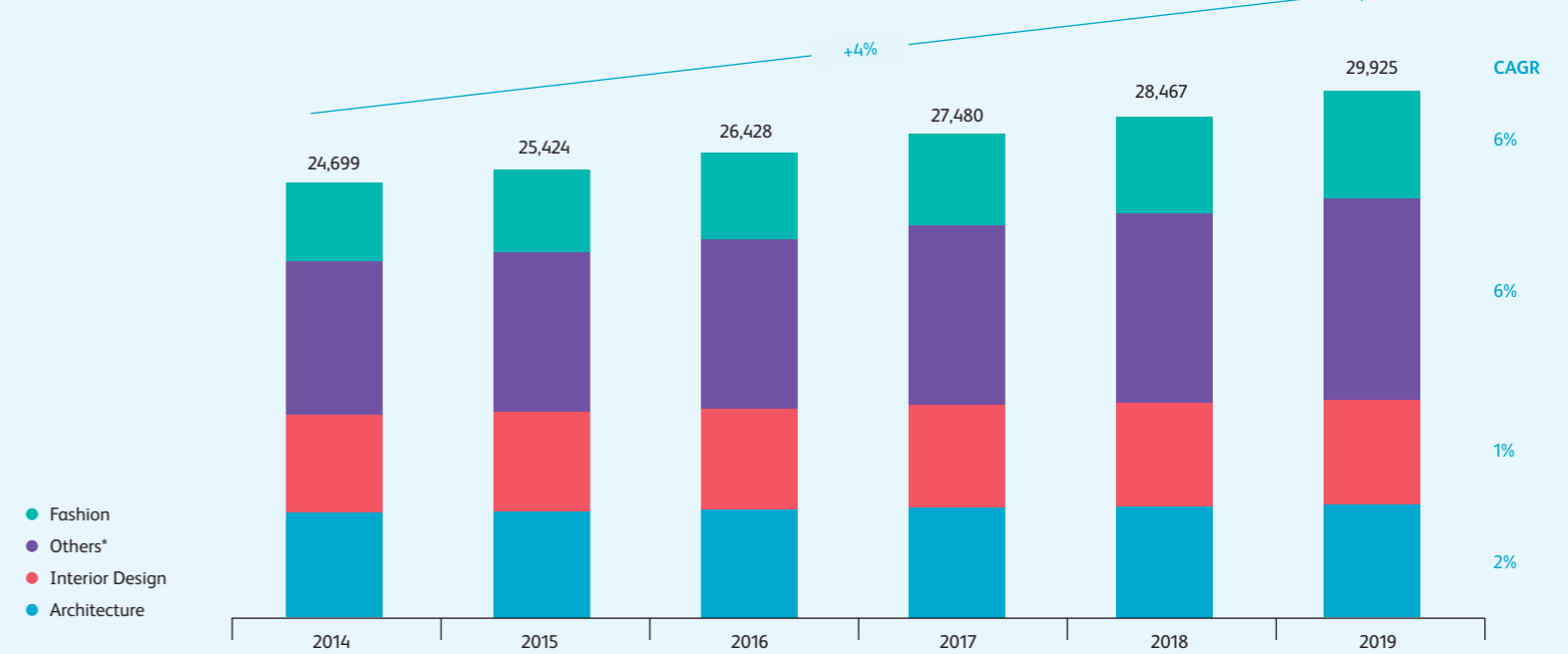


Source: MENA Design Outlook 2015

Exhibit 4: Approach used to size the Design Education opportunity

1. Identify benchmark countries		2. Map industry growth vs. skill needs construct		3. Derive projections for the UAE	
Activities	Identify benchmark countries for analysis	Activities	Develop data set to correlate design segment growth with design graduates growth	Activities	Develop projections of graduates in demand for architecture and other design segments
	Target benchmarks include: > United States > Australia > UK		Normalise data set to account for abnormal years (e.g. financial crisis)		Based on corporate survey interviews derive directional view on design segments with highest need for graduates
Approach	Desk Research	Approach	Develop regression equation (design segment growth vs. growth in graduates)	Approach	Corporate surveys
			Desk researched based on data available from National Statistics bureaus		
			Fine-tuning based on interviews/data from placement agencies		

Exhibit 5: Estimated supply of design graduates needed to sustain growth of the design sector



*Others includes Lighting, Graphic Design, Visual Arts and Experiential Design

Source: Monitor Deloitte analysis

Regional Design Education Landscape

2

Introduction

The regional geographic scope of this publication is MENA with a focus on six major countries: The United Arab Emirates, Qatar, Lebanon, Egypt, Jordan and Kuwait - which are key contributors to the MENA design education sector. In this section of the MENA Design Education Outlook report we analyse the perspectives of design education students and employers, through our research work as part of the Workforce Planning Study 2012 and the MENA Design Education Study 2015. We delve into trends in innovative infrastructure such as Fabrication & Prototype labs as well as 3D Printing and discuss their growing role within design education.

2.0 Regional Design Education Landscape

2.1	Student Perspectives	38
2.2	Industry Perspectives	44
2.3	The United Arab Emirates	51
2.4	Qatar	56
2.5	Lebanon	58
2.6	Egypt	62
2.7	Jordan	64
2.8	Kuwait	66
2.9	Role of Infrastructure	70
2.10	Fabrication & Prototype Labs	71
2.11	3D Printing Facilities	73

Student Perspectives

This section provides insight into student and corporate perspectives on design education courses, perceived gaps in design-related skill sets and preferred destinations for higher education.

In late 2012, TECOM Group and Deloitte jointly conducted an assessment of the workforce planning landscape in the UAE. Supported by interviews conducted across 17 markets amongst current students, graduates and corporate recruiters, the study examined the perception of Dubai as a center of higher education and training, Dubai's positioning versus other emerging educational hubs, and the current skills in demand across sectors. The study offered insight into areas of strengths for the education sector in the UAE while laying out the building blocks for a robust workforce planning and development effort in the UAE.

Dubai enjoys a strong perception with regard to being a hub for Higher Education across markets surveyed. The study suggested that the UAE was ranked 4th amongst preferred destinations for higher education across the world. Only the United States, the United Kingdom and Canada ranked higher as a destination for higher education.



2015 MENA Design Education Student Survey Results

The UAE enjoys a similarly strong position in the area of Design Education. In the **2015 MENA Design Education Study**, a market research student survey was conducted covering more than 900 students across 13 markets with extensive coverage across the various design sub-segments. The survey covered a wide range of students across the GCC, Levant, North Africa, Indian sub-continent and China. The average age of respondents was 24 years old. The majority of participants in the survey were students pursuing design-related courses. See Exhibit 6 and 7 p40.

Monitor Deloitte's interviews revealed a perceived lack of design courses reflecting the latest trends in Design Education in markets particularly related to Design Thinking, Strategic Design Management, Experiential Design, Sustainability, and Social Design.

In the 2015 Design Education study, close to 70% of surveyed students perceive Dubai's reputation for Higher Design Education to be "good" or "excellent". This perception appeared to be strongest in markets such as Oman (86%) and KSA (84%). See Exhibit 8 p41.

Preferred destination for design higher education

The Design Education survey revealed that students perceive the United States as the most preferred destination for design higher education, followed by France. The UAE stood 4th in terms of students' preferred destination for higher education, scoring lower than mature design markets such as the US, France and the UK. Students in markets such as India appeared to be satisfied with the quality of basic design

education in their home country. A Bachelor of Textile Design was ranked as the top design education program students are intending to pursue, followed by a Bachelor in Fashion Design. See Exhibit 9 p41.

Across the markets surveyed, the international reputation of an institution appears to be the single most important factor driving students in choosing their destination for design higher education. The second major reason for selecting a country/city to study in is the local reputation of educational institutions, followed by affordability of tuition fees. See Exhibit 10 p42.

Dubai's strong positioning as a center for Higher Design Education is reflected in its strong perceived positioning of education institutions, access to good facilities, infrastructure and availability of job placement opportunities. See Exhibit 11 p42.

Quality and adequacy of courses

Respondents in the market study cited significant gaps in the sufficiency of design courses in Digital & Multimedia design, Visual Arts, and emerging design sub-segments. This was particularly evident in China. Survey results also showed concerns around the adequacy of fashion programs in the Levant. The quality and depth of programs was seen to be a concern in markets such as China, North Africa and the Levant across sub-segments. Students from the Indian sub-continent appeared to be fairly satisfied with the quality and depth of programs across sub-segments. See Exhibit 12 p43.

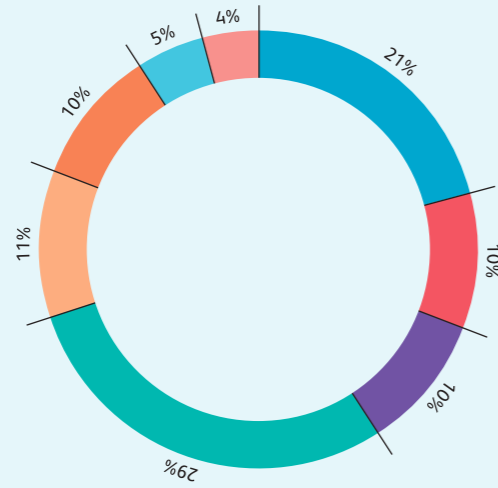


1 – 3. Dubai International Academic City campus, Dubai, United Arab Emirates

Exhibit 6: Student Survey – Profile of Students Surveyed

Breakdown of respondents by design segment

- Architecture, Landscape and Urban Design
- Interior Design
- Industrial Design & Product Design
- Fashion & Textile Design
- Communication & Graphic Design
- Digital & Multimedia Design
- Visual Arts
- Experiential Design

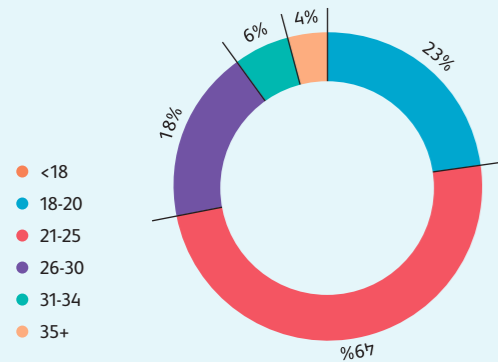


Country	Achieved Sample
UAE	100
KSA	122
Qatar	80
Oman	40
Kuwait	80
Bahrain	40
Egypt	42
Lebanon	80
Jordan	81
Morocco	42
India	83
China	40
Pakistan	80
Total	910

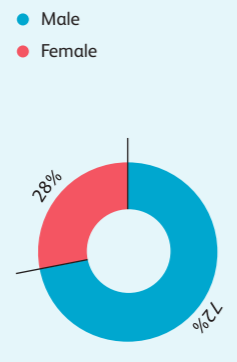
Source: TNS Student survey 2014-15

Exhibit 7: Student Survey – Profile of Participants

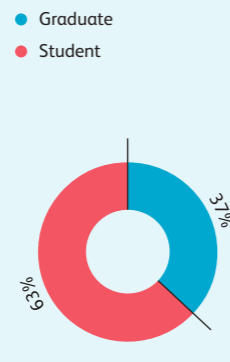
Participants Age (n=910)



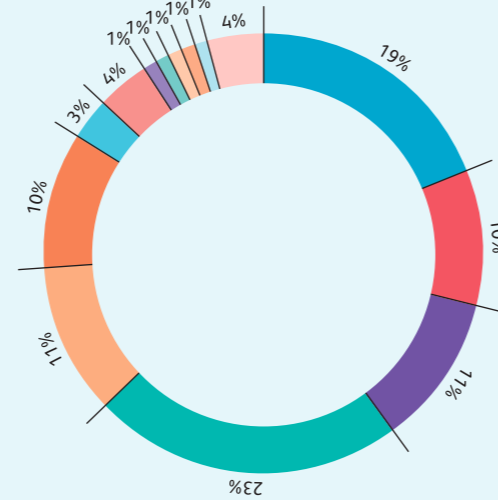
Participants Gender (n=910)



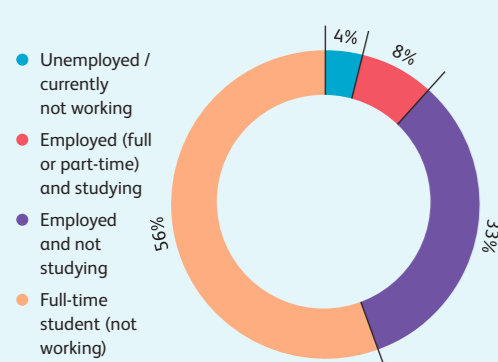
Participants Status (n=910)



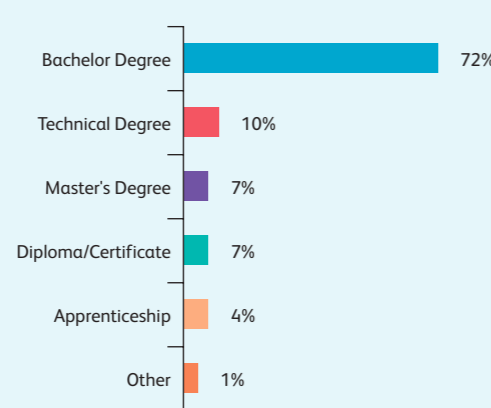
Industry of employment (n=366)



Employment Status (n=910)



Type of education pursued or currently pursuing (n=910)



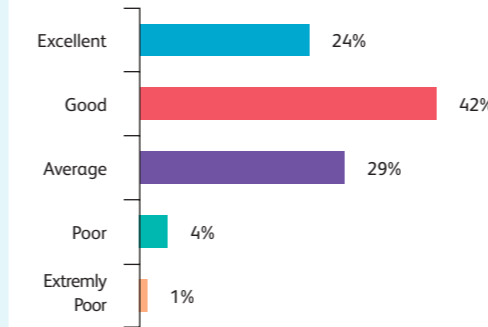
- Architecture, Landscape and Urban Design
- Interior Design
- Industrial Design & Product Design
- Fashion & Textile Design
- Communication & Graphic Design
- Digital & Multimedia Design
- Visual Arts
- Experiential Design
- Finance
- Information Technology
- Consultancy and Services
- Manufacturing
- FMCG
- Others

Source: TNS Student survey 2014-15

Exhibit 8: Student Survey – Perception of Dubai

Workforce Planning Student Survey 2012

Perception of Dubai as a Higher Education hub (n=2,126)



Design Education Report 2014

Perception of Dubai's reputation as a centre for Higher Design Education (n=910)

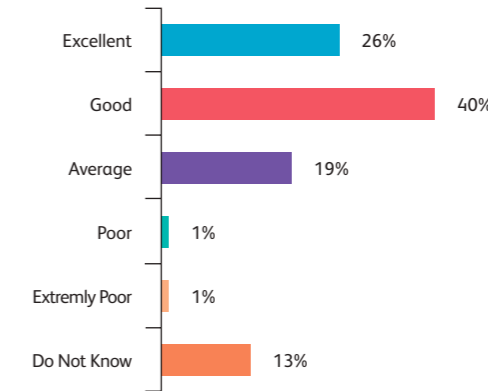


Exhibit 9: Student Survey – Preferred Courses

Top design education intending to pursue (n=381)

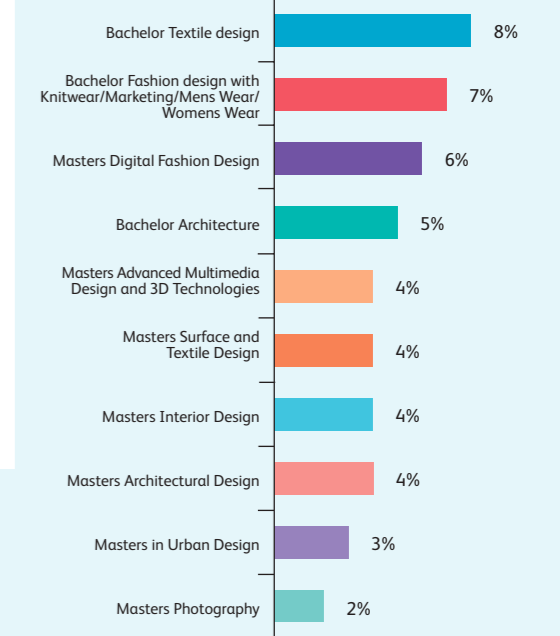
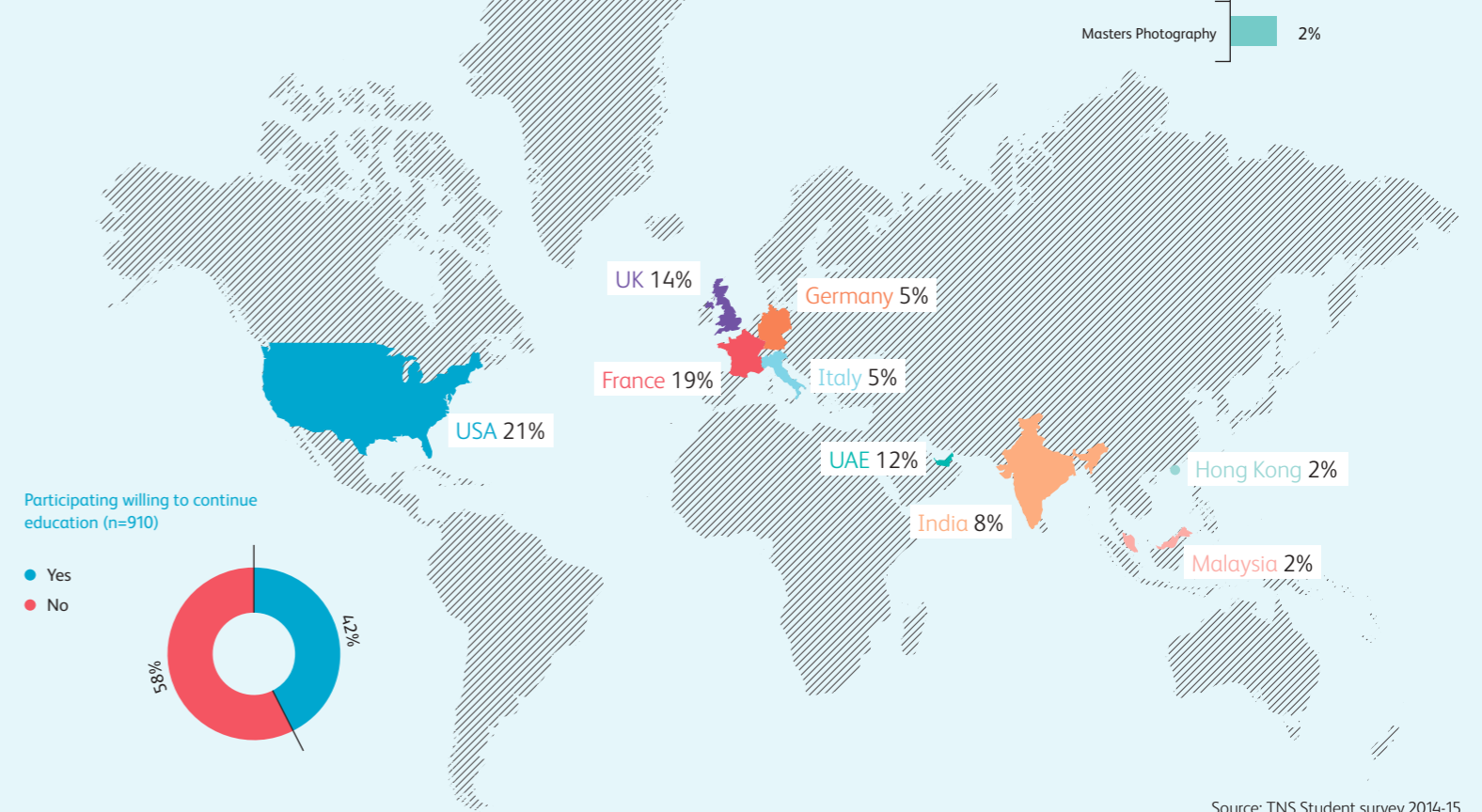
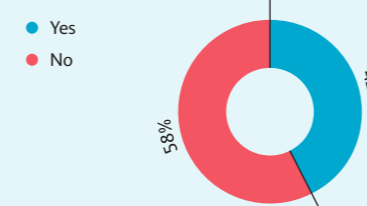


Exhibit 9: Student Survey – Preferred Destination

Preferred destination for Higher Design Education (n=381)



Participating willing to continue education (n=910)

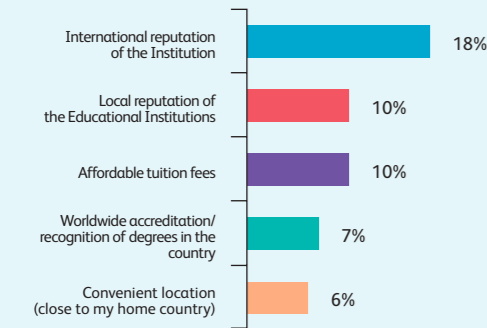


Source: TNS Student survey 2014-15

Exhibit 10: Student Survey: Criteria for selecting a destination for Higher Design education

Top five reasons for selecting Country/City to study in:

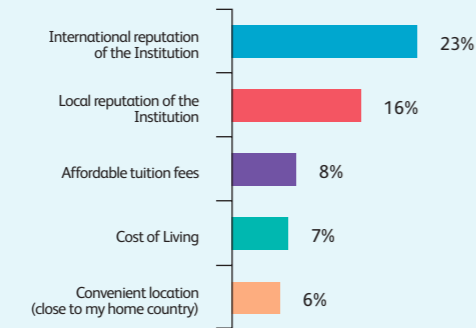
GCC (n=462)



Bahrain, Kuwait, KSA, Oman, Qatar, UAE,



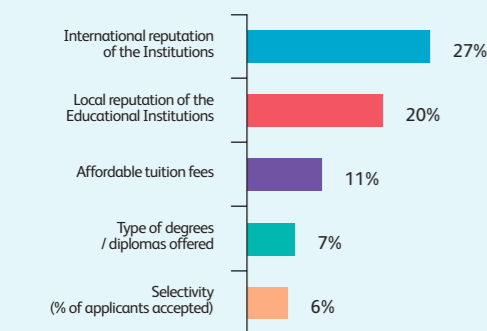
Levant (n=161)



Jordan, Lebanon



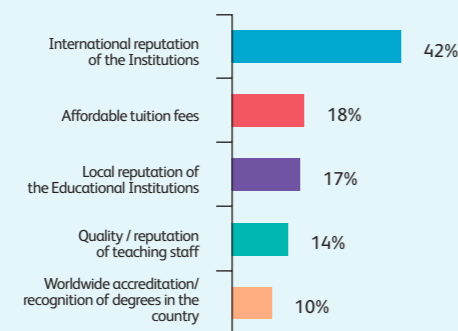
North Africa (n=84)



Egypt, Morocco



Indian Subcontinent (n=163)



India, Pakistan



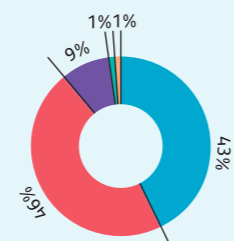
Affordability of tuition fees is a key factor in decision making for sub-continent students

Source: TNS Student survey 2014-15

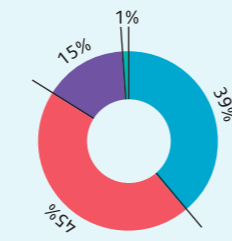
Exhibit 11: Reasons for Considering Dubai as a Higher Design Education Destination

(n=910)

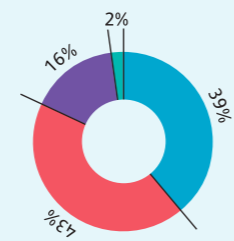
Reputation of the Institutions



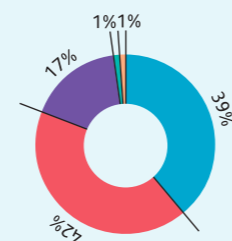
Average Salary of Alumni



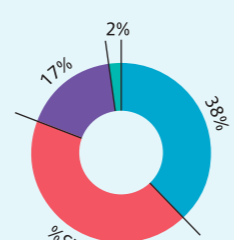
Access to good facilities and infrastructure



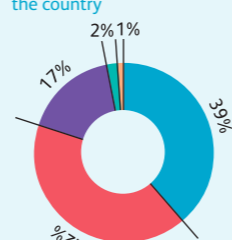
Availability of job placement opportunities



Availability of Internship programs



Worldwide accreditation/recognition of degrees in the country

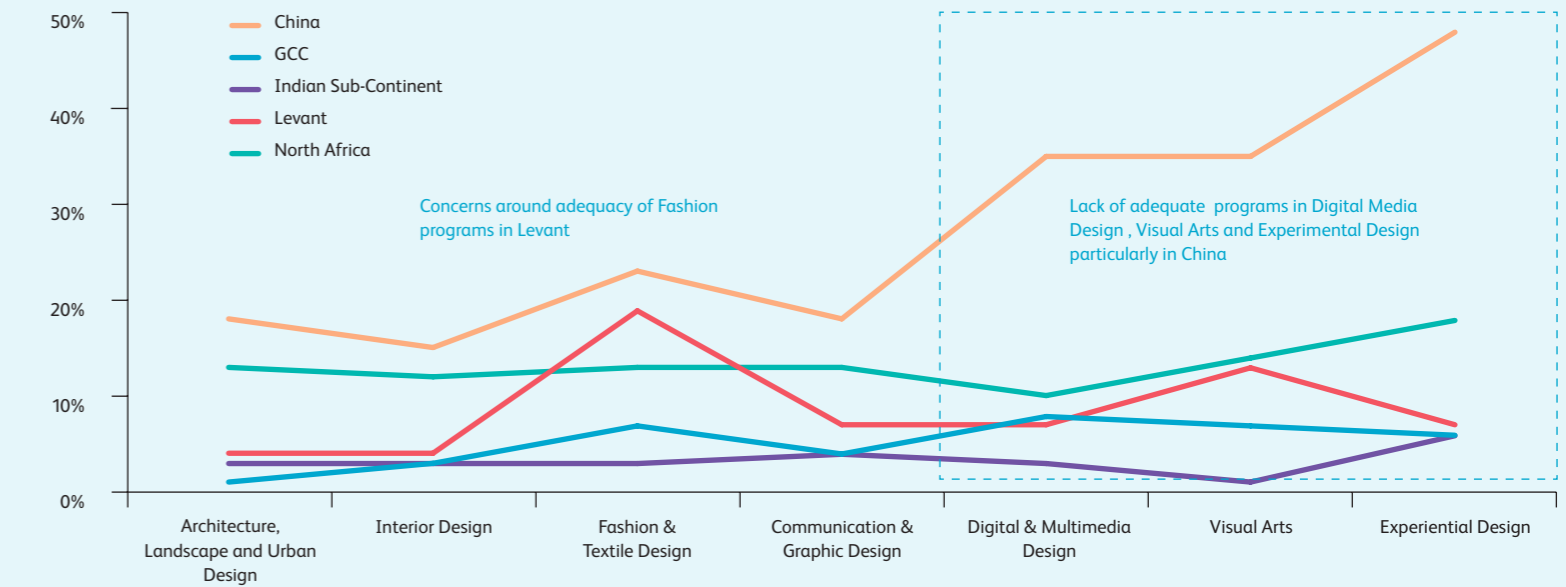


- Extremely Important
- Somewhat Important
- Neither Important nor unimportant
- Somewhat unimportant
- No at All important

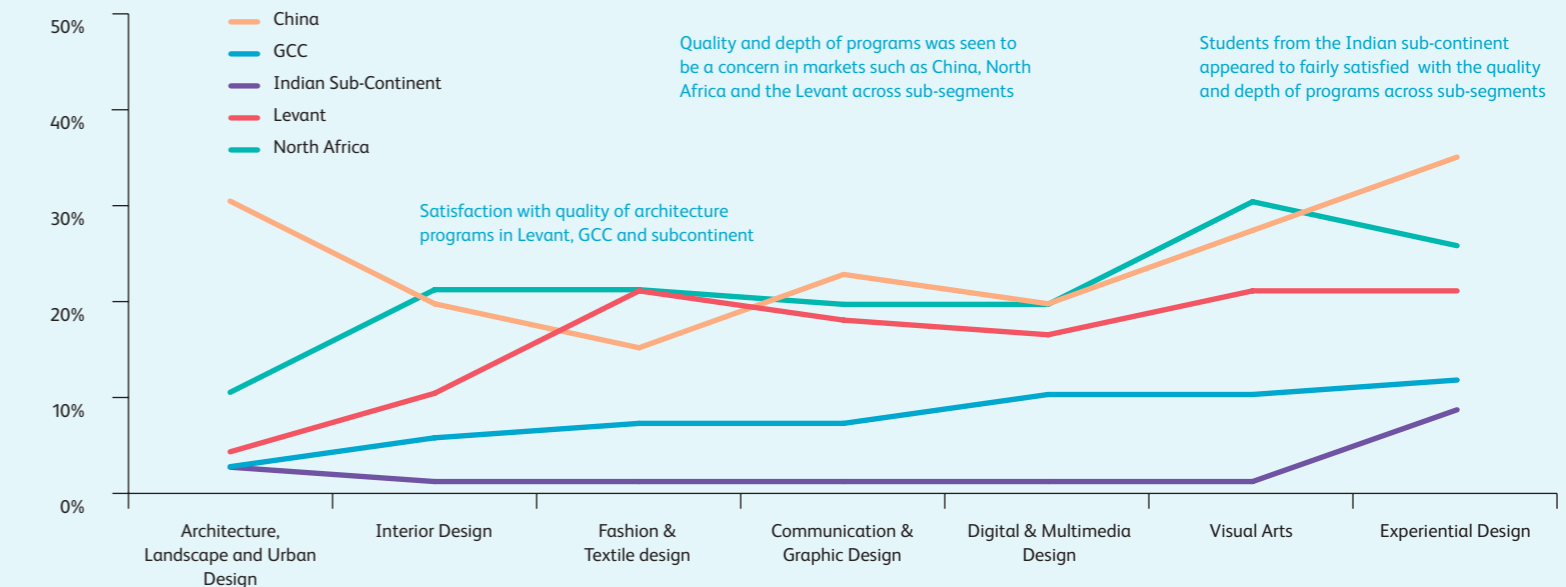
Source: TNS Student survey 2014-15

Exhibit 12: Student Survey: Quality and adequacy of courses

Perception on the adequacy of design education programs for each segment in home country (% of Respondents who considered the current design courses to be "Somewhat Insufficient" or "Not at all Sufficient")



Perception on the quality and depth of design education programs for each segment in home country (% of Respondents who considered the current design courses to be "Somewhat Insufficient" or "Not at all Sufficient")



Source: TNS Student survey 2014-15

Industry Perspectives

On average, corporates anticipate a minimum increase of 20% per annum in headcount for junior-level designers over the next two to three years, at the time of the study.

In the MENA Design Education Study 2015, a market research survey covering 154 corporates across 12 markets was conducted with extensive coverage across the various design sub-segments. The survey covered a wide range of corporates across the GCC, Levant, North Africa, Indian sub-continent and China. See Exhibit 13 p45.

Hiring trends

On average, corporates anticipate a minimum increase of 20% per annum in headcount for junior-level designers over the next two to three years, at the time of the study. At middle and senior levels, an anticipated increase in headcount is anticipated to be between 7 to 14%. Estimated increase in headcount at junior levels was highest in the Architecture and Fashion segments (i.e. between 15 to 30%). Corporates surveyed found the most difficulty in hiring at senior management levels. Large Retail Groups such as Landmark are keen to explore collaborations with regional design education institutions, but are yet to be convinced about the credibility of courses on offer. See Exhibit 14 p45.

Sourcing of candidates

The Indian subcontinent and Egypt were seen as major markets for sourcing design talent, with the exception of the GCC. At the graduate level, Egyptian (i.e. Cairo University, Alexandria University) and Lebanese universities (i.e. Lebanese American University, American University of Beirut) were the most popular universities for corporates to recruit from. Well recognised universities in the UAE, such as The American University of Sharjah (AUS), produce relatively fewer graduates than the Egyptian or Lebanese Universities and, consequently, ranked relatively lower in terms of preferred universities for recruitment. Job roles most in demand included those in Architecture, Fashion and Interior Design; consistent with students' preferred job roles after education. See Exhibit 15 p46 and 16 p47.

Perception of quality of education

At least 70% of Corporates surveyed considered Dubai to be either "good" or "excellent" as a destination for Higher Design Education. More than 70% of corporates surveyed consider UAE design universities to be of "good" and "excellent" quality compared to Europe and worldwide, with perception being lower in regards to UAE training programs. When probed, many of the respondents surveyed were not aware of design courses offered by UAE universities, suggesting a lack of proper marketing of these courses even in the UAE. Positive perception was strongest in the GCC markets and Pakistan, and was the lowest in India. See Exhibit 17 p47.

Exhibit 13: Corporate Survey – Profile of Corporates Surveyed

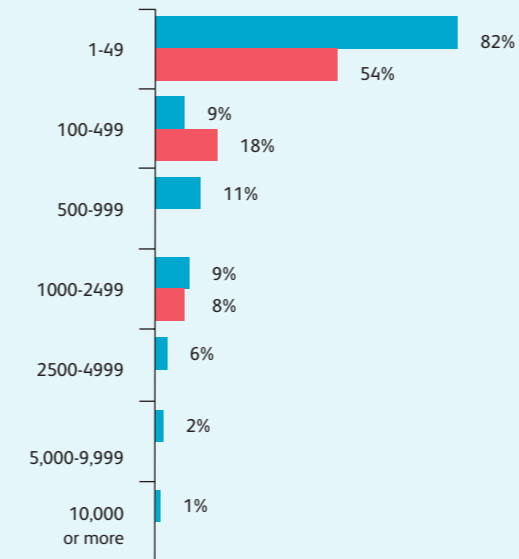
Profile of corporate surveyed		
	# of companies interviewed	Examples
Architecture	36	Hirsch Bedner Associates, KEO International Consultants, OMA AMO
Interior Design	20	Clifton Interiors, KPS
Industrial & Product Design	17	Patchi, Qatar Plastic Products Company, QOC
Fashion & Textile Design	38	Al-Futtaim, Alshaya, Landmark Group, SKS Fashions Designers
Communication & Graphic Design	17	Moloobhoy & Brown, North 55, Weber Shandwick
Digital & Multimedia Design	14	Xisché & Co.
Visual Arts	6	The Jam Jar, Maraya Art Centre

Country	Achieved Sample
UAE	18
KSA	15
Qatar	15
Oman	8
Kuwait	16
Bahrain	8
Egypt	10
Lebanon	16
Jordan	16
Morocco	10
India	11
Pakistan	11
Total	154

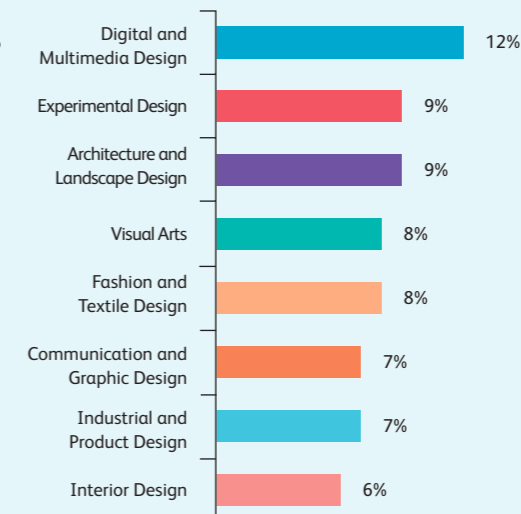
Source: TNS Corporate survey 2014-15

Exhibit 14: Corporate Survey: Hiring Trends

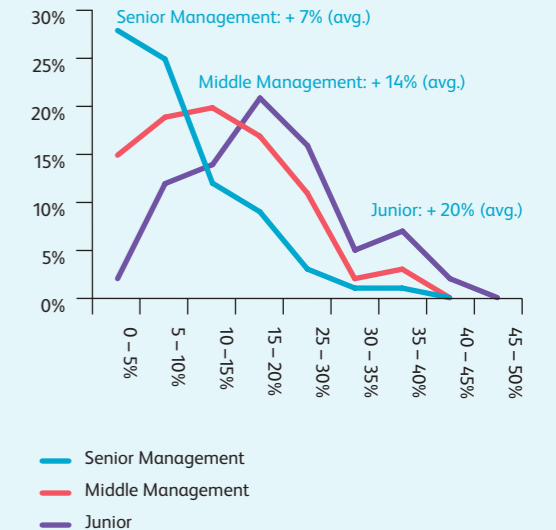
Number of Employees (n=154)



Average Expected annual growth across design segments



Expected Annual Increase in design headcount over the next 2-3 years (n=154)



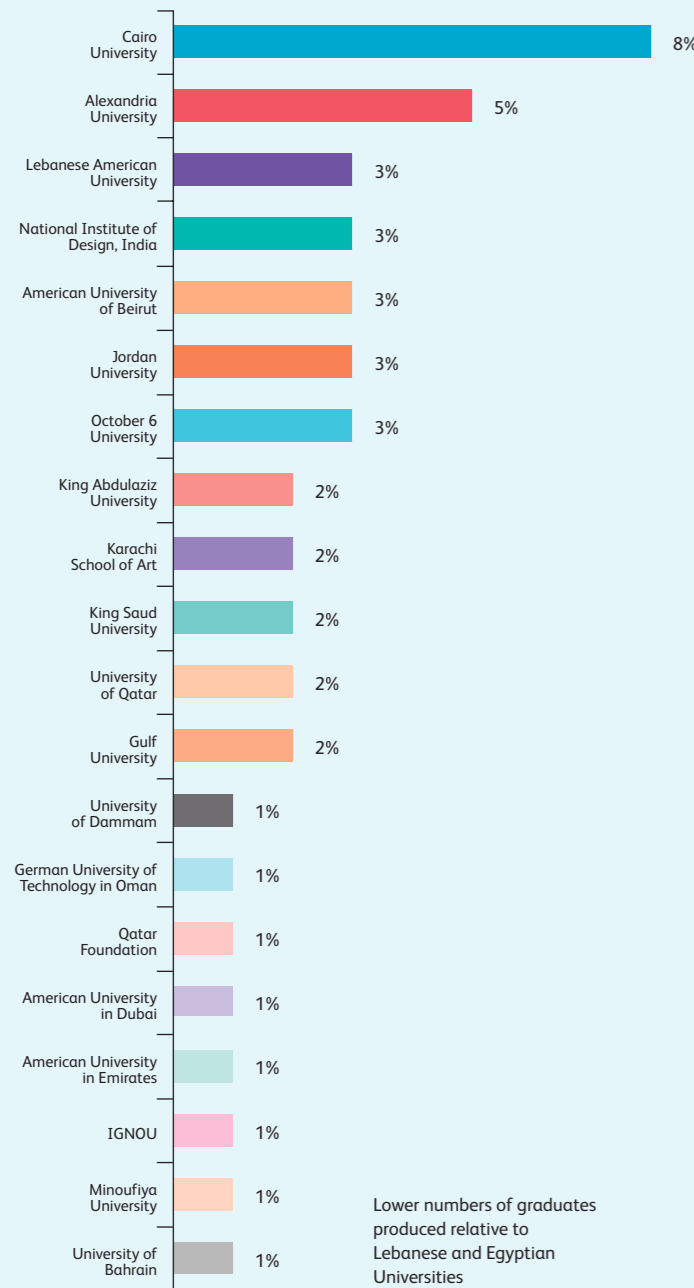
- Corporates within MENA region: Number of employees in the region
- Corporates outside MENA region: Number of employees in office country

UAE companies expect higher growth than average in Digital and Multimedia, Visual Arts and Experimental Design

Source: TNS Corporate survey 2014-15

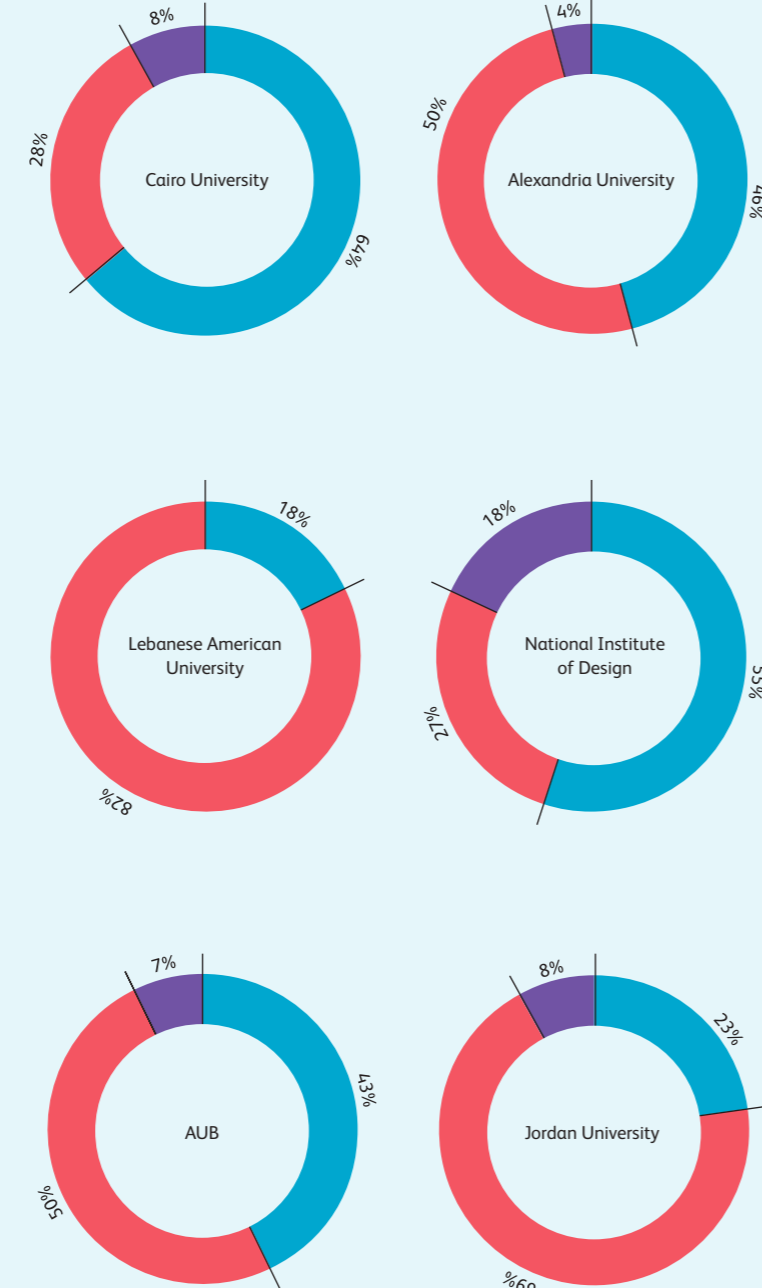
Exhibit 15: Corporate Survey: Preferred Universities

Universities Recruited From (n=152)



Source: TNS Corporate survey 2014-15

Perception of quality of graduates from Regional Universities

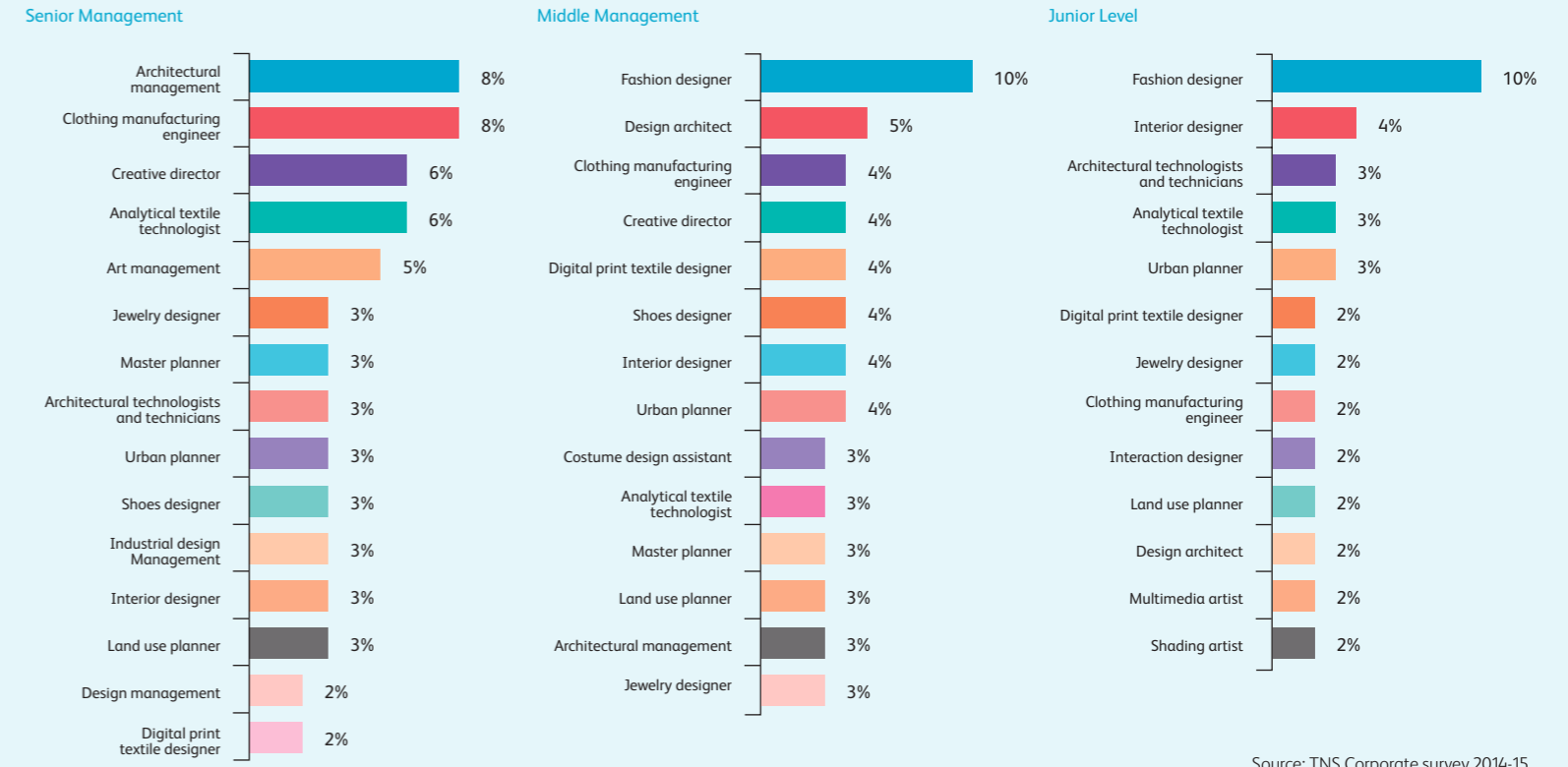


Lower numbers of graduates produced relative to Lebanese and Egyptian Universities

● Excellent
● Good
● Average

Exhibit 16: Corporate Survey: Job Roles Most in Demand

Job Roles most in demand



Source: TNS Corporate survey 2014-15

Exhibit 17: Survey: Voice of Corporates and Educators

Voice of Corporates

<p>"European Designers tend to be more expensive and very category focused. Designers from the Indian sub- continent are more flexible"</p> <p>Large Retail Conglomerate</p>	<p>"We would be extremely keen to recruit designers from the region, however we have limited knowledge of the quality of designers produced by local programs"</p> <p>Perkins Will</p>
<p>"Generally only 2nd and 3rd generation expats who live with the parents prefer to study in the UAE. The Design school would need to offer a strong proposition to them as well as overseas students"</p> <p>Various Corporates</p>	<p>"Cape Craft offers a Unique business model, working with corporates on training employees on specific issues including:</p> <ul style="list-style-type: none"> Marketing Pricing Communication How to forecast the market in the future How to change and adjust to new trends Gallery and show management <p>Cape Craft</p>
<p>"Top 3 barriers to the growth of design in the region are</p> <ol style="list-style-type: none"> The limited government support to art and design The lack of supporting ecosystem The lack of educational facilities" <p>JamJar Studio</p> 	<p>"Ensure that the technology aspect is not ignored in design courses. Key skills lacking in the region include experience with AutoCAD, etc"</p> <p>Xische</p>
<p>"The Design School as part of D3 should partner or be sponsored by one of the Top US design schools"</p>	<p>"Shortage of high quality Arabic speaking designers is a key constraint"</p>

Source: TNS Corporate survey 2014-15

Industry Perspectives Regional MENA Design Education Offering

In order to retain and nurture regional talent it is important to provide an environment in which upcoming talent can flourish, and that promotes collaboration within the design community and with the wider economy.

The design industry has gained recognition and momentum in the region with a number of high profile events, such as Art Dubai and Dubai Design Week increasingly placing the region on the global stage. With the growth of the industry follows the importance of educational institutions in providing the necessary design education programs to help feed talent into a growing segment of the economy. While the stature of the industry has grown over time, the quality and range of design education offerings has not kept pace.

White spaces in the design education offering, particularly in the Industrial Design and Emerging Design segments

As in any market, construction is the key driver of architecture services in the MENA region, as architects work closely with engineering and construction companies to develop the design work and detailed plans for construction projects, as well as providing support in the build phase. With this in mind, it is no surprise that education institutions in the region place significant focus on Architecture and Interior Design programs to produce graduates for these sectors. Digital & Multimedia Design, along with Communication & Graphic Design programs, are on the rise in unison with the growth of these segments in the market. Only two out of the six countries studied offer Industrial & Product Design degrees, namely Egypt and Jordan – fittingly, both being countries heavily engaged in manufacturing. The relatively low importance given to Industrial and Product Design reflects the GCC's limited focus on manufacturing and the relatively low spend on Research and Development. Furthermore, manufacturers tend to rely on importing skills from abroad rather than developing these locally.

Fashion Design programs are prevalent in Lebanon, a region that is home to several globally acclaimed fashion designers. However, our research revealed virtually no courses in the Emerging Design segments such as Experiential Design, design for Social Change and Food Design, or emerging design concepts such as Design Thinking.

Design education: nurturing talents

In order to retain and nurture regional talent, it is important to provide an environment in which upcoming talent can flourish, and that promotes collaboration within the design community and with the wider economy. There is some evidence of this within the MENA region, particularly in Beirut where a culture of co-working spaces and collaboration amongst designers has developed. The lack of educational facilities and the paucity of regional design talent are intertwined and together received the greatest consensus as being the primary barriers to growth. There are several challenges to pursuing a creative career in the MENA region, including the lack of early stage involvement in design as well as unclear career pathways, with many programs that are available in design education hubs not being available in this region. Furthermore, there is a lack of clarity about career options within design and about earning potential, as well as limited support for emerging artists and designers. It should, however, be noted that there are increasing educational opportunities in the region, with the American University of Sharjah frequently mentioned as setting the standard within the region, and the Sheikha Salama bint Hamdan Al Nahyan Foundation in the UAE that launched a cultural awareness program in 2013, in which high school student are taken on cultural trips to international design hubs, such as Tokyo.



1. Emirati product designer Latifa Saeed's prototype, developed as part of Tashkeel's Tanween programme

There are opportunities for the region to learn from international cities that have established global reputations for design education provision. Initiatives include incorporating design into early learning programs, as seen in the UK and Singapore, which seek to build an understanding of design from a young age, and provision of a greater range and depth of education programs. Furthermore, greater alignment with the needs of the economy should ensure that design graduates are equipped with the skills required to succeed in the globalised economy. [See Exhibit 18 p50.](#)



Exhibit 18: MENA Design Education Programs (2015)		Fashion & Textile Design	Digital & Multimedia Design	Experiential Design	Architecture, Landscape, & Urban	Visual Arts Design	Interior Design	Comm. & Graphic Design	Industrial & Product Design
UAE	Educational Institution								
	UAE University	•	•		•	•			
	Higher College of Technol	•	•					•	
	Zayed University		•			•	•	•	
	Al Hosn University				•		•		
	American University in the Emirates	•	•				•	•	
	American University of Dubai		•		•	•	•	•	
	American University of Sharjah		•		•		•	•	
	Amity University				•		•		
	The British University in Dubai				•				
	Canadian University Dubai				•		•		
	ESMOD French Fashion Institute	•							
	Heriot-Watt University	•			•		•		
	Islamic Azad University				•				
	Manipal University		•		•		•	•	
	New York University Abu Dhabi		•				•		
NYIT Abu Dhabi						•			
Paris Sorbonne University Abu Dhabi				•					
SAE Institute		•						•	
University of Sharjah	•			•	•	•	•	•	
Qatar	Virginia Commonwealth University, Qatar	•	•			•	•	•	
	Qatar University				•				
	Northwestern University, Qatar		•						
Lebanon	American University of Beirut		•		•	•		•	
	Lebanese American University	•	•		•	•	•	•	
	Balamand University		•		•	•	•	•	
	Notre Dame University	•	•		•	•	•	•	
	American University of Science and Technology	•				•	•	•	
	Arts, Science and Technology University in Lebanon						•	•	
	Beirut Arab University				•		•	•	
	The Holy Spirit University of Kaslik (USEK)				•	•	•	•	
	The Academie Libanaise des Beaux-Arts (ALBA)		•		•	•	•	•	•
	Lebanese University		•		•	•	•	•	
ESMOD Beirut	•								
Egypt	Alexandria University				•	•		•	•
	American University of Cairo		•		•	•		•	•
	German University in Cairo		•		•			•	•
	Cairo University				•				
	Ain Shams University				•				•
	Italian Fashion Academy	•				•			•
Jordan	Jordan University		•		•	•	•	•	
	Yarmouk University	•				•	•	•	•
	German Jordanian University		•		•		•	•	•
	Jordan University of Science and Technology		•		•			•	
	Applied Science University				•		•	•	
Kuwait	Kuwait University				•	•	•	•	
	American University of Kuwait		•					•	
	Gulf University for Science and Technology		•					•	
	Box Hill College		•				•	•	

Source : KHDA, websites, Monior Deloitte analysis

The United Arab Emirates

Dubai is the most attractive education destination for students in the region

Based on the survey findings from the 2012 Workforce Planning Study, Dubai is positively perceived as an education hub by both students and corporates. Of those respondents who are willing to study abroad, 7% see the UAE as their preferred destination, with the overwhelming majority of these identifying Dubai as their most likely study destination in the UAE. Significantly, the UAE scored higher than other emerging education hubs in students' estimation of their preferred destination for higher education, and is perceived to be the most attractive destination for higher education in the region. On a similar note, at least 60% of the corporate entities interviewed perceived Dubai's positioning as a center of higher education to be "good" or "excellent". The positive perception of Dubai as a center of education appears to be strongest in markets such as India, suggesting an opportunity for universities in the UAE to develop stronger linkages with a vast student pool who have unmet needs for high quality education.

New regulatory body in Dubai for Vocational Education Training (VET)

In April 2015, the **Knowledge and Human Development Authority (KHDA)** announced that it will establish a new regulatory body in Dubai for vocational education. Students will now have better access to quality vocational learning courses designed to meet the requirement of employers. The 2012 Workforce Planning Study, conducted jointly by TECOM and Deloitte, which highlighted the critical importance of attracting more people into vocational education because of a skill gap in the country's workforce, played a role in the establishment of the body. Only 1 to 3% of academic enrolment in the UAE is in vocational

education, compared to the global average of 10%. In developed economies such as Germany and Japan, the average is upwards of 40 to 50%.

While Vocational Education Training (VET) is in a nascent stage in the UAE and the region, large corporates are increasingly taking on the role of setting up in-house academic training centers to address specific skills gaps amongst the workforce. In spite of this, Dubai is strongly perceived as a training hub, with 62% of corporates surveyed identifying Dubai as "good" or "excellent" in this area. Our study identified that at least 56% of corporates interviewed opt to outsource their training programs with a strong preference for local (38%) and regional (44%) training options. While training for entry level employees is often conducted in the country of operation, at mid and senior levels a significant proportion of training takes place overseas. Another key insight from the study is the potential for the UAE to benefit from stronger linkages between higher education and VET through regular forums of interaction.

Innovative Programs in Design Education are increasing from UAE academic institutions

The **American University of Sharjah (AUS)** is highly regarded as one of the top universities in the GCC, providing programs in various design sub-segments. The **Interior Architecture & Design** program at AUS is by far the most popular design program, producing approximately 50 graduates per year. The program aims to provide students with the knowledge, understanding and skills to respond to professional needs, taking into consideration innovation and sustainable design practices. The program comprises of a four-year full time mode of study including a common Foundation year in Art and Design. Teaching methods involve the practical application of

In addition to being the region's leading art fair featuring over 90 galleries each year, Art Dubai also boasts an impressive education program. The various design education initiatives include artist residencies, Campus Art Dubai, internships and traineeships.

The United Arab Emirates

In order to grow a thriving design education ecosystem, international partnerships are necessary both for the exchange of professors and also to provide students with global exposure.

interior and architectural design concepts. The **British University in Dubai (BUID)** offers a Masters program in **Sustainable Design of the Built Environment** whose objective is to contribute to better living at an urban level. The course has been well received and is the only one of its kind in the region.

The **Heriot-Watt University Dubai** campus offers a range of high quality British degrees to students in the UAE and wider Gulf region. Programs range from undergraduate degrees to doctoral programs in various disciplines including **Architecture, Interior** and **Fashion Design**. The **Fashion Marketing & Retailing** program is voted number one in Scotland for art and design and eighth in the UK. The program prepares students for a career within the marketing and retailing industries, teaching the fundamentals of fashion marketing and retailing in the fashion business, and enabling them to acquire creative, critical and transferable skills for fashion-focused marketing and retailing. The University collaborates with corporates and industry leaders in fashion to help their students in gaining 'live' learning experiences. Close relationships with business and industry are maintained to ensure that courses are up-to-date and accredited by all relevant professional bodies.

The School of Architecture, Art and Design at The **American University of Dubai (AUD)** offers a five-year **Bachelor of Architecture** degree, and a four-year **Bachelor of Fine Arts (B.F.A.)** in **Interior Design**, and a **Bachelor of Fine Arts (B.F.A.)** in **Visual Communication**.

The mission of the School of Architecture, Art and Design at AUD is to prepare students in the fields of Architecture, Interior Design, and Visual Communication to immerse themselves professionally while attaining international standards of excellence. This is achieved through the delivery of studio-based curricula that combines art and design theory, construction technology, digital media and the human sciences. The Bachelor of Architecture program offers a strong base mainly in technology, history and theory, professional practice and digital media, as well as a wide range of professional courses addressing specific topics and aspects of Architecture. The Interior Design program offers students the opportunity to specialise in design-related software, Integrated Computational Design (ICD), which includes Building Information Modelling (BIM). The Visual Communication Department offers a choice of four majors: Advertising, Digital Media, Graphic Design and Studio Art. The school is committed to promoting critical thinking, creativity, cultural diversity, professional ethics and environmental awareness: Students in all three programs are trained to think, analyse, and create in order to meet the demands of an increasingly competitive design market.

Tashkeel in the UAE is a not-for-profit institution which offers short-duration courses and targets professionals and graduates looking to learn new skills. Tashkeel focuses on Arabic design, offering courses on Modular Arabic Lettering, Typography, and others.

A local group creating a focal point for cross industry collaboration

Amongst the growing number of creative spaces emerging across the UAE, the **Jamjar** is an organisation that aims to support the growth of the local design industry by positioning itself as a key node in the design industry network. By partnering with schools and universities, as well as local and international professional design firms, Jamjar gains a unique understanding of the market. To serve local artists, it provides an accessible design space, learning opportunities based on community needs and the region's first Public DIY Painting Studio.

School workshops are one of Jamjar's several education programs, with support in developing curricula provided to teachers. Students are also given the opportunity to engage in hands-on learning through an ArtBus project that organises trips to UAE design events. The Young Artist Program is a Jamjar initiative that provides aspiring designers with a solid, age-appropriate foundation in art and exposes students to potential careers in the industry.

Art Dubai Education

In addition to being the region's leading art fair featuring over 90 galleries each year, **Art Dubai** also boasts an impressive education program. The various design education initiatives include artist residencies, Campus Art Dubai, internships and traineeships.

Campus Art Dubai (CAD) is a year-round school targeting design professionals in the UAE. Courses and other events occur on weekends, enabling higher levels of participation. International and local academics and artists lead the workshops and support participant collaboration to encourage the free flow of creativity. CAD Core, a partnership between Dubai Culture & Arts Authority (Dubai Culture) and Dubai Design District (d3) is also offered periodically. Unlike the open community courses, the Core is a six-month, intensive program that requires a formal application and is generally highly selective of its candidates. The lead tutors tend to be visiting academics from leading international art universities: Professor exchange programs are definitely noteworthy as they promote the international exchange of education methods and curriculums.

Art Dubai's Internship Program provides valuable work opportunities for students. University-based training teaches individuals basic skills and gives them space to grow creatively, but workplace experiences result in a plethora of invaluable learnings. Over 400 students from all over the world have participated in the Internship Program, which typically consists of three months of intensive placements. The Art Dubai Fair also creates internship opportunities.



1. Heriot-Watt University, Dubai, United Arab Emirates

The United Arab Emirates

Traineeships at Art Dubai cater to experienced designers in early stages of their career, or to those with non-artistic backgrounds interested in shifting career paths. Trainees are able to interact with senior members of the organisation and take on significant levels of responsibilities. The fact that the program is open to motivated individuals who do not necessarily have a degree in design highlights an important challenge - many design education programs are limited to those with some (often school level) experience in art. A well-developed education ecosystem should accommodate a full range of backgrounds.

There are clear benefits of person-to-person learning, especially in creative communities, that could be incorporated into other design education initiatives.

Artist community established in Abu Dhabi

Abu Dhabi Art Hub is the first artist community to be established in the United Arab Emirates. Focused on emerging and established visual artists from across the world, Art Hub is a platform for interaction and cross-cultural artistic exchanges between national, regional and international artists. Support of art and artists is reflected in the founding and theme of Art Hub: 'live - create - exhibit', providing a platform for design education and talent.

Art Hub is a purpose-built housing complex that provides artistic and specially-designed accommodation, studios, workshop facilities, galleries and community spaces. Exposure to alternative techniques and design ideas allows for creativity to flow freely among residents in a manner that is difficult to replicate in academic or professional settings. Workshops are continuously offered by residents and industry experts, most of which are open to the public. There are clear benefits of person-to-person learning, especially in creative communities, that could be incorporated into other design education initiatives.

Recognising international talent

As part of **Dubai Design Week 2015**, an exhibition entitled Global Grad Show was held featuring work from top students across the world. Participating universities include: Royal College of Art, MIT, Pratt Institute, Hong Kong PolyU, National University of Singapore, ECAL, Keio University Graduate School of Media Design, Eindhoven University of Technology, KAIST and Tsinghua University. The impressive geographical distribution of academic institutions that are collaborating on this project is a testament to the capabilities and potential of the design industry in Dubai. In order to grow a thriving design education ecosystem, international partnerships are necessary both for the exchange of professors and also to provide students with global exposure.



2 – 3. Global Grad Show at Dubai Design District, d3, part of Dubai Design Week 2015
4 – 6. Abu Dhabi Art Hub, Abu Dhabi, United Arab Emirates

Qatar



Qatar is seeing an emerging design industry and an increase in design education programs

With the emergence of design industries in the country, Qatar is seeing strong involvement from education institutions who are acting as catalysts for the sector's growth in the country, one example being the Qatar campus of the **Virginia Commonwealth University (VCU) School of the Arts** in Richmond, Virginia. VCUQatar was founded in 1998 through a partnership with Qatar Foundation, and offers programs in **Fashion Design, Interior Design, Paint and Printmaking, and Art History**. VCUQatar is fully accredited by the National Association of Schools of Art & Design (NASAD) and the Council for Interior Design Accreditation. The university has established itself in Qatar as a centre of excellence for education and research in art and design. Graduates from VCUQatar have built careers in the government and private sectors, as well as in not-for profit institutions.

Design education programs with a cross-cultural approach

Art History is amongst the design programs offered by VCUQatar. The program focuses on the interchange between the Islamic World, the Western World and the non-Islamic cultures of Asia. Students are offered the opportunity to study the complexity of cultural interchange that forms the basis of our increasingly globalised contemporary world. It shifts a Western-oriented curriculum prevalent in most university Art History programs to one that encompasses a multi-cultural approach. The program is a four-year Bachelor of Arts that includes field trips and workshops to multiple locations, such as the Hamdan Bin Khalifa Symposium on Islamic Art, museum and gallery internships, field study, and study-abroad programs.

Diverse learning opportunities offered by Qatar's creative institutes

In addition to the academic programs available to design enthusiasts in Qatar, there are numerous local organisations that hold conferences and public workshops. In fact, the **Arab Museum of Modern Art** is going a step further by working with schools and universities to develop tailored educational content and methodologies centered on Modern Arabic art. Monthly workshops provide teachers and museum educators with the opportunity to discuss design pedagogies and to collaborate to create relevant course curriculums.

Another example of an organisation that is active in the design education field is the **Doha Film Institute (DFI)**. Periodic workshops and labs are offered for students to learn technical and creative skills as well as connecting them to industry mentors. One notable event at DFI consisted of a five-week filmmaking challenge hosted at the Hamad Bin Khalifa University, which provided participants with comprehensive training in fundamental filmmaking skills. The dual aim of the program was to enable a cohort of aspiring movie makers with the necessary skillset and to inspire artistic exploration of contemporary life in Qatar. It is also important to note that the workshops were offered in both Arabic and English – the vast majority of design education courses available in the Arab world are taught in English which many critics claim to be a barrier to the development of the Arabic creative sector. While it is difficult to measure the validity of these assertions, there is a clear gap in the provision of design education delivered in Arabic.



A biennial Qatar event provides the only experimental design education in the region

Tasmeem Doha, an international conference held in collaboration with VCU Doha, engages its audience in contemporary interpretations of art and design. A wide range of unique workshops are offered such as *Arabic Script Light Calligraphy*, *Praesentia: Drawing with Code*, and *Making Animated GIFs in Fashion*. International collaboration features prominently across the conferences; one workshop, entitled 'Tokyo to Doha, 3D Print Exchange', holds training sessions simultaneously in Japan and Qatar via video conferencing to allow participants to collaborate on cultural mash-up design projects.



1. Virginia Commonwealth University (VCU) School of the Arts, Qatar
- 2 – 3. Arab Museum of Modern Art, Qatar
4. Virginia Commonwealth University (VCU) School of the Arts, Qatar

Lebanon

Serving as a tool to promote architecture to young audiences, education programs engage the youth to explore the environment through activities centred on architecture, urban design and landscape design topics.

Lebanon is home to some of the most high profile designers on the global fashion stage. From Elie Saab to Zuhair Murad and Reem Acra, Lebanese design giants have broken ground both regionally and globally, enabling Lebanon to claim its place on the map of the design world. Lebanon is now an established hotspot for fashion design, with educational institutions acting as catalysts for growing talent in the country through a range of high quality education programs spanning different design segments.

Bringing world-class fashion design to Lebanon
The **Lebanese American University (LAU)** is amongst the most reputable universities in Lebanon with 14% of its student body enrolled in its **Architecture & Design School**. The Design School, which had 1,139 students enrolled in 2013, includes programs in Architecture, Interior Design, Fashion Design and Graphic Design. LAU formed a strategic fashion partnership with prominent international fashion house Elie Saab, alongside the globally recognised fashion college London College of Fashion (LCF). The partnership provides internship opportunities as well as permanent jobs at Elie Saab for a select cohort of student talent, in addition to sought-after awards, such as the top student in each graduating year being given the opportunity to attend and participate in an Elie Saab show at Paris fashion week.

Developing design programs for young audiences in early stages of education
The **Arab Center for Architecture (ACA)**, founded in 2008 in Beirut, is a non-profit organisation addressing modern urban design, architecture, and design and planning in the Arab world.

One part of ACA's mission is to enhance children's understanding and awareness of their built environment by providing educational programs. Serving as a tool to promote architecture to young audiences, education programs engage the youth to explore the environment through activities centred on architecture, urban design and landscape design topics.

Focus of Design as a multidisciplinary tool for development and research

The **MENA Design Research Center** is a non-profit organisation based in Beirut, Lebanon. The center, which was founded in 2010, promotes the diverse understanding of design through the implementation of design research and collaborative multidisciplinary projects in the region. The Center is unique in its approach compared to other research fields. Contrary to market research, which involves statistics and quantitative data, design research is more concentrated on qualitative information, borrowing from the schools of social and cultural studies to interpret through a designer's frame of mind.

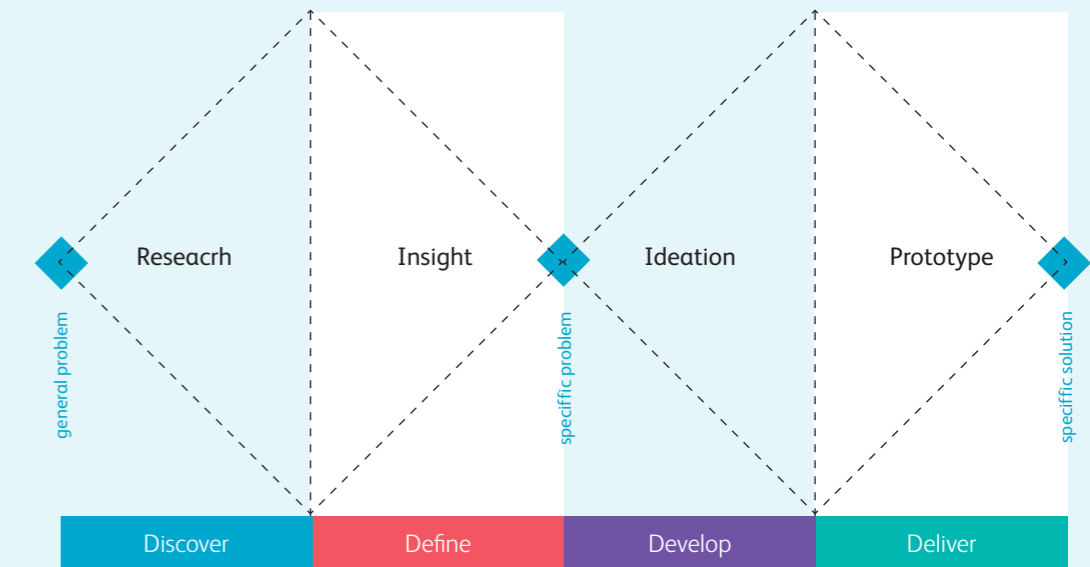
The Center has close linkages to design education in order to encourage and guide the participation of design in the non-commercial, public, and non-profit spaces. Design research follows two globally established design processes: the Double Diamond from the Design Council in the UK, and the Human Centered Design process from IDEO – a global innovation and design firm. See Exhibit 19 and 20 p59.



1. Lebanese American University (LAU), Beirut and Byblos, Lebanon

Exhibit 19: The Double Diamond – Design Council UK

The Double Diamond – Design Council UK
The Double Diamond diagram was developed through in-house research at the Design Council in 2005 as a simple graphical way of describing the design process. Divided into four distinct phases: Discover, Define, Develop and Deliver, it maps the divergent and convergent stages of the design process, showing how designers work with organisations to explore the challenges they face and work towards tangible definitions and solutions.

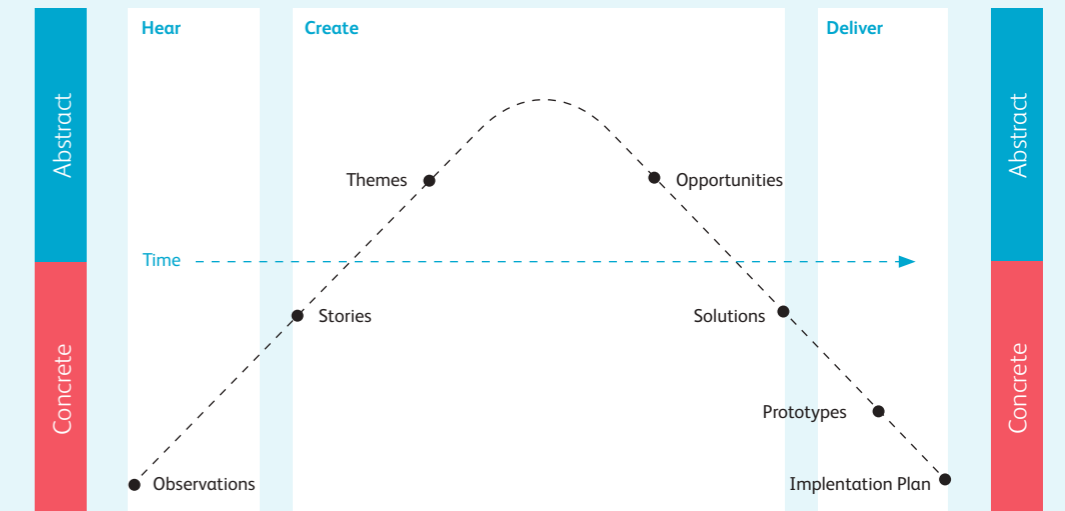


Source: designcouncil.org.uk

Exhibit 20: Human Centered Design – IDEO

Human Centred Design – IDEO

Human-centred design is a process that has been used for decades to create new solutions to design challenges. The process helps designers hear the needs of the people and communities they are designing for, create innovative approaches to meet these needs, and deliver solutions that work in specific cultural and economic contexts. Centred in optimism and embracing constraints and complexity, the HCD process helps users to ask the right questions. Ultimately, it can increase the speed and effectiveness of implementing solutions that have an impact on the lives of the people these solutions were designed for.



Source: hcconnect.org

Lebanon

Contrary to market research, which involves statistics and quantitative data, design research is more concentrated on qualitative information, borrowing from the schools of social and cultural studies to interpret through a designer's frame of mind.



Unique International and National collaborations among institutions and associations

For over 20 years, **The Académie Libanaise des Beaux-Arts (ALBA)**, a Fine Arts and Design institution for higher education in Lebanon, has developed and established partnerships with a network of international institutions in France, Russia, Poland and Canada. These partnerships are intended to facilitate student and faculty exchanges, joint workshops, shared artistic projects, hosting keynote speakers for conferences and organising research discussions. This open exchange collaboration allows the students of ALBA to measure their work in different contexts, allowing for a well-rounded and enriching curriculum. Students at ALBA are given the opportunity to participate in events, such as competitions and festivals, to showcase their work and receive awards for creativity and innovation.

ALBA also plays a national role in Lebanon, regularly participating and leading urban planning and design projects, as well as championing architectural heritage preservation initiatives in collaboration with local municipalities (e.g. Saida, Tripoli, Chekka and Souk el Gharb). ALBA plays an active role with local associations including the Lebanese Order of Engineers and Architects and the Urban Planning Association of Lebanon. Through educational research, ALBA has contributed to the revision of urban planning laws and regulations in coordination with these organisations.

City Debates: Exploring the urbanisation of Lebanon

City Debates is an annual conference organised by the Masters in Urban Planning & Policy and Masters in Urban Design programs at the **American University of Beirut (AUB)**. Launched in 2002, City Debates brings together professionals, academics, and students from Beirut and beyond to explore issues of contemporary relevance to the urbanisation of the region. The series aims to document, analyse and compare emerging practices that are transforming the cities and regions of the Middle East. It also aims to foster a platform of exchange at the regional level to enable the exploration of investigative frameworks, and the sharing of practical experience and knowledge. Each year, City Debates is launched with a new and timely theme designed to introduce innovative ways of understanding contemporary urbanisation and creative strategies to respond to particular challenges witnessed in previous years. City Debates has addressed diverse topics such as Master Planning in Lebanon, Cultural Heritage and the Politics of the Present, Spaces of Faith and Fun, Security of/in the City, Emerging Practices in Urban Design, and Rethinking Informality: Design Tactics/Planning Strategies.

Creative Space Beirut: Lebanon's first free design school

Creative Space Beirut (CSB) is a fashion design school providing free quality creative design education to talented individuals who lack the financial resources to pursue a degree at institutions of higher learning. CSB was founded in June 2011 by a Parsons School of Design graduate, Sarah Hermez, and her former Parsons professor, Caroline Simonelli. CSB students come from diverse backgrounds and commute to CSB from all corners of Lebanon, including the Palestinian refugee camps, Saida and Bourj Hammoud. CSB offers talented individuals the unique opportunity to enter into design education and to pursue a future career in the design industry.

CSB's method of design education is unique to the region. CSB creates individualised paths of study where students produce their own work under the mentorship of a team of local and international artists and designers. Through this progressive method, CSB creates an innovative space that fosters dialogue between diverse students, nurtures their talent and helps them transform their passions into solid skills. At the end of each year, students' design outputs are showcased and sold in a public exhibition, of which 100% of the proceeds are reinvested into the program. After completing the three year program, students will have an impressive and comprehensive portfolio of their work they are assisted in identifying career opportunities through CSB's network.

In 2012, CSB received official status as a Lebanese non-profit association. CSB has been featured in both Lebanese and international media outlets, including Marie Claire magazine, Al Jazeera News and Brownbook magazine. In just three years, CSB students have produced and sold over 200 one-of-a-kind, handcrafted couture pieces, designed and produced in the school's workshop in Beirut.

The growth and success of CSB can be attributed to generous sponsors and international partnerships. Mood fabric store and international fashion designers Donna Karan, Derek Lam and Diane Von Furstenberg have all donated textiles for students to use. In addition, Parsons The New School for Design NYC continues to support CSB's initiative by sending faculty members as guest teachers.



2 - 3. MENA Design Research Centre, Beirut, Lebanon

Egypt

Egypt is home to some of the most well-known educational institutions offering design courses.

Design Education in Egypt

Egypt is home to some of the region's most well-known educational institutions offering design courses. **Alexandria University (AU)**, is recognised in the design industry as offering high quality programs across different segments of design, including: Architecture, Landscape and Urban Design, Industrial & Product Design, Graphic Design & Multimedia and Visual Arts. **The American University of Cairo (AUC)** also offers programs in Design Education: AUC's Science & Engineering faculty, which includes Architecture studies, is the largest faculty within the university and has a student base of more than 2,000 students. The **Sharjah Art Gallery of the Department of Arts** is the artistic and cultural center of the department of Arts/Visual Culture Program at AUC, developed through a donation by Sheikh Sultan Bin Mohamed Al-Qasimi, ruler of Sharjah in the UAE. Its exhibition program includes: student shows showcasing the production and intellectual reflection of the Visual Culture Program; archival exhibitions set within a contemporary and educational curatorial framework and solo exhibitions which promote emerging and established artists through the production of new work with the AUC community.

Regional Product Design

An interesting finding of this study of design programs across the Arab world is that significant regional differences exist. Only two out of the six countries studied offer degrees in product design, namely Egypt and Jordan. Considering that Egypt has a strong manufacturing base, the trend is unsurprising. It is possible that an increase in universities offering the degree would grow the product design industry, leading to a rise in demand for product designers in a somewhat cyclical fashion. It would, however, be difficult for a new market to emerge from the introduction of a single academic program. In countries that hope to substantially grow a nascent industry, education initiatives must be coupled with other incentive schemes.

Residency Programs Uniting Foreign and Local Talent

Townhouse began in 1998 as a non-profit space for art exhibits but has transformed into an internationally recognised organisation that attracts designers from across Egypt and globally. In addition to workshops on a range of design subjects, the organisation offers two residency programs, one targeting local and international artists and the other being specifically tailored to Egyptian designers in need of affordable workshops. Residents at Townhouse have the opportunity to collaborate on their work, taking advantage of a form of design education that transcends traditional curricula by enabling peer-to-peer learning. This is arguably more valuable to an experienced artist than structured courses. [See Exhibit 21 p63.](#)



Sawa – an outreach design education program for underserved populations

Design education, and education in general, is sometimes a luxury only available to those who can afford tuition and related fees, and are lucky enough to not be part of a marginalised community (e.g. refugees). In response to this regrettable gap in the regional design education landscape, Townhouse launched an outreach program in 2005 that offers workshops and free spaces to refugees in Egypt. To date, over a thousand individuals have participated in **Sawa**, many of whom have continued on to professional design careers.



1 – 3. Sawa community art workshop



In countries that hope to substantially grow a nascent industry, education initiatives must be coupled with other incentive schemes.

Jordan

University continues to be the most critical phase of development for most individuals, however learning should be viewed as lifelong commitment.

Design specific programs across Jordan

Jordan University, Yarmouk University, German Jordan University, Jordan University of Science & Technology, Applied Science University and Design Institute Amman are among the educational institutions offering design specific design programs in Jordan.

Partnerships with international institutions around design education

The **Faculty of Arts and Design** at Jordan University partners with colleges, universities and technical institutes internationally in an effort to provide exchange opportunities for students. These partnerships include agreements with the Royal Academy of Arts in Britain and the Polish Academy in Warsaw. The Faculty of Arts and Design at Jordan University also attracts global artists through the Fulbright program, aimed at providing students international educational exposure. In addition to exchange programs Jordan University offers its Architecture Engineering students internship opportunities as well as training workshops through an agreement with The International Association for the Exchange of Students for Technical Expertise (IAESTE). IAESTE acts as a link between students and corporations to facilitate training and internship programs, the objective being to provide employers with well-qualified and motivated trainees, whilst providing students with higher education and technical experience relevant to their field of study.

Vocational training for fashion design students

Yarmouk University signed an agreement with Garment Training Services to train fashion design students through several courses focused on pattern making and sketching. The **Garment Design & Training Services Center (GSC)** is a non-profit organisation dedicated to providing specialised technical assistance and fashion training courses through local and Italian expertise.

Design courses catering to Jordanian professionals

University continues to be the most critical phase of development for most individuals, however learning should be viewed as lifelong commitment. The **Design Institute Amman** is an institution that provides courses targeting experienced professionals. Its mission is to support the growth of the regional design industry to make it competitive on a global scale. The Institute's outreach is not limited to design firms but broadly covers diverse productive sectors of the economy, including manufacturing, technology firms and service companies. The reach of its network, locally across businesses, and internationally with design organisations, provides a comprehensive coverage of the entire design market.



The Design Institute, Amman, Jordan:

1. Furniture Design Workshop
2. Jewellery Making Course
3. Carmella Picicelli Jewellery Making
4. Maria Ruiz Ukibari Furniture Design

Kuwait

On-the-job learning is an essential complement to classroom learning. This is especially true for design education, a fact that has been recognised and addressed by several universities in Kuwait.

Beyond traditional design education

As formal educational institutions gradually build their design curricula, independent organisations are transforming Kuwait into a regional hub of design innovation and collaboration. Several local universities in Kuwait offer design courses, mainly in the fields of graphic design, interior design and mass communication. The local design industry in Kuwait has been flourishing: In addition to the presence of architecture companies, advertising agencies and other professional firms, there has been a recent emergence of organisations, such as **Nuqat** and **YourAOK**, dedicated to connecting the design community, providing spaces for collaboration and filling the gap in design education. The breadth of training and workshops available in Kuwait has the potential to expand both demand and supply of design education in Kuwait, with the ultimate goal of creating a thriving creative industry.

Providing design opportunities to women through dedicated vocational degrees

In addition to the range of design education opportunities available to women in Kuwait at various local universities (e.g. Kuwait University, American University of Kuwait), two-year vocational degrees are offered through the women-only **Box Hill College Kuwait**. As an extension of the original Box Hill College in Australia, all diplomas are accredited by both the Australian Qualifications Framework and the Kuwait Ministry of Higher Education. Graduates may continue to pursue further education by transferring into other Kuwait-based universities, or may instead enter the workforce directly.

Vocational and technical training is an essential part of the educational landscape. However, minimal focus has been given to the importance

of programs dedicated to women. On a global scale, the merits of female education have been well-documented. A natural extension of these findings would suggest that similar opportunities should be made available in the design industry.

Course credit for work experience

On-the-job learning is an essential complement to classroom learning. This is especially true for design education, a fact that has been recognised and addressed by several universities in Kuwait. The graphic design program at the **American University of Kuwait** has developed a full internship program for students which includes support in attaining a work placement, course credit hours to incentivise students, and assessment methods that ensure a mutually beneficial experience for both interns and employers.

The **Mass Communication program** at the **Gulf University for Science and Technology** is education course that values work-study. Support and credit hours are provided to students to encourage them to secure internships at advertising firms, radio and TV stations, and newspaper agencies. The University has partnered with the student Media Club on several occasions to hold events, including THE SEEN, a three-day conference that included leaders from the design industry, design students and prominent faculty. Interactive workshops are offered, such as Arabic calligraphy, Arabic graffiti, and magazine cover design. Students are also given the opportunity to present their work to attendees. The conference is an excellent illustration of industry-academia cooperation – increased collaboration is necessary to ensure that market needs are being met by educational institutions.



1. Horouf, the first bilingual typography design competition, launched by Nuqat, Kuwait
2. Bloom workshop, part of Nuqat's design education program for children, Kuwait
3. Gallery visits are part of Nuqat's design education program for children, Kuwait
4. Presentation by artist Ghadah Alkandari, Nuqat, Kuwait
- 5 – 6. El Seed Workshop, Nuqat, Kuwait

Kuwait

ومن لا يؤثر الشيء على الاستعداد لا يكون حراً بما فيه الحرية من الدق والواجب، أنتم تؤمنون بما تسمعون به يقال أمامكم، فاملوا بالأحرى بما لا يقال، لأن صمت الناس أقرب إلى الحقيقة من أقوالهم، أنكم تتكلمون عندما توضع دونكم أبواب السلام مع أمكاركم، كثيرة حقاً هذه اليوم التي لا تعرف شخراً غير نعيقها. بين منطوق لم يقصد ومقصود لم ينطق تضع الكثير من المحبة. جيران خليل جيران ومن لا يؤثر الشيء على الاستعداد لا يكون حراً بما فيه الحرية من الدق والواجب، أنتم تؤمنون بما تسمعون به يقال أمامكم، فاملوا بالأحرى بما لا يقال، لأن صمت الناس أقرب إلى الحقيقة من أقوالهم، أنكم تتكلمون عندما توضع دونكم

Five Quacking zephyrs jolt my wax bed. Two driven jocks help fax my big quiz. Woven silk pyjamas exchanged for blue quartz. Twelve ziggurat quickly jumped a finch box. Cozy lummax gives smart squid who asks for job pen. Five Quacking zephyrs jolt my wax bed. Two driven jocks help fax my big quiz. Woven silk pyjamas exchanged for blue quartz. Twelve ziggurat quickly jumped a finch box. Cozy lummax gives smart

خط زملكا
Zamalka Font
أحمد الهندي Ahmad Al Hindi

أبجد سرع الفوق لثام، كما أليدهم
بج ص ع ف هـ
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كثيرة حقاً هذه اليوم التي لا تعرف شخراً غير نعيقها
Twelve ziggurat quickly jumped a finch box

كثيرة حقاً هذه اليوم التي لا تعرف شخراً غير نعيقها
Twelve ziggurat quickly jumped a finch box

كثيرة حقاً هذه اليوم التي لا تعرف شخراً غير نعيقها
Twelve ziggurat quickly jumped a finch box

Winning Horouf entry by Zamalka Ahmad Al Hind

Nuqat | Dedicated to developing Arab creativity

Established in 2009, Nuqat has been an active organisation committed to transforming the creative industry across the Arab world. A yearly conference and multiple partnerships have facilitated region-wide collaboration on this initiative. In addition to these activities, Nuqat has been developing a design education curriculum tailored specifically to the Middle East with the intent of establishing design training institutes in cities across the region.

Types of workshops and events offered by Nuqat:

Drama Therapy Workshops

Reintroducing adults to the concept of imaginative and dramatic play, the objective being to strengthen communication skills and explore conflict resolution within personal and business relations.

Screenwriting: Your Film To Life

Providing aspiring writers with the tools to create a short film narrative screenplay.

Music: Essentials of Improvisation

Teaching the basic vocabulary and advanced tools to allow musicians to improvise, including scales, chords, harmony, and rhythm.

Directing: The Director at Work

Training in the following skills: Screenplay analysis and breakdown, pre-visualisation and director's vision, basic cinematography for directors, and directing actors.

Social Media Writing Workshop

Presenting successful social media case studies and helping participants to create natural and lively community relationships and conversations through social media.

Feeding the Eyes: Food Styling and Photography Workshop

Inspiring photographers and foodies through technical training in the art of food photography.

Kashida

As a furniture and product design company, **Kashida** partnered with Nuqat for the 2012 **Kuwait Creative Conference**. The workshop allowed conference participants to develop and submit design ideas with the support of the Kashida team. The top six product ideas were delivered to Kashida for a final revision before being distributed at retail level, with each winning product carrying the name of its designer. These kinds of industry-led competitions and workshops provide students with invaluable opportunities to get their ideas recognised and disseminated throughout the design community.

Horouf

Through a collaboration with 29LT, a type foundry based in Lebanon, Nuqat held **Horouf**, a bilingual type design competition. Entry was open to students and professionals alike to fulfill the goal of discovering designers with potential in this field. However, the ultimate objective was to inspire a drive to create Arabic and bilingual fonts, which is currently severely lacking despite a market for Arabic publications that extends well beyond the MENA region. See [Exhibit 22 p68](#).

LOUDArt

LOUDArt exhibition was Nuqat's first event in Saudi Arabia, born out of a collaboration with the Desert Designs Art Gallery and NTI & Co. It began as a platform for local amateur artists but eventually evolved into a collaborative art exhibit that engages in excess of 30 artists per year. LOUD Art also invites local designers to exhibit and sell their work. The collaborative and awareness attribute of this event is particularly valuable as the design sector must extend beyond academia and industry to properly engage the wider community.

YourAOK | Unifying MENA designers

YourAOK.net is an online platform providing an accessible space for designers across the MENA region. It aims to recognise and develop untapped or underdeveloped talent in the Arab world. YourAOK also offers a physical space for community workshops led by community leaders.

Nuqat and YourAOK held a joint two-day conference in 2013 that brought together many design academics and design practitioners from Kuwait, the region, and the rest of the world. Unifying such diverse members of the creative world allows for interesting discussions and critical debate, offering attendees a form of learning. Organisations such as YourAOK and Nuqat have taken key steps towards bridging a crucial gap in design education in the region. A prosperous design community must be one of collaboration in order to link talent-creating educational institutions with the marketplace.



7. LOUDArt exhibition, a collaboration between Nuqat, Desert Designs Art Gallery and NTI & Co., Saudi Arabia

8. Wajha, the non-profit social design initiative from Nuqat, Kuwait

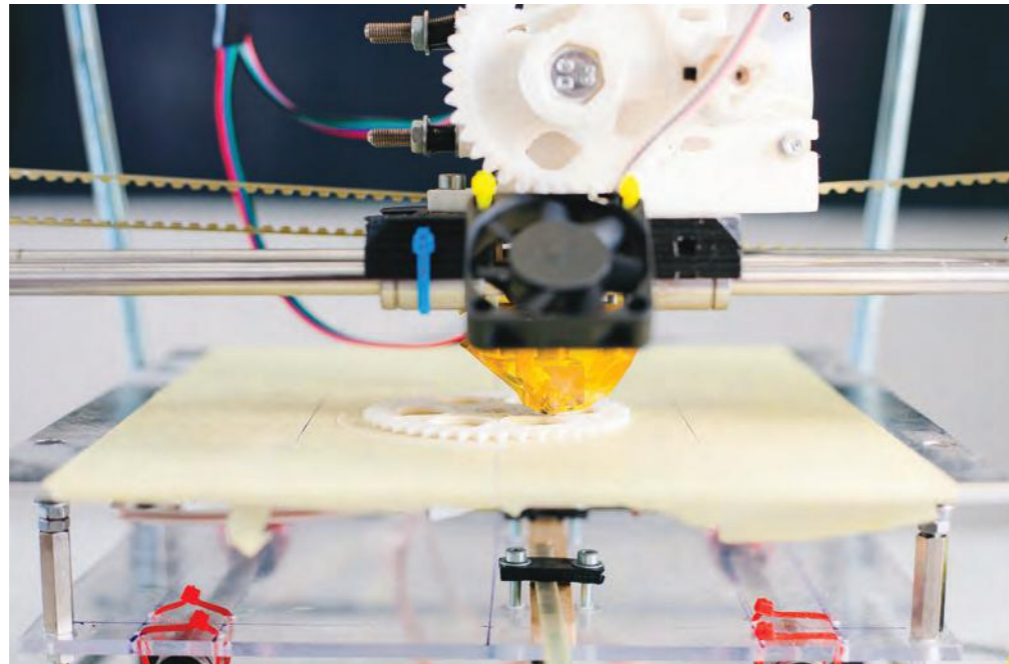
9. Nuqat collaboration with Kashida, a product design team from Lebanon, with studios in Beirut, Lebanon, and Dubai Design District, d3, Dubai, United Arab Emirates

Role of Infrastructure

Learning starts in schools and universities, but it must not end there if we are to enable lifelong design education. An entire ecosystem of support and technologies must be made available to allow the design industry to realise its potential. The MENA region has successfully attracted many designers and firms but in order to transform into a market that leads innovation in the field, the first step lies in providing the right infrastructure and supporting continuous

education. Students and practitioners must not only have access to equipment such as 3D printing, but also to co-working spaces that would allow for both the creation of new designs and new design equipment. Prototyping labs have emerged as vital to the learning process; major design cities such as Rotterdam now offer fabrication labs within the city perimeter serving both the student population and the city at large (individuals, businesses, associations, and the local government).

The MENA region has successfully attracted many designers and firms but, in order to transform into a market that leads innovation in the field, the first steps lie in providing the right infrastructure and supporting continuous education.



Fabrication & Prototype Labs

Paving the way for personal fabrication

Born out of MIT's Center for Bits and Atoms (CBA), fabrication labs represent the next great leap in design innovation: the ability for anyone to make (almost) anything. Fab Labs – the more catchy nomenclature – began as an experimental learning environment that aimed to introduce school kids to the concept of problem-solving through creation. The success of the Fab Lab outreach program led to its global expansion. As of September 2015, more than 550 Fab Labs exist in over 40 countries. Among the inventions emerging from this space include radio-frequency ID tags for cattle in Norway, customised prosthetic limbs for amputees in Afghanistan, and many more examples of personalised solutions. Fabrication labs are part of a larger design market trend that sees innovation emerging from any individual world equipped with the right tools, rather than from traditional research and design centers.

Belief in Making | Multipurpose prototype labs in Sharjah

The **College of Architecture, Art and Design (CAAD)** at the American University of Sharjah (AUS) has some of the most advanced design infrastructure, not only within the region but also internationally. CAAD Labs promotes the act of making as an essential component of comprehensive design education. CAAD Labs consists of three primary lab groups – **Material Labs** (woodworking, metal working, pottery, and casting), **Fabrication Labs** (laser cutting, 3D printing, CNC cutting, industrial robotics), and **Media Labs** (audio/video production, photography, printmaking, and physical computing). Facilities cover the spectrum of creation, from raw clay to new materials and techniques that span the use of hands, tools and mechanical and digital fabrication.

Tashkeel Dubai-based art organisation offering design and fabrication spaces

Tashkeel was established in 2008 by Sheikha Lateefa bint Maktoum with the goal of supporting UAE's creative communities. The organisation is engaged in an impressive range of activities spanning from studio facilities and workshops to fellowships and artist residency programs. The studio facilities available include a digital lab, printmaking, photography studio, fine art studio, textile printing, workspaces, 3D printers, and jewelry design equipment. In addition to the workspaces and facilities, a visual arts library is available featuring over 1000 books and 30 international magazines.

Tashkeel partners with both international and UAE-based institutions, providing participants with free access to facilities. In exchange, participants host workshops or talks within their respective disciplines. Partners have included NYU Abu Dhabi, Zayed University and the American University of Sharjah.

In collaboration with PAL Labs, a UK based Fab Lab, Tashkeel holds an annual design program that consists of two-day workshops held over a period of nine months. In a highly iterative process, participants receive ongoing support and mentoring from regional and British experts, allowing them to experiment and refine their designs. Through such forms of design education innovation, Tashkeel is providing a truly immersive experience which is undoubtedly valuable and highly unique, particularly in the Arab region.

A Fab Lab has been defined as a small-scale workshop offering digital fabrication facilities. In 2008, Stanford University launched the Fablab@school project and started building Fab Labs in K-12 schools.

A typical fabrication lab includes the following equipment:

A computer-controlled laser-cutter, for press-fit assembly of 3D structures from 2D parts

A larger (4'x8') numerically-controlled milling machine, for making furniture - (and house) sized parts

A sign-cutter, to produce printing masks, flexible circuits, and antennas

A precision 9micron resolution) milling machine to make three-dimensional moulds and surface-mount circuit boards

Programming tools for low-cost high-speed embedded processors

Fabrication & Prototype Labs

Exhibit 23: Number of Fabrication Labs – MENA

Country	Number of Fab Labs
UAE	2
Saudi Arabia	3
Bahrain	2
Kuwait	1
Jordan	1
Egypt	5
Lebanon	1
Turkey	2

Source: FabLabs.io

Exhibit 24: Number of Fabrication Labs – International benchmarks

Country	Number of Fab Labs
The United States	101
Netherlands	28
United Kingdom	23

Source: FabLabs.io

FabLab UAE | A world of creativity

FabLab UAE was born in response to His Highness Sheikh Khalifa bin Zayed Al Nahyan's announcement that 2015 would be the year of creativity. FabLab UAE is designed in line with international standards and specifications set for fabrication laboratories globally. The Lab collaborates with the UAE Ministry of Education and its affiliated institutions through joint initiatives aimed at providing programs and enriching curriculums to enhance creativity and innovation by students. The programs offered by FabLab UAE covers sectors in line with the National Strategy for Innovation, including Renewable Energy, Technology, Transportation, Water, Healthcare, and Education.

Graduating experienced innovators

The complementary outcome of the emergence of fabrication labs is the disruptive effect on design education. Through fabrication labs, students graduate as experienced designers and innovators rather than job applicants equipped only with college-level technical skills. By going through the cycle of idea creation, design, prototyping, testing and iteration, students gain both an in-depth knowledge of the design process and machines, as well as a strong appreciation for valuable 'soft skills' such as teamwork, leadership and communication. Fabrication labs have also served as a platform for P2P (peer-to-peer) learning within each lab and across the global network of fabrication labs. Design industry leaders frequently deliver

workshops, either through video conferencing technology typically installed in these labs, or by visiting the locations offering hands-on training. Several top-tier universities offer such labs to their students, including the University of Chicago, MIT, Stanford, and the University of Texas. A key differentiator is that these facilities are also made available to the city at large, offering the design community (i.e. individuals, businesses, associations, and the local government) the opportunity to engage and share ideas, thus stimulating entrepreneurship and innovation. [See Exhibit 23 and 24 p72.](#)

Fab Lab providing community solutions in Alexandria, Egypt

iceAlex is a fabrication lab in Alexandria with a strong social and environmental commitment. The physical space provides tools and resources for the community to create solutions to local challenges. Workshops and mentoring services are also offered. Among the various innovations is a DIY un-interruptible power supply (UPS), which aims to address the frequent electricity cuts across Egypt. As an open-source project, the schematics are publically available to enable uninhibited dissemination of the technology. The innovators of the DIY UPS also hold local training sessions to support individuals interested in the product.

3D Printing Facilities

3D Printing | technological paradigm shift

3D printing, a technology also known as additive manufacturing, allows users to 'print' three dimensional digital model designs through a 3D printer. The physical model is created through the successive layering of materials, which can range from plastic and steel to biological materials.

The technology has opened up tremendous possibilities in almost every industry. Individualised prosthetics and implants are transforming patient's lives, while increasingly complex airplanes are benefitting from the rapid creation of customised engine parts. The design industry is definitely not an exception to the latest trend in the creation revolution – the ability to rapidly generate a physical object has profound implications for most sectors including architecture, product design and interior design.

Gartner projects that the 3D printing market globally will grow from USD 1.6 billion in 2015 to USD 13.4 billion in 2018 with a 103.1% CAGR. Dollar value and usage is heavily skewed to the enterprise market. Monitor Deloitte projects that the enterprise market (rather than consumers) will account for just under 90% of the value of all 3D printers, over 95% of all printed objects by volume and 99% by economic value. More significantly, Monitor Deloitte also predicts that rapid prototyping and the production of 3D-printed objects that fit into existing manufacturing processes (such as creating a mold, die, cast or tooling that will be used to make final parts) will represent 90 percent of the 3D objects made by enterprises. Although likely to be the fastest-growing component of 3D printing, final-part manufacturing will still represent less than 10% of 3D objects printed.

In a 2014 survey of industrial manufacturers, 62% of respondents were either not implementing 3D printing technology or only experimenting with it. Of those who were actually using 3D printing, two-thirds were using it for prototyping and marketing purposes only; a quarter were using it for a combination of prototyping and production; 7% were building products that couldn't be made using traditional methods; and only 2% were using their machine purely for production of final products or components (and even then, only for very low volume products).

These trends seem likely to continue in 2016. 3D printing is ideal for prototyping when a fully-functional part is not required. Traditional prototyping requires skilled artisans in machine shops and can take days or even weeks to complete while each object can cost tens of thousands of dollars. An enterprise-grade 3D printer can take the CAD (Computer Aided Design) file the designer is using and build, layer by layer, a physical sample in eight hours for a materials cost of \$100. The designer can then look at the part, make any necessary adjustments in the CAD software model, and print out an iterated version by the next morning.

The Middle East region represents a small fraction of the global 3D printing market as a relatively immature market with a small design and manufacturing industry. However, the Middle East is expected to follow the global growth trend with an expected annual increase of almost 60% in 3D printer units shipped and almost 30% per annum in 3D printing revenues until 2017, albeit off a low base.

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3D Printing Facilities

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The relevance of 3D printing to the Middle East region could be seen at Downtown Design in October 2014, with an exhibition about what the future might look like that showcased a 3D-printed housing complex made entirely from recycled plastic³⁹. The exhibition was produced by Stay Plastic, a project from the Royal College of Art in London, although it has clearly generated interest amongst the design community in the region. Furthermore, 3D Print Show, the international industry-established show originating in London, with Paris and New York editions, came to Dubai (as well as California, Madrid and Berlin) in 2016, identifying the city as the 3D printing hub for the region and as one of the upcoming leaders in the field.

Despite the growing presence of 3D printing at conferences and the adoption of the technology by universities, there remains considerable hype and mixed-messaging around the 3D printing industry in the Middle East region, with a relatively limited understanding about the technology. Skills are required to understand the full 3D printing process and to match the technology to the end product requirement. Customers drawn to the low-end printers that are in the market can end up disappointed with the outcome. This lack of awareness presents the greatest challenge to growth in the 3D printing market in the Middle East, particularly relative to more mature markets where customers have a deeper understanding of the technology.

There is already evidence in the Middle East that 3D printers are becoming the factory within schools. A number of universities in the region have invested in state-of-the-art 3D printing systems, such as the American University in Sharjah that provides 3D printing systems within its Department of Architecture, and the Texas A&M University in Qatar, which runs an annual 3D printing competition amongst all faculty, researchers, postdocs and students. This is certainly the first step in resolving the challenge of education and awareness in the region, with skilled graduates likely to lead the 3D printing revolution and drive growth in the coming years.

Large interior design and architecture companies in the region, such as Godwin Austen Johnson (GAJ), already use 3D printing in their client work (via suppliers in Europe), although the proliferation of the trend is currently limited by the cost of 3D printing hardware. There are, however, a number of recent new 3D printing providers in the market, such as the recent arrival in the UAE of D2M Solutions FZE, a 3D printing factory that provides on-demand professional 3D printing service to the Middle East region.

Accelerating the pace of design and design education

The two main benefits of 3D printing are the ability to create highly customisable designs and the speed at which this can occur. This allows for the rise of rapid prototyping – users can quickly generate physical models of the design concepts. Naturally, 3D printing also gives rise to the possibility of creating end-user products, in a process known as rapid manufacturing.

Product designers and interior designers are a small sample of the myriad of professions that would benefit from such technology. Equally significant are students of these professions that will likely grow in an era when 3D printing experiences great advances and becomes a commonplace tool in a designer's workspace. In order to prepare today's graduates for tomorrow's world, appropriate infrastructure must be available in educational institutions.

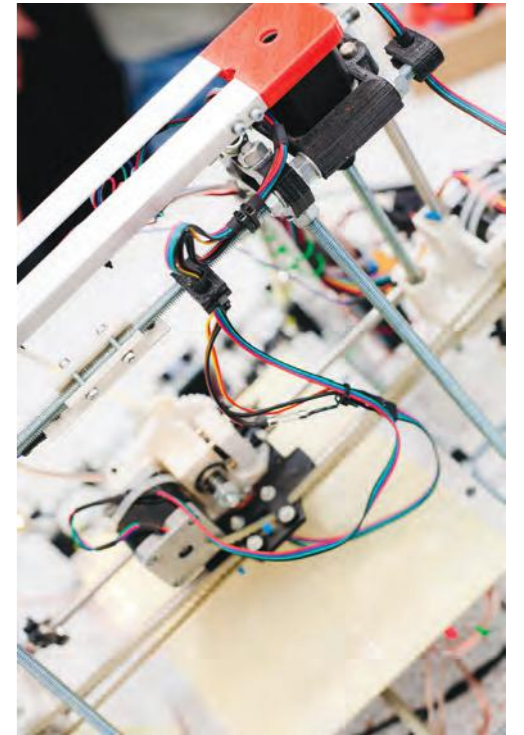
Dubai-inspired 3D printed dress

Khulood Thani, a renowned fashion designer and the first Emirati to graduate from ESMOD Paris, is an excellent example of local talent who uses 3D printing in her designs. She partnered with the architect Amer Aldour of INTER I ACT in 2015 to create a highly experimental and innovative 3D printed dress. The design evolved from a 3D model of Dubai, embracing the city's signature high-rises as well as the surrounding rolling desert dunes. The project, entitled 'Urban Corp' was showcased at the art and fashion exhibit, Meet d3, hosted by Dubai Design District, d3.

Dubai leads the way by building the world's first 3D printed building

While the trend in 3D printing has largely focused on relatively smaller scale products, Dubai is leading on a global scale by creating the world's first functional 3D printed building. A 20-foot 3D printer will be used to create the 2,000 square foot structure using a combination of materials, including Special Reinforced Concrete (SRC), Glass Fiber Reinforced Gypsum (GRG) and Fiber Reinforced Plastic (FRP). Combining the diverse materials on such a large scale will also add a level of complexity as yet unexplored. 'The Office' as the building is called, will serve as the interim headquarters for the Museum of the Future, another Dubai project that is likely to feature and indeed lead the way in design and technological innovation.

The physical design of the building, an oval-shaped structure, is also an impressive architectural feat. As a tribute to the Ruler of Dubai, the Arabic poetry of Sheikh Mohammed bin Rashid Al Maktoum will feature on the exterior walls.



³⁹ "The Royal College of Art presents: Stay Plastic", Downtown Design (Accessed Oct 2014): <http://bit.ly/1WKG4w1>

Design Hubs – Lessons Learnt from International Benchmarks

3

Introduction

In this section, we examine the trends and best practices from select global design hubs and their policy and non-policy level interventions on design education and research. Our analysis identified a few consistent themes across the design education hubs benchmarked. These include the recognition of the need for a National Design strategy; the existence of strong linkages between National Design policy and strategies for design education; and research and the funding of skills development in the design sector. The importance of design as a tool for innovation, productivity and economic growth is well recognised. ‘Ships’ (i.e. mentorships, scholarships, internships) are seen as a key part of the support mechanism to promote design capabilities in several of the markets benchmarked. In addition, markets such as Singapore offer Overseas Promotion Partnership Programmes (OPPP) to enable Singapore designers to present at international design platforms. Design support is targeted at companies, usually Small and Medium Enterprises, through matchmaking between designers and businesses, Creative Credits (as in the UK), incubation facilities and tax credits.

A unique strength of design education in the UK is the role played by Sector Skill Councils in influencing and shaping design education. In the US and Netherlands industry practitioners ensure that design education courses continue to remain relevant to workforce needs. In select markets (e.g. Singapore), the forecasting of skills in demand and related policy-led interventions have helped to minimise the impact of structural and short term skills gaps in the workforce.

In some markets, such as the Netherlands, academia (such as that of the Eindhoven Design Academy through the General Director of the Executive Board) participates actively in shaping the National agenda for a smart and creative workforce. Real-life projects and collaborations with the corporate sector are seen across all the markets benchmarked. Participation in trade fairs is a common thread running across several of the benchmarked countries

At the service delivery level, we have seen that the existence of multiple pathways to design education and fostering of early stage interest in design has often led to a positive perception of design as a lucrative career option. Apart from this, the major design hubs offer an extensive range of programs tailored to different age segments and ensure the continued relevance of design education to the needs of the industry. Multi-disciplinary study is emerging as an important trend to enable designers to draw on a broad range of disciplines, including social sciences and the humanities, in order to solve problems in a competitive global market. Finally, a critical factor for success in many of the benchmarked countries was shown to be the existence of a robust National Career services framework, establishing linkages across the education sector and the workforce, catering to ages 13 years and above.

3.0 Design Hubs - Lessons Learnt from International Benchmarks

3.1	The United Kingdom	78
3.2	Singapore	82
3.3	United States	86
3.4	Eindhoven	90

International Benchmarks

The United Kingdom

In the United Kingdom, one of the recommendations of the Design Commission was the need to set up a clear Government-owned design strategy to draw in experts and design practitioners, and for the business community to assist and advise.

The United Kingdom does not have a National Design strategy and one of the recommendations of the Design Commission was the need to set up a clear Government-owned design strategy to draw in experts and design practitioners, and for the business community to assist and advise⁴⁰. It also published a Plan for Growth that sets out a series of policies to support growth in the digital and creative industries, such as greater flexibility in the communications and media regulatory framework, and increased support to Intellectual Property (IP) intensive businesses to ensure they can exploit their IP domestically and overseas. See Exhibit 25 p79.

In the UK, responsibility for design education is shared across various government and industry-led bodies. The **Design Council** in the UK plays an integral role in promoting the importance of design by working with UK businesses, education establishments and government departments. The Council generates and advises on Design Policy and works with **Sector Skills Councils** on improving design education and skills. Sector Skills Councils are employer-led, independent, UK-wide organisations whose main role is to reduce skills gaps and shortages, improve productivity and improve learning supply. They are supported and funded through the UK Commission for Employment and Skills (UKCES). The **Design Business Association (DBA)** is an industry-led body and a not-for-profit organization that supports design professionals through training courses, events, mentoring and awards. A significant portion of DBA's funding comes from membership fees. Universities across the UK collaborate with Sector Skills Councils as well as the industry to develop courses and curriculum. **Vocational Education and Training Institutes (VET)** – publically

funded further education colleges and private providers - collaborate with industry to provide apprenticeships to their students. See Exhibit 26 p79.

Funding for skills development is a key enabler of the design ecosystem

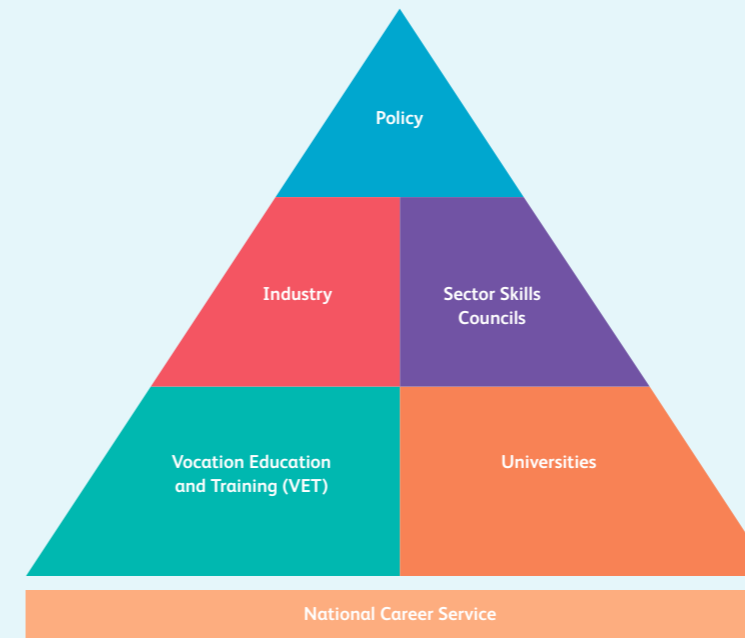
The UK government plays an active role in funding skills and businesses to support training and skills development in the design industry. In the UK, skills funding has two roles, the first being to invest in skills and education in order to promote trade, boost innovation and help people to start and grow a business. The second is to support creative businesses and help organisations to bring innovative ideas to life. The Creative Credits scheme represents an innovative mechanism for SMEs to engage with the creative sector and strengthen in-house capabilities. See Exhibit 27 p80.

Sector Skills Councils have helped stimulate the development of industry-relevant education courses focusing on identified skill gaps

Sector Skills Councils are employer led, independent, UK-wide organisations whose main role is to reduce skills gaps and shortages, improve productivity and improve learning supply. They are supported and funded through the UKCES. Three main sector skills councils service the Creative industries in the UK: CITB, Creative & Cultural Skills, and Creative Skillset. **CITB** is the Industry Training Board and a partner in the Sector Skills Council for the construction Industry. CITB promotes investment in training and development, assisting employers to review their business skills needs and improve them cost-effectively. It also promotes and delivers apprenticeships, and works with providers to ensure industry's current and future skills needs are met.

⁴⁰ Restarting Britain – Design Education and Growth

Exhibit 25: Overview of the Design Education Sector – UK



1 Policy

- **Design Council** generates and advises on Design policy
- Works with Sector Skills Councils on improving design education and skills
- Receives funding from various government departments and it raises additional funding by providing training and other business services
- It is an industry-led body, which conducts high level research aimed at driving thinking around design policy in the UK
- A publicly funded, industry-led organization that offers strategic advice on skills and employment issues
- Provides businesses and people advice on the labor market

2 Industry

- **Design Business Association** is a not-for-profit organization with 70% of its funding coming from membership fees and 30% from other sources such as events. It is not Government funded
- Supports design professionals through training courses, events, mentoring and awards

3 Sector Skills Councils

- **Sector Skills Councils** are employer led, independent, UK-wide organizations whose main role is to reduce skills gaps and shortages, improve productivity and improve learning supply
- They are supported and funded through the UK Commission for Employment and Skills (UKCES)

4 Vocation Education and Training (VET)

- Vocational training institutes collaborate with industry to provide apprenticeships to their students

5 Universities

- Universities across the UK collaborate with sector skills councils as well as the industry to develop courses and curriculum

6 National Career Service

- It is the publicly funded careers service for adults and young people (aged 13 or over) in England
- Provides information, advice and guidance on learning, training, career choice, career development, etc.

Source: Websites, Monitor Deloitte Research

Exhibit 26: Case Study – Design Council Initiatives

Capacity Building in SMEs

Designing Demand Program

This program aims to build capabilities in UK small and medium sized enterprises (SMEs) to understand how they can use design strategically and effectively within their business

The Design Council provides coaching to businesses, through workshops and peer-to-peer support

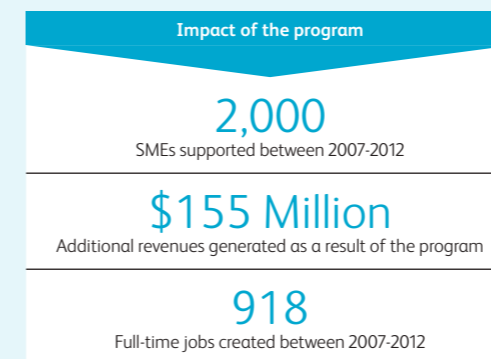
The program is delivered through the council's national team of Design Associates who have worked across different sectors and organizations such as Philips, Virgin, Black & Decker

Design of the Times (DOTT) Program

The Design of the Times Program in the UK developed new solutions for social and economic challenges by involving communities in designing local services

The Design Council, Cornwall Council, University College Falmouth and the Technology Strategy Board were partners behind the designs of the Time Program in Cornwall and the Isle of Scilly

The UK government plays an active role in funding skills and businesses to support training and skills development in the design industry.

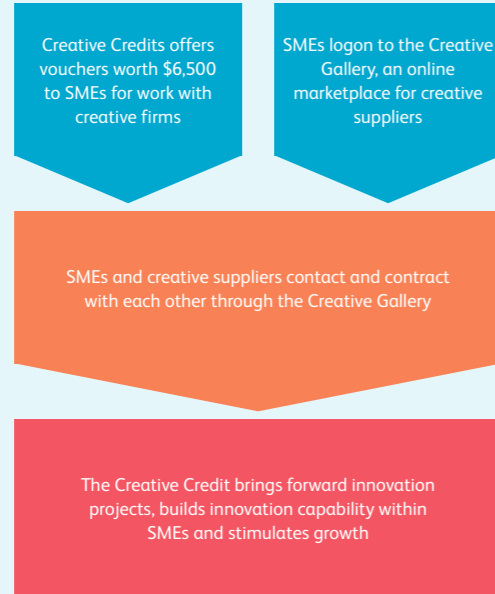


Source: Websites, Monitor Deloitte Research

Exhibit 27: UK Skills Funding

“Creative Credits” – Engagement with SMEs

- Creative Credits is a voucher scheme that enables small and medium sized businesses to benefit from the expertise of the UK’s creative businesses
- Creative firms are from 13 sectors including architecture, crafts, designer fashion, computer games, etc.
- It was piloted in the Manchester City Region in North West England between 2009 and 2010, where it made 150 Credits available to SMEs



Source: Creative Credits, Monitor Deloitte Research

Exhibit 28: Creative Skillset – Course Design

UK Commission for Employment and Skills (UKCES)

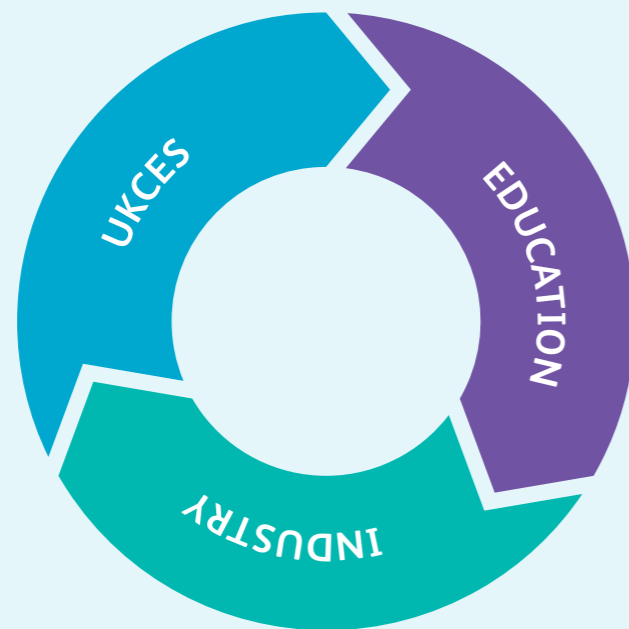
UKCES supports the Creative Skillset Council’s “Creative Advance” program, a mentoring and industry consultancy service to bring identified courses up to a good standard. As part of the “Creative Advance” program employer mentors work with course tutors to help embed best practice.

Industry

The Creative Skillset Council works with employers and industry to launch apprenticeships and internships:

- > More than 1,500 apprenticeships started in the UK in 2013
- > The duration of apprenticeship is generally between 10 and 18 months
- > Funding is available typically targeting 16-18 year olds

Source: Websites, Monitor Deloitte Research



Education Providers

Creative Skillset has accredited more than 130 courses in the UK

- > The Skillset Accreditation scheme scrutinizes the industry content and professional relevance of higher education courses
- > Employer and industry representatives are trained to become course evaluators

The Council is responsible for the “Build your own MA program” which provides continuing professional development for employees

More than 40 “Build your own MA” courses have been developed

Some examples of courses include:

- > **Creative Ideas Generation**, Bradford University
- > **Future Media Platforms and Environments** by Bournemouth University
- > **Audience centred design** by Bradford University

“Creative Business Mentor Network” - Mentorships

Description	Offers creative companies one-to-one mentoring with successful business leaders Companies have seen a transformational impact on their businesses through engagement with industry leaders across the creative sectors
Case Studies	TERN TV’s challenge was to grow from being a UK based company (largely Scotland based) and to improve its profitability NESTA paired TERN TV with Jane Turton, COO of All 3Media, the UK’s largest TV, film and digital distribution company With Jane’s inputs, TERN TV was restructured clarifying business relationships and entering into new strategic partnerships Playniac which earlier developed games on a commission basis was looking to publish and fund its own games retaining IP Playniac was mentored through NESTA by the former CEO of SEGA Europe and successfully supported the transition

The United Kingdom

Creative & Cultural Skills provides labour market research and engages employers with their workforce development agenda. The Council works with education and training providers to ensure qualifications address the needs of the sector. CCS covers design (e.g. communications, interior, and product design), craft, visual arts, cultural heritage (e.g. museums), music, theatre, literature and jewelry. **Creative Skillset** manages training funds raised from the industry and Government for skills development. The Council collaborates with the UK Commission for Employment and Skills (UKCES), education providers and industry to develop new education courses for the design industry. It covers the UK’s creative industries including advertising and marketing communications, animation, fashion and textiles, film, games, photo imaging, publishing, radio, TV and visual arts.

The involvement of the Creative Skillset Council has helped the development of new and innovative programs such as the Future Media Platforms and Environments program offered by Bournemouth University, and Audience Centred Design offered by Bradford University. See Exhibit 28 p80.

Multiple pathways to design education

An important feature of a developed design education system is the existence of multiple pathways into higher design education through the university and Vocational Education Training (VET) routes. VET plays a significant role in offering on-the-job experience as well as continuing professional education for working professionals. Having concluded their core education at 16, students can take vocational qualifications at school, at a college or as part of work-based learning programs including apprenticeships. Sorrell’s National Art and Design Saturday Club and the Eco Design challenge have helped to foster creativity in young students aged between 14 to 16 years.

The UK government places a statutory obligation on schools to deliver careers advice which the government quality assures. A foundation diploma in Art and Design functions as an exploratory year. This foundation course does not prepare students for work, and is solely used as a route into further university study.

Sector Skills Councils are employer led, independent, UK-wide organisations whose main role is to reduce skills gaps and shortages, improve productivity and improve learning supply. They are supported and funded through the UK Commission for Employment and Skills (UKCES).

Future Media Platforms and Environments program, Bournemouth University, United Kingdom



Singapore

Design Singapore Strategy

Singapore launched its Design Singapore strategy (DSG-I) in 2003, a 5-year plan covering design development, design promotion, the role of the Singapore Design Festival, Design Futures and design culture. The DSG-I has achieved significant results by adopting a holistic approach aimed at developing Singapore into an international design hub, as described in the exhibit opposite. See Exhibit 29 p83.

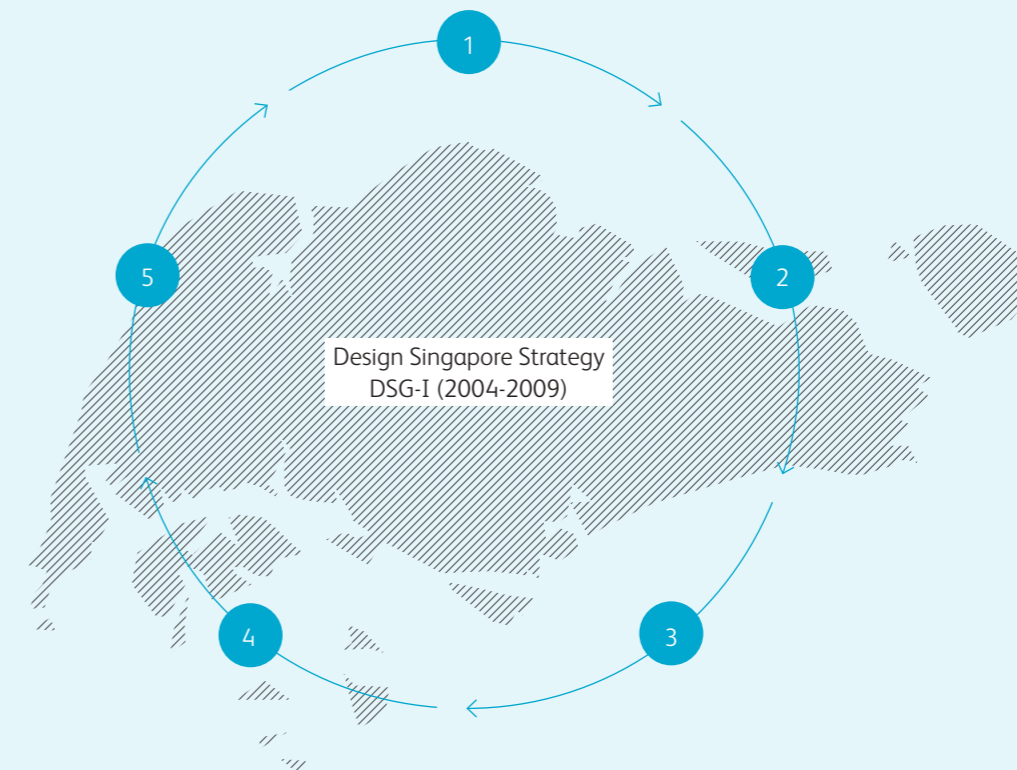
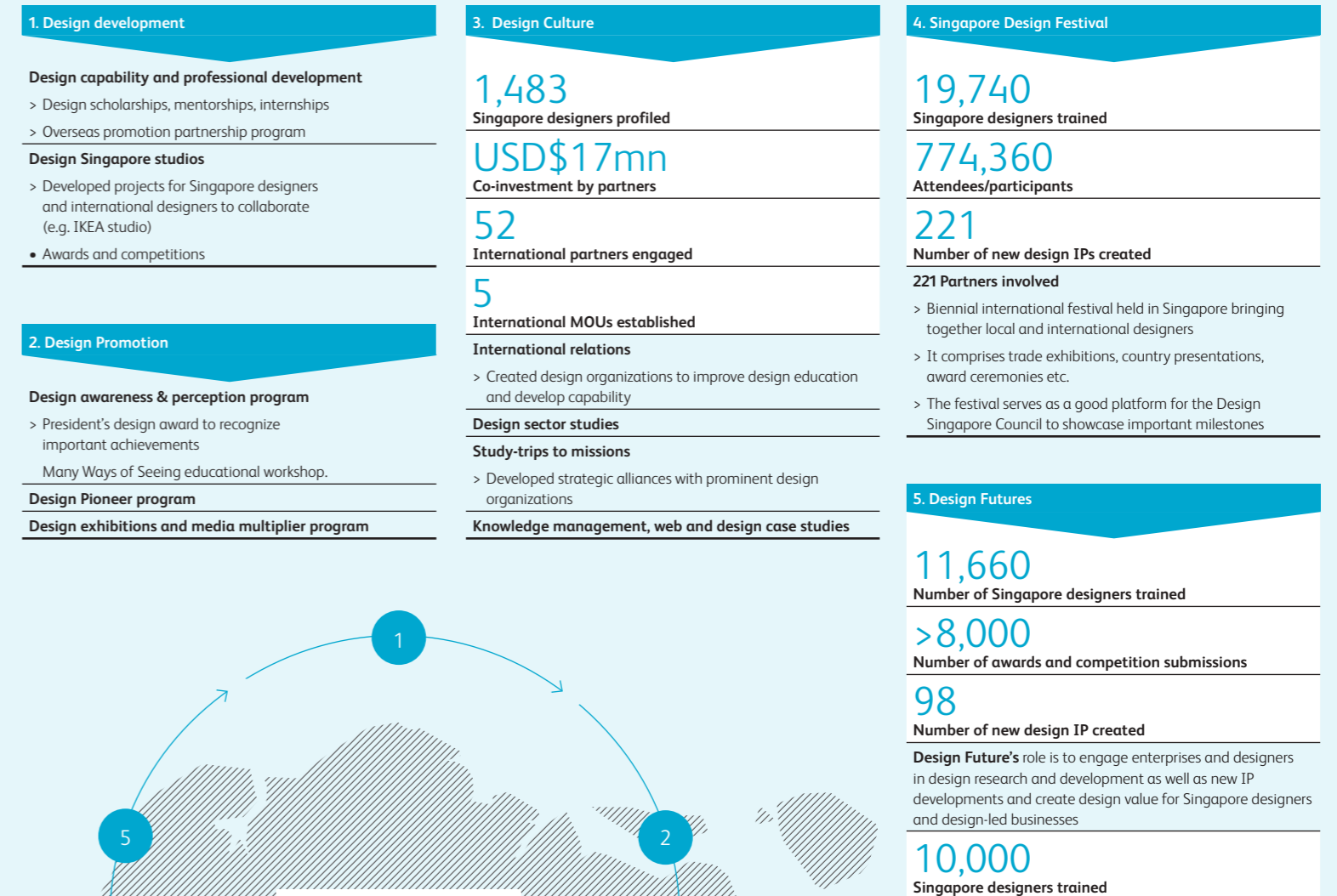
Singapore Design Business Summit, 2015, Design Business Chamber Singapore



The Design Education Sector in Singapore

Design Singapore Council is the primary government body responsible for developing the design sector by working with industry, educators and other government agencies. DSC is the national agency for design and is part of the Ministry of Communications and Information. The Council's mission is to develop the design sector and to help Singapore use design for innovation and growth. **Design Business Chamber Singapore** is a business chamber which aims to promote the design sector through organising training courses and events, and setting industry standards. The **Economic Development Board of Singapore** is the government agency which oversees the development of industrial design companies in Singapore, including attracting international design companies to relocate or expand to Singapore. The **National Design Centre** supports the Design Singapore Council's efforts to encourage design adoption by businesses, serving as a hub to bring together enterprises and designers in order to drive innovation. The **Design Incubation Centre (DIC)** was established in 2006 by the National University of Singapore, and aims to promote and conduct design research and development activities. See Exhibits 30 p84, 31 and 32 p85.

Exhibit 29: Design Singapore Strategy (DSG-I) and Impact



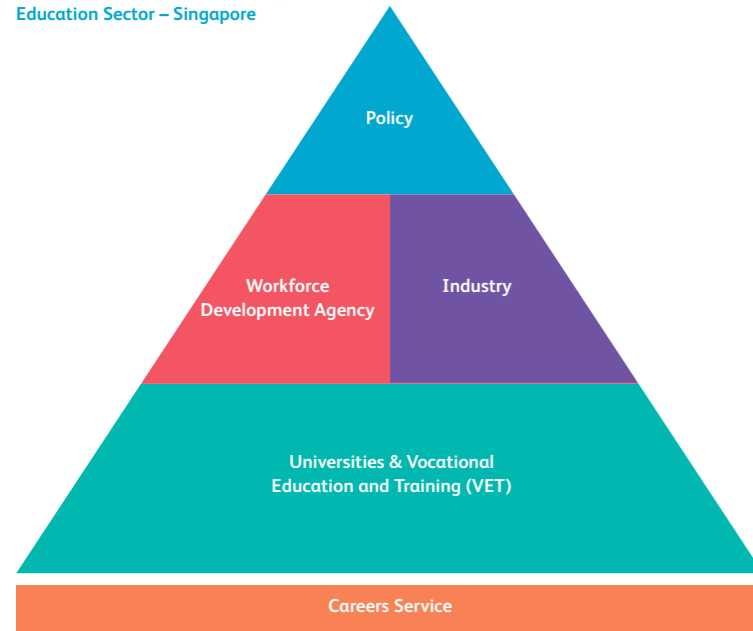
Source: Monitor Deloitte research analysis 2014; Design Singapore Council, Strategic blueprint of the design Singapore initiative 2009-2015

Singapore

Design Singapore Council is the primary government body responsible for developing the design sector by working with industry, educators and government agencies... The Council's mission is to develop the design sector and help Singapore use design for innovation and growth.



Exhibit 30: Overview of the Design Education Sector – Singapore



Source: Monitor Deloitte research analysis 2014; Design Singapore Council, Strategic blueprint of the design Singapore initiative 2009-2015

1 Policy

Design Singapore Council is the national agency for design and is part of the Ministry of Communications and Information. The Council's mission is to develop the design sector, and to help Singapore use design for innovation and growth

2 Workforce Development Agency

Workforce Development Agency (WDA) established in 2003, funded partly by employers and the state to enhance the employability and competitiveness of the country's workforce

3 Industry

Design Business Chamber Singapore is a business chamber which aims to promote the design sector through organising training courses and events and setting industry standards

Economic Development Board (EDB) is the government agency which oversees the development of industrial design companies in Singapore including the outreach to international design companies to locate in Singapore

International Enterprise promotes design as one of the strategic capabilities for the internationalisation of Singapore-based companies

National Design Centre supports the Design Singapore Council's efforts to encourage design adoption by businesses and serves as a hub to bring together enterprises and designers to drive innovation

4 Universities & Vocational Education and Training (VET)

There are approximately 9 universities, polytechnics and specialised art schools which provide diploma and degree level education in design

Established in 2006 by the National University of Singapore, the **Design Incubation Centre (DIC)** aims to promote and conduct design research and development activities

5 Careers Service

The **Workforce Development Agency (WDA)** Career Centers provide a range of career and training services for the local workforce including career coaching and training advice

Exhibit 31: Singapore Design Council Initiatives - Promotion and Many Ways of Seeing Program

Overseas Promotion Partnership Program

Description	This scheme funds Singapore designers to present at top international design events and trade shows such as the Tokyo Design Week and Milan International Furniture Show This enables designers to market themselves and gain access to wider business opportunities in the global arena
Type of support	50% of participation costs capped at USD \$20,000
Eligibility criteria	It targets emerging designers and design companies with strong track record that have been selected to participate in international trade shows and events Singaporean or permanent resident
Impact	39 Singapore design firms have been supported For designers supported at these international events, this scheme contributed to: 180 Number of industry contacts 160 New business opportunities

Many Ways of Seeing (MWOS) Educational Workshop

Description	Educational workshop to train design conceptual thinking in primary and secondary schools It was introduced in 2003 as a pilot project in three schools in Singapore and since then many schools have participated through the Singapore Polytechnic
Objective	The purpose of these workshops is to foster creative thinking and design appreciation in teenagers
Type of activities	Students collaborate with a teacher, a designer and a mentor in small project groups Groups prepare video clips and posters to express their observations and insights of the world around them
Impact	Singapore Polytechnic's Experience Design Centre has run this workshop with 920 students from 22 schools

Exhibit 32: Singapore Design Council Initiatives - Design Futures and 10 TouchPoints

Design Futures – R&D Support

Description	Launched in 2007, Design Futures aims to engage businesses and designers in design research and development as well as new IP creations to drive innovation and develop new design value for local designers and design-led businesses
Support	USD 4.8 million design R&D grant was launched to support the following research areas: a sustainable city, urban mobility, interactive digital media user interface Parallel research projects would be carried out in collaboration with international design universities such as MIT to identify design issues and develop solutions for future cities
Impact	The targeted outputs for Design Futures for 2008/2009 were: 10 Number of projects supported by grants 10,000 Singapore designers trained

10TouchPoints

Description	Three-phase nationwide project which aimed to improve every day living through design. Phase 1: invited Singaporeans to identify public amenities for improved design through an online voting platform Phase 2: Singaporean designers were invited to redesign the top 10 nominated ideas through a design competition Phase 3: Owners of the public amenities had to implement the new designs
Impact	400 Number of nominations in phase 1 17,000 Votes on items that could be better designed 113 Number of submissions from designers

United States San Francisco

In the United States, we came across very few examples of support at Federal level for firms to engage with the Creative Industries, unlike in the UK. Initiatives around workforce planning and skills development are region-centric with a good deal of autonomy related to decision making.

Projects and initiatives supporting the development of the design sector

As expected, there are greater levels of government support in mature design cities, such as New York and San Francisco, where governments are increasingly collaborating or supporting private initiatives (such as with education institutions or not-for-profit organisations). See Exhibit 33 p87.

Affordable working and exhibition spaces for emerging brands and designers

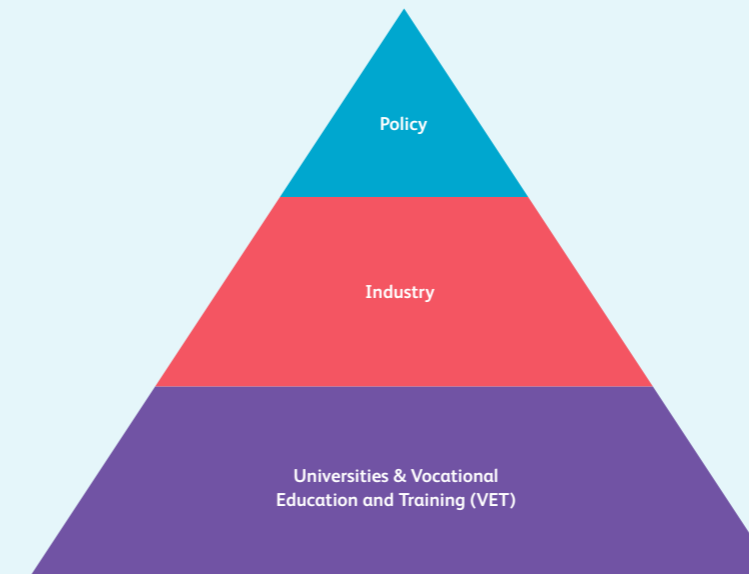
Public and private investment is being channeled into supporting the sector's growth via affordable space for designers, including refurbishment of empty public spaces and the creation of affordable co-working spaces to accommodate freelancers and small companies. San Francisco, along with Helsinki and Berlin, has recognised the need for affordable exhibition and working space for their creative communities, altering regulation and dedicating public spaces for their use. This provides designers with the opportunity to collaborate with other designers and share ideas, and to expose their work amongst the public. For example, in Helsinki, the Kaapeli building, a former cable factory, has been converted into a cultural center with museums, art galleries, dance theatres, ateliers, art schools, as well as hosting several events throughout the year.

The San Francisco local government launched the **Living Innovation Zones** project in 2013. The initiative has dedicated public spaces for the installation of design concepts, and to foster collaboration and learning. The first installation has been created by The Exploratorium, a museum in San Francisco, with an installation on a central street that encourages passers-by to stop and consider their urban environment. See Exhibit 33 p87.

Fashion Design Incubators in San Francisco

Incubators play a major role in supporting creativity and innovation. **Fashion Incubator San Francisco (FiSF)** is a non-profit organisation that provides training, workspace, technical support and mentoring to aspiring fashion designers. The program, which was started by the department giant Macy's, opened in 2012. It has capacity for six designers per year, providing 12-month training consisting of more than 25 master classes, and a mentorship network consisting of attorneys, finance partners and educators. FiSF runs monthly community seminars to expand relationships across the design and manufacturing community. **San Francisco Fashion Lab** is an additional fashion incubator in San Francisco for emerging designers. Founded in 2009, the Fashion Lab has since formed a range of partnerships including California College of the Arts (venue), Art Institute of California (venue), Hult Business School (internship program), and Law on the Runway (legal support). Services offered include business and strategy mentorship, entrepreneurship training, and networking events with San Francisco area designers, developers, manufacturers, retailers and start-ups.

Exhibit 33: Overview of the Design Education Sector – San Francisco



1 Policy

- It oversees activities and programs related to business attraction and retention, workforce training, development planning, and neighborhood commercial revitalization awards
- At the national level, the Department of Education acts as a facilitator of education in the country
- California's education system operates with minimum government interference
- At a regional level, high schools are funded and monitored by independent school districts, while community colleges are monitored by the regional education board

2 Industry

The **Industrial Design Society of America (IDSA)** supports the creation of a coherent industrial sector through design publications, conferences, international design excellence awards

The **Design Management Institute (DMI)** is an international membership organisation with membership from consultancies, industry and academia. They organise design conferences and workshops and develop research and teaching materials

The **American Institute of Graphic Arts (AIGA)** is the largest professional membership design organisation in the world, with over 25,000 members. They are involved in design education and professional development

3 Universities & Vocational Education and Training (VET)

San Francisco is home to some of the best universities in the country including Stanford University and California College of the Arts

Source: Monitor Deloitte research analysis 2014

Exhibit 34: San Francisco's Living Innovation Zones



Credits: Exploratorium's Studio for Public Spaces; Robbie Sweeney; Stephanie Sevest

Living Innovation Zone allows designers and artists to utilise City-owned properties for creative projects and innovative technologies. This project is part of a larger City initiative called Make Your Market Street which aims to bring artists, designers and creatives to the sidewalks of Market Street in order to revitalize one of San Francisco's most important streets.

Public and private investment is being channeled into supporting the sector's growth via affordable space for designers, including refurbishment of empty public spaces and the creation of affordable co-working spaces to accommodate freelancers and small companies.

United States New York

New York-based schools are among the United States' top-ranked universities. Below are some of the highly ranked universities specialising in design in New York. See Exhibit 35 p89.

Cross-disciplinary study in design education
Parsons, The New School for Design, is a private art and design college located in New York City and is one of the world's most prestigious art and design schools. It comprises of five schools offering numerous degree programs with a campus in Paris and academic centers in Mumbai and Shanghai. Cross-disciplinary study is heavily emphasised at the School. For example, an Architecture student can minor in politics, or a Communication Design student can take a minor in psychology. Parsons even offers a graduate degree in Transdisciplinary Design.

Parsons offers exchange programs with leading institutions including:

- Royal Melbourne Institute of Technology (RMIT)
- Sydney College of the Arts
- Tongji University School of Design
- Regent's University London
- University of Arts London
- École Nationale Supérieure des Arts Décoratifs (ENSAD)
- Delft University of Technology

Incubator programs in design education
 The **Centre for Social Innovation** and **Parsons** have co-created an incubator program for Parsons students and recent alumni launching design-led social innovation projects. The Centre for Social Innovation is a Toronto-based organisation that has opened a 24,000 square-foot space in New York, which supports changemakers in the NGO, public, business and academic sectors. The incubator program is seen as an opportunity to bridge the academic and professional worlds.

The first cycle of the incubator program launched in 2013, with five projects being selected for development by five teams totaling 15 students and recent alumni of two innovative graduate

programs from Parsons: **MS Design and Urban Ecologies** and **MFA Transdisciplinary Design**. In addition, the DESIS (Design for Sustainability and Social Innovation) Lab at Parsons creates programming for the incubator program.

Selected projects include Bike Flocks, an urban, clean energy transportation system focused on biking; Make Your Mark, an urban parks stewardship program for youth that connects STEM education (science, technology, engineering and math) to design and social change, and Citysteading, a community-driven process that seeks to empower marginalised urban populations to have a voice in driving important policy issues, such as affordable housing and environmental protection.

The Centre for Social Innovation and Parsons have co-created an incubator program for Parsons students and recent alumni launching design-led social innovation projects... The incubator program is seen as an opportunity to bridge the academic and professional worlds.

New York-based schools are among the United States' top-ranked universities.



1–3. Parsons, The New School for Design, New York, Unites States of America

Exhibit 35: Overview of Design Schools in New York

Highly Ranked Design Schools in New York	Highly Ranked Programs*					
	Architecture	Interior Design	Industrial & Product Design	Fashion & Textile Design	Multimedia & Graphic Design	Visual Arts
1 Parsons, The New School for Design				•	•	
2 Fashion Institute of Technology (FIT)				•		
3 Pratt Institute		•	•	•	•	
4 New York School of Interior Design		•				
5 School of Visual Arts (SVA)			•		•	•
6 Rochester Institute of Technology			•		•	•
7 Syracuse University					•	
8 New York University Tisch School of the Arts					•	
9 Columbia University	•					•
10 Cooper Union	•					

Source: Fashionista.com; U.S. News & World Report; Center for an Urban Future, Designing New York's future

*Note: These New York based schools have been ranked highly in their corresponding programs in the U.S. News & World Report as well as other leagues tables

Eindhoven

Eindhoven has been able to establish itself as one of the leading cities in design through its ability to provide designers with the required facilities and resources to grow.

Eindhoven has been able to establish itself as one of the leading cities in design through its ability to provide designers with the required facilities and resources to grow. The Dutch city features two leading universities, namely the Eindhoven **University of Technology (TUE)** and the **Design Academy Eindhoven**. The TUE offers a wide range of technical design programs, including an MSc in **Smart Energy Buildings and Cities**, and a Post MSc in **User-System Interaction**. The Academy of Design serves a slightly different segment of the design education market by offering degrees in subjects such as Social Design and Information Design. See Exhibit 36 p91.



Interdisciplinary design

The Design Academy, Eindhoven is an interdisciplinary educational institute for art, architecture and design located in Eindhoven, Netherlands. Its academic programs focus on people and society at core, which is reflected in the names of the design themes such as Man and Communication, Man and Living, Man and Public Space, and Man and Well-being.

The educational program consists of four Kompas departments that aim to develop students' basic level of knowledge and skills:

1. **Market** | Development of talent into content suitable for business (e.g. presentation, entrepreneurship, economic analysis)
2. **Forum** | Place design and the design profession in a socio-cultural context
3. **Lab** | Focus on interaction between the creator, the product and the user
4. **Atelier** | Students learn how to think while designing actual models and designs

In terms of degree courses, the Design Academy offers bachelor-level diplomas in eight interdisciplinary departments, covering Art, Architecture, Fashion, Graphic and Product Design. It also offers three distinct masters programs in the innovative fields of Information, Social and Contextual Design. The University is deeply committed to realising the potential design can have on the community. The Masters in Social Design program is a prime example as it aims to develop new models, strategies and products that can play a decisive role in the development and transformation of society.

Connecting Concepts

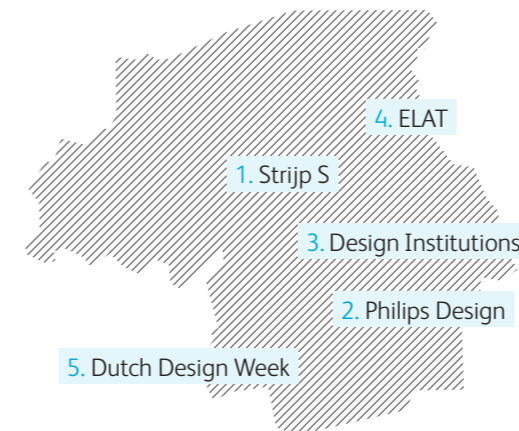
Organised by the Eindhoven Design Academy, the goal of the Connecting Concepts travelling exhibition is to support the development of sustainable creative networks and to share and discuss ways of design thinking. Local designs are added to the exhibition at each staging post, thus interconnecting the respective design cultures and kick-starting a dialogue. In doing so, the evolving exhibit engages in dialogue with different design cultures, through the help of visitors, designers and producers. China, India, Turkey and Germany are among the various locations visited by the organisation. Connecting Concepts stimulates network development, cooperation in the field of education, and meetings among designers, professional and trade associations, and potential clients.



Student Graduate work from Design Academy Eindhoven, The Netherlands:

1. Olivieran Herpt Functional 3D Printed Ceramics ACT CUM 2015 ©FR
2. Tijs Gilde Fringe ACT 2015 ©FR
3. Alejandro Bona Form Follows Forces MACont 2015 ©FR

Exhibit 36: 5 key drivers that have enabled Eindhoven to emerge as one of the leading Design Cities



1. Strijp S	Strijp S is the former Philips complex of approximately 27 hectares The area is being developed to provide a hub for artists, designers, musicians, and theatre makers "A place where studio space will be available and where a wide range of creative activities will find a home"	4. ELAT	ELAT is a geographical area in the Dutch, Belgian and German cross-border region with a high concentration of outstanding knowledge and R&D centers as well as incubators ELAT provides designers with the resources needed to experiment their designs and be creative
2. Philips Design	Philips Design, with 580 employees worldwide (of which 200 work in Eindhoven), is the largest private design company in the world Eindhoven is also a home for other design companies such as: Shapeways, and RPI Paro	5. Dutch Design Week	It was started in 2001 as the day of design and has now grown to become a phenomenal household name in the Netherlands with more than 80,000 visitors every year Dutch Design Week takes place across different locations including Strip S, Eindhoven University of Technology, and Design Academy Eindhoven.
3. Design Institutions	Eindhoven is home for some of the best design educational institutions in Europe and world wide such as Design Academy Eindhoven and Eindhoven University of Technology		

Source: Monitor Deloitte Research and analysis, Websites

Closing the Regional Design Skills Gap

4

Introduction

In order to drive the growth of the design sector over the next five years and to ensure that it is self-sustainable, there is a need to establish a blueprint for workforce planning across the region. This involves developing an ongoing assessment of design skill gaps in the region with focused interventions needed to address these. The pipeline of design graduates and its diversity is vital to the preservation and development of the design industry⁴¹. Governments across the region need to recognise design and, in turn, design education as a positive lever for growth. Research has consistently shown a link between the use of design and improved business performance across key metrics such as turnover, profit and market share. Furthermore, the contribution of the Creative Industries to GDP in the region still lags behind more mature design hubs.

4.0 Closing the Regional Design Skills Gaps

4.0 Closing the Regional Design Skills Gaps 92

⁴¹ Restarting Britain – Design Education and Growth

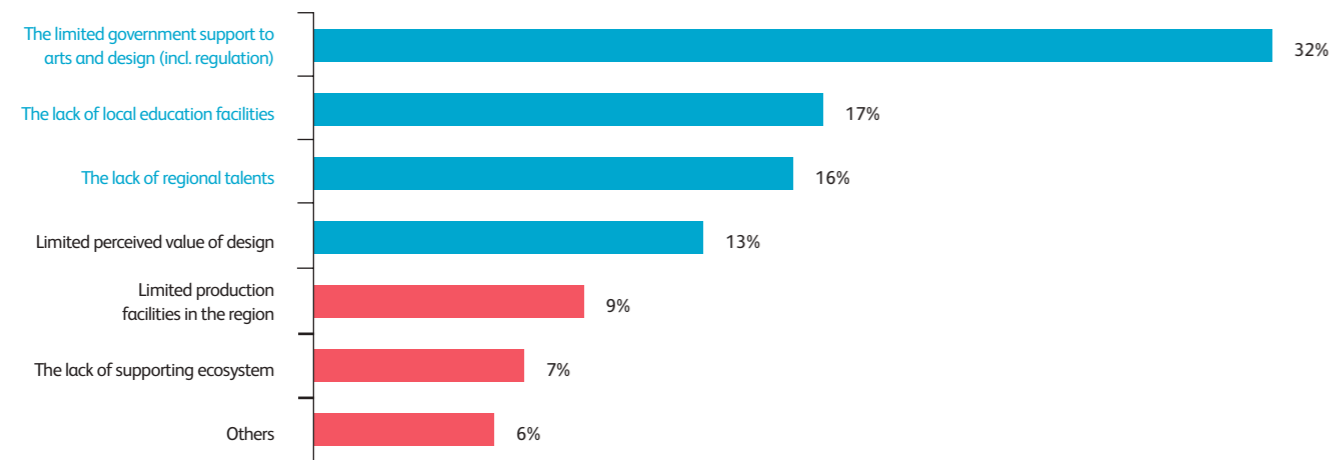
Barriers to growth of the Design Sector in MENA

This section of the report is focused on developing a blueprint for educators and policy makers to shape their design education offerings in a manner which is more aligned with industry needs.

The extensive primary research that has been carried out for the purpose of this publication has revealed a wide variety of initiatives taking place in the MENA region that are supporting the emerging industry to grow at double the global market rate. There are, however, a number of challenges and barriers that remain within the MENA region that will need to be overcome for it to compete effectively with international design hubs. In a survey conducted by Monitor Deloitte and TNS across more than 150 corporates, the lack of government support to Arts and Design was cited as the single most important issue hindering the growth of the industry, followed by lack of local education facilities and lack of regional talent. See Exhibit 37 p94.

Exhibit 37: Issues Hindering the Growth of the design industry

What are in your views the key issues hindering the growth of the industry?*



*Top Rank - based on 152 respondents

Source: TNS Corporate Survey, 2014

Best Practices in Design Education: Key Learnings for MENA

A number of global cities have built an international reputation as design education hubs by recognising the importance of education planning and early learning experiences, through to providing a structured career path and aligning education skills with the needs of the economy. We have identified a series of best practices that have supported the development of design education hubs and a skilled design workforce.

A cohesive National Design strategy with linkages to workforce planning

Few of the benchmarked countries have an established a National Design Policy (e.g. Singapore) with clear metrics to measure performance against long-term objectives. In some of the benchmarked countries, Design Policy is driven by multiple government agencies (e.g. US, UK) either at the National level (as in the case of the UK) or at the Regional level (as in the case of the US). Design Councils such as those in the UK play an important role in fostering design education and enhancing skills.

The MENA region has yet to see such a structured approach towards design, despite the thriving design environment in certain countries. While setting up a National Design Policy may not be on the immediate agenda, developing a coherent and well-coordinated approach to the design industries could potentially yield economic benefits. In the UAE, the establishment of the Dubai Design and Fashion Council in 2013 reflects the increasing strategic importance that the Emirate is placing on the design and fashion sector as it seeks to further diversify the economy and make the transition to a knowledge driven economy.

There is generally a lack of design institutions in the MENA region, which is particularly evident in Lebanon where design is not yet considered a priority by the government, despite the existence of a vibrant design ecosystem. To date, the sector has benefitted from investments from the private sector, such as the MENA Design Research Center and STARCH, as well as investment from foreign organisations such as the British Council. However, there are increasingly government-facilitated initiatives underway, such as the Beirut Digital District that was launched in 2012 and will support the growth of the digital industry, and the Ministry of Tourism as a partner to the annual Beirut Design Week. In 2015, Dubai Design Week was launched in partnership with Dubai Design District (d3), encouraging the growth of the design industry in Dubai and creating a global meeting point for the regional and international design community through design-dedicated events, activities and projects within d3 and across the city of Dubai.

There is more that can be done within the MENA region to set up a supportive design ecosystem and there are a number of such examples from international design hubs. For example, Finland and the UK are leading the way in terms of embedding design within National decision-making, with both having commissioned design experts to train government policymakers through the Helsinki Design Lab and Policy Lab respectively. Furthermore, the UK Design Council, the UK government's advisor on design, provides design services and carries out innovative design research to champion the sector.

The MENA region has yet to see such a structured approach towards design, despite the thriving design environment in certain countries. While setting up a National Design Policy may not be on the immediate agenda, developing a coherent and well-coordinated approach to the design industries could potentially yield economic benefits.

Best Practices in Design Education: Key Learnings for MENA

The chart opposite highlights the contribution of the Creative Industries to design across regional markets and more mature ones. Boosting the Creative Industries has positive benefits in terms of diversifying regional economies, increasing productivity and stimulating entrepreneurship. See Exhibit 38 p97.

The MENA region lags behind more developed markets in terms of the relative contribution of the design industry to GDP.

Advanced design economies have fostered exposure to design in early education

A common practice seen across design education hubs is the fostering of an early interest in design education through innovative programs involving active projects in primary and secondary schools. The UK Design Council partnered with Cornwall Council, University College Falmouth and the Technology Strategy Board to develop the Time Program in Cornwall and the Isle of Scilly, which sought to develop new solutions for social and economic challenges by involving communities in designing local services. For example, one of the programs initiated by the project encourages Year 8 students to channel their creativity into redesigning parts of their schools, with the objective of reducing their ecological and carbon footprints.

The Design Singapore Council developed the 'Many Ways of Seeing (MWOS) Educational Workshop'. The objective of this initiative is to foster creative thinking and design appreciation in teenagers through developing educational workshops to train design conceptual thinking in primary and secondary schools. The initiative was introduced in 2003 as a pilot project in three schools in Singapore, and since then many schools have participated through Singapore Polytechnic.

A key strategic imperative for the region is to foster a positive attitude towards design at an early stage and overcome traditional stereotypes. To this end, K-12, university and VET educators have an important role to play in incorporating design thinking in their curricula and offering a model of early stage interaction with design concepts.

Identifying strategic skills in demand and working with the education sector to address them

Markets such as Singapore produce detailed workforce analytics which helps to identify strategic skills in demand and address short-term gaps in manpower needs. These include the regular identification of occupations in critical demand to reflect labor trends. A manpower resource guide highlights local sources of manpower which companies can tap to meet their immediate and near-term manpower needs.

A systematic approach to identifying skill gaps and addressing these through linkages with the education sector could be of tremendous benefit to the region, particularly in the design sector. This would help to establish a stronger narrative around long-term needs and enable discussions with educators i.e. universities, K-12 institutions and private sector providers. Many of the companies interviewed as part of the study mentioned the need to import skills into the region, given the paucity of talent in specific areas of the design industry.

Enhance the depth and range of courses in design education

As part of this study, we had highlighted the existence of white spaces in design education offerings. Design programs in the GCC appear

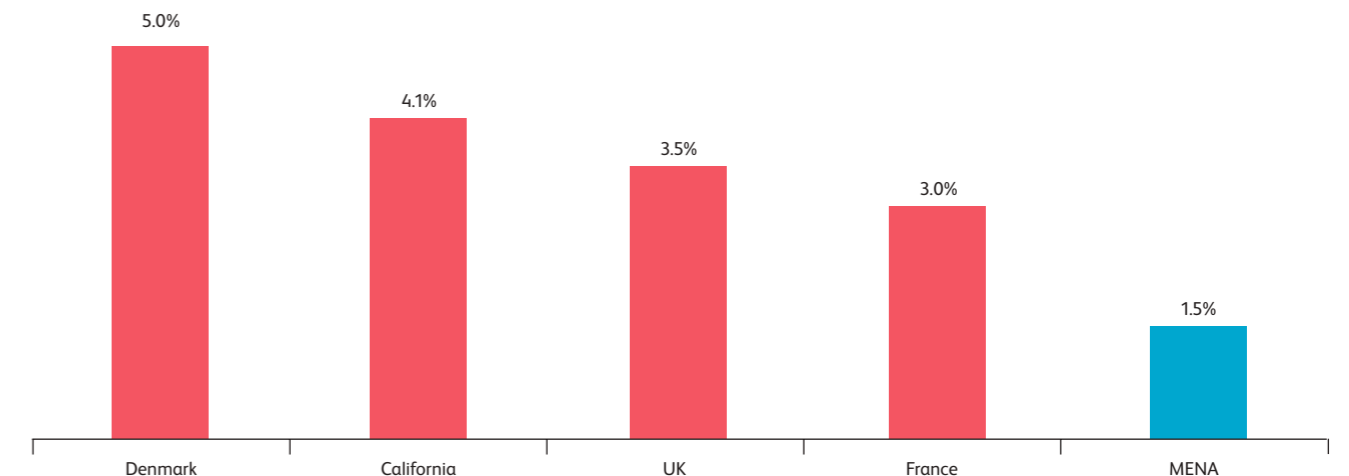
to be largely focused around Architecture and Interior Design, reflecting the importance of the construction sector in these countries. There are virtually no courses in Industrial or Product Design, and students keen to pursue education in these areas generally look to travel overseas, often taking up employment in the United States or the European Union. Other segments such as Experiential Design are yet to see interest from educators. This has resulted in a flight of intellectual capital away from the region and is clearly hindering the growth of the design industry. Collaborations between regional universities could be a first step in addressing the white spaces in design education offerings. Cross-fertilisation of ideas would facilitate better coverage of all key design segments, thereby offering students looking to pursue a career in design with regional education programs that are both relevant and cost effective.

Developed markets offer personalised pathways and multiple routes into the design sector

An important feature of a developed design education system is the existence of multiple pathways into higher education through university and Vocational education training (VET) routes. VET plays a significant role in offering on-the-job experience as well as continuing professional education for working professionals. Vocational training and academic institutions are well established within Singapore, with a clear pathway for students from secondary school level. There are currently five polytechnics in Singapore offering a wide range of courses in various fields, including diplomas in Industrial Design and Interior Design. The government funds and regulates polytechnics, which deliver three-year diploma courses in vocational subjects, with around 6% of Singaporeans

A common practice seen across design education hubs is the fostering of an early interest in design education through innovative programs involving active projects in primary and secondary schools.

Exhibit 38: Contribution of Creative Industries to GDP – MENA vs. Other Markets



Source: Various publications, Monitor Deloitte analysis

Best Practices in Design Education: Key Learnings for MENA

A strong industry-academia linkage underpins design education, ensuring that design education courses continue to remain relevant to workforce needs. Moreover, real life projects and collaborations between the universities and corporates serve to strengthen student skill sets and experience.

currently gaining a polytechnic diploma. The polytechnics offer a more industry-oriented education as an alternative to junior colleges for post-secondary studies. In addition, inclusive design competitions offered by polytechnics (e.g. Toy Design competition) encourage cross-disciplinary design.

In the UK, having concluded their core education at 16, pupils can take vocational qualifications at school, at a college, or via work-based learning including apprenticeships. The UK government places a statutory obligation on schools to deliver career advice, the quality of which is assured by the government. As detailed in the exhibit below, there is a foundation diploma in Art and Design which functions as an exploratory year. This foundation course does not prepare students for work and is solely used as a route into further university study.

The region's VET institutes need to gear themselves to offer broad-based design education programs complementing the university level courses and targeting specific segments e.g. industry professionals looking to refresh specific skills.

Collaboration between industry and academia ensures that graduates are equipped with the relevant skills for the economy

A strong industry-academia linkage underpins design education, ensuring that design education courses continue to remain relevant to workforce needs. Moreover, real life projects and collaborations between the universities and corporates serve to strengthen student skill sets and experience. The Sector Skills Councils in the UK works with education and training providers to ensure qualifications address the needs of the sector. In addition, the councils promote and

deliver apprenticeships, in addition to working with providers to ensure the current and future skills needs of industries are met.

In some markets, such as the Netherlands, academia (e.g. Eindhoven Design Academy through the General Director of the Executive Board) actively participates in shaping the National Agenda for a smart and creative workforce. In San Francisco, the TechSF economic and workforce initiative is a partnership between industry, educators and community based partners, providing education, training and job placement assistance.

Students at Instituto Marangoni, a leading fashion school in Italy, have various opportunities to work on projects with real clients. For example, the school and Ermenegildo Zegna partnered to create the Masters in Menswear Program, with students given the opportunity to offer ideas and proposals to contribute to the men's collections of Ermenegildo Zegna's design lines. An important aspect of the course is the presence of managers from the fashion label to enhance students' skills in the three areas of product, style, and retail.

Occupational standards for the Creative Industries serve as an important reference point for all stakeholders in the design industry

The UK and Singapore developed detailed occupational standards for the Creative Industries, serving as an important reference point for students, employers and educational institutions. Standards support students to determine whether courses are relevant, employers to identify training needs for their staff, and educational institutions to provide courses that prepare students adequately for the job market. The Creative Skillset in the UK,

part of the Sector Skills Councils, maintains the 'National Occupational Standards' which define the skills, knowledge and experience required to work in the Creative Industries. These standards are integral to qualifications and apprenticeships, and are created in close collaboration with industry bodies, companies and other key stakeholders.

In Singapore, the Workforce Development Agency is responsible for developing industry wide National Occupational Standards for all industries including design. To date there are 33 workforce skills qualifications (WSQ) industry frameworks, which detail the skills required to perform in the industry and the occupational skills to perform specific jobs.

Multidisciplinary programs offer diverse courses that enable designers to develop broad skills, such as management and economics, in addition to design expertise

Multi-disciplinary study is emerging as an important trend to enable designers to draw on a broad range of disciplines, including social sciences and the humanities, in order to complete in a competitive global market. The approach offers diverse courses for students to develop their skills across various disciplines, as well as bringing together students from different backgrounds in multidisciplinary collaboration. The designer of the future is evolving in line with the evolution of the uses of design in business and industry, with interdisciplinary activity becoming prevalent.

Design modules are being embedded into MBAs and business school curricula, and into science and engineering courses. Design departments are increasingly working with other departments within their own universities on multi-disciplinary

projects. Higher education institutions in the UK offer multi-disciplinary Masters Programs, such as Northumbria University in Newcastle that launched a Masters in Multi-disciplinary Design Innovation, run by the School of Design in collaboration with Newcastle Business School and the School of Computing, Engineering and Information Sciences. Paris College of Art provides a Masters in Transdisciplinary New Media, targeting students who are interested in exploring New Media that goes beyond traditionally defined art and design disciplines. To encourage the transdisciplinary approach, the program is open to applicants from various backgrounds including art, design, programming, business, literature, philosophy, science, and music.

In Finland, Aalto University has established an experimental platform for multi-disciplinary education and innovation, the Design Factory. It is a space where business meets design and engineering in an environment created to enable conversations, connections and creativity across the traditional barriers of industry, academia, research and hands-on practice.

South Korea has set up a Convergent Design Education Program, awarding funding to eight universities to enable them to develop multi-disciplinary activities. Universities are working with the Korea Institute for Design Promotion (KIDP) to develop this convergence program, which is funding curriculum development alongside teaching and learning.

While many educators who participated in the study cited the need for multi-disciplinary courses in the Middle East region, our study came across very few courses of this nature. Embedding collaboration and multi-disciplinary course offerings for learners within the future



1. Design Academy Eindhoven, The Netherlands

Best Practices in Design Education: Key Learnings for MENA

Strategic alliances and partnerships amongst the top design institutes is seen as a key feature across the mature design markets. These partnerships focus on exchanging students and teaching staff, knowledge exchange and experience.

landscape of design education reflects not only a strategic imperative but is vital in order to drive innovation.

A National Career Services framework offers free services related to career, skills and training to people at every stage of their careers

A critical factor for success in many of the design education hubs is the existence of a robust National Career Services framework to establish linkages across the education sector and the workforce, and catering to age groups from 13 years and over. The Workforce Development Agency (WDA) in Singapore and the National Careers Service (NCS) in the UK provide a range of career and training services for the local workforce, including career coaching and training advice.

Career Counselling Services in the region are as yet fairly underdeveloped with inadequate information provided regarding education courses and possible career paths in the design industries.

Advanced design economies provide world-class infrastructure to support the development and growth of designers

A common feature of the top design schools is the availability of advanced infrastructure (e.g. fabrication labs, workshops, 3D printing facilities, etc.) on campus. Open spaces on campus (e.g., the 'White Lady' campus of the Eindhoven Design Academy) offer opportunities for close interaction. Many of the top design schools (e.g. Pratt Design Incubator for Sustainable Innovation) and a few regional schools surveyed offer in-house incubation facilities which have resulted in the growth of several successful design start-ups.

Funding for skills development is important for both growth in the design sector and to facilitate design research

Skills funding in the UK is actively provided by government agencies, design councils and other innovation focused charities. In the UK, skills funding has two key roles, the first being to invest in skills and education to promote trade, boost innovation and help people to start and grow a business. The second is to support creative businesses and help organisations to bring innovative ideas to life. In Singapore, a levy is imposed on employers (i.e. through the Skills Development Fund), the main objective of the funding initiative being to support training and skills development in the design industry.

Partnerships between educational institutions aim to develop educational programs and enhance student experience

Strategic alliances and partnerships amongst the top design institutes is seen as a key feature across the mature design markets. These partnerships focus on exchanging students and teaching staff, knowledge exchange and experience. The Eindhoven Design Academy organised Connecting Concepts, a travelling exhibition developed to showcase Dutch design as well as designs from other participating countries, with the aim to support the development of sustainable creative networks and to share and discuss ways of design thinking. Connecting Concepts connected students of Design Academy Eindhoven with other students in various schools and universities across different countries, stimulating exchange of knowledge and network development among students and designers. Regional universities have taken steps in this direction and could benefit strongly from increased partnerships. See Exhibit 39 p101.

Intellectual Property Protection

The poor enforcement of Intellectual Property protection has been a recurring theme throughout our interviews in the MENA region, with experts highlighting a lack of harmonised regulation across the region and issues with implementation and enforcement. A number of agencies that we spoke to confirmed that they protect their IP in the UK or US at significant cost, and that this presents a barrier to entry to for freelancers and small agencies unable to do the same. Beyond IP protection, a number of important policy decisions critical for the design industries have also been highlighted, such as labor laws to allow freelance status, rigidity around trade licenses, and flexibility for students to participate in internships and apprenticeships. Copyright laws have been introduced in all the GCC states but they are not harmonised across countries and, in some cases, have not yet been implemented and therefore remain unenforceable. It is important for regional designers to see progress in this area in order to retain the talent and encourage foreign designers to participate in the MENA economy. The UK, for example, has recently passed an updated IP law, strengthening protection for designers and reducing red tape surrounding the process, in recognition that it contributes USD 25 billion⁴² to the UK economy annually⁴³.

Design promotion initiatives

A barrier to growth that has been identified throughout our market research is the limited willingness to recognise design as a commercial service in the region. There is a general consensus that there is demand for design, but that the design element of a piece of work is compromised in cost negotiations as clients resist paying for the service. This has been particularly evident in the architecture and interior design segments. There are a large number of design events that promote the art and design sectors, particularly in Beirut and Dubai, such as Beirut Design Week and Design Days Dubai, delivered in partnership with their respective governments. There is certainly more that can be done however, by governments in the region to advocate the commercialisation of design by using promotion strategies, such as developing branding initiatives or subsidising private sector collaboration. Examples from international design hubs include Turquality in Turkey and Design Selection in Germany, developed to promote national design at a domestic level as well as overseas, and Innovation Vouchers in the UK that subsidise the services of design experts to private businesses.

Exhibit 39: Eindhoven Design Academy's "Connecting Concepts"

Description	
	Connecting Concepts' is a travelling exhibition showcasing Dutch design as well as designs from other participating countries
	Connecting Concepts is a joint project of Premsel; the Netherlands Architecture Institute; and Design Cooperation Brainport. The exhibition is part of the Dutch Design Fashion Architecture program
	Local designs are added to the exhibition at each staging post, thus interconnecting the respective design cultures and kick-starting a dialogue. In doing so, it engages in dialogue with different design cultures, with the help of visitors, designers and producers.
	'Connecting Concepts' stimulates network development, cooperation in the field of education, and meetings among designers, professional and trade associations, and potential clients
	In Feb, 2012; a new project was added to Connecting Concepts which connected students of Design Academy Eindhoven to traditional Turkish craftsmanship; young Turkish and Dutch designers and students work together creating an interesting exchange of knowledge and a new vision for design
	Exchange of knowledge is a key outcome of Connecting Concepts and with Istanbul the participating institutions included the Mimar Sinan Fine Arts University, Glass Furnace, Istanbul Technical University and Design Academy Eindhoven
	The exhibition has been featured in China, India and Germany

⁴² Converted from GBP 16 billion using a conversation rate of 1 GBP = 1.56475 USD on November 18, 2014

⁴³ Gov.uk – <http://bit.ly/1nRwrf>

Best Practices in Design Education: Key Learnings for MENA

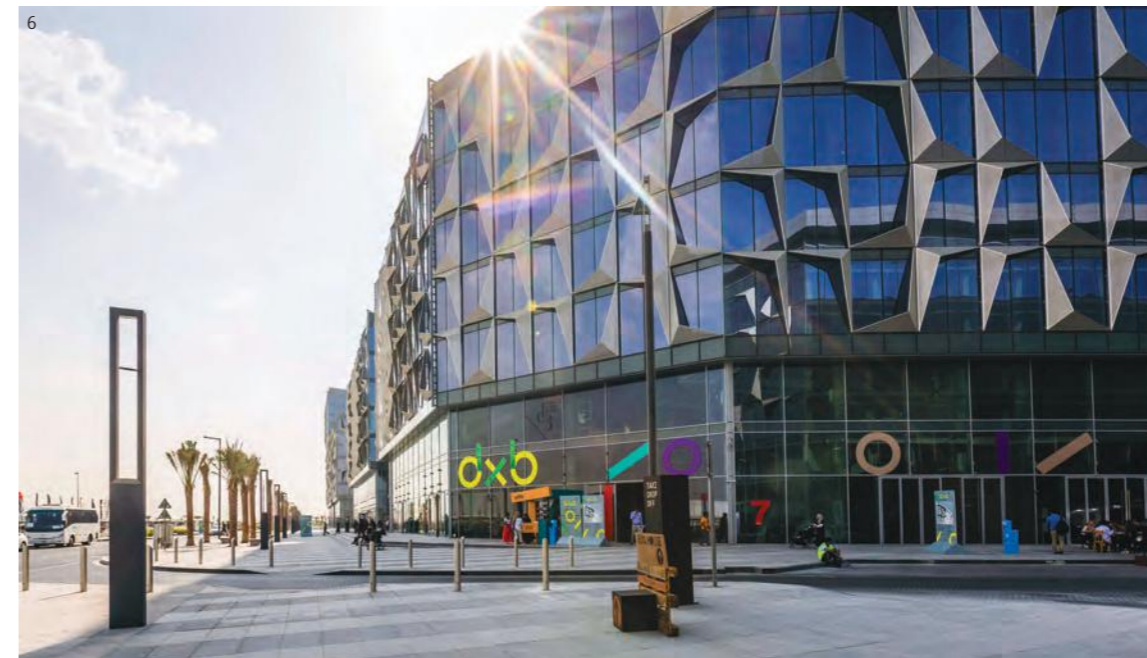
A further barrier that has been highlighted in our market research is the limited production facilities in the region, particularly evident in the Gulf where the focus within the design value chain tends to be on promotion and distribution.

Design infrastructure

A further barrier that has been highlighted in our market research is the limited production facilities in the region, particularly evident in the Gulf region where the focus within the design value chain tends to be on promotion and distribution. Our analysis indicates that the contribution of design-related industries⁴⁴ in Dubai to GDP is 4.5% based on retail sales, falling to 1.5% when considering only local production, indicating that the demand for design-related products and services exceeds the existing supply. The UAE's approach to developing its production facilities would therefore depend on how it views its role within the design value chain, i.e. to act as a retail presence for large design companies that want to address the affluent regional market or, more ambitiously, to grow design creation and production in the region.

It is evident across international design hubs that it is challenging to maintain the whole design value chain, including production and distribution, within a single district. This can be explained by the competing requirements of upcoming artists and designers as well as artisans, for low-risk and low-cost facilities, and the costly and inflexible leases associated with high-end galleries and retail outlets. However, cities such as Berlin and London have developed initiatives to support upcoming designers and young brands, such as pop up concepts that provide affordable space in which to test new design concepts. Furthermore, the Artisan Initiative in Beirut supports craftsmen in Bourj Hammoud to raise their quality of work up to luxury standard by attracting experts from Italy to provide high quality artisanal training. Should the UAE plan to develop its creation and production capabilities, the development of similar innovative initiatives to incubate the design community would be a critical component to the success of this strategy.

⁴⁴ Limited to architecture, interior design, graphic and digital design, furniture, and visual art



2 – 5. Heriot Watt University, Dubai, United Arab Emirates

6. Design Days Dubai at Dubai Design District, d3, Dubai, United Arab Emirates

Endnotes

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- 2 Includes Lighting Design, Graphic Design, Emerging Design segments such as Experiential Design, Design for Social Change and Visual Arts
- 3 MEED — GCC Construction Project Market 2015
- 4 Cityscape Global
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- 44 Limited to architecture, interior design, graphic and digital design, furniture, and visual art

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