

think :act

Special Arabia
MAGAZINE FOR
DECISION MAKERS



MOHAMMED AL AWAR
The finance strategist discusses the rise of Dubai as a global banking center



JOHN DEFERIOS
CNN's emerging markets editor on the region's growth potential

SHIFTING SANDS: IDEAS FROM THE DESERT

Arabia
moves toward
a diversified
economy

Strategy: How SABIC became one of the world's largest chemical companies

Innovation: The Qatar Science & Technology Park attracts researchers from all over the world

Art: A new generation of Arab artists achieves international success

**TRANS
FORM
ATION** **TRADE**
EDUCATION
LOGISTICS
TOURISM
ENTERTAINMENT
ART **HIGH-TECH**
RESEARCH **DIVER**
PRODUCTION **SIFICA**
SPORT **TION**

DEAR READER,

What happens when entire economies change? How does political turmoil affect the marketplace, and how should organizations adapt to this changing environment? Economists around the world model and



analyze complex questions like these on a daily basis. What I find even more exciting is seeing their theories being validated by real-life events.

The Arabian Peninsula is an excellent example. No other region in the world is experiencing such economic and cultural upheaval; the Arab countries between the Red Sea and the Persian Gulf are redefining themselves.

The region faces a historic opportunity: oil has made it wealthy, yet all good things come to an end. The challenge for the coming decades will be to sustain the boom. Governments are investing billions of dollars in training and research to reduce their dependence on raw materials and guarantee long-term prosperity. Societies in Arabia have already begun adapting new forms of human resources management, top-class universities for women, spectacular architecture, increased opportunities for young artists, and the construction of the world's biggest airport. The region has begun a quest for the new source of wealth of the twenty-first century.

The transformation of Arabia offers huge potential for foreign investors. Vast amounts of money are pouring into the region, even though some construction projects have been placed on hold until the economy improves. More than 800 projects were planned for 2011, worth nearly USD 450 bn. The region is also experiencing a population explosion; 102 million people will live in Arabia by 2030, an increase of 34 % over today's numbers.

I believe that this high concentration of manufacturers, consumers, and decision makers in one region offers exceptional opportunities; success is a matter of knowing how to exploit these opportunities.

Roland Berger Strategy Consultants has had a presence in the Arabian Peninsula for many years. Our offices in the UAE, Saudi Arabia, Bahrain, and Lebanon serve the entire Gulf region and maintain relationships with key local decision makers. This THINK:ACT SPECIAL describes the region's vision of a new era in which it is no longer dependent on oil and gas. Our reporters have recorded their own first-hand impressions, and local experts have shared exclusive analysis with us. I hope you enjoy reading it.

With best wishes,

DR. MARTIN C. WITTIG

Chief Executive Officer
Roland Berger Strategy Consultants

think :act

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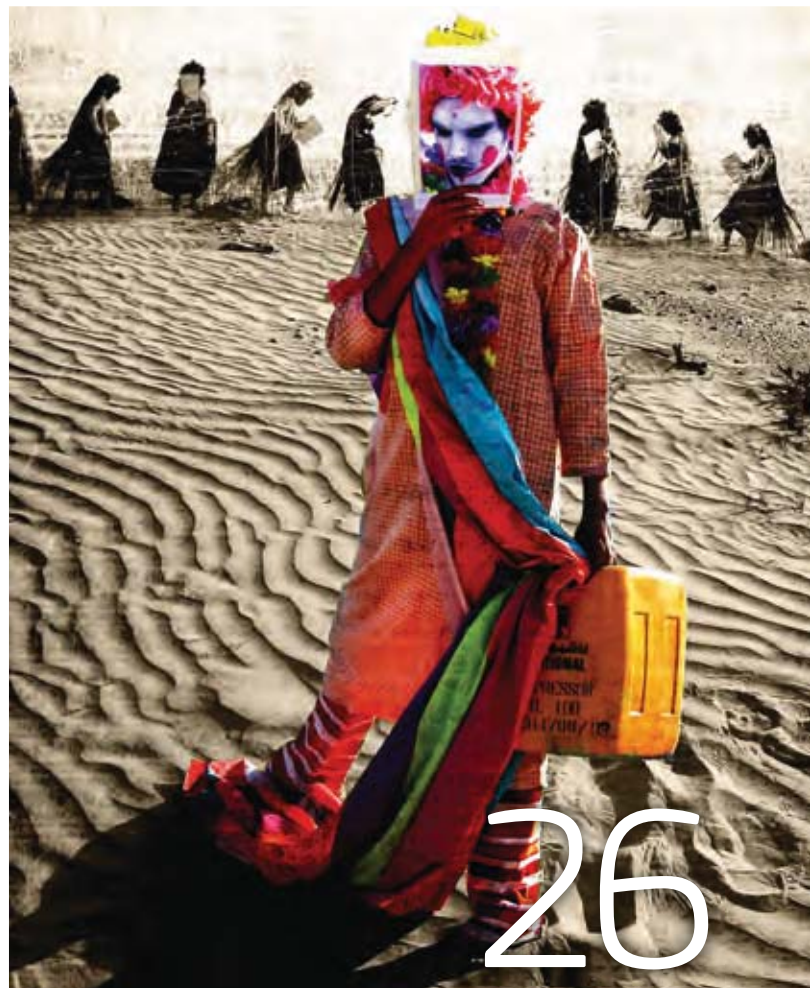
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THE CHANGING GULF

“No state is immune”. This is what Sheikh Hamad bin Khalifa Al Thani, the Emir of Qatar, said when the Arab revolutions spread throughout the Middle East last year. He wasn’t referring to revolution, however, but to the change that it would bring

Eighteen months on, it is apparent that the so-called “Arab Awakening” has indeed changed the Arab world, even if the nature of change is still not clear. Certainly, as the revolutionary states still struggle with their transition to majority rule, outcomes there remain uncertain.

RIISING OIL PRICE

One of the most obvious trends in recent years is the rise in oil price. While this has had serious ramifications for the global economy, it has no less an impact on the oil producing states of the Gulf. The oil price had started its climb long before the events of 2011; in fact, the start of the price rise can be dated back to around the time of the US invasion of Iraq in 2003. It has been increasing steadily ever since, but the Arab Awakening tipped it over the USD 100/barrel mark. In 2011, the oil price averaged USD 111/b, some USD 29/b higher than in 2010. Once upon a time, USD 29/b was the actual price of oil, not the price difference.

This price rise has brought the oil producers an unprecedented windfall. Government earnings since the beginning of the millennium have vaulted. In 2001, the Saudi Arabian government earned USD 49 bn from oil. In 2011, it collected oil rents of USD 271 bn: more than 5 times the amount a decade earlier.

This windfall has allowed the Gulf States to spend lavishly. Since 2000, government expenditure has in some cases risen fourfold. In response to the regional turmoil in 2011, spending by the Gulf States rose by over 20%. The importance of this trend cannot be overstated; Gulf nations remain state-driven economies and government expenditure is integral to wider consumption and economic expansion.

Crucially, unlike in the petro-boom of the 1970s, today the Gulf States are spending their cash at home. As a result, the region has attained some of the highest rates of growth in the world in recent years. Indeed, the Gulf’s oil-fuelled consumption will ensure that the region remains among the fastest growing

economies globally over the next five years. Although there are deepening downside risks to this outlook, as the eurozone crisis escalates, the Gulf is less exposed to Europe than it once was.

A SHIFT TO THE FAR EAST

The eurozone crisis has also accelerated another key trend in the Gulf: the tilt toward the East. In 1990, the Gulf producers’ share of Chinese oil imports was less than 40%. Today it is about 55% and within the next five years, the Gulf will supply almost 70% of China’s oil needs. Already, Saudi Arabia sells more oil to China than it does to the US. With China and Japan, the world’s second and third largest oil consumers, more than two-thirds of oil that exits the Strait of Hormuz heads east. Oil consumption in Asia will grow by 4.4% per year on average over the next five years, while the OECD’s demand is expected to plateau.

But it’s not just about oil; in the past decade, Gulf imports from China have risen tenfold. This is particularly apparent in the UAE; China is the UAE’s largest

Regional turmoil and the global downturn have served as reminders to Gulf leaders that relying on a single commodity is economically unsustainable.

import supplier, with many goods imported by the growing numbers of Chinese nationals in the country. There are around 300,000 Chinese people working in the UAE and over 2,500 Chinese-registered businesses. In the past two years alone, Chinese companies have won large development contracts in the UAE worth just under USD 5 bn. As growth continues to falter in Europe and European banks continue to withdraw capital from the region, the Gulf's links with the East will only strengthen further.

This burgeoning relationship will also support the Gulf's efforts to diversify its economy. Back in 2001, the GCC States set out a plan to diversify their economies away from oil in order to stabilize their economies and to support fiscal sustainability. However, oil's contribution to the Gulf economy remains unchanged in the decade since the governments announced their plan. To be fair, they have made considerable strides; during that period, the size of the non-oil sector has grown threefold. But the rise in oil price over the same period has also supported the rapid expansion of the oil industry.

Regional turmoil and the global downturn have served as reminders to Gulf leaders that relying on a single commodity is economically unsustainable. Gulf governments are now redoubling their diversification efforts and nowhere can this be seen more clearly than in Saudi Arabia, where plans to build brand new "economic cities" are being urgently implemented.

JOBS BEYOND OIL

One of the key underlying drivers for diversification is the need to provide jobs in the non-oil private sector. The Arab revolutions were about "bread" – in other words, economic opportunity, and this dynamic is apparent in the Gulf States as well. Saudi Arabia must create at least 300,000 new jobs every year, just to soak up new labor market entrants. In the UAE, the size of the national workforce will triple in the next 20 years. But neither the oil industry, nor the public sector – traditionally the employer of last resort – can absorb all the school leavers for much longer. Gulf authorities are hoping that



MICHAEL WETTE

Michael Wette is a Senior Partner at Roland Berger Strategy Consultants and the Regional Director of Middle East & Turkey. He studied Business Administration at WHU Koblenz, in Grenoble and in Texas, and started his professional career as an investment banker in M&A. He joined Roland Berger in 1997 in Frankfurt, established himself and a team of four colleagues in 2001 at RB Switzerland, in Zurich, and in 2004 he moved to the Middle East, where he has developed RB's regional footprint, which includes four offices and approximately 80 employees. He lives with his family in Bahrain, and advises industrial clients and governments on strategy and organizational development.

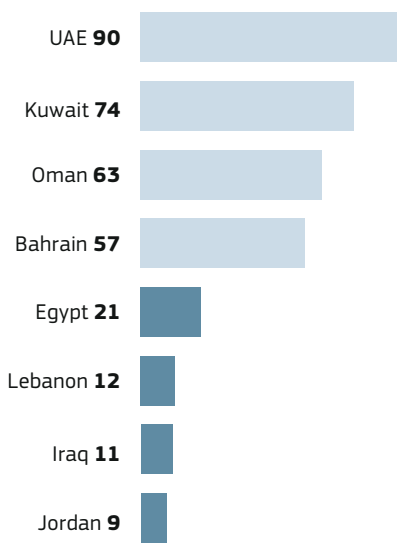
plans to encourage entrepreneurialism and build a viable SME sector will give impetus to private sector development. Fostering enterprise is vital not only to economic growth, but also to the job creation process; in developed economies, the SME sector typically employs up to 70% of the workforce.

Statistics from the US show that between 1980 and 2000, over 90% of all new jobs were created by companies less than five years old. Initiatives to support SME development and new business creation are being announced daily throughout the Gulf. Eighteen months after the start of the Arab Awakening, Sheikh Hamad's pronouncement holds true. Although the Gulf States avoided much of the regional unrest, the events of the past eighteen months have galvanized the regional leadership into action. Long-laid plans to stabilize, diversify, and liberalize their economies – half-forgotten during the boom years prior to 2009 – have been dusted off. Change in the Gulf is gaining pace. <

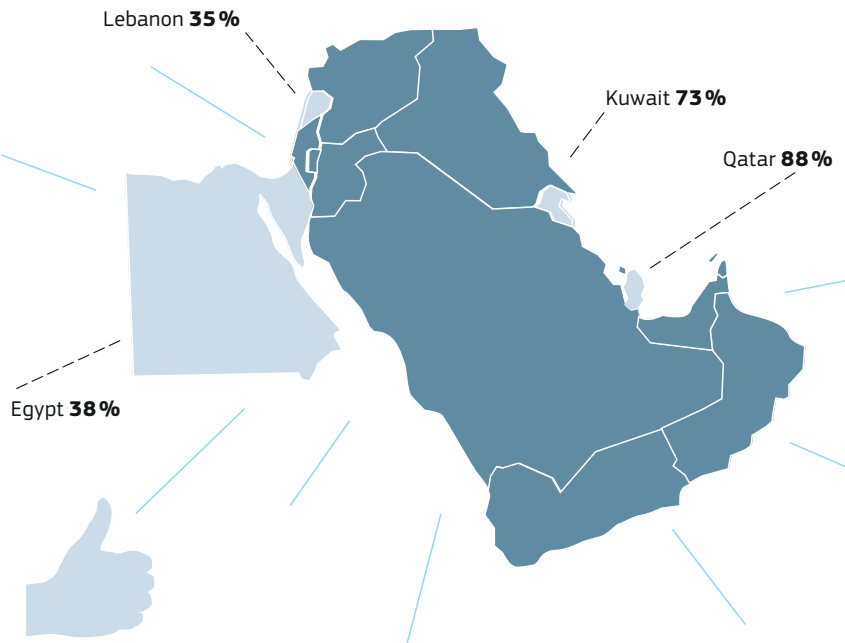
THE BOOM AND ITS SOCIAL DIMENSION

With the population of the Middle East expected to grow to 102 million in twenty years, what do people in the region think about this growth and other radical changes taking place in the area? Here are some facts and figures

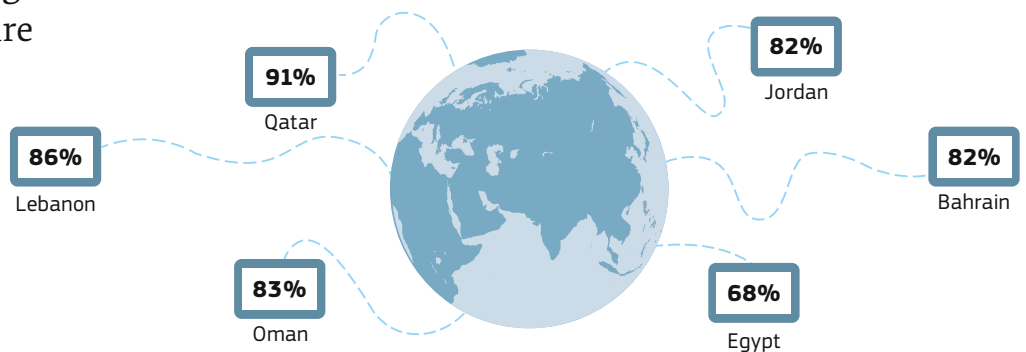
→ Proportion of young people expecting to go to college (%):



→ Proportion of young people expressing optimism about their country's future:



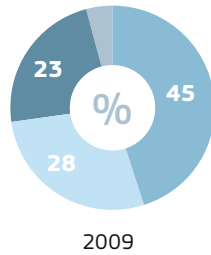
→ Proportion of young Internet users who are online every day:



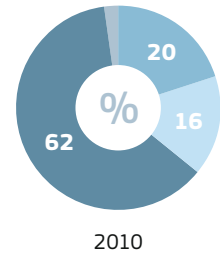
→ Citizens of Gulf Cooperation Council States say the ideal number of children is four. In countries with high average incomes, the figure quoted is 2.4.



→ What is your opinion of US president Barack Obama?



■ positive
■ negative
■ neutral
■ no opinion/did not answer



→ Proportion of respondents who believe it is very important to live in a democracy:

91% 85% 78% 75% 75%



Iraq

Jordan

Egypt

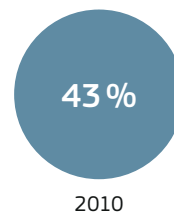
UAE

Kuwait

94

→ Percentage of female residents of Bahrain who believe that women should be able to do any job for which they are qualified. This is the highest figure of any GCC State.

→ A growing proportion of the population thinks that the gap between rich and poor is getting wider.



LESS THAN HALF

→ of GCC nationals say they would have no objections to living next door to someone of a different faith. In other Middle Eastern countries, such as Egypt and Lebanon, only a minority of people hold this opinion.

ARABIA'S YOUNG

ENTRE
PRE
NEURS

A new generation of business men is emerging. Startup founders such as **Badr Jafar** (photo) are making the most of growth markets around the Gulf, and have no connection to the oil industry. We profile five successful young entrepreneurs and their innovative business models



Bokra is the Arabic word for “tomorrow.” A song by the same name is a huge YouTube hit, and has already racked up over two million views. It has been performed by 23 different artists from across the Arab world, and is featured on the website of Iraqi composer, Kadim Al Saher. Cultural projects are to be financed for children in the Middle East with the income from the initiative. “Bokra” was first performed on November 11, 2011, in Dubai, when the track’s two

producers, Quincy Jones and Badr Jafar, took the stage. Since Michael Jackson’s *Thriller*, Quincy Jones has been firmly established as the most successful music producer of all time. Badr Jafar is hugely popular in Dubai; he was born in Sharjah – in the United Arab Emirates (UAE) – in 1979. He was educated in Great Britain, and is one of the most successful entrepreneurs in his homeland to date. He sees no contradiction between hard-nosed business and social engagement, and is not afraid to take risks. Jafar >

BADR JAFAR | EMIRATI, BUSINESS EXECUTIVE AND ENTREPRENEUR

Jafar spent his school years in Great Britain, but once he returned to the Gulf, he founded a wide range of startups. At 29, he was named Young CEO of the Year, and today, the Emirati is president of Crescent and CEO of Crescent Enterprises. In September 2010, at the UN headquarters in New York, Jafar launched the Pearl Initiative – an organization that fosters corporate governance, transparency, and corporate-social responsibility.



Badr Jafar and Kevin Spacey

makes the most of opportunities offered by the Gulf economic area; he states, “I believe that the Middle East today offers businesses more potential than in the West. Western markets are totally saturated, and in many cases there is very little scope to carve out a niche – except in technology and a few other sectors with high growth rates.” The UAE, on the other hand – which recently celebrated its 40th anniversary – offers an ultra-creative environment with excellent growth indicators in practically every market. In Jafar’s eyes, it represents fertile ground for startups looking to make their mark in the young, rapidly developing, economies around the Gulf – something Jafar has been doing for some time.

The 32-year old is a role model for many up-and-coming Arabic entrepreneurs. He built his first business while he was still very young, and has never rested on his laurels or been satisfied with his success. Shortly after its founding, his fashion label “Collo Fashion” sold clothes in 42 outlets in 11 different countries. Jafar then invested the profits into property, aviation, and private equity, before returning to Sharjah in 2002, to work his way up the ladder of his family’s Crescent Corporation. Within five years, he had reached the position of Executive Director for the oil subsidiary Crescent Petroleum. In parallel to this, he remained an entrepreneur, looking after his film companies Full Moon Productions, and EMJAG Digital.

American actor Kevin Spacey took notice of Jafar’s work. Together, they founded the Middle East Theatre Academy (META). “We’ve already held a range of theater workshops for children, and have ensured that the production of Shakespeare’s Richard III – with Kevin Spacey

in the lead role – will be coming to Doha this year, and thus to the Gulf for the first time,” explains Jafar. “Our objective is to help theater and the performing arts achieve a deep-rooted, lasting position of respect in the region. Productions from the West End and Broadway will certainly find their way to the Middle East – and the other way around, as well.”

Jafar is convinced that the region does not lack creative people, be it in the arts or business. The problems arise however, when it comes to startup capital for the emerging entrepreneurial scene. Banks in the region are too cautious when it comes to awarding loans, he believes. “The economic area must also do more to support business founders, in terms of the procedures necessary to set up new companies,” Jafar comments. “The process is far too complicated at present, though there have been significant improvements, particularly in Abu Dhabi, Dubai, and Doha.”

Badr Jafar’s voice also has political weight in the Arab world. In September 2010, at the UN headquarters in New York, he launched the Pearl Initiative – an organization to foster corporate governance, transparency, and corporate social responsibility. “A growing regional network with executives from across the business world and other areas, each committed to working together and exchanging knowledge and experience,” notes Jafar, who, in 2009 – at 29 – was named “Young CEO of the Year.” He believes the Arab economy offers huge potential, but that business and government must do more to capitalize on it. Jafar is campaigning for targeted support of independent and small businesses, particularly in the startup phase, and comments that, “In Great Britain, Germany, the USA, and other countries, this has been practiced with great success.” Through this policy, small and medium-sized enterprises in the region would gain greater weight in terms of the overall economy, which would encourage diversification and growth.

According to the serial business founder, the private sector can also help change things by developing a culture of corporate accountability. The issue of transparency is particularly close to Badr Jafar’s heart, and the aim of his Pearl Initiative is to bring about higher standards in business practices. This is something that startups could benefit from significantly, with transparency spurring business success. <

Young Arab entrepreneurs see Badr Jafar as a role model. The 32-year-old Emirati has already founded a host of businesses and works to aid the social and cultural development of his homeland.


A man with dark hair, wearing a dark suit jacket, a white shirt, and a striped tie, is laughing heartily. He is standing in front of a large window with a view of a city. The window has a white frame and is partially open. The background shows a clear blue sky and some buildings.

SAMI KHOREIBI | ENVIROMENA

For five years now, Sami Khoreibi of Abu Dhabi has dedicated himself to solar electricity. His company, Enviromena, was one of the original startups in the Gulf solar sector. Today, the region is diversifying its energy sources, and with turnkey solar farms, solar systems to heat drinking water, and solar-powered lighting systems, Khoreibi's business is thriving. The value of his company has multiplied six-fold in recent years.

ASHRAF MANSOOR | TWFFAHA

At the end of 2007, Ashraf Mansoor came across a study of online job sites in Arab countries. The Sudanese entrepreneur noticed how few women were registered. Mansoor had found his niche, and the path was set for *Twffaha*, the first job site in the Middle East **exclusively for women**. 31-year-old Mansoor and his co-founder Ammar Mustafa initially financed their startup from their personal savings. Advertisements and paid subscriptions make the site a profitable online business today.



Twffaha is the first Arab job portal exclusively for women. Founder Mansoor was quick to spot it as an area where the region needed to catch up.

**HABIB HADDAD | YAMLI**

"ARABIZI" is the name given to the language used in text messages and on forums, blogs, Facebook, and Twitter, where Latin characters replace traditional Arabic script. 30-year-old Habib Haddad from Lebanon, developed an online translation program in 2007 entitled Yamli, which translates Arabizi back into Arabic script. Georges Harik and Aydin Senkut, two former Google employees, recognized the potential of the social media tool, and supported Habib as business angels.

AHMED+RASHID

BIN SHABIB | BROWNBAG

Not everything Ahmed and Rashid Bin Shabib touch turns to gold. The 28-year-old twins from Dubai are too willing to take risks for that to be the case. In 2006, they founded *Brownbag*, an online shopping portal. *Brownbag* was followed by the print cultural magazine

Brownbook: an Urban Guide to the Middle East. *Brownbag* flopped, but the magazine proved a success from Tehran to Casablanca. The brothers develop their projects in a flexible shared office – the “Shelter” co-working space in Dubai. There, young Arab entrepreneurs sit side-by-side, offering the perfect breeding ground for creative ideas.



In the Middle East there is entrepreneurial drive, good ideas, and the perfect conditions to implement them. Shelter brings creative people together as a form of intellectual haven.



ONLINE AND ON THE STREETS

How Google executive Wael Ghonim shaped the revolution in Egypt



In January 25, 2011, demonstrations began in Cairo against Hosni Mubarak's regime, and with those demonstrations the Egyptian revolution began. It is still too early to judge what shape the democratic process will ultimately take, or how Egyptian society will develop, and it is true that the initial euphoria has given way to a certain skepticism in many places. Nevertheless, one thing is clear – social media played a major role in driving the revolution. Google executive Wael Ghonim stood at the meeting point between online activism and offline protest in Tahrir Square.

As founder of the mubasher.info finance portal, Ghonim made a name for himself on the Arab startup scene back in 2005. For his Facebook protest against

Mubarak, however, Ghonim chose a pseudonym – “El Shaheed” – The Martyr. In so doing, he helped make protest history. Thousands followed his call to demonstrate, and as a result, America's Time magazine included him in their list of the world's 100 most influential people.

In his book *Revolution 2.0*, Wael Ghonim gives his views on the events leading up to the fall of Mubarak. In an exclusive extract for THINK:ACT, he explains how social opposition was organized through social media, and discusses the mobilization of Facebook members to protest the murder of blogger Khaled Said in the summer of 2010.

Facebook and Twitter are powerful tools for political communication. Wael Ghonim knows exactly how to use them.

Extract from *Revolution 2.0*:

The power of the people is greater than the people in power

On June 19, a day after the first Silent Stand, I decided to develop an opinion poll to find out people's reaction to the stand and to publish the results online. I posted a questionnaire and asked the page members to participate; over five thousand people did. The results helped invigorate the spirit of participatory democracy on the page.

How did security forces react to your participation in the stand?

- 47% They did not even speak to me.
- 32% They spoke with me but I was very calm.
- 15% They spoke with me and I was normal.
- 6% I got angry and they provoked me.

Do you feel the Silent Stand was effective?

- 28% Very effective
- 38% Satisfactory
- 3% Not effective
- 12% Useless
- 19% I don't care

For those who didn't join the Silent Stand, why didn't you participate?

- 6% I was scared.
- 4% I had exams.
- 6% I was too lazy.
- 16% I had work.
- 25% My parents would not let me.
- 20% I'm outside of Egypt.
- 6% I'm not convinced.
- 6% I did not know the scheduled time.

Will you come to the next stand?

- 39% Certainly.
- 39% Most probably.
- 22% I will not come.

Most of the survey respondents were not political activists and were not too familiar with the Ministry of Interior's brutal treatment of its victims. The opinion poll revealed the excitement of those who joined the experience of the Silent Stand and their willingness to

repeat it. The poll also confirmed that participants in the stand had in fact been ordinary people, and that many actually did want to take part but had been prevented from doing so by their parents, who feared for them. This was understandable, given the fact that more than 70 percent of the page's members were under twenty-four years old, which meant they were mostly students and still dependent on their families. The weapon of fear that the security apparatus had used for decades had worked with previous generations, but it was becoming clear that it would no longer work with younger Egyptians.

In response, I wrote about the skepticism I had felt, but not revealed, before the stand.

I want to be honest with you ... I did not think we would succeed, but I did what I could ... I even told my wife that I felt I was wasting my time with this stand ... now I have a story to tell my son and daughter when they grow up ... and still we have not done anything yet ... all we did was reclaim our confidence and our certainty that we are united as one.

👍 593 💬 118

Traffic on the page increased remarkably on Friday. Until that day, the average number of members who "liked" the daily published content had not gone above 5,000 and the comments had never exceeded 7,000. But on that Friday the number of "likes" reached 37,000, and comments reached 120,000. This sent me a clear message: action on the ground raised the level of interaction among page members, which was vital for the page's sustainability.

The nature of the comments also changed significantly. The page developed its own culture, and its members began to feel that they belonged to a community. Commenters defended Khaled Said and

the page's mission, even though no one knew who was behind the page.

The Ministry of Interior began to understand that its usual methods of oppression might not work in this new world. On June 19, Prime Minister Ahmed Nazif (now on trial for corruption) told Al-Dustour newspaper that he was concerned about the Khaled Said case and said that if the secret police officers were convicted, justice would be served. In short, the regime was now trying to co-opt us. It was a partial victory – better than the usual practice of government officials, who systematically avoided discussing cases of violation of human rights. This time the intense pressure forced the case into the public sphere. The prime minister's statement about Khaled's case revealed that the pressure applied by private media outlets and on the Internet, in addition to the stands and protests, had certainly captured the regime's attention.

I continued to celebrate every small victory to counterbalance the page's skeptics. Every little step toward justice for Khaled was hailed.



REVOLUTION 2.0

Ghonim reports on his fight against the Egyptian government, after the killing of blogger Khaled Said. He discusses why revolution in Egypt was unavoidable, and what can be learned from the experience. Ghonim delivers a blueprint for how we can change things – right up to revolution 2.0.

Wael Ghonim, Stephan Gebauer,
and Barbara Kunz

Fourth Estate

“THE REGION NEEDS TO GENERATE 100 MILLION JOBS”

The Middle East and North Africa are on the right track for diversified growth, says **John Defterios**, CNN’s Emerging Markets Editor. In an exclusive interview for THINK:ACT he expresses confidence that the region is getting the formula right

THINK:ACT: Over the past three decades the GCC States have witnessed an unprecedented economic and social transformation. Oil proceeds have been used to modernize infrastructure and create employment. Now the country’s leaders are investing in the development of a knowledge-based economy. Do you think this project will be successful?

JOHN DEFTERIOS: I believe there is a greater awareness of the need to diversify the regional economy as a whole. What we are seeing as a result is money directed at a whole range of industries, from high technology chip manufacturing to petrochemicals. This is a clear and distinct effort to move countries up the value chain in terms of development and providing employment for the next generation of workers who are being educated in universities at home and abroad in record numbers.

Klaus Schwab, founder of the World Economic Forum, is in no doubt that talent, not capital, should be the main driver of economies. With GCC States investing billions in building a knowledge society, have they understood the implications over the course of time?

JOHN DEFTERIOS: I like to say we have entered a new phase in the energy sector, the so-called Goldilocks scenario, where pricing is being managed in a

range from USD 80-100 a barrel rather than USD 60-80 a barrel. This was recently acknowledged by the region’s largest producer, Saudi Arabia, and the Kingdom’s energy minister Ali Al-Naimi on CNN. So with increased revenues, leaders in this region are using that capital to build up their local talent pool and at the same time attract “best of breed” business leaders from the East and West in priority sectors for diversified growth. A great deal has been learned in the past generation in the Middle East and North Africa, and in a post-Arab Spring environment there is a greater awareness on getting the formula right.

With Qatar Foundation and Education City, the State of Qatar is investing in a knowledge-based economy for the future. The approach is unique: they have brought together six different departments from different universities – does this make sense?

JOHN DEFTERIOS: I believe it was Intel’s former chief executive Andy Grove who said during an interview at his Silicon Valley headquarters in the mid-1990s that only the paranoid survive, meaning that competition creates better results, keeps talent on edge and maintains innovation within organizations. I have had the chance to see first-hand the Education City cluster in Doha and its success in

fostering ideas, recruiting talent from multiple sources, and creating a lasting structure for education and training.

Saudi Arabia and Abu Dhabi are investing huge amounts of money in cultural projects like Saadiyat Island. Oil on canvas seems to be the new crude oil: a smart cultural masterplan?

JOHN DEFTERIOS: As a correspondent and anchor for the past two decades, I have lived in London, New York, Los Angeles, Washington, and Rome before relocating to the Middle East six months ago. All those postings share a common DNA. Even though they are distinctly different, they are all vibrant hubs for arts, culture, and design. Not surprisingly, they also rank very highly as destinations for business travel and tourism. The developments in Saudi Arabia, Abu Dhabi and Qatar reflect a desire to offer a well-rounded environment to those living in these countries and at the same time build a global reputation as destinations worth spending time in. I believe leaders in the region know that one cannot buy culture, but by developing the conditions and climate over a longer period of time, visitors to the region will be inspired to explore the local culture beyond conferences or business meetings.

Unlike in Western Europe, where foreign workers have only complemented the national workforce, usually by filling lower-status jobs, in the GCC States they have become the primary, dominant labor force in most sectors of the economy. While some locals in the GCC States have strong fears of losing their cultural identity, the economy is still reliant on foreign labor. Do you see a way of overcoming this dilemma?

JOHN DEFTERIOS: It is widely known that the region needs to generate at least

“We see a clear and distinct effort to take countries up the value chain.”



"I believe there is a greater awareness of the need to diversify the regional economy as a whole."

100 million jobs over the next decade to only "tread water" and not see unemployment rates rise due to some of the fastest birth rates in the world. With that in mind, there has been a greater awareness to balance out the national, regional, and expatriate workforces, particularly in the GCC States. This trend has been observed for the past few years and is expected to continue, as there will be greater demands to offer opportunities to local populations, outside of the government sector. Most of the people I interview say it has less to do with cultural identity and more to do with training the next generation of local

talent to fill the roles needed to diversify economies in the region and provide employment to an expanding talent pool. As a result, one can expect the ratios we see today, with a high level of expatriate workers, to drop over the next decade.

Qatar's successful bid to host the FIFA World Cup in 2022 has strengthened self-confidence in the GCC States, especially in Qatar. Apart from the huge infrastructural investments, do you think the event will have a sustainable effect on the region's development?

JOHN DEFTERIOS: There is no doubt the FIFA World Cup takes the region to a whole new level in terms of global



JOHN DEFTERIOS
CNN'S EMERGING
MARKETS EDITOR

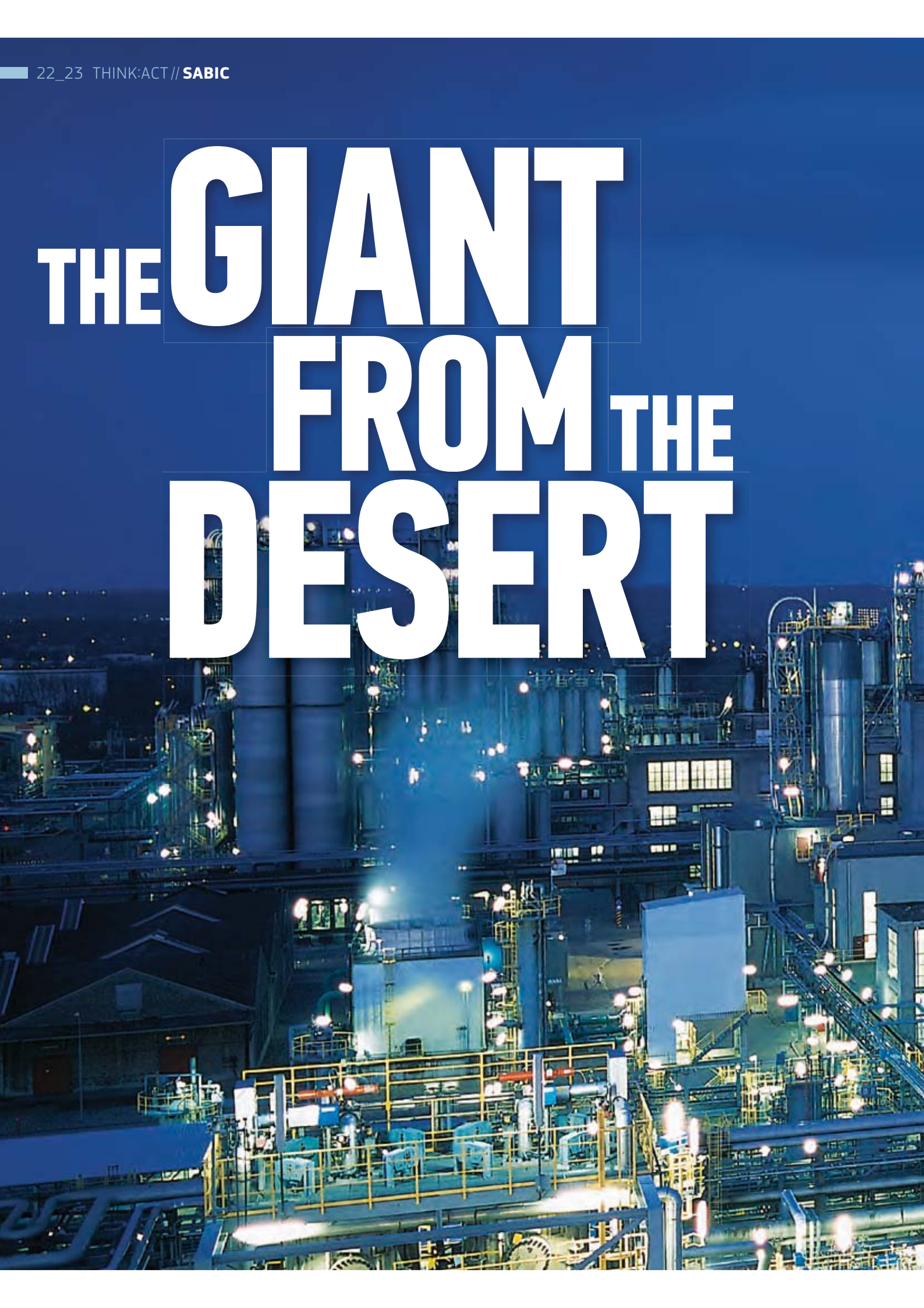
John Deferios was born in 1961. He is emerging markets editor at CNN, where he presents **Global Exchange**, broadcast at 5 pm Central European Time from Sunday to Thursday and exploring the influence of emerging markets on the international finance sector. He also anchors the weekly **CNN Marketplace Middle East**, featuring analysis and interviews on business issues and trends in the region. Deferios has over twenty years' experience as a journalist, which has included covering the fall of the Berlin Wall and reporting from Kuwait on the 1990-91 Gulf War. CNN is an international media partner of Roland Berger Strategy Consultants. We sponsor a number of joint events including the annual **Best of European Business** awards in Berlin, a **debate club**, and a **Davos Debrief**, held this year for the first time.

positioning, but one could contend this has been a growing phenomenon with hosting the Asian Games in Doha, F1 Circuit events in Bahrain and Abu Dhabi, and world-class golf events in the region for the past decade. By 2022 we can expect to see a very different region altogether, one with a developed "hard" and "soft" infrastructure, meaning world-class cities with top-flight infrastructure, but with plans to have the talent to drive growth beyond hydrocarbons.

Dubai and Doha are building mega-airports: a cool calculated project?

JOHN DEFTERIOS: Strategically and editorially, we see Abu Dhabi and the region as the crossroads of East and West – a meeting point for business, trade, investment, and the exchange of culture. The mega-airports of today, whether in Dubai, Qatar or Abu Dhabi, are a direct result of the national flag carriers building strong, lasting positions in the global hub and spoke system of air travel. If one looks at the new fleet orders from Emirates, Qatar Airways or Etihad, they are being built on demand projections for future growth. <

THE GIANT FROM THE DESERT



Saudi Arabia's Saudi Basic Industries Corporation (SABIC) is a world leader in the chemical industry. Its carefully planned growth strategy could be a blueprint for the rest of the region



Many of SABIC's factories take more than fifteen minutes to drive from end to end.



T

he first chapter in the history of the world's most profitable chemical company is not particularly remarkable. When SABIC was founded 35 years ago, it attracted little attention. The Saudi Arabian market had largely been carved up by western companies, and while the idea of a chemical plant in the desert might have had some novelty value, few spared it a second glance. No one thought it would come to anything – but how wrong could they be? Today, SABIC's history is a textbook case of successful strategic growth.

The company's startup capital was cheap oil, gas, and other commodities, and it exploited this market advantage by setting up factories all over the world. It reinvested its massive profits into research and development of more complex products that added value. In parallel, SABIC's management forged strategic alliances that opened up new markets. By diversifying, making higher-quality products, and improving its business model, SABIC grew less dependent on access to cheap

oil and gas. This could provide a role model for the region, showing how low-cost raw materials can provide the initial impetus for structural change, diversification, and business success.

AMBITIOUS PLANS

"SABIC is the world's biggest chemicals group in terms of earnings," says HSBC petrochemicals analyst Sriharsha Pappu. He has been following its fortunes for years, as it has overtaken its rivals one by one, and says it is likely to maintain its leadership in the medium term.

In 2010, Saudi Arabia was the world's leading producer of crude oil, enjoying a 12.1% share of the market and pumping 10.3 million barrels per day. If it continues to produce oil at this rate, it will be enough to keep SABIC supplied with the raw material it needs for another 69 years.

The company's 19 sites make chemicals, plastics, steel, and artificial fertilizers. Many are so vast that it takes more than 15 minutes to drive from one end of the facilities to another. The company's Riyadh headquarters overshadows everything around it like a huge triumphal arch. The group is expanding very rapidly, having almost doubled its output in just ten years, and has ambitious plans for the future. In 2010 SABIC produced 66.8 million tons of materials; by 2020, this is expected to rise to at least 100 million tons.

With numbers like these, SABIC can be excused for sounding confident. In March 2011, its chief executive and vice president Mohammed Al-Mahdy said at a conference in the Saudi city of Yanbu, "It is widely recognized that SABIC is the leading force in shifting the petrochemical industry's focus from the west to the Middle East." The company's president is Prince Saud bin Abdullah bin Thenayan Al-Saud, who owns a 70% stake, and the remaining 30% is held by investors in other Gulf States.

SABIC benefits greatly from the country's massive reserves of oil, and from the gas that is a byproduct of its extraction. In spite of being formerly

“Over the coming years, we’ll see a race to catch up, technology-wise.”

JAAP KALKMAN,
PARTNER AT ROLAND BERGER
STRATEGY CONSULTANTS

burned off as waste, this gas is now one of the most important raw materials for chemical plants. The company pays much less than its foreign rivals for both commodities; it gets its oil almost 30% cheaper, and gas at a discount of up to 90%.

“The group’s success is based on its use of nearly-free gas and cheap oil,” says HSBC’s Sriharsha Pappu. “This gives it a cost advantage of 70-75% over its foreign rivals.” This is abundantly clear from SABIC’s balance sheet; while its revenues are only the sixth largest in the world, its profit is second to none.

SABIC’s competitors may say this government support is unfair, but the company is now a huge international conglomerate and other companies must come to terms with this. While shifting plastics production to the Middle East, it is expanding in the west and in Asia, and now employs 33,000 people in 40 countries worldwide. Fourteen of its 64 factories are in Europe. SABIC is also continuing to diversify. “The petrochemical industry is SABIC’s core business, and will remain so for the foreseeable future, but we are always on the lookout for new investment opportunities,” says Riyadh-based corporate communications consultant José Ramón Tarazona.

THE POST-OIL ERA

The group adds over 150 new products to its catalog each year and plans to widen its lucrative range of specialist chemicals and high-tech plastics. In 2010, this segment accounted for only 2.5% of total production, but this will rise to 20% in the next five years.

“Over the coming years, we’ll see a race to catch up technology-wise,” says Roland Berger partner Jaap Kalkman. “The group has been clever about its strategic investment in research and development.” The company has some 1,500 scientists working in 18 technology and innovation centers in Saudi Arabia, the US, Europe, and Asia. It owns 7,000 patents, of which 700 are results of research carried out in Saudi Arabia, many in partnership with the new King Abdullah University of Science and Technology on the Red Sea. SABIC is also cooperating with AlgaePARC, a research center at Wageningen University in the Netherlands, to explore possible uses of algae in the chemical industry. The company plans to gain a foothold in the biodegradable plastics market, and is making every effort to ensure it is well prepared when the cheap oil runs out. HSBC’s Sriharsha Pappu says that it cannot expect the government to keep supplying it with gas at bargain prices forever. The company has therefore begun gradually increasing the prices charged to Saudi companies. In the long term, the royal family does not intend to subsidize the dividends paid to shareholders in other Gulf States.

CONTINUED EXPANSION

SABIC is also acquiring foreign companies to carry out high-tech plastics research. In July, the government in Beijing approved a joint venture with the Chinese chemical company Sinopec – to which SABIC will contribute USD 3 bn. Another research center in Shanghai will develop new plastics for laptop housings, and a joint venture with a Japanese consortium centered on the Mitsubishi Corporation could help the Saudis profit from post-tsunami reconstruction in Japan. SABIC’s efforts are already paying off. It acquired the plastics division of US giant General Electric for USD 11.6 bn in 2007, and since then, its bulk chemicals and basic plastics have been processed in western plants supplying more high-quality products directly to western customers. The products are used to make housings for mobile phones and iPods – in 2010, when the World Cup was held in South Africa, the sun-resistant stadium roofs were made by SABIC. <



In a new study, experts at Roland Berger conclude that the focus of the chemical industry will shift inexorably eastward over the next two decades. *Chemicals 2030* gives an overview of worldwide growth prospects in plastics, standard chemicals, and specialist chemicals.

→ www.rolandberger.com/chemicals2030

ART AS MODERN AS THE REGION

Young Arab artists look to the future with great confidence. Their work is highly regarded, prices for paintings and sculptures are on the way up, and galleries and auction houses are experiencing a real boom, springing up across the region



**LAMYA GARGASH –
UNITED ARAB EMIRATES**

Lamya Gargash was born in 1982 and lives in Dubai. This artist has played a key role in documenting the changes experienced in the UAE.

→ www.lamiagargash.com

As collectors, Arab art lovers have long played a part on the international scene. Over the last few decades however, they predominantly purchased Western art. Things are now starting to change. Economically speaking, things are on the rise in the Arab world, and a new generation of Arab artists is producing contemporary pieces that offer a close examination of local identity. They consider the past, present, and future of the region, and celebrate Arab culture around the world.

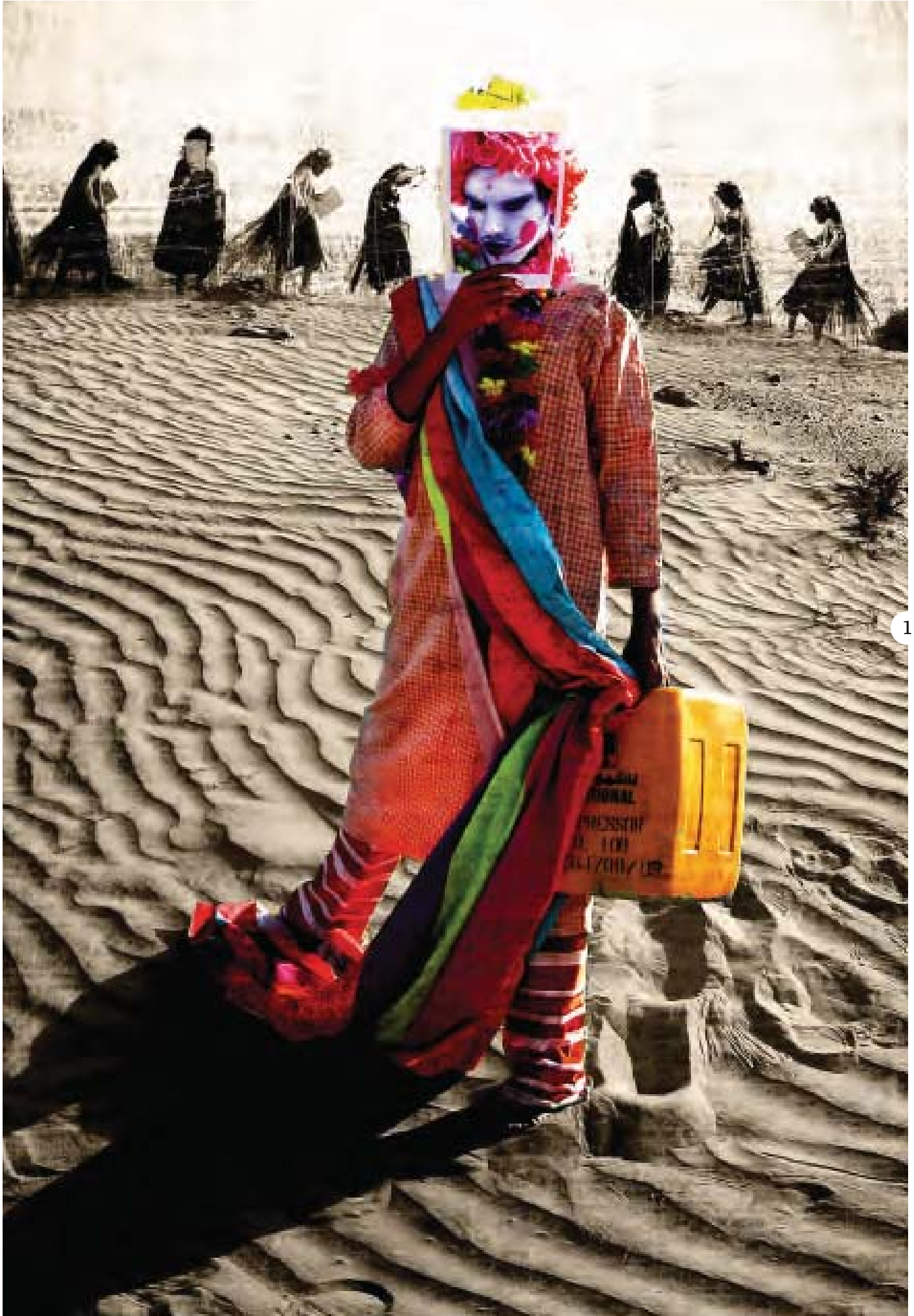
Libyan artist Arwa Abouon is part of this new movement. The 29-year-old artist was still a child when her family

fled Gaddafi's regime to live in Canada. Culture and exile are key themes of her predominantly photographic work, as she asks the question, "What happens when Arab, Muslim culture is transferred to a Western environment?" In pan-Arabian art magazine, *Canvas*, Abouon's fellow artist Haig Aivazian wrote, "Abouon's pieces may seem loaded with symbols to the observer, but they are always built upon highly personal experience. Abouon does not seek to make proclamations on Islam. Nevertheless, she is constantly asked to do just that; people want to hear her pronouncements on her role as a woman, a Muslim, a Canadian, and a Libyan,

whether she is for or against the veil, and if she is for or against the West." When the revolutionary events were playing out in Libya, Abouon was thus all the more wary of making rash judgments; it should be, "something meaningful and sincere," she commented. Abouon is able to bridge the gap between the two worlds, and through her images has become an ideal mediator.

Loved at auctions

Ayman Baalbaki, from Lebanon, is another up-and-coming artist that is part of the new generation. He hails from a family of artists, and was born >





in 1975 (the year civil war broke out in Lebanon) in a village near the Israeli border. In his turban, he stands out from fashion-conscious Lebanese society. He was educated at the Lebanese University, and at the École Nationale Supérieure des Arts Décoratifs in Paris. He is currently writing his doctoral thesis on the “art of images and contemporary art,” though he remains closely tied to his homeland. His paintings and installations convey a sense of deceptive beauty, yet tackle controversial topics – some pieces depict marksmen, for example, or buildings

pock-marked by bullets from the civil war and the conflict with Israel in 2006.

Art collectors line up for Baalbaki's work. Prices recently shot up at an auction held by Christie's – his large-format painting, “Let 1,000 Flowers Bloom” went for over USD 200,000. While everything that reminds people of war is gradually being removed across Lebanon, Baalbaki considers it important to maintain memorials of the war; this is the only way that future generations can learn from the errors of the past.

The benefits of not studying art

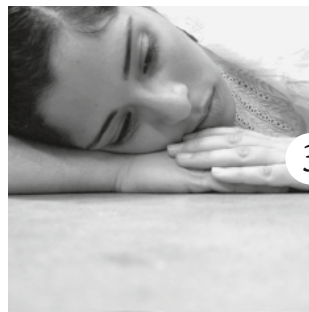
Rising prices are just one indicator of the growing interest in contemporary Arab art, while the increasing number of exhibitions in practically every Arab country is another. In addition, plans to establish several modern art museums are underway; the most ambitious projects are in Dubai and Abu Dhabi. Their curators have already stated that these collections will finally offer a space for Arab artists. The days of obsessing over Western art as investment pieces are gone.



AYMAN BAALBAKI – LEBANON

Ayman Baalbaki was born in a village near the Israeli border in 1975 and is one of his country's best up-and-coming artists. His installations convey an impression of deceptive beauty, while tackling controversial topics.

→ www.radisnoir.com/ayman



ARWA ABOUON – LIBYA

This 29-year-old artist now lives in Canada. Her family fled Gaddafi's regime when she was still a child.

→ www.arwaabouon.com

There are still challenges to be overcome regarding the education opportunities available to young artists. There is a lack of local art schools, forcing young artists lucky enough to have the financial means, to study at Western institutions. The less well off have to teach themselves about the fundamentals of artistic production. For British artist and founder of the Edge of Arabia organization, Stephen Stapleton, this does bring benefits. When he first encountered Saudi Arabian artists, he was fascinated by their, "connection with

daily life, and with ordinary people from their community. I felt they were very authentic, and in a way that you do not find in the West. To be successful, these artists do not have to relate to other painters or theories, or employ a jargon that is only understood by those on the inside. That applies to Saudi Arabian artists particularly." Over the course of the last decade, numerous galleries have opened their doors; with the art market now firmly establishing itself in the Middle East, there are unavoidable changes ahead for artists in the region.

One example is Dubai, where dozens of galleries – most of which are less than five years old – cater to the requirements of a growing sector of Middle Eastern society that feel they should be doing something that reflects their Arab identity. The arrival of the galleries in the region has been accompanied by the arrival of auction houses. 2005 saw Christie's open a subsidiary in Dubai, and it now holds two auctions a year featuring contemporary Middle Eastern art. Michel Jeha, Managing Director at Christie's for the Arab region, could not be more enthusiastic about the results recorded last April. "Records were broken and in the sales room it was standing room only," he comments. In total, USD 8 m was generated, which, "reflects the quality of Middle Eastern art and the growing international interest in it."

The first art fair in the Arab world

Lamya Gargash, a young artist from the UAE, (born 1982) is becoming an ambassador for contemporary art in her home country. Her work closely examines the rapid changes taking place in the Persian Gulf. When the UAE was represented, for the first time, with its own pavilion at the 2009 Biennale di Venezia, Gargash's predominantly photographic pieces were exhibited. Her work was also showcased at the Vitra Design Museum, and admired as part of the Locarno Film Festival. One of her pieces features two playful images of women with and without the veil, characterizing the West's obsession with the topic. Her work conveys intimately that the issue can be discussed more lightly, and that it need not always be such a focus for negativity.

A year after the arrival of Christie's in the region, Art Dubai – the first art fair in the Middle East – was launched. It is a premier social event held every March in the exclusive Hotel Madinat Jumeirah, and is attended by the Sheikh of Dubai. Western art dealers and collectors flock to the occasion, and use the opportunity to pay a visit to the groundbreaking, intellectually minded, Sharjah Biennial, in the neighboring Emirate. Art from the Middle East is certainly in fashion at the moment, yet, in spite of the boom, there are some critical voices. Their principal complaint is that the museums, art schools, and art critics of the Middle East >



HAYV KAHRAMAN – IRAQ

The first Gulf War forced Hayv to leave Iraq at age 12. Today she works in Oakland, California.

→ www.hayvkahraman.com

are merely a reaction to the trend-based interest of the art market.

An international audience

The Ashkal Alwan Academy in Beirut is the first independent art school in the Arabic world, and from autumn, will begin teaching under the curator Christine Tohmé. Western art institutions, from New York's MoMA to Berlin's Museum for Contemporary Art, are also organizing exhibitions with work by Arab artists. Since 2010, the Victoria and Albert Museum has awarded a prize

– with the support of Saudi Arabian philanthropist Abdul Latif Jameel – that honors artists who connect with Islamic artistic traditions in their work.

Iraqi Hayv Kahraman, (born in 1981), had to flee her homeland at the age of 12 and today lives in Oakland, California. Geographically speaking, the Californian city is quite some distance from Iraq. Kahraman's paintings, which often portray women in marionette-like poses, force the observer to consider themes such as identity and alienation in the Arab world. When her work was exhibited in 2009 at London's Saatchi Gallery, it delighted visitors from around the globe. Last year, Kahraman was shortlisted for the Jameel Prize from the Victoria and Albert Museum. According to Salma Tuqan, curator of contemporary Middle Eastern art at the museum, Kahraman's pieces represent, "a wonderful melting pot of different influences, cultures, and ideas. With her mix of surrealism, Japanese design, Persian miniatures, Islamic motifs, and the Italian renaissance, the artist projects her own global experiences of the Iraqi diaspora." Kahraman's approach, Tuqan believes, "employs particularly challenging techniques. She works primarily with water colors on paper, and with oil on unprimed canvas or wood, and displays a great understanding of her materials."

The international attention currently focused on Middle Eastern artists is without precedent, and means that a far wider audience will view their work. Abouon sums it up, "Contemporary art from the Arab world draws its relevance from the fact that it gives us better opportunities to share with others who we really are. The West has learned that TV cameras do not capture anything close to what our region has to offer." <

Jeff Koons is a highly respected individual around the Gulf. The renowned US artist recently attended the opening of the first



museum of modern art ("Mathaf") in the region, found in Qatar.

QATAR'S SILICON VALLEY

Qatar is becoming a knowledge-based economy, and western companies and universities that promote knowledge transfer could reap some of the benefits. The Qatar Science & Technology Park is a textbook example of a successful technology cluster

W

ith his foot to the floor, 22-year-old Finnish driver Valtteri Bottas hurls his Williams racing car around a hairpin turn, oversteers, and ends up stranded on the shoulder. Bottas' mistake is witnessed by Ayrton Senna, Nigel Mansell, Jacques Villeneuve, Nelson Piquet, Alain Prost, and Keke Rosberg – fortunately for Bottas, not the real-life racing legends, but their portraits on the wall of the simulator control room.

Bottas, who is a Formula 3 (F3) test driver, sits in an exact replica of the Williams chassis currently being used in the championship. He flashes a quick thumbs-up, and goes on to complete a clear lap of the simulated circuit.

"This guy has talent," says Damien Scott. "I wouldn't be surprised if he ended up as a Formula One driver in a few years' time." Scott, 29, has spent the past two years as General Manager of the Williams Technology Centre in the QSTP. Like many of his colleagues, he has a cosmopolitan background; he is a New Zealander who grew up in Botswana and studied physics in Sydney.

The Qataris overcame one of the challenges of building a successful technology park long ago: they created a flagship project attracting talent from all over the world. Scott's responsibility at Williams is future technology, "Of course we're testing the driver's skill, but our primary aim is to keep improving the simulator." The Williams Formula One (F1) racing team, which was founded in 1977, enjoyed considerable success in the golden era of racing from 1982 to 1997 – Piquet and Prost both won world championship titles. The company diversified and began marketing its design capabilities. Today, Williams' two main products are high-end simulators and hybrid technology.

The Qatar Foundation

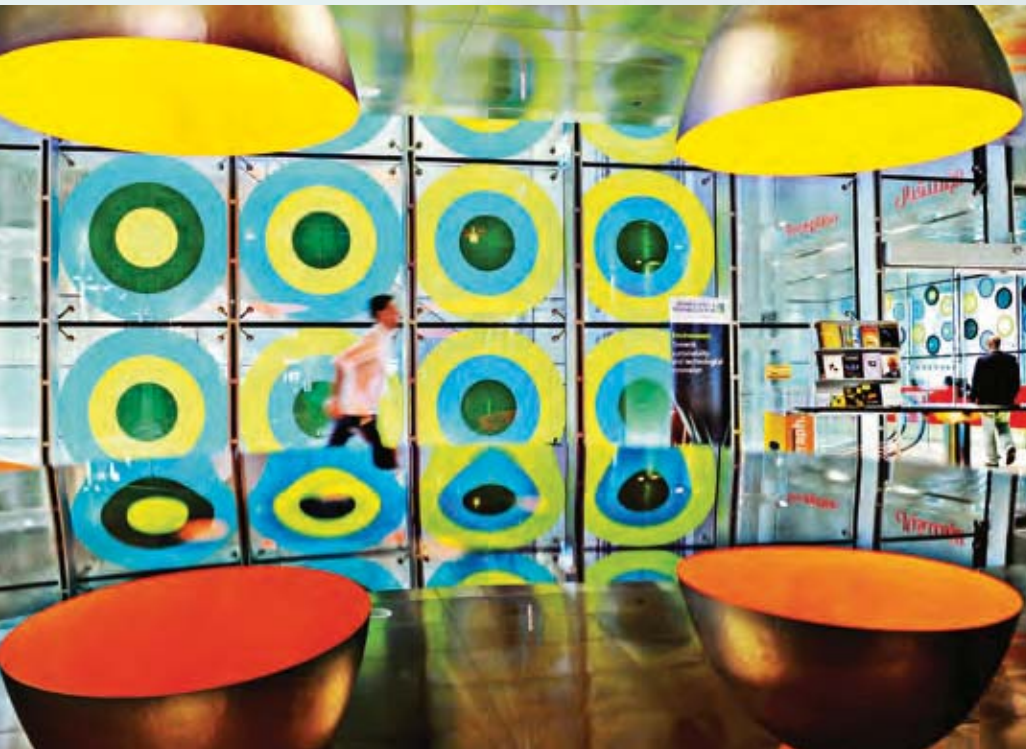
The Qatar Foundation, established in 1995 by Emir Hamad bin Khalifa Al Thani, is the driving force in transforming Qatar into a knowledge economy. The foundation is chaired by the Emir's second wife, Mozah bint Nasser al Missned, and promotes teaching projects such as Education City, near Doha, where six leading US universities have campuses. The foundation's other flagship project is Qatar Science & Technology Park (QSTP).



"We looked all over the world for the best location, and we eventually decided on Qatar," Scott says. This was a direct result of the emirate's diversification and development strategy. It is still dependent on oil and gas for 61% of its income, which the Qatar Investment Authority (QIA) is investing in a highly diversified portfolio of international holdings. For example, its subsidiary Qatar Holding LLC owns 10% of Porsche. In the long term, >



These are some of the best research and development facilities in the world, and the prime minister of Saxony (Germany) himself is actively seeking new cooperation opportunities.



Good design helps to increase the park's profile, and tenants appreciate the first-class laboratory facilities and exceptional architecture.



Qatar plans to become the region's leading knowledge economy, which means making it as easy as possible to carry out practical research and development.

QSTP is one of the most obvious fruits of this strategy. Inaugurated in March 2009, it offers 484,000 square feet of research space, including a futuristic, UFO-like, central complex that cost USD 600 mn. The complex is the work of Australian firm Woods Bagot, which also designed the Melbourne Convention Centre, and has attracted firms such as EADS, ExxonMobil, GE, Microsoft, Rolls-Royce, Shell, Total, Maersk, Norsk Hydro, and the Qatari software company iHorizons. There is no doubt that these firms appreciate the architecture, but they are probably more attracted to the tax breaks and market access – the QSTP is a free-trade zone.

The park lies at the heart of one of the world's fastest-growing markets. "Qatar is serious about its vision of a knowledge-based economy," says its British general manager, Eulian Roberts. "Our job is to drive this vision forward in practice." Roberts is another example of the high fliers lured to Qatar by the project, having begun his career in 1986 at the Institute of Plant Science Research in Cambridge, where he was responsible for finance and for marketing research projects. He then headed Stirling University Innovation Park in Scotland from 1993 to 1997, where he gained experience in biotechnology, environmental technology, energy, health care, software, and telecommunications.

LOCAL EXPERTISE FOR LOCAL SOLUTIONS

As he sits in his modest office, his enthusiasm is very apparent. "If you look back a decade, whenever Qatar had a technology problem, it was Western companies that came up with the solutions. They didn't use local expertise, but that's what Qatar wants now: homegrown solutions to local issues."

This was also the requirement imposed on companies desiring to set up shop at QSTP, a prime example of a successful technology cluster. "If you're coming to Qatar to sell something, or to manage existing service contracts, we're not the right place. We want companies to develop new technology here. Of course they can market the resulting products in Qatar, but the main emphasis of QSTP is development, not sales."

Another important success factor is human resources. The neighboring university campus of Education City Doha, provides a pool of young, highly educated, talent, and the park is ideally placed for networking with top international research institutions. A number of US universities have sites here, including Carnegie Mellon, Cornell, Georgetown, Northwestern, Texas A&M, and Virginia Commonwealth.

"In the beginning, it was difficult to persuade academia that Qatar was serious about its vision of a knowledge economy," Roberts admits, "however, we were supported by companies who'd been doing business in the country for a long time, such as

ExxonMobil, Shell, and EADS." This support is, in part, a result of the project's use of public incentives to attract private investors.

INNOVATION MADE IN QATAR

Observers say QSTP is off to a good start, but is it possible to foster a culture of entrepreneurialism in such a wealthy country? Why should anyone bother to set up a software company if they're already comfortable? Roberts demurs, "Qatar has produced a lot of trading entrepreneurs during its history; people have been good at knowing where to buy and sell products most profitably for a long time. Developing the product itself is the next logical step."

Qatar has a particular interest in health care; 12% of adult Qataris have type 1 diabetes – the highest figure of any Gulf Cooperation Council state. "There are lots of programs to cut diabetes here, ranging from diagnosis to treatment," Roberts says, explaining that QSTP is serving as an interface between the neighboring university's medical faculty and the country's health care industry.

Meanwhile, test driver Valtteri Bottas has completed an accident-free race on the simulator, and his boss, Damien Scott, wants to show us another form of new technology that Williams is developing at QSTP. Use of Kinetic Energy Recovery Systems, (KERS) which store energy in a flywheel or battery, is increasing in hybrid vehicles. At QSTP, they are being developed and tested on the Porsche GT3 R hybrid, and Scott hopes they will soon be used for public transport in Qatar. The emirate is seeking to show itself as a modern center of business and education to the world; during the run-up to the 2022 World Cup, the buses used to ferry the teams around could be fitted with KERS. <

HOW TO BUILD A SUCCESSFUL TECHNOLOGY PARK

- 1 Identify the areas of technology with the greatest development potential, and concentrate on attracting businesses from these and related sectors.
- 2 Provide public incentives for private investment, including tax breaks and easy market access for high-tech products.
- 3 Invest heavily in human resources. Recruit top-ranked creative talent from all over the world, and offer an attractive environment in which to live and work.
- 4 Encourage universities to set up local campuses, with a particular emphasis on natural sciences and technology.
- 5 Build international knowledge and business networks.

USD 1.2 bn*

BATTLE OF THE ICONS

Few places in the world have put up so many buildings so quickly in the last few years. The Arabian Peninsula's construction boom continues apace, in spite of the recession, with spectacular new architectural landmarks helping to shape the region's global identity



→ INFORMATION



KINGDOM TOWER,
Jeddah, Saudi Arabia

Adrian Smith and Gordon Gill's Kingdom Tower will loom over 1,000 meters above Saudi Arabia's leading port city. The world's first kilometer-high skyscraper will dwarf Dubai's Burj Khalifa, which is currently the tallest building on the planet. Add in Kingdom City, the development surrounding the tower, and the price tag jumps to USD 20 bn.



The cost of the
Tower alone

→ INFORMATION



**KING ABDULAZIZ CENTER
FOR WORLD CULTURE**
Dhahran, Saudi Arabia

This 45,000 square-meter project in the country's eastern oil region is the work of Norwegian architectural firm Snøhetta. Comprising five individual buildings reminiscent of blank pebbles, it includes a plaza, shops, a cafeteria, a museum, a library, a concert hall, and a mosque.

300,000 books*

*
in the
cultural
center's library

The desert is being tamed not only by kilometer-high buildings, but by people burrowing into the ground.

Another day, another record: if all goes according to plan, Chicago architects Adrian Smith and Gordon Gill will soon be the first to construct a building more than one kilometer high. The Kingdom Tower, commissioned by Prince Al-Waleed bin Talal, will form the centerpiece of a newly created district on the north side of the Saudi Arabian port of Jeddah. It will cost USD 1.2 bn, take five years to complete, and reach 200 meters higher than the Burj Khalifa in Dubai, currently the world's tallest building.

Constructing skyscrapers has become a competitive sport for Arab rulers, thanks, in part, to the region's burgeoning economic power, which is expected to thrive despite the recent severe downturn in Dubai. However, this quest for new status symbols also reflects the reality that cities like Dubai are relative newcomers to the ranks of global metropolises, practically unknown outside the region until a few decades ago and, unlike economic giants such as China, still in need of a clearly defined image on the world stage.

Apart from pumping oil, where do these countries' real strengths lie? In the absence of any clear answer to this question, they are affirming their identities using iconic buildings whose visual impact outweighs their lack of content and character – you are what you build.

Paradoxically, stockpiling skyscrapers does not necessarily give you an easily understandable, locally rooted, and clearly defined personality. The language of architects and their clients in Dubai and Abu Dhabi is often abstruse and contradictory, and the hulking structures they create rarely form a cohesive, harmonious cityscape. Their penchant for steel and glass stands in blunt contrast to the region's traditional building methods. The new icons are going up too rapidly and failing to create the collective sense of identity fostered by decades and centuries of complex symbolic interaction. Many are designed to catch the largest possible share of the international spotlight, making radical gestures, but mired in self-referentialism.

Unlike early Western icons such as the Eiffel Tower, these buildings are simply plonked down in a pseudo-urban environment that lacks historical roots. This is particularly true in Dubai: the

buildings are symbolic only of themselves, with few ties to the rest of the city or the region as a whole. Urban planning is a slapdash affair, a medley of creations by competing private and public-sector architects with little effort at cohesion. There are hardly any interconnections between large buildings and it seems infrastructure is thrown in as an afterthought. As the online architectural magazine BauNetzWoche points out, visitors use taxis even for very short distances in Dubai; many people take them just to cross the twelve-lane Sheik Zayed Road – even though the Shangri-La Hotel has built a bridge across it.

URBAN THINK TANK

The alternative to spending half your life in cabs is to stay indoors and take refuge from the punishing heat. This is why huge multipurpose indoor structures such as shopping malls have proven a big hit in the Middle East; the one next door to the Burj Khalifa is the largest in the world.

The strong emphasis on indoor culture could also be affecting the way people work. If people in the region have problems, they seek solutions close at hand – ideally in the same building. This is turning office complexes like the Burj al-Arab and Atkins ME's Millennium Tower into business clusters in their own right, with companies at different levels of the value chain increasingly working together under the same roof.

Planning and architecture are very different in this region, and we should be careful about engaging in Eurocentric criticism. Life in these artificial, air-conditioned worlds is radically unlike the concept of the “good,” “European” city, and may seem surreally unattractive to outside eyes. Yet they are part of a new urban reality that could spread far beyond the Emirates and Saudi Arabia, and observers of urban development would do well to keep a watchful eye on them.

That's certainly how Richard Armstrong sees it. As the head of New York's Guggenheim Museum, he has commissioned Frank Gehry to build a >

→ INFORMATION

AL BARAHAT SQUARE

Doha, Qatar

This 65,000 square-meter space is part of the enormous *Musheireb* development.

There is little outdoor life in the Qatari capital, with the exception of a few places such as the old Souq Waqif market, and the square, designed by Mossessian & Partners. It is intended as a new public space. As in the souq, the emphasis is on shade, and the square will include shops, offices, and hotels.

USD 5.5 bn*

spectacular new outpost in Abu Dhabi as part of the institution's shift of emphasis away from the Big Apple toward a more networked international structure with a particular focus on cities undergoing radical change. The Deutsche Guggenheim museum in Berlin is an example of this. "We now see ourselves as an urban think tank," Armstrong told me recently when we met in his New York office. In this scenario, architectural innovation has much to offer to places experiencing rapid transformation driven by capitalism.

ARCHITECTURAL COMPETITION

The soulless architectural statements of places like Dubai, Abu Dhabi, and Doha seem to deny the role of buildings in illuminating social change. Yet each one tries to be more iconic than the last, with its builders engaged in a competition that is anything but soulless. After all, if one building is taller than another, there is an indirect relationship between them; they may not combine to create a harmonious urban landscape, but they are at least a visual embodiment of the competition principle.

The architect and theoretician Rem Koolhaas first formulated this idea in relation to urban infrastructure. (See THINK:ACT 7). In his essay *Generic City*, he writes, with a hint of hyperbole: "Infrastructure is no longer a more or less urgent need but a strategic weapon... southern metropolis Z, still in its infancy, is 'given' a new subway system to make established metropolis W in the north look clumsy, congested, and ancient."

The Emirates are not the only place where symbolic competition has become a driver of architectural innovation. Autostadt, a huge outdoor museum operated by Volkswagen in the car manufacturer's home city of Wolfsburg, has behaved similarly since it opened in 2000. The museum's individual pavilions, each representing a VW group brand, are positioned in relation to one another so that visitors are forced to compare them. This creates a kind of architectural beauty contest in which one pavilion's strengths are always seen in the context of another's relative weaknesses. In fact, the whole idea of the pavilion is one of symbolic competition, and it has been a pivotal component of world



Capital cost

The city is the work of competing private and public-sector designers.

fairs – which are traditionally theaters of international rivalry – since the mid-19th century. The pavilion principle also helps us to understand the new architecture of places like Dubai for a different reason. This type of structure has a deliberately porous relationship between indoor and outdoor; Mies van der Rohe's Barcelona Pavilion of 1929 is a prime example. Many buildings in the Emirates are sealed off from the outside world; their interiors are domesticated versions of the exterior environment. In these cities within cities, indoors is the new outdoors.

CLIMATE-CONTROLLED BEACHES

Part of this need for artificiality lies in the fact that in the United Arab Emirates (UAE), where the real outdoors is perceived as life-threatening, all you can do is create your own atmosphere. This inevitably involves demolishing something that already exists, and it could be argued that for all the soullessness of the mall, the Emirates are the one place where it has truly found a home. Dubai's malls have managed atmospheres and are worlds in their own right, cultures where everything is kept on a tight rein. In the words of the art historian Jonathan Crary, Dubai is “a place in which nothing unexpected can happen.”

You can actually interpret Dubai's perception of itself in a different way: unexpected things can indeed happen, and as technology increases our ability to change the environment, the landscape is in a constant state of flux. There are plans to build a climate-controlled beach, in which a network of underground pipes will keep the sand pleasantly cool even on the most suffocating days. Architectural blogger Geoff Manaugh describes this as “the verticalization of grounds management.” The desert is being tamed not only by kilometer-high buildings, but by people burrowing into the ground.

As skyscrapers stake their claims on the sky in an act of symbolic conquest, so airports increasingly form the nuclei of new cities. In the Middle East, you don't start by building a city, letting it grow organically and adding an airport at some indeterminate stage in the future; you make it an essential component of the urban plan from

the beginning, located as close as possible to the downtown area – Dubai's is just five kilometers away.

WELCOME TO THE AEROTROPOLIS

Author Greg Lindsay has coined his own word for this new type of urban region: the aerotropolis. “I would describe the aerotropolis as a city with a closer relationship to the air, and to other cities accessible by plane, than to its own immediate hinterland.” As you'd expect, he believes the best example is Dubai, whose excellent international air links go hand in hand with the creation of economic powerhouses like Dubai Media City and Dubai Internet City. Iconic architecture is not art for art's sake; it attracts investment and places cities in a position to compete globally.

Critics like Leslie Sklair of the London School of Economics regard this as a further step toward the total commercialization of public space. Iconic buildings, he writes in the journal *Theory, Culture & Society*, “play an important role in promoting a cultural ideology of consumerism.”

ARCHITECTURAL MEANS TO ECONOMIC ENDS

Part of the *raison d'être* of architectural icons like the Guggenheim in New York and its Bilbao and Abu Dhabi offshoots is to be consumed as forms. This is the core of the much-debated Bilbao effect, which turns cities into tourist destinations and encourages urban tourism in which culture becomes an increasingly commercialized machine. But who would want to prevent countries like the United Arab Emirates from gaining access to what was originally a Western consumer culture – and why?

This does not mean that all architecture can be justified on the grounds of economic need, nor does it mean that we should stop engaging in critical discourse. However, we must not rush to cast Eurocentric judgment when we see strange, and perhaps undesirable things happening in the Middle East. We must admit to ourselves that the architectural experiments being hatched in the deserts of the Arabian Peninsula exert a sometimes eerily powerful fascination. <



“The world is running out of places where it can start over. We live in an age of completions, not new beginnings. Sand and sea along the Gulf, like an untainted canvas, provide the final tabula rasa on which new identities can be inscribed: palms, world maps, cultural capitals and financial centers. In its current state, the Gulf is a landscape of vast means and ambition translated with gargantuan effort in ambiguous and sometimes disappointing results, a kind of farewell performance of an ‘Urban’ that has become dysfunctional through sheer age and lack of invention.”

REM KOOLHAAS,
“THE GULF”

THE NEW WATERFRONT CITY



The USD 2.5 bn Bahrain Bay development is the most important infrastructure project for this small kingdom in the Arabian Gulf. Forty thousand people will live and work in the new 1.5 square kilometers district



S

ometimes you see dolphins swimming in the bay," Bob Vincent says, putting down his coffee cup and pointing to the lagoon outside the panoramic windows of his office in the NBB Tower (National Bank of Bahrain).

A dolphin leaping from azure waters would be the perfect image for a glossy property brochure, though the view is still dominated by concrete foundations. Located on the north coast of the capital, Manama, the development will comprise office buildings, shopping centers, a five-star hotel, and apartments. The next major project Vincent will be responsible for is the construction of the Four Seasons hotel.

>

BAHRAIN BAY, A GIANT OF A CONSTRUCTION PROJECT

Bahrain Bay is being built on 434,999 square meters of what was, until recently, largely empty sand. By 2017, there will be a whole new city district here, with over 4 kilometers of roads, a 2 kilometers pedestrian area, and a quay wall of 3.3 kilometers. Towering above all this will be the Khaleej Capita Remza, a 219-meter-high hotel, shopping, office, and residential complex. 65% of the lots have already been sold, but there is still room for more investors. Bahrain has a population of 1.2 million; 62.4% are foreigners. The service sector, and to a greater extent, the finance sector, have both traditionally played an important part in the economy. By contrast, oil and gas account for only 12% of GDP, which is very low by Gulf standards.

**The foundations
are in place**...and so
are the first landmark
buildings. Now, progress
should be very fast.



“The development is currently on time and on budget,” he says, which is no small achievement given that so many other plans have been delayed by the recession. Bahrain Bay is a glittering expression of this small country’s big ambitions; the World Bank recently named Bahrain the world’s 18th most business-friendly nation. Vincent’s window gives him a bird’s-eye view of how the project is progressing every day.

Avoiding artificiality

This likeable Australian property developer has managed major construction projects around the world for the past 25 years, and was a strategic advisor to the investment bank Macquarie for a long period. The display boards and architectural model in his showroom – scaled down to the size of a tabletop – bring the development to life for those who fail to visualize what it will look like; its structure of concentric rings radiate outward from a circular central island.

Included in the model is a 50-story, 260-room Four Seasons hotel that is scheduled for completion in 2013. The hotel’s Sky Pod restaurant will offer a 360-degree view of Manama and the Arabian Gulf. However, the island’s best views will be reserved for owners of the spacious apartments in Raffles City Bahrain, designed by US architect Rafael Viñoly, which form an amphitheater opposite the retail and office complexes. The model shows the island linked by two road bridges to the nearby diplomatic quarter of Manama, with little boats at anchor in the marina beside the lagoon.

Bahrain Bay is a harbor district, combining residential, business, and retail uses. Futuristic waterfront developments are prolific in the Gulf; what’s so special about this one? “The difference lies in the cohesion,” Vincent says. “This isn’t just a collection of solitary skyscrapers; it’s a mixture of shops, offices, hotels, and homes, very much in line with the modern philosophy of

urban planning that you see in big Western cities. We’re creating an authentic place, firstly because of the density, secondly because of the design, and thirdly because of the sector mix of investors. This isn’t the world’s highest tower, it’s a completely new city district with a density similar to midtown Manhattan or Tokyo.”

One of the first landmarks is already in place – a large, black, office block, whose design has already won plaudits from architects, stands on the northern shore of the lagoon. Sadly, it has not escaped the effects of recession; this is the headquarters of the investment bank Arcapita, which has filed for insolvency and is now protected from its creditors while it restructures. This has not affected Bahrain Bay as a whole; the project is soundly financed, and demand for property in the Kingdom is still high. “Dubai had the economic opportunities, and they managed to persuade many investors to stick with them,” says Vincent, who handed over his role as CEO to Robert Lee at the beginning of this year. “Bahrain has always had fewer resources, so less was built. That’s turned out to be an advantage, because there is less excess property in Bahrain than in Dubai.”

Last year, Vincent told the MIPIM real estate conference in Cannes that 65% of the parcels at Bahrain Bay were sold. Real estate agents report that demand is still high.

The Arcapita building still dominates its surroundings, though it will soon be joined by the Four Seasons hotel and Raffles City Bahrain.

The site is much closer to completion than it looks, Vincent’s colleague Arran Dall reassures us. “In the Gulf, things often get built before the infrastructure is ready, which causes investors unexpected problems. That can’t happen here in Bahrain Bay; all of the utilities like electricity, broadband, and air conditioning are already in place.” To set up shop here, all you do is stick a plug into an outlet. <

“We may not have the world’s highest tower, but we have a completely new city district with a density comparable to midtown Manhattan or Tokyo.”



Bahrain Bay will be completed in five to seven years, if former **CEO Bob Vincent** has his way.

Nojoud al Sihli completed her degree this year, specializing in information systems.



Visiting Saudi Arabia to produce a report on **women's universities** calls for plenty of persistence. Our writer managed just that

PLAYING CATCH-UP

Princess Nora bint Abdulrahman University is another milestone in a lengthy process.

52,308 students.

2,000 staff members.

15 colleges on a 1,977-acre campus.

Princess Nora bint Abdulrahman University, 24.9 kilometers north of Riyadh, is more than just the world's largest all-female university. It must also be one of the best-equipped educational institutions in the world. Almost USD 5 billion has been invested by Saudi Arabia in the new university, and its opening by King Abdullah in May of last year, represented a clear statement that the country now puts great importance on educational opportunities for women.

Princess Nora bint Abdulrahman University is another milestone in a very lengthy process. Until 1955, Saudi Arabian families had to hire a personal tutor or send their daughters to private schools in Cairo, Beirut, Europe, or the USA for their education. In the 1960s, King Faisal and his wife, Queen Effat, overcame conservative forces and founded the first public schools for girls. By doing so, they laid the foundations for higher education for Saudi women. Today, the Saudi government guarantees free education for boys and girls through high school, in single-sex, public schools. Anyone achieving the necessary academic qualifications may continue their studies at a state university, free of charge. Many of the Kingdom's 58 colleges and universities educate women exclusively. In addition, a dozen such institutions have been privately founded since 1999 nationwide. This educational strategy is already bearing fruit; around 60% of all Saudi students are now female.

Furthermore, co-ed teaching of men and women is no longer taboo. In 2009, the King Abdullah University of Science and Technology (KAUST) opened under the overall control of state-owned enterprise Aramco. At KAUST, both men and women can earn master's degrees and doctorates in eleven scientific and technical disciplines. There are no tuition fees, and teaching is conducted in English. The Red Sea campus features a supercomputer and ultra-modern research facilities, and the campus boasts an international staff with some of the world's leading experts. Dr. Choon Fong Shih, the



In Saudi Arabia, all boys and girls have access to a free education. 58% of their students are women.

founding president of the university, hails from Singapore and studied mechanical engineering at Harvard. The university is administered by a body of trustees from around the world, and is certainly not lacking in funds: King Abdullah, whose name the institution bears, provided the university with an endowment of over USD 8.5 bn. In other parts of the world, education budgets are collapsing; Saudi Arabia has the funds and the drive to invest in the education of young women. The country seems to be on the right path; the next challenge will be integrating these young, intelligent, well-educated, females into the job market – at present, they account for just 14% of all working people. Fossil fuels will one day run dry; the country must make the most of this valuable resource for the good of its economy. <

KEY INFO

- ▶ **The Saudi government** is committed to education as a driver of economic development.
- ▶ **Saudi Arabia** is home to 58 colleges and universities.
- ▶ **Industry** is partly financing the institutions.

HUMAN RESOURCES: DARE TO GET RID OF HIERARCHIES



Keeping foreign specialists in the region and developing local talent are the two major challenges.

The Gulf States attract high-flying talent from around the world with good working conditions and excellent salaries. Yet, the human capital offered by the region is also enormous. What kind of knowledge transfer is taking place? How can the region ensure the brightest individuals don't simply come to the region, but stay there? How can the Gulf States get the most out of their own human resources? Khalid Al-Yahya, a Harvard Kennedy School associate, provides some answers in an exclusive THINK:ACT essay

Employers in Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, and the United Arab Emirates (UAE) must meet the challenge of developing the human capital available to them. Major sums have been invested in improving the local labor force and in attracting talent from abroad, yet rapid economic growth and increasing competition on global markets have made it difficult for the countries of the Gulf Cooperation Council (GCC) to keep up.

The countries are in an excellent starting position – the economic area offers peerless mineral resources, and has invested significant amounts in educational services and scholarships

to study abroad. At the same time however, the countries have felt obliged to attract foreign workers in order to develop their infrastructure and assist with the running of their businesses. Around 70% of employees of private Saudi Arabian business are from abroad, while this figure rises to a remarkable 98% for the UAE. Over the last couple of decades, the region has made progress in this field, though the latest changes to the economic situation have brought new challenges with them. Among these, budgets for major projects and developing human resources have shrunk, while many sectors are fighting to prevent specialists from leaving.

Another key issue is preserving national identity and social cohesion in societies where foreigners sometimes make up the majority of the population. The proportion of local employees must rise, with the ultimate aim that all local people can find work. This is the only way of keeping them in the country for the long term.

30 years ago, it was widely agreed that there were insufficient specialists within the region. The Gulf States thus

invested generous sums to educate executives to improve administrative and organizational efficiency. Both the government and the private sector provided significant funds, and it was believed that this approach would bring about noticeable improvements. Although the problem was recognized early, successes in training and education have been found lacking across the region as a whole. Countless studies have come to the same conclusion that the educational level has only been raised slightly, particularly in the public sector. Why, despite dedicated investment, has the desired effect not been achieved?

I recently completed a study that looked at the human capital and the productivity of organizations in the GCC countries. I came to the conclusion that the lack of local talent is not the main problem at all; what is absent is a supportive environment that makes the most of the local labor force's potential. The study was based on a survey of over 700 employees in the UAE, Saudi Arabia, and Oman. I found that knowledge and skills were often employed in the wrong areas, were unknown, or were not capitalized >



DR. KHALID AL-YAHYA,

Director of Governance and Public Management
Research Program at Dubai School of Government and
Associate at Harvard University's Kennedy School

“AROUND 70% OF EMPLOYEES OF PRIVATE FIRMS IN SAUDI ARABIA ARE FOREIGN, WITH THE FIGURE RISING TO 98% IN THE UAE.”

on, in spite of the fact that classroom capacities have been improved significantly after years of development.

The participants in the study pointed to several possible reasons for this problem. They cited a lack of opportunities to play a role in organizations' decision-making processes. Blind faith in hierarchies was frequently mentioned, as were authoritarian decision-makers who had spent many years at the organization, and were fundamentally against any changes to the status quo. Furthermore, many employees were simply put to work in the wrong area. In short, at many organizations, local staff are insufficiently motivated, integrated, and challenged. This highlights the widespread problem of there being little connection between the improvement of human resources, comprehensive organizational development, and management reform. The absence of a link is caused by a tendency to blame individuals when things go wrong, but not the environment in which they operate.

A further challenge for management is ensuring that foreign talent is not merely attracted to the organization,

but actually stays there over the long term. The Gulf region has 40 years' worth of experience in successfully recruiting employees who bring knowledge and expertise from other countries. For major projects in particular, such as building factories, hospitals, and hotels, foreign labor is often employed. As a result, there are few other parts of the world where employees offer such ethnic diversity and vibrancy. Such wide-ranging knowledge and experience offers benefits both to local people and local companies, yet foreign expertise is often insufficiently anchored in the region. Each year, thousands of specialists and consultants leave Gulf-based employers to take up new roles, often without fully transferring and integrating their expertise into the business.

A survey in Dubai recently reached the conclusion that 65% of all organizations lose core competencies when employees move to other companies or return home. Very few firms employ systems that gather and manage explicit knowledge, rendering

these organizations unable to access the tacit knowledge that individuals hold or that is embedded into social relationships in the work place.

In order to meet this challenge, it is essential to do away with deep-rooted hierarchies, and to support entrepreneurial behavior and intuitive mindsets. In terms of status and remuneration, there should be greater equality among staff, while organizational barriers must be overcome that limit cooperation by separating individuals and teams from one another. Tackling this issue is perhaps the most important task facing the GCC States as they strive to achieve continued growth and prosperity. The right tools must also be found to make the most of locally available human capital and provide local staff with decision-making authority. Similarly, it is vital that knowledge and expertise brought in from abroad is transferred and stored. This is necessary if GCC States wish to be successful in their efforts to ensure the sustainable development of their economies and societies. <

HIGH-FLYING AMBITIONS

Dubai is building the world's largest airport. While progress has been slower than expected, the vision maintains: airports are the oil wells of the 21st century

DUBAI
WORLD
CENTRAL

33

BERLIN-BRANDENBURG
INTERNATIONAL

4.1

BANGKOK-
SUVARNABHUMI

3.8

DENVER

4.8

BUILDING COSTS

IN USD BN

A construction fence, believed to be the longest in the world, rings a vast area of Dubai's desert. An airport is being built behind it, but not just any old airport; its name, Dubai World Central (DWC), signals the Emirates' desire to make it the biggest and most beautiful in the world. As you'd expect from Dubai, mega is not big enough; this airport will be giga. The gleaming glass showcase of a metropolis already has more than its >

“FOUR BILLION PEOPLE LIVE WITHIN AN EIGHT-HOUR RADIUS. THAT’S TWO-THIRDS OF THE WORLD’S POPULATION.”

EMIRATES PRESIDENT TIM CLARK ON THE STRATEGIC IMPORTANCE OF DUBAI

fair share of triumphant superlatives: world’s tallest building, biggest shopping mall, biggest manmade island, biggest indoor ski slope – and now, biggest airport.

When DWC is completed between 2025 and 2030, it will cover 140 square kilometers of desert at a cost of USD 33 bn. It will handle 120 to 150 million passengers and 12 million tons of freight each year, twice as many passengers as London’s Heathrow and five times as much freight as Frankfurt. To ensure that people and pallets transit the airport as smoothly as possible, five runways will operate simultaneously, each four and a half kilometers long to accommodate the widest of wide-body jets. DWC will be an airport like no other, a landmark straight out of One Thousand and One Nights.

It will also form the core of an “aerotropolis” or aviation city, with a trade fair site, satellite logistics, manufacturing and research facilities, offices, parks, a golf course, hotels, shops, mosques, and residential districts for blue and white-collar workers and managers, with each group neatly segregated as you’d expect in Dubai. One day, almost one million people will live and work here, and if you believe the planners’ ambitious claims, there

is no better location in the world for an airport. “All of the world’s airports can be connected via our hub,” proclaims Sheikh Ahmed bin Saeed Al Maktoum, chairman of the state-owned Emirates Airlines. The existing airport, Dubai International, is served by 150 airlines flying to 220 destinations. “Two billion people live within a four-hour radius,” explains the airline’s president, Tim Clark. “Increase that to eight hours, and you have four billion, which is two-thirds of the world’s population.”

AN IDEAL LOCATION

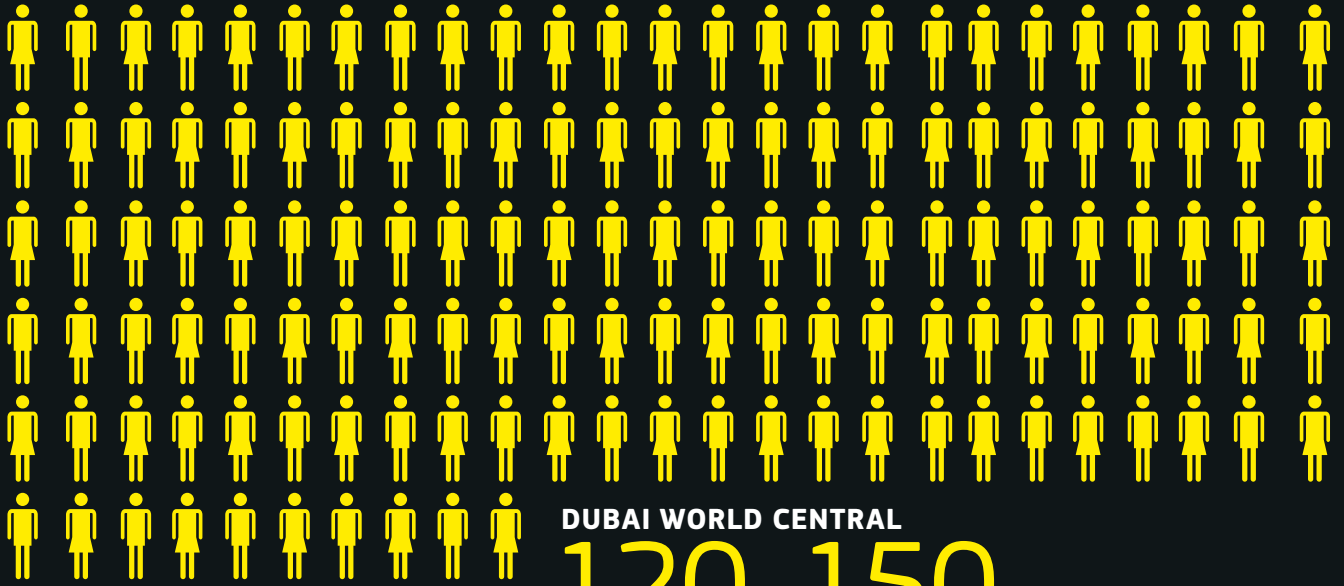
Analysts say globalization and the increasing prosperity of developed countries are shifting the international aviation industry’s center of gravity away from Europe and toward the Gulf. Dubai is becoming increasingly important as a transshipment hub for the world; for India and China, for example, it is ideally located between producers and consumers. Jebel Ali, the Middle East’s largest port, is only ten kilometers away from the future DWC super airport, and in theory it will be possible to move goods between ships and aircraft in less than an hour. In Dubai, Chinese laptops are fitted with English, German, and Russian keyboards and then sent on their way. Boxes of German free-range eggs are loaded into small aircraft so that guests at five-star resorts in the

Maldives can enjoy a perfect breakfast. Dubai has a long track record of impressive growth. The number of passengers using Dubai International rose from 24.8 to 47.2 million between 2006 and 2010, and Dubai is the world’s sixth largest freight airport, handling 2.27 million tons.

Even during the last recession it was business as usual, and there is every sign that this growth will continue. Boeing and Airbus are expecting the worldwide passenger and freight fleet to double in size by 2030; aviation strategists in Dubai have every intention of keeping pace with this trend and making as much money as possible from it as soon as possible. “We want to gain market share from the European hubs,” says Paul Griffiths, head of Dubai Airports. His airport is well equipped for future growth in a region where aviation is often synonymous with prosperity and airports are the oil wells >

PASSENGERS

IN MILLIONS PER YEAR



CARGO

IN MILLIONS OF TONS PER YEAR



FRANKFURT/MAIN

2.3

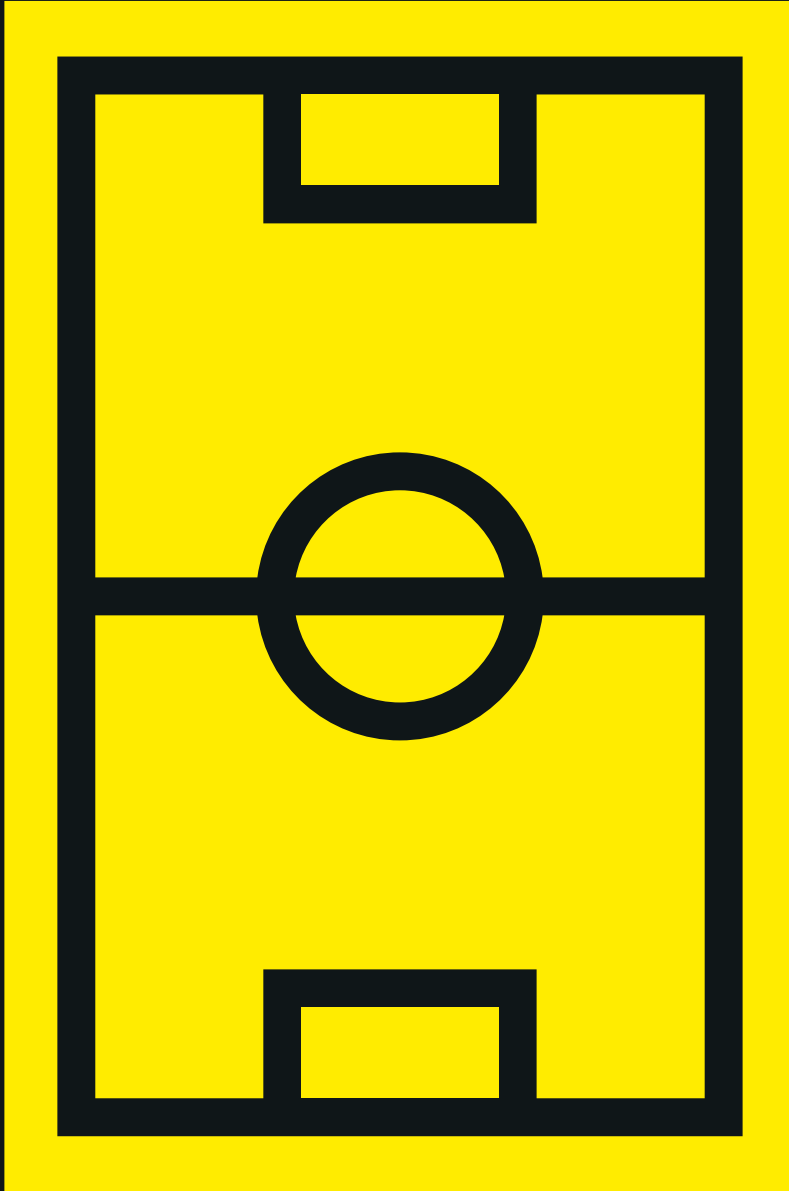


12

DUBAI
WORLD
CENTRAL

TOTAL AREA

IN SOCCER FIELDS



DUBAI WORLD CENTRAL

19,607

of the 21st century. The British business research institute Oxford Economics calculates that 260,000 jobs – one out of every five in Dubai – are dependent either directly on aviation or on spending by the tourists and business people who fly there. Hence the excitement about the future of the industry.

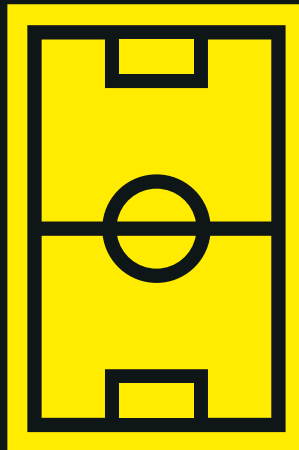
MORE PLANES, MORE PASSENGERS, MORE CARGO

People in Dubai cannot understand why anyone would want to charge an aviation tax, ban night flights, or engage in lengthy discussion regarding the need for new runways. The existing airport already operates around the clock, and the airline industry is largely exempt from taxes. Sheikh Ahmed bin Saeed Al Maktoum personally runs the aviation and transport authority, Emirates Airlines, and Dubai Airports, which no doubt speeds up the decision-making process.

Much to the joy of Boeing and Airbus, the airport's flagship carrier, Emirates, is buying wide-bodied jets by the bucket load – with well over USD 80 bn currently on order. It is easy to calculate that many million more passengers and millions of tons of freight will pass through Dubai when these aircrafts are delivered over

NEW YORK
JOHN F. KENNEDY

2,794



JEBEL ALI, THE MIDDLE EAST'S LARGEST SEAPORT, IS LESS THAN 10 KILOMETERS AWAY. IN THEORY, GOODS CAN BE TRANSFERRED BETWEEN SHIPS AND AIRCRAFT IN LESS THAN AN HOUR.

the next ten years. "We know exactly when these passenger seats will come onto the market," says Dubai Airports' marketing director Lorne Riley. "That allows us to plan the capacity we need to handle this growth." At some stage, the existing airport, surrounded on all sides by offices, homes, and business districts, will run out of space. The obvious question is when will it happen?

SLOWER THAN EXPECTED

Construction is taking rather longer than planned. The control tower, a freight terminal, and a runway are complete. The 315-foot control tower sticks out of the ground like an arrow. Staff members at the new airport are not overworked yet. Cargo business is getting off to a good start; customers are attracted by low prices and the direct road connection to the free-trade port; the mood is optimistic. "You can see that it's turning into an airport," says operations manager Dilip K. Sitlani. The number of flight movements per month is rising, though

the plans for Dubai World Central have not escaped the effects of recession. The plans for DWC date from the 1990s, when everything seemed possible, and progress at the moment is evolutionary, rather than revolutionary.

Dubai International, just 4.8 kilometers southeast of the city center, has continually expanded in recent years. The new terminal 3, used exclusively by Emirates Airlines, opened three years ago and catapulted the airport's capacity to 60 million passengers per year.

By 2018, there will be another terminal, exclusively for the Airbus A380, which will push capacity to 90 million passengers, the same as the world's current largest airport, Atlanta International. Emirates Airlines has shifted its move to sometime between 2022 and 2030. Salem Obaidalla, Senior Vice President of Commercial Operations at Emirates Airlines, says: "The expanded capacity at Dubai International means there is no need to move to the new airport in the near future." His boss Tim Clark says that in the first few years after 2018, DWC will act as "a kind of pressure valve for Dubai International – particularly for new airlines coming to Dubai, and those switching to the new airport on cost grounds." Even in the long term, DWC will complement the old airport rather than replace it, and although this milestone project clearly needs more time, its completion is not in question. "We are expecting more growth," says Dubai's ruler, Sheikh Mohammed bin Rashid Al Maktoum,

"and we must be prepared for this." His vision and strategy for the world's largest airport remain unchanged, but the world's economic center of gravity is shifting eastwards more rapidly than expected, and Dubai is fast becoming its fulcrum. <

TAKE AWAY

► **Airports are the oil wells of the 21st century.**

They will secure the region's prosperity when the oil boom ends.

► **Globalization,**

and increasing prosperity in the developing countries, are shifting the center of the aviation industry from Europe to the Gulf.

IRAQ

KUWAIT

→ KUWAIT CITY

BAHRAIN

→ MANAMA

QATAR

DOHA →

SAUDI ARABIA

FAST TRACK



From ships to rail: Kuwait City is about to begin a new era in public transportation.

From 2017, high-speed trains will link Kuwait with other Gulf cooperation council States. The new railway network is not just another infrastructure project

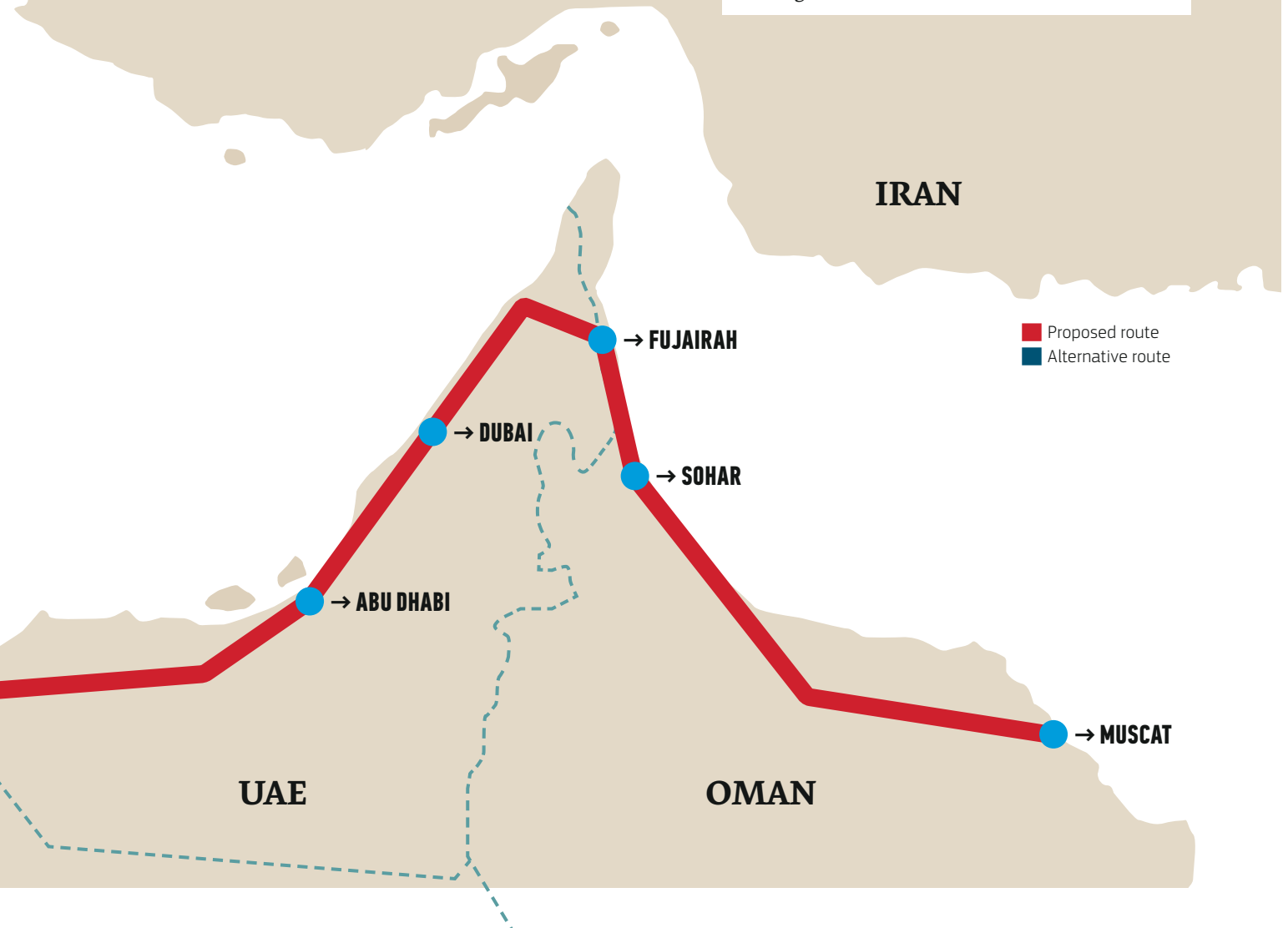
The GCC Rail Network's locomotives and rolling stock will bring the Gulf States closer together in more than one sense. When the project, spearheaded by Kuwait, is complete, fast, comfortable trains will link the emirate with Saudi Arabia, Bahrain, and Qatar. The second phase of construction will add the United Arab Emirates and Oman to the network, and eventually the UAE will have a direct link to Saudi Arabia.

Last autumn, Kuwait announced a public-private partnership that would turn a political vision into a practical reality in the form of high-speed diesel trains. Communications Minister Salem Al-Othaina recently told a conference in Doha that the GCC Railway Network would accelerate the region's economic integration. Kuwait already has an extensive national metro and railway system, and the expertise to design a train service that will attract adequate numbers of passengers.

The project's chances of success are excellent. The number of passenger journeys within the GCC States is constantly increasing: in 1995, fewer than five million people crossed the border from one Gulf State to another, but by 2010 the figure had reached fifteen million.

"This trend is set to continue, and it would be strategically unwise to leave railways out of the equation as a means of transport," comments Michael Wette, partner and managing director of Roland Berger Strategy Consultants in the Middle East. "The initial cost will be high, but the project will pay for itself in the long term."

The transnational railway will start on Kuwait's border with Iraq, and will cost at least USD15 bn. Kuwaiti Communications Minister Salem Al-Othaina has no doubt that it will be a good investment. While its precise economic value is impossible to quantify at this stage, it has obvious strategic importance. "The project will pave the way for a GCC single market," he predicts. If the railway is a success, it will provide another significant boost for the region's rise to the status of a global economic power, putting the Gulf on the fast track to integration. <



ABDULLA M. AL AWAR
**Dubai International
Financial Centre (DIFC)**

Abdulla M. Al Awar, 32, has been Chief Executive of the DIFC since 2009, and serves on the management board for the stock exchange holding company Borse Dubai. He is responsible for the strategic direction of the DIFC, which is a financial free-trade area with its own laws and regulatory body. The DIFC is home to over 800 companies, including many of the world's leading banks and asset managers. Al Awar co-founded Dubai Knowledge Village and Dubai Internet City, after serving as the managing director of the DIFC Authority.

Optimistic: Abdulla M. Al Awar,
Chief Executive of the Dubai
International Financial Centre



“WE’RE BECOMING A GLOBAL FINANCIAL HUB”

As chief strategist at the Dubai International Financial Centre, **Abdulla Mohammed Al Awar** is transforming the Arabian Gulf into a key financial market. His expertise is in high demand; interviews with him are considered a great honor. He tells **THINK:ACT** about Dubai’s ambitious plans

THINK:ACT: You’re trying to establish your country as a focal point for financial services in the Gulf region. How will your vision translate into a specific plan?

ABDULLA MOHAMMED AL AWAR: The DIFC was created to bridge the gap between West and East and bring international markets and financial centers together. The region between London and Hong Kong has a great deal of investment and business potential. It comprises 42 countries and is an increasingly prosperous region. It represents a chance for leading banks and asset managers to expand into this market. We realized that international companies needed to take advantage of this region’s opportunities while enjoying the level playing field that they are used to, so we created a free-trade zone for financial services providers that removed all the restrictions on foreign companies doing business.

Bahrain, Qatar, and your neighboring emirate Abu Dhabi are also trying to attract the international financial sector. Why should people come to you?

The DIFC is the size of 63 soccer fields (111 acres), and it uses Anglo-Saxon civil and business law rather than that of the United Arab Emirates. Our system is very similar to English law, making it attractive for international companies and financial institutions. They are provided with a legal framework they are familiar with and the location is closer to their target market. The city is ideally suited to the requirements of international companies; Dubai airport offers extensive transport connections, and it is easy to get from Dubai to destinations in Africa, southern Asia and even Southeast Asia. Also, you shouldn’t underestimate the lifestyle factor: the city offers an excellent quality of life.

The DIFC has big ambitions. You are trying to make Dubai a regional financial center, and an international one on a par with London, Frankfurt, and Hong Kong. How close are you to achieving these goals?

When we talk to companies, we encourage them to use Dubai to do business; not just with the GCC countries and the Middle East, but with regions like southern Asia and Africa as well. For example the big British bank, Standard Chartered, which is particularly strong in markets like Asia and Africa, relocated its Chief Executive for the Middle East, >

“We’ve created a free trade zone for financial services providers.”

Europe, Africa, and America to Dubai. I think that’s a sign of the bank’s confidence in the DIFC.

You’ve also had some setbacks since Dubai’s debt crisis in 2008 and 2009, and several financial services providers have left your center.

No city and no financial center has escaped the economic crisis, but some companies have proved very resilient. In fact, none of the big names have left the DIFC; on the contrary, the number of registered clients has increased by an average of 6% per year.

You’ve recently been developing closer contacts with Asian countries such as India, China, and South Korea. Is no one coming from the west anymore?

We completely overhauled our business strategy last year, and we realized that the economic crisis had shifted the economic focus toward emerging- and growth-markets, so we’ve done two things. First, we’ve informed companies in markets like Europe, the United States, Hong Kong, and particularly our existing customers, that there’s even more they can do from Dubai now. Second, we decided to be more active in the emerging- and growth-markets, with a view to new business opportunities. Therefore, it’s not surprising that an increasing number of companies from the Middle East and South and Southeast Asia are joining us.

Your business is primarily dependent on bringing international players into the DIFC. Isn’t it more important in the long term to have more domestic companies with a global reach?

There are already good examples of domestic companies in our center. When we were setting up

the DIFC and it was still very new, we needed to tell local companies about the kind of infrastructure we offered. Today, six or seven years down the line, we’ve got some good examples of local companies who’ve chosen the DIFC as their base because they’re seeking to expand internationally.

You’ve been very active in gaining wider international acceptance for sharia-compliant financial products, such as sukuk bonds and takaful insurance. How important is this segment for your center’s success?

Very important, and we’re still placing a great deal of focus on it. There are all kinds of Islamic financial services offered by the DIFC, including banking, asset and fund management, and insurance. When we talk to these companies, we try to make them aware of the opportunities, such as the possibility of applying for an Islamic business license from our regulatory authority, the DFSA.

The center could be seen as part of your country’s efforts to monetize its oil wealth into long-term growth for future generations. Do you still think that’s a good idea in view of the turbulent financial markets of the last few years?

I think that diversification in the service sector is a great strategy. We are realizing our vision of turning Dubai into a knowledge economy. We’ve created a cluster of financial services providers that didn’t exist here six years ago, and we’ve already got more than 11,000 people working here. That adds a lot of economic value, boosts direct foreign investment, and has a positive effect on the city’s economy.

It’s not all roses, is it? Your commercial arm, DIFC Investments, built up a huge mountain of debt after investing in foreign equities and property outside the DIFC.

The main lesson we learned from the economic crisis was to focus on our core objective of making the DIFC a leading international financial center. We reviewed our strategy at the beginning of 2010, and set business goals for the next three to four years. All of these goals are about turning these 111 acres into a global financial center.

Has Dubai’s debt crisis run its course?

I’m no clairvoyant, but I really do believe we’re making progress. The figures show that 2010 was better than 2009, and 2011 looks like it will be better than 2010 – so I’m sure we’re well on the road to recovery.

Until the crisis, Dubai was a country of superlatives. Over the past three years, you've had many disappointments, and some important projects have failed or are being heavily downsized. Is that good or bad?

In terms of financial services, Dubai has always been in a strong position. In the annual rankings of international financial centers published by *The Banker* magazine, Dubai has just risen three places to number eight – despite very difficult times both here and worldwide.

How are you preparing for the effects of this turbulence on the global financial markets?

We haven't seen any cause for alarm so far. We're still getting interest from big companies that want to expand within the region, including some from the United States and Europe.

You've also had problems within the DIFC as an institution, and you've had two new governors in two years. Does this affect confidence in the center's stability? How do your customers react to it?

Change happens in every organization. The fact remains that our customers are basically interested in receiving the best possible service, so we concentrate on providing it. When you look at this, and our growth figures, you see that the changes haven't affected the way we do business.

As a financial center, has Dubai profited from the recent turmoil and uncertainty in other parts of the Arab world?

The DIFC has always attracted companies seeking to cover a larger region, and that has continued during the Arab Spring. I think it is the result of the same factors: clearly defined laws and regulations, the legal security, the safe environment, and the lifestyle. <

“In the service sector, diversification is a great strategy.”

A LOOK INSIDE:

Three questions on the Dubai International Financial Centre for Francesco Pavoni, Senior Partner and in charge of Financial Services at Roland Berger Middle East



How important is the Dubai International Financial Centre (DIFC) for the Gulf region?

Very important. It is clearly a business accelerator for Dubai and the whole GCC

region. Since its beginnings in 2004, the DIFC has grown to host more than 700 companies operating in a wide variety of sectors, such as banking, insurance, wealth management, capital markets, professional services, and retail. This definitively proves the success of its formula: a tax-free environment, full foreign ownership, and operational support. Today, more than 70% of these players are international, which has positively influenced foreign direct investment in the region.

Are there other financial centers in the GCC states that compete directly with Dubai?

There are. Bahrain, Abu Dhabi and Qatar are important hubs with their own specific characteristics and business propositions; for example Qatar Financial imposes a 10% corporation tax on locally sourced profits. Bahrain is another important example. It has a highly developed financial system with more than 320 banking licenses, high asset intensity (e.g. 300% assets/gdp), and plays a significant role in financial intermediation (e.g. 170% loans + deposits/gdp). In general, together, these financial centers represent a strong business accelerator for the whole GCC region.

Did the debt crisis in Dubai harm the city's reputation as a financial center?

The global crisis had an impact on Dubai as well. Economic, financial, and liquidity issues, combined with increased risk factors, all significantly affected its development as a financial center. However, compared to other regions and economies, Dubai and its financial center showed resilience over time, with most companies weathering the storm. In the aftermath of the global crisis, the DIFC is now starting a new growth cycle with an even stronger reputation.

PREDICTABLE GROWTH



Demand will be driven by the growing urbanization of Arab countries and their need for high-quality infrastructure.

Population growth in the developing countries poses challenges for business. A new series of publications by Roland Berger Strategy Consultants explores the many opportunities it also presents

The markets are a roller coaster, economic forecasts are outdated before the ink is dry, and a new order is emerging in key regions of the world. The Arab Spring symbolizes a major shift of political perspective in a world that changes with lightning speed. This makes it all the more important to plan for the future by identifying the long-term megatrends affecting society, business, and the environment. Even in unpredictable times, there are a few near certainties.

One of the megatrends is population growth. We can now forecast with reasonable accuracy how many people will be living on the planet in the future; this capability provides companies with a sound basis for identifying and exploiting future business potential.

The numbers speak for themselves; by 2030, the world's population will have increased by almost 20% to around 8.3 billion. We also have a fairly clear idea of the geographical distribution of future populations: if you imagine the world in 2030 as a town with a

population of 100, fifty-eight people will live in the Asia district, nineteen in Africa, nine in Europe, eight in South America, five in North America and one rather lonely individual in Australia/Oceania. This means that 80% of the world's population will live in Asia and Africa, and 95% of the growth will occur in developing countries. This will dramatically shift the global balance of power.

The appointment of managing director of the International Monetary Fund showed that the old guard was still hanging on to power, but there are plenty of Chinese and Brazilian contenders for key positions in such organizations. A population explosion in the Arabian Peninsula (Bahrain, Yemen, Qatar, Kuwait, Oman, Saudi Arabia and the UAE), where the number of inhabitants is expected to grow by 34 % to over 102 million in 2030, will also give the region greater global clout.

So much for the statistics; where are tomorrow's decision makers, consumers, and producers likely to come from? The numbers show that in 2030, the Arab lands will have very young populations. The average age will be 21 in Yemen, 39 in Kuwait, Oman, Qatar and Saudi Arabia,

and 44 in the industrialized nations. The Arab population is growing younger, and therefore more economically active, in contrast to other regions with aging populations.

Per capita income is also forecast to rise. Jordan, Kuwait, Saudi Arabia, Qatar, and the United Arab Emirates (UAE) will see stable growth of 3 to 5%. In Jordan and Saudi Arabia, for example, 14% more households will have an annual income of over USD 25,000 in ten years' time. A new middle class is emerging, helping to maintain social stability and demand for products and services. Arabia is an up-and-coming region with a lot to offer European investors.

With the exception of Yemen, GDP in the region is expected to rise at a steady 3 to 6% over the coming years, and trade with the European Union is booming. The biggest importer is the UAE, which spent USD 40 bn in the EU in 2011, an increase of 17.7% on the previous year.

Demand will also be driven by the growing urbanization of Arab countries and their need for high-quality infrastructure. Even now, most equipment and machinery is imported, and although many construction projects in >



BERND BRUNKE

is Partner and Member of the Executive Committee of Roland Berger Strategy Consultants, and author of the *8 Billion Business Opportunities* series.

“DESPITE UNCERTAIN PROSPECTS FOR THE WORLD ECONOMY, THE INVESTMENT POTENTIAL IS IMMENSE.”

North Africa have been halted by global economic uncertainty and popular uprisings, the investment potential is immense. In the first quarter of 2012, capital projects worth USD557 billion were in the pipeline.

Population growth also makes it easier to sell direct to the end customer. With consumer spending forecast to rise by 4 to 5% annually over the next 10 years, some of the biggest increases in demand will occur in the health care and communication technology sectors. For example, the UAE already imports medical technology and sells it on in Dubai and other marketplaces.

There is strong demand for high-quality German technology; as long as exporters respect local business practices, this will also represent a huge opportunity. It is important to build close personal relationships with local investors, and a good local network is an absolute necessity. Small, unknown businesses need to agree to strategic distribution partnerships with high-profile local players in order to gain a foothold in the market.

One example of a company that has accomplished this is the bathroom fittings manufacturer Hansgrohe, based in Germany's Black Forest. Hansgrohe provided fittings for the world's tallest hotel, the Mecca Royal Hotel Clock Tower; the luxurious Emirates Palace Hotel in Abu Dhabi; and the Burj Khalifa in Dubai. The manufacturer is also supplying water and energy-saving technology to the new sustainable city of Masdar in Abu Dhabi. Hansgrohe is a successful player in nearly all countries defining the Arabian Peninsula, and achieved double-digit sales growth last year.

Julian Henco, the company's sales director for the region, says that Middle Eastern customers trust German products. “In addition to German engineering and exceptional quality, we also offer a very high standard of reliability and outstanding pre- and after-sales service, a strong customer focus, and a great deal of flexibility. The fact that our products are created in cooperation with six of the world's top designers gives us an extra advantage.” <

8 BILLION BUSINESS OPPORTUNITIES

In 2030, the world's population will be about 8.3 billion – almost 20% more than today.

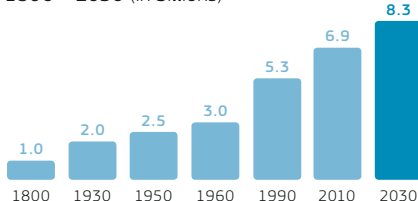
The developing countries, in particular, are experiencing a population explosion.

Population growth in the developing countries poses challenges for business. But *8 Billion Opportunities*, a new series of publications by Roland Berger Strategy Consultants, asks senior managers and observers on the ground about the vast economic potential it also presents.

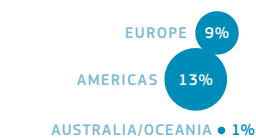
FOR MORE INFORMATION,
EMAIL eightbillionopportunities@rolandberger.com

THE ACCELERATING PACE

Global population growth / World population 1800 – 2030 (in billions)



POPULATION DISTRIBUTION IN 2030 BY REGIONS



By 2030, only **23%** of the world's population will live in Europe, the Americas and Australia/Oceania

By 2030, **77%** of the world's population will live in Asia and Africa

ONLY THE BEST!

Arab investors are welcomed around the world. Over the last few years, they have built up an impressive portfolio in international markets

Harrods

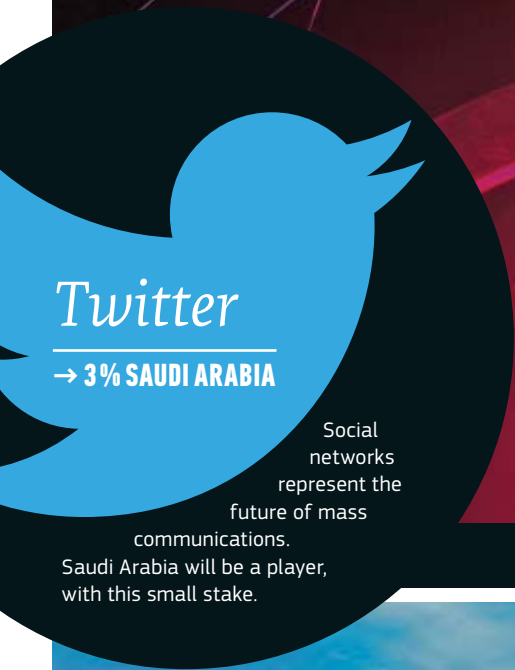
→ 100% QATAR

Shop 'til you drop. Since 2010, London's renowned department store, Harrods, has been operated by Qatar Holding. The organization acquired the company from Egyptian businessman Mohamed Al-Fayed.



Cirque du Soleil

→ 20% DUBAI



Twitter

→ 3% SAUDI ARABIA

Social networks represent the future of mass communications.

Saudi Arabia will be a player, with this small stake.

Dubai is transforming itself into a global capital of live entertainment, and is increasingly investing in globally respected productions. Canada's Cirque du Soleil is one of them.



Queen Elizabeth 2

→ 100% DUBAI

The Gulf of Dubai is also easily accessible by boat. As such, the world's most elegant cruise liner is the ideal investment.



London Stock Exchange

→ 20.6% DUBAI + 15.1% QATAR

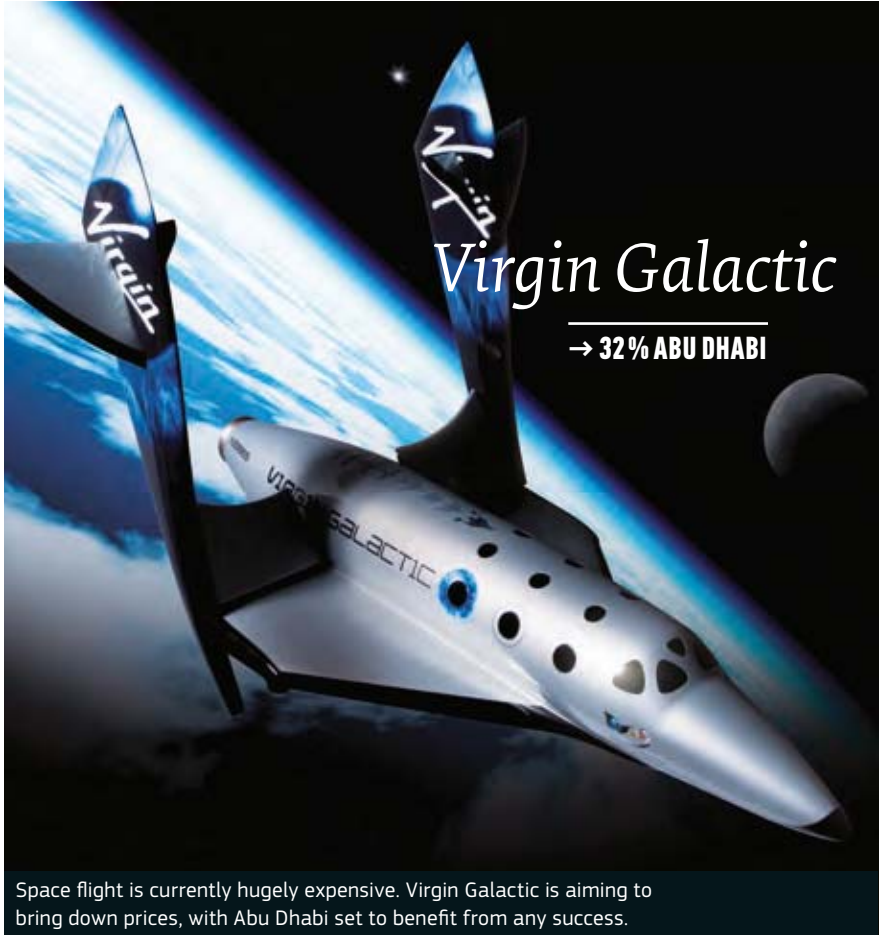
Arab investors boast enormous share portfolios, and hold over a third of one of Europe's largest and oldest stock exchanges.

Money and football go hand in hand. Manchester United may have more tradition and fans, yet England's current champions are Manchester City.



Manchester City

→ 100% ABU DHABI



Virgin Galactic

→ 32% ABU DHABI

Space flight is currently hugely expensive. Virgin Galactic is aiming to bring down prices, with Abu Dhabi set to benefit from any success.

GLOBAL TOPICS

2012 is a year of dramatic economic and social challenges - and one of political change, with transitions of power taking place in 60 countries, affecting 50% of the world's GDP



→ For more information on the Global Topics study series, go to <http://www.rolandberger.com/GlobalTopics/>

With our GLOBAL TOPICS initiative, we assess the most pressing issues and outline possible solutions to leaders. Leveraging the global footprint of our firm, we focus on how debt, welfare issues, energy supply, and changes in demographics affect perspectives for the world. We also explore how Africa as an entire continent turns these challenges into opportunities.

1 Rising population growth and 20 fast-growing emerging markets

8 Billion Business Opportunities is a publication series looking at how population growth will improve economic prospects. In our introduction we analyze 20 emerging markets that will offer the most attractive growth and business opportunities. By 2030, they are expected to represent two-thirds of the total emerging market growth.

2 HR goes global – emerging markets change the HR agenda

80% of the world's employees work in emerging markets. How companies recruit, retain and manage people across the entire organization will often determine their success or failure in emerging countries. That's why this study looks at some of the most important "people" and organizational issues for European companies to compete successfully in these regions.

3 Africa - soon to be the world's most dynamic region

Africa has changed. Its business realities have left old perceptions far behind. Growth is more sustained and diversified than ever before. Income per capita will grow by 50% over the next 12 years, turning it into one of the world's most dynamic regions. Reforms and entrepreneurial drive have transformed Africa into a continent of opportunities that can no longer be ignored.

4 Transforming the complexity of Social Systems

Social systems, the public infrastructures that support a nation's citizens, are central to the strength of a nation. But they are costly. According to current estimates, France, the USA, China, and Russia currently spend over USD 4,400 bn each year on social systems. In today's climate of global recession, improving social systems may be a major challenge, but it also presents a pivotal opportunity for progress.

5 Dealing with financial crisis and public debt

Public debt is a major concern: In 2011, combined public debt of the Project 2012 focus countries stood at USD 13.95 trillion. Developed, highly indebted nations must bring their debt levels under control. Developing, less indebted nations must keep a watchful eye on theirs and avoid the mistakes of their developed counterparts. A smart mix of six recommended actions will help each country stay on track.

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Roland Berger Strategy Consultants

We have a successful track record when it comes to doing business in the Middle East. Our Bahrain office opened in 2006, followed by locations in Beirut (2007), Doha (2009) and Dubai (2011).

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