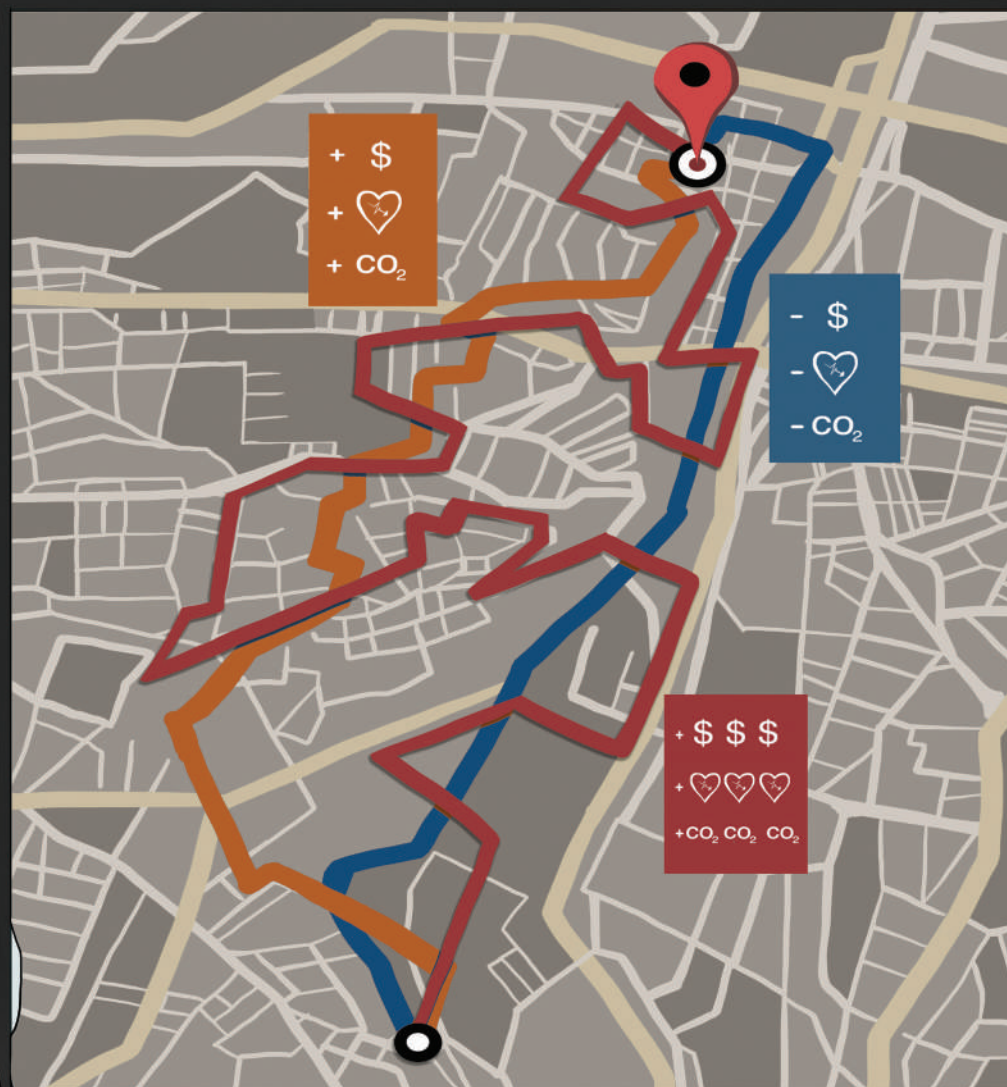


# Executive

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# EDITORIAL

#237

## Groundhog Day

**Some repetitions have become part of our routine; it is amazing what human beings can learn to accept.** We have become used to daily power cuts, as the electricity switches back and forth between state supply and generator, and to water shortages in the summer and waiting for private companies to refill the tanks. We are only reminded of the pain when we pay the overpriced double bill for bad quality services. We pay, complain, accept—then forget.

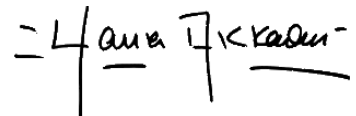
Beyond this nonchalant bourgeois attitude that chooses to throw money at the problem rather than revolt, there is one issue that is impossible to accept or ignore: the lack of mobility in this country. The congested streets and the absence of public transport impacts our daily routines, our pockets, and our health—and the problem has been growing to paralyzing levels.

Our mobility woes are rooted in our politicians' disregard for lives and productivity. Citizens are forced to contend with destructive behaviors, poor planning, and the lack of responsibility and accountability lost between a state-owned and *laissez-faire* economy. We are stuck in limbo, between a state unable to provide for its citizens and an unregulated private sector feeding off the state's dereliction of its duties.

It all boils down to one thing: our inability to decide what kind of country we want to be. Transport is one of the many state-owned industries that has disintegrated over time, as vested parties bickered on their vision for the state. The trams, trains, and buses we enjoyed in the '50s and '60s, they dismantled in the '70s and '80s and have never rebuilt.

We need to ask what is the price we are paying—the cost of being stuck in traffic every day is depriving us of the basic human right to get from point A to point B without losing our time and resources, and putting ourselves in harm's way for hours on end. Moving 20 km in two hours is not acceptable, putting our lives in the hands of reckless Lebanese drivers each day is not acceptable, not being afforded the healthy option, an alternate mode of transport, is not acceptable.

But, of course, the repetitions persist. It is in the interest of our politicians to keep the transport sector in the shambles it is today, just as it is in their interest to keep the electricity and water sectors as they are. We suffer, while they enjoy the returns of an informal system that only benefits them.



Yasser Akkaoui  
Editor-in-chief

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\*Lebanon Opportunities, April 2019

# LAST MONTH

## ZOOM IN



*After his release from prison in Iran, Lebanese national Nizar Zakka flashes the victory gesture at the presidential palace in Baabda, east of the capital Beirut on June 11, 2019.*

### Four security personnel killed in Tripoli attack

A lone gunman killed two army officers and two members of the Internal Security Forces (ISF), wounding many others, in an attack on June 3—the beginning of Eid al-Fitr. Abdel-Rahman Mabsout was reported to have fought with Daesh in Syria. He began his attack by throwing a grenade at the Serail, before moving to Mina, where he opened fire at an ISF vehicle, fatally wounding LCpl. Johnny Khalil and Pvt. Youssef Faraj. He then went toward the port, where he opened fire on an Army vehicle, killing Pvt. Ibrahim Saleh. Mabsout then moved to the roof of a residential building that was subsequently surrounded by Army Intelligence and the ISF Information Branch; he threw a grenade and opened fire, killing 1st Lt. Hasan Farhat. He was shot and killed when security forces stormed the building.

### Arabnet 2019

The 10th edition of Arabnet took place June 12-13 in Beirut. Corporate executives, government leaders, and entrepreneurs comprised the cohort of over 250 speakers and experts, 100 startups, and 100 investors present. The 22 panels covered

a broad range of topics from how to engage with the Lebanese diaspora to bring opportunities to the country, to open banking and two panels on fintech. For entrepreneurs, the focal point was a startup competition in which Searchie, a UAE-based talent acquisition platform, took first place and received a \$20,000 cash prize and an acceleration scholarship in Silicon Valley. Seez, an app that seeks to simplify the car purchasing process took second. Taking third was Nutribox, a personal nutritionist and healthy living app.

### Lebanon close to talks on maritime borders with Israel, Syria

Israel Energy Minister Yuval Steinitz announced on June 19 that Israel expects to start US-mediated talks with Lebanon to demarcate their shared maritime border in July; there has been no confirmation from the Lebanese side at the time of writing. The talks have hit a roadblock as the two sides disagree on the level of UN involvement in any future negotiations, for how long Israel would halt construction in disputed areas, and whether negotiating points may be delivered verbally or in writing. In an interview published in Russian news outlet Sputnik on June 15, Defense Minister Elias Bou Saab said that Syria was also looking





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# LAST MONTH

## QUOTE OF THE MONTH

“The plan will help the Palestinian private sector capitalize on growth opportunities by improving access to strong, neighboring economies.”

*Extract from the White House's Peace for Prosperity plan, launched in Bahrain, on June 25-26.*

to demarcate its maritime border with Lebanon, raising the possibility of Russian involvement in the process. The minister said that the Russians had an economic interest in the issue, given that Russia's Novatek is part of a consortium of international oil companies set to begin exploration in Lebanon's offshore Block 4 in December.

### Project Lebanon

The 24th edition of Project Lebanon, held June 18-21, saw a decrease in the number of Lebanese and international companies taking part in the event. While the number of exhibitors was down, observers noticed brisk visitor attendance. Prime Minister Saad Hariri spoke from the international trade exhibition for construction materials and equipment, saying that Lebanon is ready to undertake large-scale construction projects. The conference had a broad mix of participation, with Egypt, France, China, Greece, Iran, and India, among others, having their own respective national pavilions.


### Budget committee takes month to review draft budget

On June 25, MP Ibrahim Kanaan, head of Parliament's Finance and Budget Committee announced that the committee had approved 80 percent of the draft budget and would finish its review in early July. Moody's Investors Service said in a June 25 credit analysis that despite inclusion of fiscal consolidation measures in the 2019 draft budget, Lebanon is seen to be at an increased risk of debt rescheduling or a different liability management exercise due to slowing capital inflows in Lebanon and weaker deposit growth.

### “Peace to Prosperity” conference takes place in Bahrain

On June 25-26, Bahrain hosted the US-led “Peace to Prosperity” workshop, a proposal for solving the Israeli-Palestinian conflict that US President Donald Trump has called the “deal of the century.” As an official Palestinian delegation boycotted the conference, Lebanon abstained from sending a delegation, as did Iraq. The official Israeli delegation pulled out of the workshop, citing security concerns; Israeli businessmen and members of the Israeli press were still present. In attendance were representatives from Jordan, Morocco, and Egypt. Gulf countries Saudi Arabia, the United Arab Emirates, and Qatar were also represented. On June 23, speaking ahead of the conference about Lebanon's refusal to attend, Speaker Nabih Berri said that any offer intended to help the Palestinians must include refugees' right to return. The US plan earmarked \$6.3 billion primarily for infrastructure projects in Lebanon.

### Lebanese University professors suspend strike

On June 28, Lebanese University professors decided to suspend their strike, after Education Minister Akram Chehayeb promised to address their concerns. Teachers began striking on May 6 over concerns the draft budget would reduce LU's funding by nearly 9 percent, equalling \$25 million. Cuts to state contributions to salaries would be 10 percent, or \$2 million. Chehayeb said that an agreement had been reached with Finance Minister Ali Hasan Khalil to exempt LU professors from budget item Article 90 that would increase the minimum period state employees must work before they can retire from 20 to 25 years. 



A man in a black tuxedo and a woman in a red dress are in a room with a large chandelier and a violin on the floor. The man is standing and looking to the side, while the woman is sitting on a white chair, looking down. The room has light-colored curtains and a wooden floor.

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# LEADERS

## MOBILITY

### A revolution of a different kind

Transportation is transforming and Lebanon must keep up

When compared to political revolutions, it has never been exactly clear what economic revolutions entail nor how long they take. But it is clear that these economic revolutions combine multiple change and adaptation processes, whether one talks of periods of fundamental economic transformation as “revolutions,” beginning with the first agricultural revolution in the fertile crescent or starts the tally with what is today labeled the first industrial revolution, originating in 18th century Britain and sweeping, virus-like, through Europe in the course of the next 100 years. Economic transformations thus might be called “revolutions” on account of their impact in changing human societies, but not because of their speed or intensity.

It is also clear that while real changes were gradual, each economic revolution in the past 300 years has spread faster than the previous one. When discussing the first and second industrial revolutions, there is also the debate as to whether these industry transformations were accompanied by epochal developments in trade, transport, communication, and finance—or if transportation and communication revolutions constituted core components that shaped these economic transformations in ways that, without them, the industrial leaps, such as those that occurred in textile or steel manufacture, would have not been revolutions at all.

The intuitive expectation in the early 21st century would be that the currently unfolding digital economy revolution is inseparable from the digital communication revolution, and the digital mobility revolution, which is simultaneously unfolding

in the two large realms of moving goods—through trade and transport—and of moving humans and connecting them in superior social and productivity settings.

#### DIVERSIFICATION OF DIGITAL

There are too many innovations taking place in the sphere of the digital mobility revolution to discuss the implications of each of them. To bundle these micro uprisings of tech entrepreneurs and myriad disruption-minded businesses, each of which can contribute to shaping mobility in the short and medium term, let us talk of four transition issues: technical, behavioral, economic, and regulatory mobility.

These four issues entail diversification and digitization of mobility through technical inventions, as well as behavioral implications and new patterns through shared mobility and the sharing economy on the level of individuals, families, and urban communities. They further entail enterprise-level shifts in trade and transport with productivity optimization and corollary creative-destruction impacts on regions, industries, and national economies. They finally comprise challenges to create enabling environments for mobility through prudent regulation and wise political decisions, so as to hopefully enable socially and environmentally responsible progress of digital mobility through economic activity in this crucial segment of the emerging digital society.

A very reasonable assumption, however, is that plenty of the current innovations and changes in mobility and digital life will run into technical dead ends and political roadblocks, encounter behavioral resistance, and be enmeshed with an economic mix of wins and busts. This assumption advises us to moderate our expectations about the digital mobility transition,

its rapidity, and its reach. For example, the likelihood of a mobility revolution that creates a platform of “zeros”—zero emissions, zero accidents, and zero ownership—is about as great as the likelihood that a future iteration of the sharing economy will equip mankind with zero exploitation of its weaker participants, zero corruption of the stronger players, and zero conflicts between economic interests.

Even if you are as enthused about the digital mobility future, there is ample reason to expect—by all methods that people have acquired throughout history—only the tiniest of odds that digitization of our mobility would transpire into zero congestion, zero inefficiency, and zero crime in this vast human mobility realm. Thus in their sum, the chances for all afore-quoted ideological expectations of zero-ness to soon come to fruition through digital mobility are, well, zero.

On the other hand, an equally unwise approach—which one sadly encounters all too often in Lebanon—lies in harboring notions that the arrival of digital mobility can be mastered with wait-and-see indifference or fake eco-

■ Economic transformations thus might be called “revolutions” on account of their impact on changing human societies.

nomic complacency in pretending that the current business models work well enough and will never be destroyed. Indifference, careless ignorance, or even a focus on 20th century solutions for as yet undefined digital mobility challenges will not be our advantage, neither in the private nor in the public sector.

Before any other consideration on national mobility, it must be acknowledged that Lebanon is in urgent need of better—and better balanced—ap-



A large, stylized number '4' is formed by a thick gold line. The top curve of the '4' is a semi-circle, and the vertical stem is a straight line. The word 'YEARS' is written in a gold, sans-serif font across the middle of the '4'.

YEARS

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# LEADERS

proaches to the challenge of transitioning into a digital mobility future than begging international partners to fund investments in hard infrastructures for transportation or even soft infrastructures of public transport. It also deserves to be pointed out—over and over, until construction of a better reality is at least attempted in concerted actions of public and private stakeholders—that it is nothing short of tragic how in the current status quo, Lebanese mobility is becoming an oxymoron.

It is an oxymoron to talk about mobility when the daily commutes of employees and entrepreneurs makes the economy lose incalculable amounts of productivity, and when the time wasted on state-related errands makes citizens lose entire workdays unnecessarily. It is also a contradiction-in-terms to discuss trade and digitization of logistics industries in Lebanon at times when stifled information flows at import gateways and disregard of transport logic continually translate into ballooning logistics costs, and when inefficient road networks in combination with unsafe delivery vehicles and substandard urban infrastructures erode the capacities for ethical and environmentally responsible, or “green,” earnings.

All this is tragic in the classical sense of how this society, by trying to address social and economic challenges through the means from the past of transport and communication, seems to steer itself into squandering an intangible historic asset that may be at least as valuable as the oft-cited assets of Lebanese entrepreneurial spirit and this society’s admirable human capital: a good mobility narrative with cultural and practical implications.

Lebanon has practically no historic identity narrative of the kind that has helped other countries to grow beyond their limits. What Lebanon seems to have much more than “natural borders”

and nation-forming stories, however, is a deep history of trade entrepreneurship and maritime agility.

## MOVING FORWARD

The above narrative could contribute to building a national shared identity that Lebanon lacks, along with a unifying national sense of purpose and social contract narrative with convincing mutual obligations.

The iteration of a new and convincing social contract narrative might well be of what the country is in greatest need. Lebanese society is in want of such a narrative, possibly more than it has need of savings in the financial system and perhaps even more than it needs well-organized institutions, political identification figures, and an effective fight against corruption.

This translates, on account of the search for a better narrative of what Lebanon can be, into an open-ended quest for all patriotically minded people, a quest that can be pursued at practically no economic investment cost and with no consultancy involvement: the construction of a credible narrative that weaves stories of the great historic achievements in trade and mobility by all the clans, tribes, and religious com-

■ It is nothing short of tragic how in the current status quo, Lebanese mobility is becoming an oxymoron.


munities living in what today is known as the state of Lebanon, into a narrative of mutual obligations and common purpose for a—socially truly fair and inclusive—shared national identity.

On the practical level, Lebanon’s mobility and correlated trade problem includes not only wasteful processes in customs, underpowered aviation (in terms of infrastructure and operation), congested primary arteries, and

dilapidated secondary roads in rural provinces. The problem also extends to politically-poisoned national planning overloaded with unimaginative, competing, and unrealized economic plans, to failures of achieving urban productivity improvements, and shortsighted and opportunistic decision-making on all levels from municipal to transnational infrastructure and trade.

The country needs to solve the fiefdom issues that still infest parochial institutions and obstruct national strategy development, an important example for the problem’s trade dimension being the—conceptually long-expired—temporary authority at the Port of Beirut. The government needs to focus not merely on investment calls and construction of public-private partnership models for road infrastructures but also dedicate more attention to assuaging risks of 20th century infrastructure projects. It needs to improve governance of all transportation, mobility, and communication related public institutions and state-affiliate entities, of which there are plenty, but none that stands out with first-class governance.

EXECUTIVE thus calls on all stakeholders to depart from parochial thinking, abandon piecemeal approaches to long-standing mobility, trade, and transport problems, and invest in developing a much broader and more committed approach to the complex challenges of digital mobility in the context of Lebanon’s digital transition.

Lebanon today is a prisoner of its recent financial and economic past that stands on top of a 300-foot cliff; to escape from this past the country has no choice but to jump into a macroeconomic ocean of uncertainties that is moreover full of financial undercurrents, microeconomic rocks, and political risk reefs. The only sane thing is to jump, but do so with existential trust and the added confidence of having a perfect mobility program that covers all possible routes for swimming out of the danger. 



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# STORIES OF TRADE AND TRAVEL

The importance of Lebanon's macro and micro mobility

*"Nobody ever saw a dog make a fair and deliberate exchange of one bone for another with another dog." - Adam Smith*

**Online economic literature has no ready answer to the question of whether Adam Smith had a deep personal bond with a canine, nor if he was an expert on animal behavior by the standards of the time and Scottish dog-keeping society.** But one thing is certain: Smith's interpretation of the distinctly human trait for trade as a "propensity to truck, barter, and exchange one thing for another"—which is directly juxtaposed with his dog reference in his inquiry into the wealth of nations—is an indisputable pointer to the importance of trade in the making of human economy. Some even see trade as the secret that made us human.

Regardless of the idea of what makes one human, one can easily postulate that the impulse to engage in give and take has provided fundamental patterns for people's interaction and development of diverse forms of capitalist economies—whether in Adam Smith's human-gain-oriented propensity or in Karl Polanyi's social-relationships-oriented "reciprocity and redistribution."


From the vantage point of modern Lebanese identity, however, the real roots of this Lebanese identity construct may have emerged and been shaped at the time of the country's political formation. Trade is intrinsically linked to the history of the seafaring people in this region since some 32 or 33 centuries ago when the Phoenician era saw Levantine cities rise to world-shaping trade powers. And for about the same length of time—about three millennia—trade organized from the cities on this coast was inextricably entwined with the people's aptitude for mobility and their adoption of practicable written communication through the Phoenician alphabet.

The narratives of Phoenician trade by ancient Greek and Roman observers strengthen the view that trade is an eternal trait—if there ever is anything human that can be called eternal. Moreover, success in trade, by this very long view, is contingent upon positive linkages to two other fundamental human traits: the desire for mobility and the ability to communicate. This desire to move and discover, entwined with the impulse to pursue actions of give and take, and augmented by the will to narrate, has preceded, transpired into, and historically driven, the development of humanity's trade and mobility tools from the physical to the organizational.

This means on the practical front that the cargo always came before the container and preceded the vessel. It makes the case that trade existed before the first bank opened its doors and that trade indeed determined the creation of the mercantile corporation. It also puts recent issues into perspective. The story—and dream—of travel started before the rise of cart, train, car, plane, and any Elon Musk rocket project; and the commute to places of greater productivity existed before the metro, before the tram, and way, way, way before the ride hailing app (see stories pages 54 and 56).

In short, trade and travel are inseparable from what contemporary society views as progress. As long as people exist, mobility happens and trade happens. But matching the impulses to engage in trade and mobility with the optimal tools and patterns for each moment in history is the source of the narratives of failures or successes that shape history. This is evidenced from the establishment of the Silk Road over the narrative of the Dutch East India Corporation as the archetypical enterprise, to the double daily congestion that we experience commuting between our homes in Damour, Aley, or Jbeil and Jounieh to our work places in Beirut (see story page 30).

For the present state of Lebanon, the importance of trade and mobility extends from the country's positioning on the trade routes between Asia and Europe that are emerging as 21st century Belt and Road iterations of the Silk Road—with all implications for the need to develop Lebanese logistics, marine shipping, and port operations—to responsible care and expansion of 20th century aviation patterns between Lebanon and its relevant but diverse travel markets in the Arab world, Africa, and Europe (see Q&A page 36).

These trade issues, some of which have been getting considerable attention by the political circles in the country, will be integral for the success of the Lebanese economy—but just as crucial for the Lebanese economy, and urgently deserving attention, are the myriad aspects of urban mobility and near-term futures in digital transportation. EXECUTIVE hopes you will enjoy some of our mobility stories and find them useful in working to improve Lebanon's national and your personal productivity. 

## THE CHICK AND THE EGG



Private sector embarks on creation of EV charging-point infrastructure

**The most eye-catching developments in mobility involve cars.** The world is filled with cars; many of us sit in these machines for inordinate lengths of time every day. Surveys done in recent years in the United States found that the average person might spend upward of 17,500 minutes per year at the steering wheel or about the same as seven full work weeks, according to a 2016 study by the American Automobile Association; an academic study in 2007 assessed the average time spent driving by US residents as about one hour and 20 minutes per day, which makes almost 36,000 minutes annually.

Such “average Joe” observations have a zillion weaknesses and are hardly useful when Joseph or Jeanette is stuck in a traffic jam that has no right to exist. But it seems fully reasonable to say that a lifetime in the late 20th and early 21st century is a lifetime with a lot of driving and a lot of time wasted in traffic, as well as other auto-related hassles. If not a driver themselves, pretty much everyone in the world uses or is confronted with cars on a frequent basis, and even the most spiritually focused stylite or eremite in the desert would be hard pressed if she wanted to live with a vow of not setting eyes on passing vehicles.

As our obsession with cars and motorized mobility is shifting to new considerations that stretch from autonomous vehicles and flying taxis

to everyday cars that no longer rely exclusively on internal combustion engines, the question of electric vehicles (EVs) and hybrid electric vehicles (HEVs) is capturing the attention of the car-crazy population. This topic of EVs has two parts, however, the first part talking of the latest cars featuring the technology (see story on page 40) and the second talking about the problems of building an EV charging infrastructure.

The question on how to charge EVs rapidly enough and cheaply enough so that electric cars make sense has been at the core of the electric mobility debate since the first hybrids came to market in the late 1990s and specifically since maverick US maker Tesla early in the current decade commercially launched a first pure EV, the Model S, that made every competitor look old. The issue of infrastructure commands so much attention because even if an electric car can be charged fully by plugging it overnight into a power outlet in the owner's garage, this does not answer half of the what-if questions that even a technical dummy can immediately conjure.

### FUNDAMENTAL QUESTIONS

What if you need to drive your EV for a longer distance than facilitated by an overnight charge? What if you do not have the luxury of charging for several hours? What if you do not have a garage? What if you do not have electricity at the place where you usually park your car? It is an elementary calculation that electric mobility requires some sort of an infrastructure which, to be really functional, needs to be purpose-built.

After all, a car is a wholly different gadget from your personal smartphone that needs a regular battery charge. Car and phone will both be dead if out of battery, but that is where the similarities diverge. Even the contemporary person with the most stone-age brain gets this, not to mention the highly developed Lebanese brain that has over decades been supercharged in mental ability to incessantly think of electricity supply problems and be ready for them.

In engineering, operational, and economic terms, there are trade-offs between the technol-



ogy used to augment or substitute a car's combustion engine with an electric drive. Larger batteries have greater reach but are heavier and cost more, and complex technical solutions have to be deployed to address this triangular challenge whether the car is a pure EV, a plug-in hybrid (PHEV) designed for external electrical charging in combination with in-drive charging through a combustion engine, or a quasi-internal hybrid (HEV) where all the charging comes from the combustion engine that works as a motor/generator in tandem with an auxiliary electric motor. On operational terms, hybrids are happy with supplies of fossil fuels alone while PHEV and EV owners will want to have access to some sort of external electric charge unit. In terms of economy, more tech and more battery power both carry costs that are difficult to offset when a vehicle is used sparingly.

## THE LEBANESE ENVIRONMENT

In Lebanon, electricity is a touchy issue that very often engenders people to break out in lengthy and passionate tirades. Also, politicians have been known to vacillate between making ludicrous excuses for electricity problems and untenable promises that do not address when and how affordably problems might be solved. In between citizen complaints and political debates, electricity issues lead minds to erupt in confrontations filled with arguments that seem driven by passion more than by reason (see story page 60).

In this constellation of existing for decades with poor power realities, when global public attention began turning to e-mobility around 2012, the idea of seeing electric cars on Lebanese streets looked for the next five years like a concept that was completely out of this world. Although PEVs and EVs had become surprisingly successful in markets elsewhere and had gained measurable market shares, few such vehicles made appearances in local traffic.

When EXECUTIVE produced its 2017 special report on the country's automotive realities, we therefore felt compelled to note that the government until this time had missed out on providing incentives for electric cars—there was a “total absence of a legal framework that would boost the import and sales of hybrid cars or EVs,” as one contributor observed. In response to this state of affairs, EXECUTIVE called in the October 2017 issue's leader for “things such as green auto loans, insurance discounts for EVs, recharge stations at hypermarkets, and free EV parking at malls.”

To give credit where credit is due: Since the time of this report, Lebanon's government, lobbied by members in the country's automobile importers' association (Association des Importateurs d'Automobiles au Liban – AIA) introduced incentives for electric car ownership by liberating EVs fully from various duties and by granting reduced customs and fees also for hybrids.

And as this magazine's editors noticed with surprised glee, in 2018, not only did the first quick-charge units for EVs make their first appearances at Medco gas stations, but also several highly desirable and visible parking spots at three malls in town had turned bright green, with the message that they were reserved to EVs (and offered charging options).

Then, in spring 2019, EV import launch events became hot social items on the local calendar, and Beirut saw its first e-Motor show in the middle of April. It was a small-scale show when viewed against an exhausting and e-heavy mobility feast such as the (similarly timed) 2019 Auto Shanghai

■ Although PEVs and EVs had become surprisingly successful in markets elsewhere, few such vehicles made appearances here.

show with its 1,000 exhibitors and 1,500 presented vehicles (Industry predictions say that China will have about 1.6 to 1.8 million sales of EVs and HEVs in 2019, representing a share of 6.7 percent in the car

market.) Nonetheless, Beirut staged a sort of mini Shangri-La of greener mobility where some 18 different electric cars, from posh SUVs and limousines to compact and subcompact urban hoppers, were on show alongside e-golf carts, e-tuktuks, Chinese-made but locally-branded scooters, as well as sharing-economy scooters (brought in from Canada) and European-made e-bicycles (urban and cross-country models).

Sparked with curiosity about the new impulses for the Lebanese mobility future, EXECUTIVE researched the latest EV developments among automotive importers and, to better assess the important question of electric charging options and supporting infrastructure for electric driving, contacted gas station operating companies with avowed electrification agendas.

## THE NEW CHARGERS

It appeared from EXECUTIVE's research that Medco, importer and distributor of oil products and



gas station operator in Lebanon, decided some years ago to investigate electric charging units for EVs and PEVs in Lebanon with an eye to enhancing its long-term commercial strategy and also its communication with the market. According to Nicolas Abou Halka, general manager of Medco's lubricants and bunkering business unit, the group's board of directors decided earlier in the 2010s to undertake an investigation into the electric charging infrastructure.

Abou Halka says he pursued the task through research and by establishing connections with French companies with expertise in EV charging technologies. Medco then decided to import some specialized charging equipment, and while the material was still en route from Europe, the company was fortuitous to witness the Lebanese government introduce incentives for EV ownership. The equipment was installed by Medco in four Beirut gas sta-

tions and in the parking structures of three upscale shopping malls.

For Abou Halka, this sparked interest from the local automotive sector. "Having established the seven units, we approached car importers to see about their plans and saw that our move encouraged them to proceed as they had read in many articles that the main issue for bringing EVs to the road is the infrastructure for charging them," he tells EXECUTIVE. "We have offered them this infrastructure, and they have only to bring in the cars and sell them, after which the car users can come to the stations and charge."

For oil imputing company IPT, the entry point into the issue originated with the company's focus on sustainability. IPT inaugurated a solar-powered EV charging unit in conjunction with what it described as the company's first fully sustained gas station in late spring 2019, explains Vice Chairman/General Manager Toni Issa, who emphasizes that this sustainability strategy is the root of the economic direction taken by IPT.

"We are not waiting to have the electric cars in order to transform ourselves. We are transforming ourselves into [a] sustainable [group of] companies in various ways and methods," he says energetically. At the same time, Issa, like Abou Halka, is fundamentally upbeat on the electric play in automotive mobility and importance of the supporting infrastructure in the country. "The use of hybrid and electric vehicles will certainly grow in the coming few years in Lebanon, especially after the incentives given by the Lebanese state that reduce customs duties and excise taxes on imports," he adds.

Issa says that there is no clear visibility on the scope of the coming EV penetration, naming as reasons external factors such as cost and technical barriers encountered by global manufacturers as well as internal issues in Lebanon such as insuffi-

■ "The main issue for bringing EVs to the road is the infrastructure for charging them."

cient awareness of EVs, local cost barriers, and the need to measure the impacts and implications for the national electricity system and for the environment. "The first thing to do is to assess the impact of deploying EVs on the electric grid in terms of capacity and load, and [the related] environmental impact under consideration of the fact that we still rely on fuel oil and diesel oil to produce energy," he explains.

Despite his confidence in the proposition of



electric mobility, and despite his commitment to not rely on pollution-heavy power sources but rather use a renewable energy source, Issa acknowledges that IPT has to invest more into a solar-powered charging unit than is required for a conventional grid-based unit. He concedes further that IPT currently has no clear plan yet as to the commercial rollout of solar EV charging units as the whole project is still under trial and is nowhere near generating profit. “We are sure that the market is growing from what we are witnessing, but we are not sure about at what time the demand will justify the investment that we are doing,” he tells EXECUTIVE.

For Medco, the experience of working with the adaptation of various charging solutions for EVs in public spaces provided insightful lessons on the current technical and regulatory barriers that companies have to deal with when they embark on provision of fast charges to automobiles.

Different systems (AC and DC), different plug and socket designs and standards used in Europe and the US versus Japan and China (two existing main solutions are known as combo and chademo), different battery sizes and battery technologies, varying on-board power transmission capacities of cars, and different conditions at each gas station in Lebanon, in terms of electricity supply and grid connection, translate for Abou Halka into investment needs that can be upwards of \$50,000 for EV charging units in commercial gas station environments. According to him, installation of less versatile and powerful charging units in places where an EV can park longer and infrastructure designed for

mall operations are not as expensive or complex.

As to the company’s strategy for developing its charging network, the manager says that Medco is preparing to equip several stations on major Lebanese traffic arteries outside of core Beirut with a new and more powerful generation of charge units. The company will deploy these ultra-charge units in 2019, Abou Halka promises. “We will be starting to put these into operations in the second half of this year,” he says. “We will double the number of [charge] units, so that hopefully by end 2019 there will be 15 units spread all over the country, [with the new ones located] along the main axes to the north, south, and east.”

He also points to yet untapped potentials that electric mobility could provide in the Lebanese market, specifically to operators of taxis and commercial vehicles, such as buses and trucks. While he vigorously supports the engagement of the government in incentivizing EV and HEV ownerships, and also sees the need for greater public involvement in the specific infrastructure development of charging stations, he also notes some side effects. “Probably unintentionally, the taxation regulation on electric vehicles is greatly favoring the most expensive cars for which very high cus-

tom duties are due,” he says. “People who buy a premium car with electric configuration will be compensated by the waiver of the customs duties and so what one might see from next year

■ “We are not sure about at what time the demand will justify the investment that we are doing.”

are many more luxurious cars that are electric cars than small EVs.” (Economists like to describe such public sector interferences as the provision of perverse incentives.)

Not discounting the fact that provision of commercial charging units is not looking be economical for several years—neither on the level of gas stations nor on the level of charging stations at shopping malls—Abou Halka concludes that a company wanting to be active in the automotive field in the long term will have to take courageous decisions and embark on a journey by starting somewhere and learning by doing. He says, “In the medium term, within the next five years, I think there is a potential for an expansion of the electric car population in Lebanon, provided that the problem of batteries and the high cost of batteries will be solved.” ■



## THE EGG AND THE CHICK



Strategies, opportunities, and natural limitations to EV infrastructure in Lebanon

**Based on discussions with the two Lebanese gas station network operators—Medco and IPT—it seems fair to describe the first step of the journey into this particular private-sector infrastructure construction as based on the understanding that electric vehicles will make their appearances in Lebanon sooner or later, and that the country could ill afford to fall behind global developments in electric mobility.**

Notwithstanding, however, the faint hope for a sustainable electricity solution among large parts of the Lebanese population, there are clear technical possibilities to solve Lebanon's electricity infrastructure and road quality problems. It appears paradoxical then that the nation's electricity supply problems feature heavily in popular perceptions as a barrier against phasing in electric cars. By comparison, the much less mutable geographical size and population distribution of the country combine into an issue that is not much talked about in connection with the viability of e-mobility approaches.

Lebanon is a very small country if one thinks about distances that need to be covered—driving time is a different consideration. From practically any starting point in the country, there is simply no direction in which a person can drive for 250 km straight and still find themselves in Lebanon. Also, Lebanon, by international comparison, has high urbanization, high population density, and relatively short internal distances when compared with any non-small-island nation.

On one hand, this means that establishment of electric driving infrastructures and charging units are not nearly as challenging in Lebanon as they are in thinly populated territories or nations where long stretches of roads lie between settlements—whether one thinks of geographies in Africa and Australia or countries like Norway that face automotive e-infrastructure issues.

To illustrate the point, Lebanon's gas station network is estimated at about 3,200 units, of which 2,500 are officially registered. In a country where the population density is assumed to be around 600 per-

sons per km<sup>2</sup> spread across 10, 452 km<sup>2</sup>. European countries with gas station networks in the similar range of 2,500 to 3,000 in total are, for example, Sweden, the Netherlands, and Bulgaria. However, Sweden is 45 times the size of Lebanon by territory, Bulgaria 11 times, and Austria eight times. Population densities in these countries range from just under 30 persons per km<sup>2</sup> in Sweden, to 64 in Bulgaria, and 101 people in Austria.

Such data suggests that exceedingly few people in Lebanon would have to cover as large a distance as typical Austrians, Bulgarians, and Swedes when they want to visit relatives or business acquaintances across the country, and that the average hamlet dweller in Sweden, Bulgaria, and Austria has to drive much farther than the typical Lebanese to get to the nearest fuel pump.

So, in relative terms, Lebanon does not look like a territory that will face particular economic cost barriers when it comes to the establishment of a charging unit network. Recalling the experience with the rollout of mobile telecom infrastructure during the country's post-conflict restoration of communications in the 1990s reinforces the notion how fast the nationwide mobile networks could be built in regional comparison.

On the other hand, the shortness of distances and high concentration of people in Lebanon also means that economic feasibility of mobility options involving high initial acquisition and comparatively advantageous, or even low operation costs, is not easily achievable. It is, apart from a few people who drive for a living, quite a rare feat for any motorist in this country to cover more than 100 km or 200 km on a given day and reach an average annual count of more than 20,000 km or 30,000 km.

This, in turn, means that vehicles with a trade-off between elevated acquisition cost and low operations cost make little sense in Lebanon, if lifetime cost of a car is the main consideration. Electric vehicles (EVs) of certain power, quality, and comfort, cost more than similar cars with an internal combustion engine, at least in 2019 and probably for some years to come. This means that an average Lebanese with daily driving needs of 25 km to 35 km (9,000 km to 12,500 km per year) will hardly ever save enough money from e-charging (vs. filling up with gasoline) to recover the higher acquisition cost of the e-version of his compact or middle-class car.

Such factors illustrate that overall feasibility of automotive electric mobility is a complex scenario by which barriers and opportunities will differ widely from country to country. Moreover, in the current

situation of undeniable mobility needs that clash with old, economically, and environmentally no longer tenable solutions, engineers, tinkerers, and visionaries are crowding the field of radical inventions with solutions that have technical potential.

Contenders that are visible from the cognitively very limited vantage points of media range from cars with integrated solar cells, where a long-range passenger sedan prototype this summer was introduced by a Dutch manufacturer, to hydrogen-

powered vehicles using the fuel cell technology that is often mentioned in the discussion and is available internationally in some vehicles on the road. But in all probability there are

many not-yet-discussed inventions that are looming just beyond the horizon as solutions in both the in-car and infrastructure technology realms.

As the market constitutes the economy's cognitive laboratory for discovering the most feasible practical solutions for an economic problem with great social and financial implications, i.e. profit potentials, the move to future mobility will economically be marked by new winners and creative destruction of old realities. State interferences in this market process in form of regulations and sometimes unintended nudges will additionally influence the mobility developments and sometimes distort them, but public interventions are inevitable due to the great importance of mobility for society.

## MOBILITY OF SELF IS MUCH MORE THAN AUTOMOBILISM

The entirety of automotive mobility and diverse digital mobility is thus being immersed in an ocean of change that is concealing a wide variety of challenges but also is already witnessing all the mobility perks, trimmings, and side shows—from hybrid cruise ships to Formula E car racing—that the world has become addicted to in the 20th century.

Also, it pays to remember that this is not just about cars. Socially and financially profitable digital mobility trends relate to everything with wheels. Biking fans can look—and buy in Beirut—top of the line electric bicycles, which today means digitized two-wheelers with pedals, advanced and often very well-concealed batteries and minimalistic electric motors that support and amplify human pedal power. While pricey for a bicycle, quality

■ The move to future mobility will economically be marked by new winners and creative destruction of old realities.

## Mobility

specimen are engineered to transform both urban and cross-country pedaling efforts into paradisiac experiences. Moreover, sleek e-bikes of recent manufactures—and Europe is right now brimming with startup producers and avalanches of fascinating new e-bike designs, reach serious speeds (some versions do not lose thrust until 45 km/h) without the stigmas of being clumsy, unsightly, or retiree mobility focused transport tools that had once limited the attractiveness of e-bikes to some buyer segments.

In the Lebanese market, retailer Bike Generation says they sold somewhere north of 120 e-bikes over the past five to six years. As Bike Generation co-founder Georges Bouez tells EXECUTIVE, the market here has rational potentials for use of e-bikes in commuting. He concedes, however, that this potential is still restrained by apprehensions about e-bike prices—which are high in comparison to mass-market conventional bicycles but actually, at \$3,000 to \$9,000 for an imported machine, are not exorbitant when one takes a look at what some e-bikes go for in European countries—and by misperceptions that a bicycle is exclusively for leisure and not suited for daily transport to work.

Then there is an entire realm with heavy electric mobility disruption potentials in micro-commercial and personal urban transport. This realm extends on one side from e-versions of transport scooters to three-wheeled vehicles used on private properties such as hospital and university grounds. E-mobility in this segment can ease transportation of goods and persons in specific environments, but

they appear to be in need of clear allocations on what spaces they can circulate and also better regulations as to which uses require what safety precautions, driver training, and insurance covers.

The same need applies to the adjacent mobility segments of electric kick-scooters and e-versions of conventional scooters, the latter long having acquired a well-deserved reputation of being threats to any organized and rule abiding traffic in Lebanon.

Constituting additional options for urban personal mobility around the world's cities (and arriving with the concomitant news of accidents involving electric kick-scooters), these fast-rolling stand-on mini-vehicles, which are jumping from being mobility toys of preschoolers to choices of grown-up urbanites, could emerge as the layer of one-risk-too-far in local traffic if they are not subject-

■ There is an entire realm with heavy electric mobility disruption potentials in micro-commercial and personal urban transport.

ed to adequate regulatory frameworks and actual enforcement of such frameworks. Similarly, an increase in the population of electric scooters in Lebanon might easily become the new men-

ace dimension of obnoxious and no-rules-respected delivery guys that make streets in any Lebanese city become risk accumulation cauldrons.

In short, all these realms of new, up-scaled, and old mobility bring added risks, and although these diversified transport and mobility options tend to bring benefits and perhaps increase urban productivity, the expectation will only have merit if Lebanon's national and municipal frameworks of informal traffic conduct, formal regulations, and effective and respectful enforcement are seriously enhanced.

Without even embarking on a discussion of what mid-term future scenarios involving e-trucks and e-buses, autonomous delivery fleets, taxis, and goods or passenger drones could mean for Lebanon, the digital mobility scenario that is starting to solidify here is one of a transitional sense—meaning not one of economic determinism or dialectical paradigms. The chick of the new digital mobility is contained in the egg of the country's existing mobility; namely the, historically unprecedented, progress inducing but also problem-laden 20th century mobility. The emergence of the new will be a challenge, and it will take all the investments of structure and sanity that Lebanon's state institutions can muster.





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## THE WHEELS OF THE BUS... ARE STUCK IN THE MUD



Lebanon's informal public transport system

### **Public transport is part of Lebanon's mobility heritage, as is evident by our popular culture.**

In the song entitled “*Ala Hadir el-Bosta*,” the late Joseph Sakr sings of his love Alia’s pretty eyes while on a shared bus from Hammana to Tannourine, humorously describing the passengers who were with him—the song was composed by Ziad el-Rahbani in 1978 for his play “*Bil Nisbe La Bukra Shu?*” Marcel Khalife also sings about shared transport in “*Toot toot ala Beirut*,” where a young boy asks his father to take him to Beirut in a service (a Lebanese shared taxi). A popular Lebanese children’s rhyme encourages the bus driver to accelerate to 199 km/h without worrying that this will get him in trouble with the police as the children will have his back.

Songs and rhymes aside, images of the tramway passing through Bliss Street in the 1950s, or of the

train running through the coastal plains (for more on trains in Lebanon, see article page 42), are still shared on Lebanon’s nostalgia social media pages and evoked in photography exhibitions of the country’s recent past.

Despite this well-developed history of mobility, a casual observer of Lebanon’s roads today—noting the buses, minivans, and *services* all stopping to pick up passengers anywhere and anytime they please—would not be faulted for thinking that the country has never experienced organized public transport of any kind. And yet, there is a certain rhythm to the existing madness, as well as emerging plans for the organization of the public transport sector which will eventually—hopefully—revitalize and restore mobility within Lebanon (for more on public transport plans, see article page 30).

## A BRIEF HISTORY OF BUSES

Ziad Nasr, president and director general of the Railways and Public Transportation Authority (RPTA), explains that with the intensification of the civil war in Lebanon, public transport infrastructure was eventually destroyed. The post civil war government's immediate priorities were to rebuild the airport and fix the roads to reconnect the country externally and internally, Nasr explains—as such public transport rehabilitation fell through the cracks. Since then, “there were several proposed projects to revive the railway system or rehabilitate public transport, but there was no real political will or a ministerial decree to invest in them and implement them,” Nasr says.

One project that was implemented—but was not very successful—was the RPTA (also known by its French abbreviation OCFTC) owned blue and white buses that were introduced into Beirut in 1995. At the time, a fleet of 200 buses were introduced into Beirut, running on 22 lines, and 806 bus stops were constructed across the city. However, according to Tammam Nakkash, managing partner of Team International, an engineering and management consultancy, who was contracted for this project, they faced a lot of competition from the non-regulated buses and minivans (see article page 30). Nasr believes the lack of consistent funding into their maintenance and into the system itself was another reason the buses were not successful as they would breakdown and there would be no funds to fix them. “Public transport planning is not simply to have a driver and a bus, but also to have a back office which plays the role of planning and supervision,” Nasr says, adding that only 35 of these buses are still in operation today across nine lines or routes in Beirut and one in the Bekaa (for more see article page 30).

## WHEN NATURE ABHORS VACUUM

Chadi Farraj, co-founder of the Bus Map Project, a grassroots initiative that maps public transport in the Greater Beirut Area (GBA) (see box page 27), says there are two models of public transport system: formal and informal. The formal system is where vehicles have one operator—a private entity or the government—and run on a fixed schedule with designated bus stops; the kind encountered in most developed cities around the world. The second model is the informal one and is more commonly found in developing cities such as Bangkok, Manila, Amman, and Beirut, where a formal or organized public transport system does not exist. “The informal bus system fills

the gap where it is found and answers the need of a certain segment of society [the low-income to lower middle-income segment], so there are many versions of it across the world,” Farraj says. “It operates wherever there is demand, is organic, and makes the best use of what exists. There is no schedule or bus stop in the informal system, and it does not have a unified operator but rather a series of individual operators.”

Nasr acknowledges that with the lack of government provided and regulated public transport, it was only a matter of time before private sector alternatives were developed in a haphazard manner, explaining that this is exactly what is happening with other services meant to be provided by the government like water or electricity—where the private sector is also stepping in given the absence of public sector provision. This lack of regulation has led to a chaotic public transport system that compounds congestion across the country and specifically in the GBA, Nasr says.

Nakkash says the public transport situation in Lebanon can best be described as, “a loosely regulated transport system; loosely in that

■ “The informal public transport system fills the gap where it is found and answers the need of a certain segment of society.”

the existing rules and regulations are not enforced 100 percent, plus the whole regulatory system is deficient.”

He explains that in metropolitan areas the size of Beirut there usually is a transport authority body that regulates public transport in the area. While the RPTA could be charged with this role, the fact that they own and operate public transport buses makes it problematic for them to be regulators, in Nakkash's opinion. “The government should get out from providing the service and play a regulatory role that only the government can play,” he says.

## THE RED PLATE DISTRICT

What compounds the chaotic feel of the informal public transport sector in Lebanon is the system of red registration plates that drivers can obtain from the Traffic and Vehicle Management Authority (TVMA) under the Ministry of Interior (MoI). These registration plates are tradable assets that can be bought and sold, explains Nakkash, and so are a big part of the public transport problem in Lebanon. “Because of this system, organizing the needs for public transport of Beirut or



## Mobility

Tripoli or any city based on location is not easily achievable as you cannot control or dictate where the driver operates,” he explains.

As per official data, there are currently 55,236 red plates registered with the TVMA, according to Ali Mohieddine, head of the Syndicate of Public Transport Vehicle Operators, which has over 40,000 registered members. Underlining this chaotic sector is the fact that, in total, there are 23 different syndicates for public transport drivers, alongside six unions. Using numbers from the TVMA, Mohieddine says the plates are divided among public transport vehicles as follows: 33,000 cars, 4,000 vans or minibuses, 2,236 24-seater buses for public transport, and 16,000 freight trucks.

All those to whom EXECUTIVE spoke, say that the number of public transport vehicles in Lebanon is significantly higher than the number of licensed vehicle plates provided by the TVMA. The last time the TVMA issued new red registration plates was back in 1994; the abundance of red plates seen on the streets today is partly due to the widespread forgery, with duplicate registration plates in circulation. Mohieddine says that based on the syndicate members’ estimations, more than half the public transport vehicles in operation have forged plates or are driving without license plates in remote areas out of the GBA. A 2017 UNDP study estimated that there are 17,000 illegally procured and operated taxis in circulation. Aside from saturating the market, forged plates are dangerous in case of accidents or security issues, as allocating blame becomes impossible, Nakkash explains. Nakkash and Mohieddine both believe that those who are bold enough to use duplicate registration plates are politically-backed.

The MoI issued new designs for the red registration plates in 2017, which all registered public transport vehicles should shift over to by the end of 2019. The move was partially intended to curb the number duplicate plates used by unlicensed public transport vehicles as the new design is harder to replicate, according to a statement by Huda Salloum, head of the TVMA. Mohieddine explains that this move is a step in the right direction by the MoI as the new license plates can only be obtained from the TVMA and so only registered cars can make the switch; cars with duplicate or forged plates are unable to secure a new plate, which could explain why a big percentage of public transport vehicles still have the old red plates with only six months to go on the deadline.

## BUSES FOR ALL

Chaos and corruption aside, Lebanon’s informal public transport sector has its own problems. Nasr says that because public transport is provided by profit-driven private operators, areas with the highest demand are over served, whereas more remote areas have little or no access to public transport—those living further away from the GBA have less public transport options. If public transport was provided by the state, says Nasr, then all areas of Lebanon would have to have equal access to it as a public right. Nakkash says that the informal system cannot even be called a system in his opinion, as it does not run on a reliable fixed schedule or frequency.

There is also the public perception that all of these buses and minivans are in bad condition,

are badly driven, and are only used by those who absolutely cannot afford a car or cab, although Farraj says this is all exaggerated. “We should break the stigma of riding buses,” he says. “A small percentage of buses are rundown and some lines do feel like

■ Underlining this chaotic sector is the fact that, in total, there are 23 different syndicates for public transport drivers, alongside six unions.

they are managed by a cartel, but this is not true across the board.

“When there is a stigma regarding the public system, people will believe anything: If there is only one bus that is broken, the perception is that it is all broken.”

## A BEAUTIFUL MESS

For all its faults, the informal public transport system manages to get a nearly impossible job done; it takes people to their destinations, despite the congested roads, in an affordable and efficient manner—a bus ride within Beirut costs LL1,000 (\$0.66).

Although the perception is that there is no structure to how the informal system of buses and minivans run, two initiatives—the Bus Map Project (see box page 27) and YallaBus—have demonstrated otherwise by mapping out the bus lines in the GBA. Farraj explains that the GBA is divided into lines or bus routes that are identifiable by number. This system was developed in 1995—with the aforementioned white and blue buses—and at the time there were 22 bus lines within the GBA, says Farraj. While no official data exists, Farraj says that

# BUS MAP PROJECT



Chadi Farraj first thought of mapping the Greater Beirut area's bus system in 2008, when he himself wanted to use buses to commute to his new job in Beirut. Since his background is in telecom engineering, he created an online map for buses followed by an app. The project remained a personal hobby until 2015 when he met Jad Baaklini, who was doing research on public transport in Beirut and fell upon Farraj's work; together they created the brand identity of Bus Map Project. That year, they submitted their project to the EU-funded SwitchMed, an initiative that supports and connects stakeholders in eco and social innovations, and won 3,000 euros in addition to technical support.

Using this experience, and through an entirely volunteer-based generated content, they collected the data needed for mapping the major bus lines in all of the GBA, and designed an online and print version of the map that they are distributing. Despite having the majority of lines in the GBA covered, Farraj says the map is still a work in progress, and the next step is to cover outlying lines. As he explains it, the goal of the map is to "make the system accessible to the general public so they use the buses more." He explains, "Although we are not directly encouraging people to ride buses yet, we are indirectly encouraging them to do so through the map and therefore will gradually work on empowering the system.

"Our role has always been to highlight the informal bus system in Lebanon, change the conversation regarding public transport in Lebanon and break the stigma regarding riding the bus in this country."

## Mobility

more lines have been added since then, as urbanization increased the areas that needed public transport.

Each line has an average of 30 buses or minivans running on it with roughly fixed intervals—around 10 minutes—between each deployment. Within the city, the 12-seater minibuses or vans are proving more successful than the 24-seater buses. As Farraj explains, operators realized that vans go faster in Beirut's narrow streets and fill up quicker, enabling them to do more trips in less time. Operators also priced them competitively, at LL1,000 per ride anywhere in the GBA.

Therese Keyrouz, cofounder of YallaBus, says that bus lines within the GBA tend to have one main operator or *rayess* who owns the vehicles in the line and pays the drivers a daily fee for their service. Buses that take passengers to and from the GBA are usually individually owned and drivers/owners decide on the frequency of deployment through a gentleman's agreement, says Keyrouz. Bus drivers commuting intra-city also communicate with their frequent passengers to eventually develop a timetable that works for all, she explains. (The nature of the informal system makes it very hard to pin down its operators, as they are dispa-

rate and mostly unregistered, with no authoritative source to go to for answers.)

Then there is the model of privately-owned companies that operate more or less organized pub-

lic transport generally from and to Beirut. Connexion, which runs between Beirut and Tripoli, is one such example: its buses are air-conditioned, well-maintained, and have Wi-Fi; they also run on fixed schedules and make few


stops along the way. Although Connexion has a higher fee than a van (LL5,000 for a one way ride as compared to LL2,000 with a minivan or bus), some do not mind forking it over for some extra measure of comfort.

■ While the informal public transport system is clearly far from perfect, a considerable number of people rely on it for their daily commutes.

## BY THE NUMBERS

While the informal public transport system is clearly far from perfect, a considerable number of people rely on it for their daily commutes. Based on her field research, Keyrouz estimates that each bus in operation within the informal bus system carries an average of 200 riders per day.

Some lines have more demand than others. Farraj also conducted field research on line number 5—that runs from Hamra to Ain Saade in Mount Lebanon—and estimated that its 24-seater buses carry 3,500 passengers per day on their average three round trips per day. According to a 2016 study by Petra Samaha and Amr Mohtar, then students at the American University of Beirut, the minivans on line number 4—that runs on a high demand route between Hamra and Hadath—carry 5,600 passengers per day. Louai Halabi, director of Connexion says their 24 buses run on a daily occupancy of 80 percent with each bus making two round trips per day.

While Lebanon's current informal public transport system is a far cry from the organized and thriving formal system the country enjoyed in the pre-civil war days, it still functions, despite the obstacles and despite its obvious flaws. There are a lot of improvements that could be done to this system, and yet its relative success in transporting passengers efficiently should be noted when planning for the new models of formal public transport systems soon to be introduced to Lebanon (see article page 30). 





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By Nabila Rahhal

## THE BEST LAID PLANS

Public transport projects in Greater Beirut and beyond

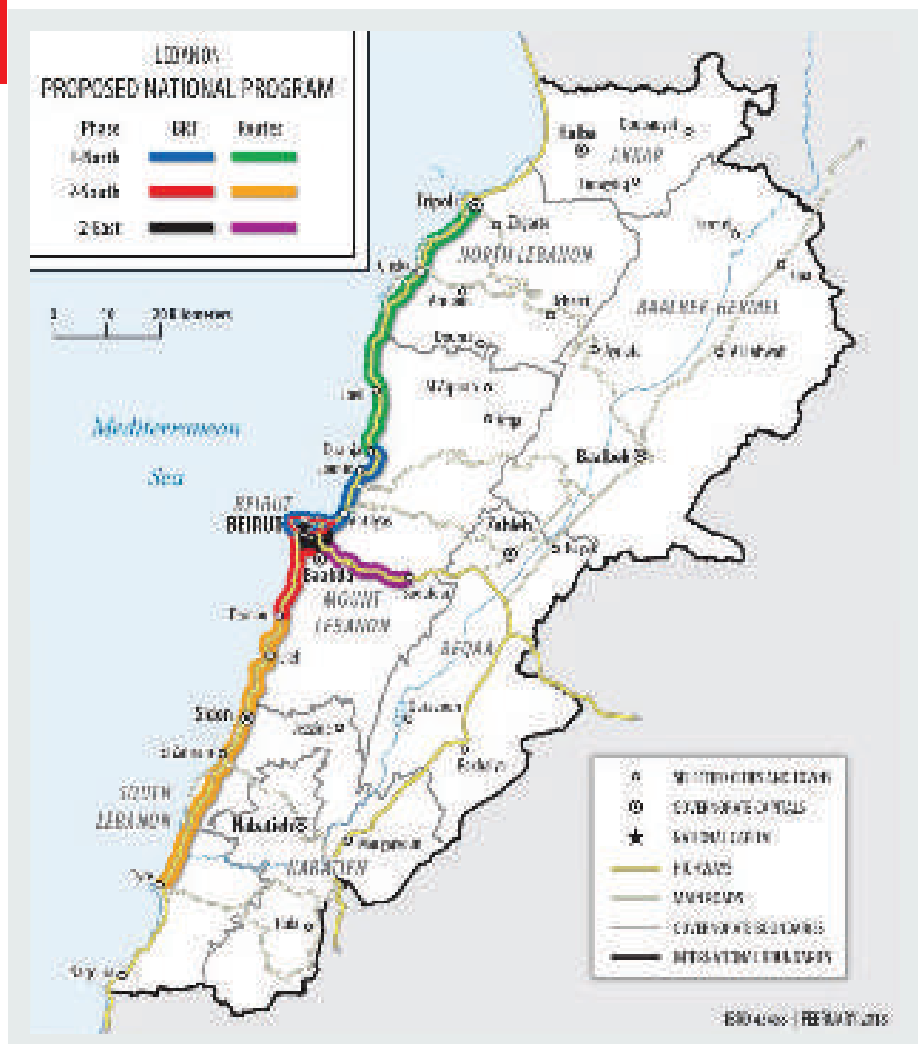
**While it is true that exaggeration is somewhat of a national trait, when it comes to congestion getting in or out of Beirut—and driving inside it—it often feels that no hyperbole is enough to describe the sense of despair evoked when inching forward in bumper to bumper traffic breathing in exhaust fumes and listening to the sound of honking horns.**

The numbers indicate that the congestion problem in the Greater Beirut Area (GBA) is real. The World Bank estimates that 650,000 vehicles enter the GBA on a daily basis, with 300,000 accessing the city via the northern entrance of the Jounieh-Beirut highway, 200,000 via the southern entrance, and 150,000 via the eastern highway or Hazmieh highway—not counting the vehicles already in Beirut. Getting stuck in this kind of traffic is not only frustrating, it has a negative impact on GDP as well; the World Bank estimates the cost of urban congestion at 5 percent of Lebanon's GDP.

Because Lebanon does not have reliable public transport, people have little choice but to use their cars, especially when commuting from outside the GBA, according to Ziad Nakat, senior transport specialist at the World Bank. "The available public transport in

Lebanon is of low-quality and people are reluctant to use it," he says. "It is catering for the market of those who really don't have an alternative, so it's not fair for the low-income population, and is not providing the middle-income people with an alternative to their cars, so it's not solving the problem." (See article on informal public transport page 24).

### PROPOSED NATIONAL BRT SYSTEM



Source: The World Bank

Decreasing congestion by developing more roads is not a viable option, according to Nakat, because of Lebanon's urban density and its terrain, with the mountains to one side, the sea to another, and a narrow coastal strip in-between. Any road development project would need to either expropriate land or construct tunnels in mountains or highways over the sea, all of which are costly options, Nakat says. This, he argues, leaves developing a reliable public transport as the only option for decreasing congestion. "Greater Beirut has a population of at least 2 million, and in any city with a population of more than 1 million, it is very difficult to reduce congestion without public transport," Nakat says. In comes the Greater Beirut Public Transport Project (GBPTP).

## BUS BY NUMBERS

According to Nakat, the GBPTP includes a Bus Rapid Transit (BRT) network—described by the international civil society Institute of Transportation and Development Policy as a "high quality bus based transit system similar to a light rail or metro system"—of around 120 18-meter BRT buses, each with a capacity of 120 sitting and standing passengers, that will run on 40 km of dedicated lanes—lanes sectioned off with barriers to prevent other vehicles from accessing them.

The main BRT line will run in the center of the highway from Beirut to Tabarja, Keserwan, covering a distance of 26.2 km, with a couple of lines on the outskirts of Beirut proper, including Ain el-Mreiseh, Cola roundabout, and Mirna el-Chalouhi avenue (see map page 30), according to Nakat. When the infrastructure does not allow for a dedicated BRT lane, such as when there is a bridge or tunnel, it will join the other vehicles on the road for a short distance, which is something a train or metro cannot do, he explains.

In order for people to access the BRT, there will be three central "park and ride" spaces, in Tabarja, in Charles Helou station, and in the Mar Mikhael bus station, the latter two of which will be renovated, where passengers can park their cars and take the BRT. There will also be bus stations at every 1 km of the journey from Tabarja to Beirut that passengers will access through a pedestrian bridge equipped with both stairs and elevators; this is a plus for pedestrians who will be able to cross the highway risk-free.

According to Nakat, the BRT itself can bring down the roughly 90-minute journey from Beirut to Tabarja—or vice versa—during rush hour traffic to 40 minutes, reducing total daily commute time by an

## BEIRUT MUNICIPALITY PLANS

Jamal Itani, president of the Beirut Municipal Council, acknowledges that Beirut is heavily congested and pinpoints several reasons as to why, noting municipal solutions, complete with timelines, where they exist.

Most of the traffic in Beirut is caused by incoming vehicles, commuters traveling into the city for work, school, hospitalization, or a number of other reasons, Itani says. Managing this external source of congestion does not fall within his area of operation as Beirut mayor, and so the World Bank is doing an important job with the BRT that will hopefully ease this source of traffic by 10 to 15 percent, "which, if it really does happen, will be great," says Itani.

Another reason for traffic within Beirut is poor traffic management by the police force. Itani says, in his opinion, Lebanese drivers do not respect rules and regulations unless enforced by fines—and so their culture of driving has to change. Meanwhile, there are not enough people on the police force to do a good job of traffic control with the amount of vehicles on the road. Itani believes there are not enough car parks in Beirut and so people double or even triple park on occasion, compounding the congestion problem. His solution for this is to construct car park buildings in key areas in Beirut, to be completed by 2021.

Some improvements are also needed in terms of traffic circulation and road planning in Beirut, Itani says, giving the example of streets that would benefit from being one way instead of two way or streets where no parking should be permitted. He says he has hired two consultants who are doing just that in addition to working on a plan to widen some of the sidewalks in Beirut to make them more pedestrian friendly; this is a project that is currently being implemented and was piloted with Jean D'Arc street in Hamra in 2018.

Itani says the Beirut municipality is working on a plan to discourage the use of private cars and instead encourage alternative transportation. Part of that plan would be the aforementioned widening the sidewalks to encourage more walking in what is essentially a small and easily walkable city in the right circumstances, he says. The bigger part is the creation of 16 km of dedicated bike lanes, divided into two loops across Beirut, with malleable barriers along their edges to prevent vehicles from crossing over and to keep cyclists safe. The project will include 25 bike sharing stations, although three of these stations are already installed and not functioning. Itani says it is bureaucracy that has delayed their work on this project, and he hopes to have it completed by the end of 2020.



## Mobility

hour. To connect the BRT with the cities and areas around it, Nakat says the GBPTP includes a network of 20 lines upon which a total of 250 feeder buses will drive among the other vehicles on the road and take passengers closer to their destination. He explains that a dedicated BRT line is not needed for those areas that will be served by the feeder buses as congestion is not a major issue there.

The total cost of the GBPTP is \$295 million, \$225 million of which are coming in the form of a soft loan from the World Bank, with the remaining \$70 million a grant, Nakat says. Future plans, which the World Bank may be interested in being a part of, include a BRT at the southern entrance of Beirut, he adds.

The Council for Development and Reconstruction and the Railways and Public Transport Authority (RPTA) are working with the World Bank on the infrastructural groundwork, but operation and management of the BRT and feeder buses will be by the private sector upon purchase of the buses, Nakat says.

The GBPTP project has been approved by the World Bank's board of directors and Lebanon's Council of Ministers and the loan has been signed off but is still pending the approval of Parliament, at the time of this writing; the deadline given by the World Bank was July 5.

### REALITY BITES

On paper the GBPTP looks like an ideal solution for the GBA's congestion problem, however, stakeholders are aware that implementing it will not be an easy task. To Ziad Nasr, president and general director of the RPTA, anything can be surmounted through collaboration. "Shared transport is a shared responsibility and so there should be coordination among all stakeholders including the Ministry of Interior and all municipalities in which the buses run through," he says, explaining that this is the most crucial for the first phase when the infrastructure is being laid down.

Nakat anticipates an increase in congestion while the infrastructure is being developed that will result in backlash from commuters who will suffer even more in traffic before things begin to get better. The BRT will also necessitate that a lane be taken away from private cars, which Nakat again anticipates will be a problem among motorists who are attached to their car as a mode of transport—and there are plenty of those in Lebanon. According to Nakat, private cars account for 85 percent of the trips made in Lebanon.

Still, Nakat believes these discomforts will help in shifting the Lebanese mentality from driving their

### WEGO TO RUN FROM JBEIL TO BEIRUT

The idea of having a bus line to connect Jbeil with the rest of the towns in its district was born out of a need. As Aya Younes, spokesperson for the municipality of Jbeil explains, plenty of buses dropped people off to the main entrance of Jbeil city but then passengers would be left stranded to get to their homes in nearby areas that are not served by public transport. People therefore generally preferred using their private vehicles to commute, which added to the congestion in Jbeil and its surroundings, especially in the summer when expat Lebanese return and more people vacation in their hometowns or simply visit Jbeil for tourism.

According to Younes, Ziad Hawat, current member of Parliament and former mayor Jbeil, was the one who pushed for this idea of public transport in Jbeil when he was in the municipality and continued to see it through until it materialized in an agreement with Connex, a bus management and operation company, in 2019.

A new bus system called WeGo will encompass six lines connecting Jbeil with its neighboring towns and one that will go to and from Beirut. WeGo will have a central station in Jbeil on land Connex rented from the municipality. The total area covered is 360 km with around 90 stops along the route, according to Younes. WeGo will use 40 30-seater busses all equipped with Wifi and air conditioning; Connex is also working on a mobile application which will allow users to check timetables and live updates using GPS.

The total cost of the project is \$6 million, according to Younes, an amount which the municipality helped Connex secure from European non profit organizations. Implementation is expected to start by the end of the year with the year 2020 as an expected completion date.

cars to riding the public transport vehicles, emphasizing that the focus should be on moving people more efficiently and not on moving cars.

### COME TOGETHER

A reality that the GBPTP will have to contend

■ "Shared transport is a shared responsibility and so there should be coordination among all stakeholders."

with is the existence of an informal network of public transport buses and minivans in Lebanon (see article page 24). "In the absence of the public sector providing shared transport, the private sector has largely taken over although in a

chaotic and unregulated manner, and there are many who now work in the informal public transport sec-

tor,” Nasr says. “Therefore, there should be solutions by the government for those who are working in this sector such as integrating them in the new system.”

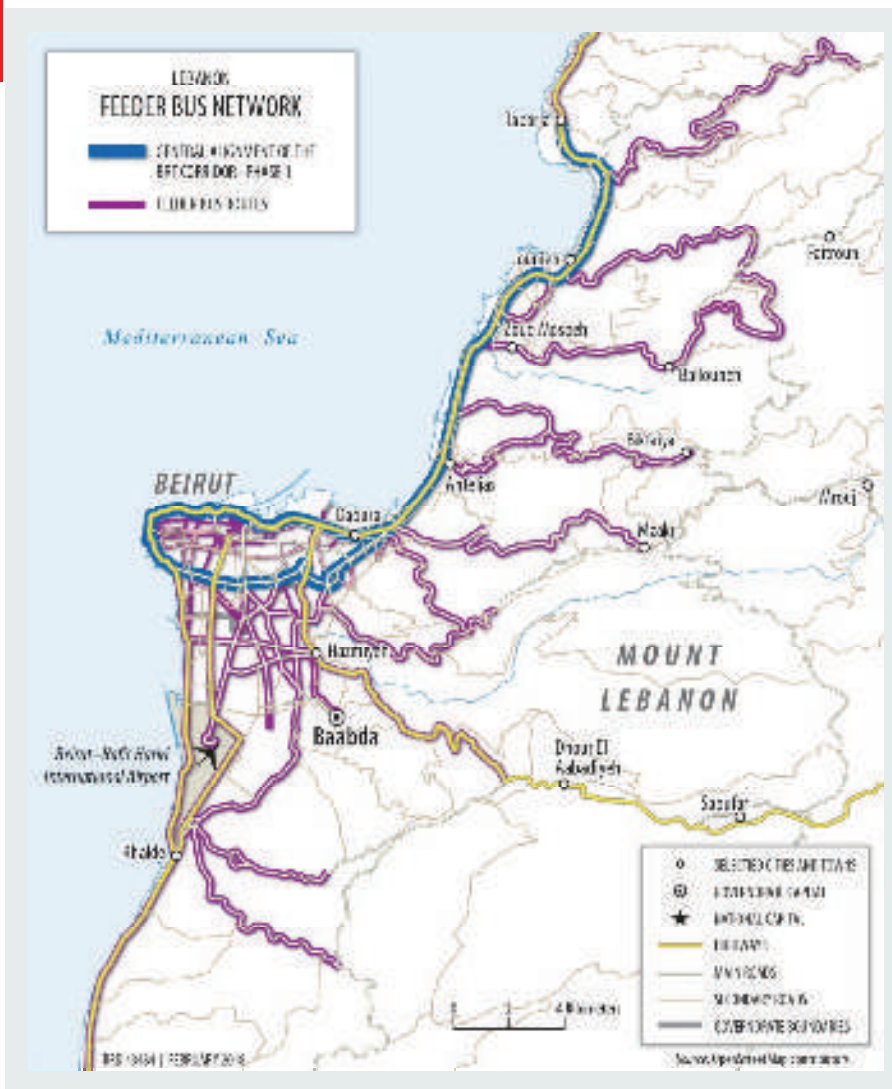
Nakat sees all stakeholders of public transport, including the informal system operators, as working together to increase public transport usage in Lebanon, and says the majority of bus and minivan operators will be integrated within the GBPTP. He explains that some will be hired to drive the feeder buses while others may tweak their business model and choose to operate in the areas the GBPTP plan does not cover or transport passengers to and from the BRT stations. Others, however, are not as confi-

dent and believe that integration will not be smooth. Speaking out of personal experience with the RPTA owned buses, Tammam Nakkash, managing partner at Team International, an engineering and management consultancy, says the informal system negatively impacted their business back in 1995. “The informal sector heavily competed with us even breaking the glass of our bus stops and harassing RPTA drivers and there was no one to stop them,” he says. “The system broke down because there was no mechanism to regulate the others.” Nakkash advises stakeholders in the GBPTP to use the “carrot and stick” approach if they want to integrate the informal sector, working with them but also enforcing regulations when they are violated.

Chadi Farraj, co-founder of the Bus Map Project, an initiative that maps the informal public transport system in Lebanon, believes that integration of the informal system alone is not enough. “They should follow a participatory approach with those in the informal bus system and include them in the conversation to get the majority’s input before they proceed,” he explains. Farraj adds that the World Bank convened focus groups with syndicates of public transport operators but those do not represent the majority of drivers.

Once the GBPTP is approved by Parliament, it should take up to five years to be operational, Nakat says. During that interval, Lebanese commuters to the GBA will unfortunately continue to drown in traffic while dreaming of faster commute alternatives such as the BRT; or dare they even dream of a railway or metro system in the future?

## FEEDER AND REGULAR BUS NETWORK

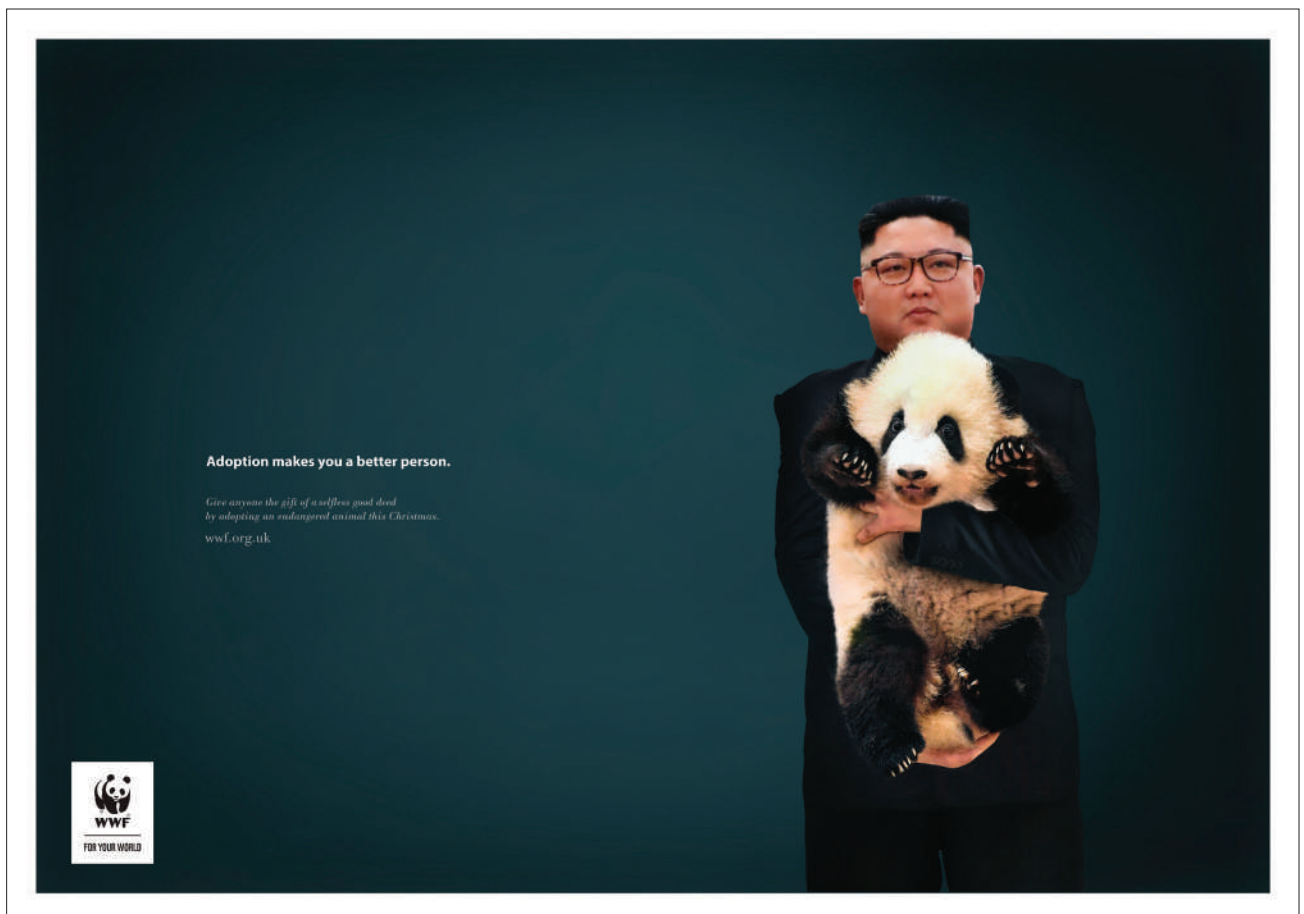


Source: The World Bank

**Executive**



# Lebanon Wins Bronze at Cannes Lions 2019!



Winning entry in Cannes Lions Festival by Elie Fakhry and Melissa Chamoun - Impact BBDO



Executive Magazine, Lebanon representative of the Cannes Lions Festival of Creativity for a fifth consecutive year, is celebrating the bronze medal win of Elie Fakhry and Melissa Chamoun from Impact BBDO at the Young Lions Print Competition at Cannes Lions Festival, held from June 17 to 21.

Elie and Melissa, Lebanon's top young advertising talent, won the chance to represent Lebanon on the world stage and join world leaders in advertising in Cannes, France, after coming top over 38 other teams of young professionals in the advertising industry on May 4, 2019. They were chosen for their outstanding work in developing their print ad for Lebanese NGO L'Ecluse by a panel of expert judges gathered at the International Advertising Association (IAA).

The Young Lions Print Competition challenged creative professionals under the age of 30 from around the world to submit a print ad for WWF (World Wide Fund for Nature), an international non-governmental organization working in wilderness preservation and the reduction of human impact on the environment. Elie and Melissa were required to develop an original and inventive print ad to help convince people to adopt an animal with WWF as a Christmas gift, not just to save a single animal, but for the sake of the whole planet.

Mr. Yasser Akkaoui, editor-in-chief of Executive Magazine, says, "If we are to reach real success in Lebanon, we have to begin with our young rising generation. Our creative talent remains our only hope. It is imperative to nourish it, protect it, and promote it. We have been able to work together with the advertising industry to make sure that Lebanon is represented in this festival and that Lebanese talent is showcased for the world to see. My hope is that there will be more great opportunities for Lebanese youth, like the Cannes Lions, to help the next generation to shine and use their talent to make great changes for this country."

Our sincere appreciation to the generous support of our sponsors and partners: Banque Libano-Française, International Advertising Association—Lebanon Chapter, Advertising Association, Clementine, Fortune Promoseven, Impact BBDO, Its, J. Walter Thompson, Mamac Ogilvy, Mirum, Noise, Pimo, Republique, as well as the Olayan School of Business at the American University of Beirut, and Air France, the festival's official carrier. Executive Magazine's choice is and will always be to invest in Lebanon's young talent, which is the fuel for our country's development and growth at all levels. Our drive to nurture and to develop artistic ideas will continue to go beyond our national borders. Thanks to Elie and Melissa for making Lebanon and the Lebanese proud and delighted!

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## SMALL AIRLINE FOR A SMALL COUNTRY



MEA focused on the local Lebanese market

**Middle East Airlines (MEA) is one of Lebanon's indisputable assets in the wide realm of mobility.**

The flag carrier throughout its 74-year history has reflected the varied economic fortunes, ambitions, and realities of Lebanon. To inquire about MEA's positioning and strategic outlook today, EXECUTIVE interviewed Walid Abillama, the airline's head of commercial strategies and alliances.

**E** *MEA very recently declared that it was a launch customer of latest single-aisle Airbus version: the A321XLR. This aircraft has a longer range of up to 4,700 nautical miles and 30 percent lower fuel consumption than other planes in the A320/321 family. What is MEA's strategy behind going for the XLR version? Do you primarily want the fuel efficiency or the larger range?*

We want both. Our strategy is based on one clear fact that we have to always remember: MEA is a small airline that is competing at Beirut airport with the biggest airlines in the world. We compete with all these guys, and our natural market is Lebanon, which is a small country. Our strategy is to service most markets to and from

Beirut airport that make sense and are sustainable. We either service [these markets] using our own fleet or by using our commercial agreements with carriers that operate into markets where we find common benefits.

The difficulty for us is that the market is decentralized and that we need to set priorities as to which point makes the most sense. We don't fly to other markets—outside of destinations in Western Europe, the Eastern Mediterranean, the Arabian Gulf, and Western Africa—but we service them through code-sharing agreements, especially in North America (Canada and the USA) where we have commercial agreements either as special pricing agreements or as code shares. What makes it difficult for us to serve destinations other than the ones I listed for you is either a lack of economic feasibility for using our own aircraft or a lack of partner [airline], which usually means the unwillingness of a [potential] partner to cooperate with us.

We are a small airline and [we take] the perspective that it is always wise for the national airline to be dimensioned at the size of the national market, which is a lesson that we learned the hard way. When the civil war ended, the management of the airline came up with a strategy that they should go after the Lebanese diaspora. Between 1990 and 1997 there were many losses because we were concentrating on serving Lebanese outside of Lebanon. This is a high-risk strategy, because people residing in a country are interested in and loyal to the airline of that country. Thus the strategy of servicing the Lebanese diaspora outside of Lebanon was at a risk of the competition being in a better position for serving this community. So we lost money.

**E** *Didn't MEA at that time also have a very large headcount in comparison to the number of planes in operation?*

Yes.

**E** *And it was widely perceived as a result of the conflict years when many employees were taken on for political reasons?*

True.

**E** *How much of the loss in the years 1990 to 1997 was based on the strategy of seeking to service the market of Lebanese diaspora customers, and how much was based on the very large headcount?*

Approximately one third of the losses were attributed to the irrational network, one third to the irrational fleet, and one third to headcount.

**E** *You undertook a massive restructuring in the early 2000s, rationalizing networks, aircraft choices, and employee numbers. What is your approach today?*

We take risks but we take very calculated risks because we are a small airline, plus we focus the risks that we take on the Lebanese market. Our strategy is to grow—we cannot escape growing—but the challenge is to do it rationally and at the right time.

**E** *Between renewal and expansion you are looking at quite a large investment in the next three years. Is that perception correct? One of the sales argument for the XLR seemed to be that you can reach destinations that are further afield, with this single-aisle twin-engine jet and don't have to use the larger dual-aisle machines. Is MEA looking at using the greater range for expansion into destinations like Sao Paulo?*

Let's stick to some facts. The XLP range extends from Beirut to Dakar in West Africa or to Reykjavik and Dublin but it cannot go across the North Atlantic. It can do so from Europe but not from Beirut. It also cannot go to China. [In any case] it is not always good to be a leader. Sometimes it is better to be a follower, and we have learned a lot from low-cost airlines. You can learn from their mistakes and you can learn from their successes. We are very good at observing what other people do and taking the best practices of what they do.

Opening new routes is about when you do it and how you do it. We have a top ten bucket list of what to do, of points where there is [the] most traffic that is not being serviced by direct flights. We monitor this every month and plan accordingly. Sao Paulo is very far [down] on our list and South America is very far on our list, and so is the Far East. North America is on the top of our list but has political obstacles. The next points in Africa that are hot on our lists are points like Abuja in Nigeria, Kinshasa [in Congo], and [other destinations] that come right after [the existing connections to] Abidjan, Lagos, and [Accra]. I would say the XLR could operate in flights to many new [destinations] in Africa and perhaps in Asia, where the challenge is to find the right partner to China. China is a big question.

**E** *As you said, the experience of low cost carriers (LCCs) has many lessons to offer, in learning from failures of airlines like Germania or Wow earlier this year and from successes of LLCs in the Middle East market, where Air Arabia and flydubai were founded and became active in the past 10-15 years. This must have had implications for your strategy.*

Yes, but I want to note and clarify something. I don't think there is a difference between us and a LCC in the way in which we think commercially. At the end of the day, they, just as we, pay for fuel, maintenance, they pay their crew, taxes, and airport fees. So they have to make money and since they do not have business class to sell, they have to make

their money in the economy segment.

■ “I don't think there is a difference between us and a LLC in the way in which we think commercially.”

Their strength is that they are very flexible from very low to very high [economy class fares]. We are less flexible but we both

want to make money. So it all boils down to who is monitoring the market better and gives the market what they want at the right time. We also have other tools like loyalty [schemes] and incentives to travel agents but the flexibility in the pricing we have learned to include.

**E** *Isn't there a difference between the fact that the LCCs are at the mercy of the market and shareholder interests whereas MEA is the flag carrier-affiliated, albeit by ownership via Intra and its shareholder BDL, with the state? Is your mandate at MEA to make profit at all costs or is your mandate to serve the Lebanese market and look at your profit always in connection to this role?*

No, the primary objective is to make money. But we understand that to make money, you have to [do it a way that fits your purpose]. Do you watch football? In football, everybody wants to win, the objective is to score goals and win. But to win and sustain a good team, you need to play well and play nice. And this is something that you have to believe in. Our objective is to make money, but we have to service the Lebanese market and the needs of Lebanon, in the sense of the needs in terms of tourism and people who reside in Lebanon. We need to do this correctly because this will sustain our money-making objective. But the objective is to make money.

**E** *But when comparing with purely private sector LCCs, are you not less vulnerable to shareholder decisions that might be driven purely by profit motives?*

In 1998, the situation [of MEA finances] was



## Mobility

very delicate and I don't wish to be back in those shoes. Since then, we have built a robust airline with concentration on conservative growth. Our financial position is robust. Our current commercial position in the market is very robust. We have loyalty in the Lebanese market, and we enjoy strong market shares on our routes because of the services that we offer. We offer the right capacity at the right times and go out of our way to operate extra flights—and it is very expensive for us to do that [as it means] to react in the last moment to sudden surges in demand.

One fact is essential to the airline industry and this fact is that the aircraft size is fixed. This [inflexibility of supply] has implications on the pricing level that very few people understand. If I don't keep selling until the last minute, my competitor wins. If I am out of seats in the month of August and my competitors will have seats and would sell at the price that they wish to sell at; they will have an easy ride while I have to reject all this demand and will not be able to serve my customers, and I will lose them. The best thing for the consumer is to always have a choice and once the consumers cease to have choice, they lose. So to preserve the choice for the customer, I have to have seats available—and that is what I do.

**E** *And from the 20-year experience between 1998 and 2017, the trajectory of pricing of the average seat on MEA was downward, and this was better for the consumer, wasn't it?*

Yes.

**E** *How are MEA experiences concerning increased connections to Europe through LCCs when flights to Western or Eastern Europe are concerned? Do you have any Eastern European destinations on your target list?*

European traffic is now segmented into two types of traffic. It is either direct or through Istanbul. Turkish Airlines and Turkish low-cost airlines have cleaned up [the market for connecting to] all the European stops. Lufthansa is now selling either direct to Frankfurt or long-haul: USA and Canada. [It's] the same thing with Air France. With Aigle Azur and Transavia (which launched Beirut services in 2017: Editor) there are low cost airlines to Paris, and we were not affected because we immediately adapted our pricing model and our commercial model. As long as the market is healthy and as long as growth is there, one has always room to adapt if you know how to apply the correct policies.

Right now, Eastern European destinations are far behind Western European destinations. But we

are [present through code-shares]. We are code-sharing with Czech Airlines and are selling a lot of seats on their flights as they operate in this market. Czech Airlines and (Romania's) Tarom are part of SkyTeam and Lot (Polish Airlines) has started operating (flights to Beirut as of June 2019: Ed), and we are cooperating with them commercially.

**E** *The impact of aviation on climate is an emotive topic; are protests or calls in Europe for climate change-related taxation of airline fuel a point of concern?*

If you are in Sweden and want to visit Lebanon, how can you do it if you don't fly? It is their right to have clean air, and it is our duty to service the demand with technology that maintains clean

air—but demand will always be the driver.

If there are tourists in the Netherlands or Germany who want to visit Lebanon, they have to fly. These people can protest,

but they will have to answer to the tourists who would like to visit Lebanon before we have to answer to them. We do not build airplanes, we try to find the cleanest ones, but we want to bring tourists to Lebanon.

**E** *You have been doing this well, and now Lebanon and all of us are in a situation where the airport has to increase its capacity. How is the projected expansion of Beirut airport in the near and longer terms impacting MEA?*

It will be for the better. Our product is limited by the infrastructure of Beirut airport. The better the quality of service is at Beirut airport, the better it will reflect on MEA and we support the project.

**E** *Will you, additionally to scheduled aircraft renewals, expand your fleet and your network with a view to ongoing improvement and later expansion of Beirut Airport or will you say, in terms of target market and strategy, let's do more of what we are good at and are doing already?*

We are expanding our fleet. It looks like we are just replacing aircraft [in 2019 and the coming years], but that is not really true because the A321 will have 150 seats, while the A320 currently has 126 seats.

**E** *And in the number of aircraft, you are looking at what total fleet size in the next few years?*

We currently are at 18, and we may have one or

two more aircraft, but even with the equal number of aircraft [when comparing the fleet of the recent past to the future fleet], there is an immediate 20 percent increase in capacity. So [the overall capacity increase] may be in the order of 30 percent if we decide to add one or two additional aircraft.

**E** *Would the newly ordered XLR jets be on top of that, increasing the fleet by four more jets in years from 2023 that Airbus announced as the year when it would begin deliveries of this model?*

The four jets will be part of the fleet increase by two more jets.

**E** *So the net increase of the fleet is looking to be two jets and the increase in capacity is to be 30 percent.*

Yes.

**E** *What can you say about your profit and performance data in 2018 and 2019 to date?*

In 2018, we made less profit than in 2017, because all additional revenue that we made [last year] by carrying more passengers was eaten up by fuel costs. In 2018, we made \$50 million more revenue, but fuel cost translated into \$60 million increase in cost. In 2019, we are going to inverse this phenomenon, because the fuel cost has dropped and we will be able to enjoy the extra revenue that we are making in terms of profits for 2019 if everything goes as expected in the high season and in the rest of the year—2019 should be financially better than 2018. And this is needed at a time when we are investing in the fleet and taking the risk.

**E** *How much is the total investment into the fleet that MEA is undertaking today?*

I do not have visibility on this, but we are receiving nine new aircraft in 2020 and another nine new aircraft in 2021.

**E** *A number quoted by Reuters reporting from the Paris Air Show was that the four XLR will cost something like \$500 million in list prices—which are usually not the prices that airplane buyers end up paying—but is it correct to think that the total investment into replacement and expansion of the MEA fleet would amount to several billions of dollars?*

Correct.

**E** *In terms of looking forward into the next few years, we have the airport expansion, the fleet renewal and then, on another level, there are implications from the impending arrival of the new Electronic Trading Platform to*

*Lebanon's capital markets next year, where the message from the governor of the central bank not long ago was that privatization should be pursued on MEA. How do you view this prospect?*

I am not in a position to comment on this. But we are a strong brand and the public trusts MEA. We are competing and we are surviving and offer a quality product at rational prices.

**E** *But when it comes to the financial side of privatization, much emphasis is being placed on corporate governance structures, due diligence, and all financial preparations for taking a company public. I surmise from what you just said that you cannot tell me if MEA has contracted any advisers or investment banks in this direction. Can you tell me, however, why you did not publish annual reports in 2018? I did not find them on your website where I saw the 2016 board of directors report as the most recent entry under financial statements.*

(Asks “Aren’t they published?” on phone with staff members: Ed)

2018 is not published yet, but the results that I gave you are correct. There will be around \$10 million less profit [for 2018] due to the increase in fuel cost. We had about \$50 million increase in revenue but the additional fuel costs [ate away at this].

**E** *And results for the first five months in 2019?*

The trend is opposite in terms of fuel. Now fuel cost has increased due to increased activity, but since the price [of fuel] has decreased, it has helped us to maintain our costs so the extra revenue we made we are seeing as moving to profits.

**E** *Can you say how much profit for the period is higher when compared to the same period in 2018?*

Profit so far for the first five months in 2019 is \$6 million, but this is an estimate.

**E** *Is this similar to how the profit was in the same period of 2017?*

Hopefully better.

**E** *In an earlier interview with an aviation magazine this year, you said that passenger increase was around 6.5 percent?*

This is now much higher. Traffic is at the level of 11 percent.

**E** *This is 11 percent up in the first five months of 2019 when compared to 2018?*

Yes.



## ARE WE GOING SOMEWHERE?



Hyundai for the Kona Electric\_MY19



Porsche Panamera 4 E Hybrid

### Hybrid and electric vehicles in Lebanon

**Lebanon still lags behind when it comes to implementing eco-friendly solutions across the board. In the automotive industry this has meant little progress toward the adoption of electric vehicles, despite some positive movement this past year.** In April 2018, the government announced under article 55 that those wishing to purchase a hybrid electric vehicle (HEV) for private use would pay 20 percent customs for a vehicle of any value; those purchasing an HEV for public use pay 10 percent. Fully electric vehicles (EVs) were exempted from customs fees and mechanic fees (the first year) altogether. This was a move in the right direction, but much more needs to be done before electric vehicles will become affordable and practical options for Lebanese. Car importers and users need to have substantial privileges in importing, selling, and buying these cars.

A first recommendation would be to reduce the customs for HEVs to a lower rate than 20 percent to incentivize their purchase. At the moment, for more basic models, there can be little difference between the HEV and combustion engine—sometimes the advantage even goes to the latter. Currently, car buyers pay 20 percent customs duty on vehicles valued up to \$13,333; for vehicles above \$13,333 they pay 50 percent on each additional dollar; this means that for low-income Lebanese there is no financial advantage to buying a hybrid, given that the cheapest option in the market right now is \$18,700, without registration. The batteries are also expensive—the average cost ranges between \$7,000 and \$8,000—and have to be replaced after the eight-year mark, making this a future cost that EV buyers must factor in.



Volvo S90 Plug-In Hybrid

The second recommendation would be to give a bonus, as European governments do, in the form of cash backs, lower insurance rates, or—in cooperation with fuel stations—the ability to recharge the car for free for a year.

The third—and most difficult to implement—recommendation would be to improve infrastructure in the country to accommodate HEVs and EVs, ensuring there is countrywide access to charging stations (see article page 16). Gasoline is still a smarter bet for the average Lebanese user, given that it costs roughly the same to fill a tank as it does to charge an electric battery, yet the former takes less than five minutes compared to an hour or more for the latter.

### PROMOTE IT AND THEY WILL BUY

Despite these obstacles, the last three years have seen more efforts from car importers to promote hybrid and electric vehicles. At the e-MotorShow in Beirut this April, car importers showcased a range of electric cars from the most basic to high-end models.

Porsche Center Lebanon has an interesting lineup with two flagships HEVs: the Panamera Hybrid and

the Cayenne Hybrid. Both cars have a plug-in hybrid system able to rely solely on the battery for a driving range of over 40 km. That means that any Porsche hybrid user would be able to commute in Beirut with zero emissions, zero consumption, and zero noise. Porsche Center Lebanon is also on the forefront of EV sales in Lebanon, with plans to import and sell the Taycan, a fully electric sedan by the beginning of 2020. The Taycan has a range of 450 km, meaning that any user could travel the length of Lebanon twice on a single battery charge.

Elsewhere in the German car segment, ETS F.A. Kettaneh S.A. has plans to import the Audi E-Tron, a luxury SUV with a range of over 400 km, by the end of 2019 or the beginning of 2020. T. Gargour et Fils, representatives of Daimler-Benz, are already selling plug-in hybrid vehicles like the E 350, the E 53 4M coupé and cabriolet, and seven-seaters like the GLE 450.

GAA & Co., the exclusive importer of Swedish car brands in Lebanon, are importing and selling two high-end Volvo hybrids. The XC90 and the S90 plug-in hybrid represent a serious alternative to German brands in terms of fuel-efficiency and eco-friendliness. In addition, Volvo Lebanon will also showcase a fully electric car in 2020, the Polestar 2.

In the British car lineup, starting this year, Saad & Trad have begun importing the Jaguar I-Pace, an electric SUV with a range of 470 km on a single charge.

The Japanese brand Toyota, represented in Lebanon by distributor BUMC, is a pioneer in HEVs. Toyota was the first manufacturer to mass produce a hybrid vehicle: the Toyota Prius. Today, Lebanese customers can buy the Toyota Prius but also the Rav 4 and Camry, both only available in their hybrid versions. Added to the entry level line in 2019, BUMC now imports the Lexus ES 300h and the RX 450h.

Korean brand, Hyundai, represented by Century Motor Company, was the first to import and showcase an alternative to the Toyota Prius—the Hyundai Ioniq. The Ioniq is an ideal car for taxis and private users, as it is not only fuel-efficient but also well-equipped. Century Motor Company has lately imported the Kona, a fully electric compact SUV with an impressive range of 450 km.

In the French car lineup, Renault country-representative, Bassoul-Hneiné, was the first to import an “affordable” EV, the Renault Twizy, available since 2017. At \$18,700 the Twizy is the least expensive EV in Lebanon, but lacks in equipment and is designed for urban driving, with a limited range of 80 km. Following the Twizy, Bassoul-Hneiné imported the fully electric Renault Zoe in 2019, a higher-end vehicle and one of the only hatchback EVs available in Lebanon with a range of 210 km, capable of traveling the Lebanese coastline on a single charge.

Chinese brands sell cheaper than their peers. SIDIA, the representative of BYD in Lebanon, imports and sells the Yuan, a fully electric compact SUV available at a relatively affordable price starting at \$34,410 (including VAT). Those EXECUTIVE spoke to, indicated that Chinese brands were selling more

■ Chinese brands with hybrid and electric products have become game changers.

and more in Lebanon; one possible reason for this increase is that these brands give Lebanese drivers the chance to have a well-equipped car at a

competitive price. Chinese brands with hybrid and electric products have become game changers. A Yuan from BYD, for example, would cost 20 percent less than an American or a European alternative, like the Chevrolet Bolt EV, (albeit the latter’s range and quality would also be substantially higher).

## STARTING TO TAKE CHARGE

Other car importers in Lebanon will not import electric vehicles, such as Gargour Automotive Company and GABS, which represent FCA and Suzuki respectively. This, however, is not specific to the Lebanese context but part of the strategy of their mother companies, which are not working aggressively on HEVs or EVs. Rymco will not import the Nissan LEAF because it is not yet available for the Middle East market. Similarly, A.N. Boukather will not consider importing hybrid or electric cars in 2019 for many reasons, including: the strategy of the car manufacturers (Mazda, Ford, and Opel), poor infrastructure in Lebanon, and limited incentives for users.

For more accessible options—the majority of the brands listed above do not represent the mass market section of electric vehicles—Hyundai, Toyota, Renault, and Chinese brands like Trumpchi, offer HEVs and EVs ranging between \$20,000 and \$35,000. This range is still expensive compared to combustion-engine options. To make it more appealing, BUMC and other car importers like Century Motor Company, Porsche Center Lebanon, and GAA & Co give the customer eight to nine years warranty on the battery.

From going nowhere to going somewhere, the private sector in Lebanon is beginning to take charge when it comes to electric vehicles. In the coming years, especially with car manufacturers complying with new emissions and noise pollution regulations worldwide, there will likely be increased imports of HEVs and EVs to Lebanon and the country will have to prepare its infrastructure accordingly. Lebanon has to follow the world in terms of mobility, regardless of its slow adoption. ■



## GETTING MOVING AGAIN



Photo: Eddy Choueiry / Train Train

Lebanon needs to build a railway network

**The absence of public transport in Lebanon has a substantial economic impact on the country, with congestion clogging the country's main transport arteries.** Without a sustainable transport system in place, this will only get worse; the average delay per vehicle will nearly double and the average speed will be halved according to a 2015 working paper from the Issam Fares Institute at the American University of Beirut. The effect is multidimensional; there is no solution to traffic congestion woes without a public transport system in place. The backbone of any public transport system is a railway network for the transport of passengers and freight. It is, therefore, crucial to have railways—and timely too, given Syria and Iraq's reconstruction needs.

Several studies have attempted to quantify the economic impact of congestion caused by the lack of public transport, with estimates ranging between

5 and 10 percent of GDP. In a March 2018 press release announcing the World Bank's approval of a \$295 million package to overhaul Lebanon's transport sector—the Greater Beirut Public Transport Project—Ziad Nakat, senior transport specialist at the World Bank was quoted as saying that, "In economic terms, the annual cost of traffic congestion is above \$2 billion, representing a large impediment to growth and regional connectivity."

### TOO MUCH PETROL

The absence of public transport is also fueling the high petrol bill that is negatively affecting the balance of payments, as petrol constitutes a large part of Lebanese imports. In 2017, Lebanon's exports amounted to \$3.91 billion, and its imports to \$20.8 billion—of which, \$3.77 billion was for refined petroleum, one of its top imports. If the country develops public rail transport, it could significantly re-

duce fuel usage and emissions, if the latest technology—trains that run on non-emission hydrogen fuel cells—is adopted. Transport in Lebanon accounts for around 23 percent of the country's emissions of greenhouse gases, mainly from road transport, according to a 2016 Ministry of Environment report.

Many past opportunities to develop infrastructure projects in the country have been dismally missed. They included projects at the energy, waste management, water, and transport levels. In 2016, the French company EGIS rail conducted a feasibility study on three railway lines: 1) a Beirut-Tripoli cargo line to connect the ports of Beirut, Jounieh, and Tripoli; 2) a Beirut-Tripoli passenger line with eight trains per hour and a capacity of 2,000 passengers each; and 3) an intercity train between Beirut and Tabarja with eight trains per hour and a capacity of 1,200 passengers each. Since that date, the file has been sitting with the Council of Development and Reconstruction (CDR) with no action taken and no indication of why the file lies untouched. Likewise, there has been no action on the Tripoli-Syrian border railway link, which has been with the CDR since 2014. (There have been indications that the Chinese were interested in investing as recently as May this year, but no concrete steps have been taken.)


## STIMULATE THE ECONOMY

Rehabilitating the railway network will have a positive impact on employment—currently local unemployment is estimated at around 25 percent. A new railway network would create thousands of jobs at no cost to the state as they will be supported by the private sector. The Lebanese government could also stimulate the economy by relinking the country to the region at a time when its neighbors are rebuilding their rail network—a regionally linked network to which Lebanon used to be connected. In March this year, Syria reopened its Tartous-Qalamoun line, while Iraq reopened its Baghdad-Fallujah line in late 2018, after years of war had brought both rail networks to a halt.

On a broader regional level, Chinese and French companies are leading many rail projects in Algeria, Egypt, Morocco, Qatar, the United Arab Emirates, Saudi Arabia, and Jordan. Lebanon should step in and take advantage of this unique economic opportunity to reestablish a railway network that was historically connected to the GCC and to Europe.

One hundred twenty-four years ago, railways connected the French port of Marseille to the port



of Beirut as part of what is known as the Levant gate. French investment brought rail service to life backed by Swiss, German, and French technologies. It drew a chapter of cooperation between the West and the East, centered on Lebanon. Perhaps Lebanon should rewrite the same journey of cross-cultural and economic exchange by joining the Chinese “One Belt, One Road” initiative, a global development strategy launched by President Xi Jinping in October 2013, or by reconnecting the Levant region to Europe via a new Levant railway open to the southern part of Europe and North Africa via the Beirut and Tripoli ports. Only time will tell, but a political decision should be made quickly before Lebanon misses the train. 

*Carlos Naffah is the president of Train/Train, an NGO advocating for Lebanese railway rehabilitation and railway heritage preservation.*



# LOST IN

A history in pictures

***Kan ya ma kan* (once upon a time), Lebanon had a well-developed railway network established by the different foreign authorities that governed the country before its independence (for more on trains in Lebanon, see article page 42).**

The first major rail line was developed during the Ottoman period in 1895 and ran from Beirut to Damascus. It was constructed by the French upon a concession from the Sublime Porte.

The second major rail line ran from Haifa, a port city in Palestine to Tripoli, north Lebanon and was constructed in 1942, during the second world war, by the Australian army.

In between those major lines, smaller lines or links were also developed. The first was constructed in 1904 and connected Riyaq (Rayak) in the Bekaa to Syria's Homs passing through Baalbek. The other was constructed in 1911 and ran from Tripoli to Homs to Aleppo.

Trains in Lebanon continued to function regularly until the onset of the civil war in 1975 when infrastructure gradually deteriorated. Since the end of the civil war, until now, there have been no functioning trains in Lebanon.

The photos in the photo essay were taken during an educational field trip organized by I Learn Academy. Information for text and captions was provided by Train/Train.



Swiss-manufactured SLM locomotive in Saidniel Station, central Bekaa

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# TRANSLATION





Mobility



*Locomotive and train carriage in Riyag, central Bekaa (above and below)*







*Interior of Chouit Araya Station*



*Chouit Araya Station, Mount Lebanon (above and to the right)*



*Riyaq (Rayak) Station doubled as a workshop for locomotives and included a rest house*

■ Since the end of the civil war, until now, there have been no functioning trains in Lebanon.



## Mobility



*Remains of train tracks in Mar Mikhael*

■ The first major rail line was developed during the Ottoman period in 1895 and ran from Beirut to Damascus.



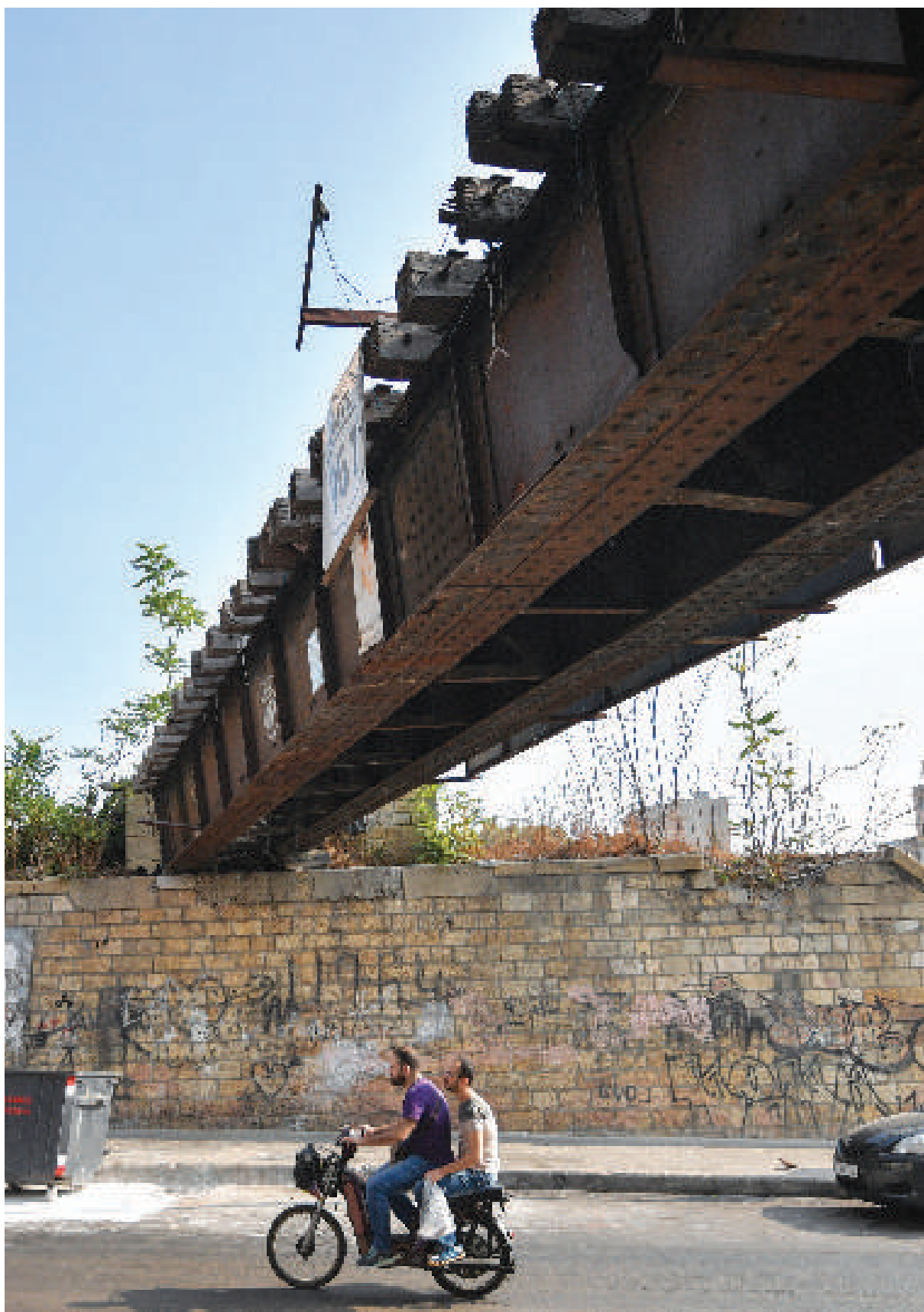
*Remains of tunnel and tracks in Dahr el-Baidar, through which the Beirut-Damascus line used to pass*



*Baabda (Babda) Station*



*Manual train switch in Baabda*



*Old railway bridge in Mar Mikhael*





## BEIRUT'S FRIENDLIEST POTENTIAL



The case for increased cycling in Lebanon

**Worldwide, the bicycle is making a comeback as part of the future of sustainable cities.** Here in Beirut, despite appearances, there is the potential to foster a bike-friendly city. Beirut's small size, compact urban form, organic and narrow street structure, and the interconnectivity of neighborhoods make it an ideal city to cycle in.

Even the more seemingly chaotic aspects of the city, the double parked cars and near constant obstacles, actually work in favor of cyclists by slowing vehicles down. Sprawl, wide avenues, and fast moving vehicles are extremely challenging for cycling, but these barriers are nearly absent in Beirut. The case for cycling is even stronger in Tripoli, Saida, and Sour, all of which are smaller and flatter than the capital and remain unscathed from car-oriented infrastructure projects such as urban boulevards. Beirut has been disfigured by the latter, making it more difficult to travel by foot and bike, and in some cases splitting apart entire neighborhoods—known as community severance.

### BARRIERS TO CHANGE

Despite the potential that exists, cycling is still not a common sight in Beirut. There are social and cul-

tural barriers to cycling in Lebanon, such as associating bicycle use with poverty and the inability to purchase a car, or seeing cycling as a leisure activity rather than a form of transport. We at the Chain Effect, a non-profit promoting and facilitating the use of bicycles as a form of urban mobility, surveyed those who participated in Bike to Work 2019—the third edition of a day-long event that provides those willing to try cycling a free bike to use, as well as parking points and dedicated bike lanes—to see what barriers—perceived or otherwise—discouraged the use of bikes in the city. Safety was one of the biggest concerns, with 48 percent of the 165 respondents saying that they perceived cycling in Beirut as dangerous. Other barriers included the lack of affordable bike options, the poor infrastructure (no places to park bikes, no showers in workplaces), and few resources on how and where to buy bicycles.

Beyond these personal concerns, Beirut is still very car-centric, making it harder to foster a cycling culture. Larger establishments like malls and hospitals can be less receptive of cyclists and their bikes, given restricted parking and concerns about visual obstructions. In Downtown, a car blocking an entire lane of traffic is acceptable, but locking your bike on a street pole will cause security personnel to come running with clamours of *mamnou'* (forbidden). Driving is immensely facilitated and subsidised; on-street parking is cheap and available, and valet parking is common. Post civil war transport projects have prioritized the movement of vehicles at the expense of pedestrians and cyclists, implementing transport plans dusted off from the 1960s and 1970s with little regard for the current makeup of the city.

### THE CASE FOR CITY CYCLING

There is, however, much potential for bicycles to contribute to Beirut's social, economic, environmental, and cultural development. The bicycle is a tool for better mobility, wellbeing, social cohesion, improved air quality, reduced environmental strain and, overall, better quality of life.

Take combating congestion as an example: Private car trips account for 69 percent of transport in the Greater Beirut Area (GBA), according to the

Ministry of Environment (MoE). The World Bank estimates that Lebanese lose 70 percent of their travel time in traffic delays due to traffic congestion, yet 50 percent of trips within the GBA are less than 5 kilometers, according to the MoE. The brevity of these trips means they have the potential to be taken via bicycle, with cycling infrastructure moving people much more efficiently—and at a fraction of the cost.

Countless studies have highlighted the enormous personal, public health, mental health, and air quality benefits that walking and cycling can bring. Regular cycling can help to combat sedentary lifestyles and obesity, as well as help lower the impact of transport on air pollution. In Beirut this is a particular boon, given high levels of air pollution affect 93 percent of Beirut's population, according to researchers at AUB, with motor traffic being the main source. Studies carried out internationally also find that bicycle commuters report being significantly happier or more satisfied than car or other commuters.

Economically, investing in cycling is a no-brainer, bringing enormous savings from reducing congestion, accident, health, space, climate change, and pollution-related costs associated with mobility. In 2018, the World Bank estimated the cost of Beirut's traffic congestion at over \$2 billion. Individually, citizens spend a significant proportion of their salary on fuel, parking, and maintenance, according to the World Bank. Poorer households in general, suffer disproportionately from the car-dependent culture.

There are also spillover economic benefits from cycling. People on bikes tend to stop more and so spend more on average than people in cars. Marrying cycling with tourism in Beirut could impact other areas like food tourism and visitor numbers to cultural sites. Already, a number of small bike-based Beirut tours and touring companies have emerged in the last year alone, paving the way for similar initiatives.

Finally, cycling in Beirut is a political statement, a symbol of defiance and a means to reclaim the city in the face of an alarming trend of privatization. Its immense value in building bridges between communities should not be ignored.

## THE WAY FORWARD FOR BEIRUT

Beirut can learn from decades of bicycle promotion experience in other cities. Planning bicycle infrastructure in a city that has none is an

enormous opportunity to rethink how people move and create links in severed areas.

Data collection must be amplified for planners to understand the current baseline and potential changes. A long-term mobility strategy that places active travel at its heart is vital to build a city vision. Rather than cycling only, an inclusive vision that promotes active, healthy, and holistic streets, and communities, has wider benefits—organizations should push for solutions together.

■ Planning bicycle infrastructure in a city that has none is an enormous opportunity to rethink how people move.

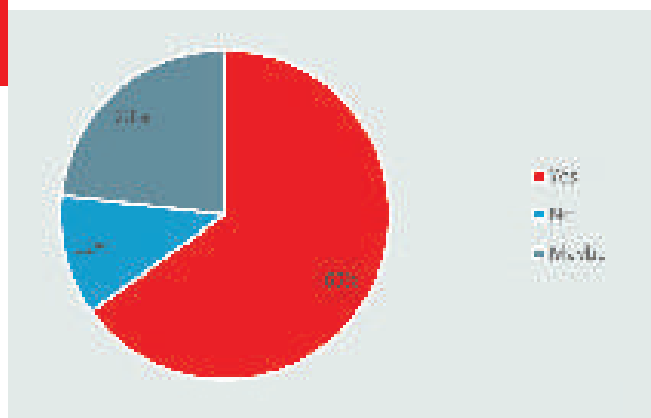
Efforts like Cycling 2030—an initiative launched by ourselves in 2018 to mobilize different stakeholders to collaborate over a cycling strategy—and TRACS—a coalition of active NGOs and

experts in the transport sector (see Last Word page 72)—demonstrate an appetite for cross-collaboration, but must be supported with horizontal and vertical communication.

Without a metropolitan transport authority, it is important for Beirut to coordinate a long-term vision and network with neighboring municipalities to fully reap the benefits of cycling.

The availability of well-executed segregated bicycle infrastructure has a direct impact on increasing cycling rates. A bicycle network strategy will help prioritize infrastructure investment as opposed to current haphazard bicycle lane plans. Gradually reallocating road and parking space from cars to pedestrians,

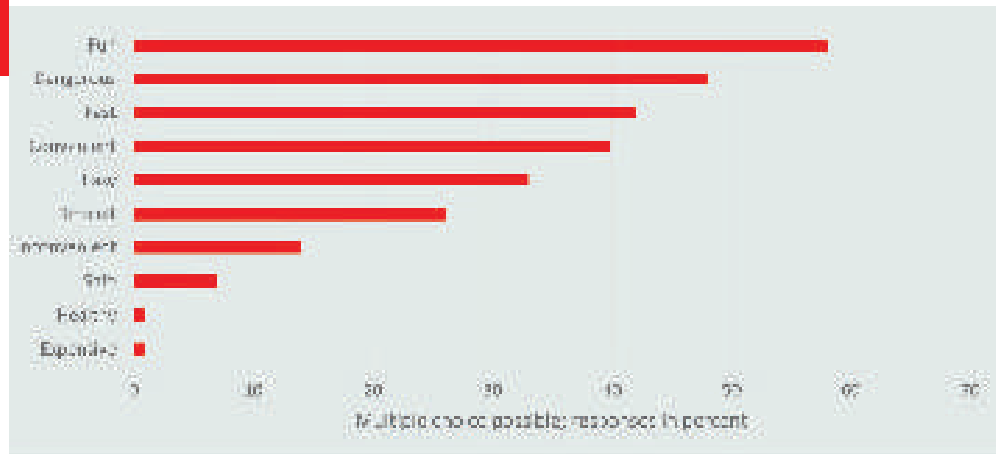
WOULD YOU CONSIDER CYCLING MORE REGULARLY FOR TRANSPORT?



Source: The Chain Effect; Bike to Work 2019 survey

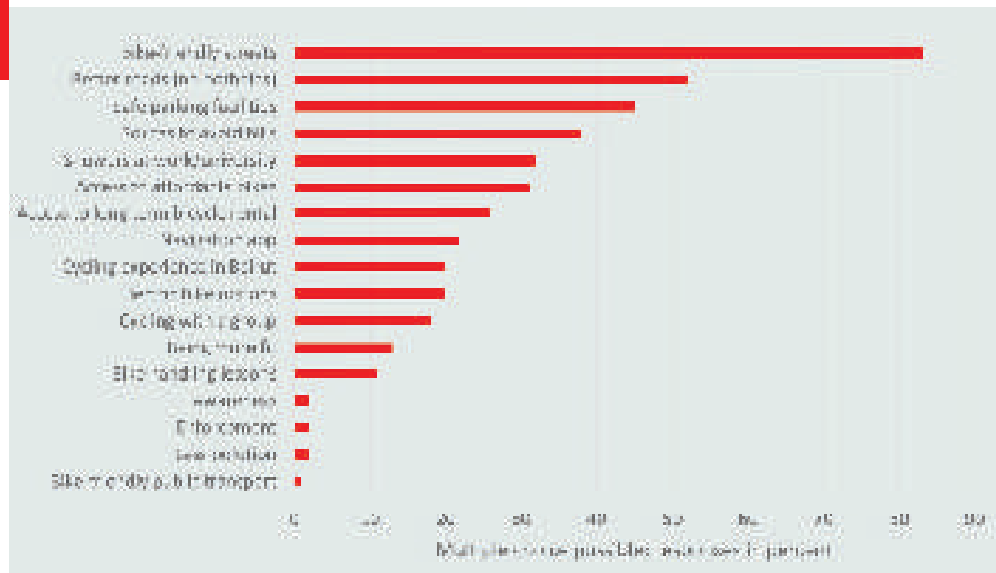
## Mobility

## IMPRESSIONS OF CYCLING IN BEIRUT



Source: The Chain Effect; Bike to Work 2019 survey


## APART FROM BIKE LANES, WHAT WOULD ENCOURAGE REGULAR CYCLING IN BEIRUT?



Source: The Chain Effect; Bike to Work 2019 survey

public spaces, and bicycles is complementary to other plans. Educational programs for youth and adults are just as important for a behavioral shift. Driving on congested main roads means bicycle-friendly streets remain lesser-known. Way-finding and alternative routes become valuable, especially in a city that is not entirely flat. Private companies have a role and benefit in facilitating active travel. Resources that facilitate car commuting can easily be redirected to cycling.

Long-time Beirut cyclists notice the airs of change are beginning to gather strength. Cycling

has become much more of a prominent topic than it was five years ago. The Bike to Work 2019 survey found that 65 percent of participants would consider utility cycling—using bikes as a mode of transport—more regularly. One thing is certain, the era of the car in the urban environment is coming to an end, making way for more sustainable cities in the future. 

*Zeina Hawa and Elena Haddad are the co-founders of The Chain Effect, an organization that promotes the bicycle as a sustainable and convenient form of urban mobility.*

# NEW INTERIOR



RESTAURANT BAR

Mar Maroun st. Saifi

**CENTRALE**

RESERVATIONS: 03 915 925 / 01 57 58 58





# THE OTHER DIGITAL REVOLUTION

Smart mobility in Lebanon

**The first digital revolution was centered around the movement of data and information in the virtual world;** the next digital revolution may very well be around optimizing the movement of people and things in the real world. The concept of “smart mobility” is the intersection between the real and the virtual worlds, and this is why it has been gaining traction of late.

Movement, like communication, is a core human need, and technology plays an integral role in how people move—mobilize—in the real world. This explains why mobility startups like UBER, Tesla, Lyft, Careem, DiDi, Ride, Lime, Grab, Deliveroo, and BlaBlaCar—to name a few—have become household names in their respective markets. People need to move more freely and efficiently to keep up with the pace of the information age.

In the case of Lebanon, our mobility infrastructure is plagued with years of neglect and lack of resources. A partial solution for the traffic congestion is to activate new smart mobility systems that tap into a widely abundant resource: unused car seats.

A 2015 environment ministry report cited a vehicle occupancy rate of 1.2, meaning the average Lebanese is driving a five-seater car to only transport themselves. Moreover, with the World Bank estimating there are around 1.6 million cars in Lebanon that means there are 6 million unused car seats crusing our roads pointlessly each day. This is the *raison d'être* for new shared mobility solutions, and the reason why young entrepreneurs—including myself—launched Carpolo in 2017 for the Lebanese public. Our app works as a search engine for those unused car seats; it unlocks a sophisticated public transportation network using two simple resources: mobile devices and existing cars on the roads.

Unlike traditional mobility infrastructure systems—roads, bridges, railways—smart mobility solutions require less investment for the value created. For the general public, it might be as simple as downloading a mobile app; for companies, it might mean creating an internal carpooling system for staff; and for governments, investing in smart



mobility initiatives can have exponential returns in economic, social, and environmental value.

When we look at the social value created, carpooling apps provide turnkey, smart mobility platforms that unlock a new mode of public transportation for subscribed cities and communities. Moreover, this smart mode of transportation can be activated immediately and requires no hardware and no land appropriation.

The value created as a result of implementing these kinds of smart mobility solutions is multifold. It decreases congestion in the city and makes movement less costly; thus allowing people, businesses, and governments to operate more efficiently.

The question remains: Now that we have proven that we are able to create value through smart mobility solutions, who are the stakeholders who should invest in long-term mobility solutions for Lebanon?

## THE NEED FOR PUBLIC SUPPORT

Looking at the buses and vans that compete for passengers on Lebanon's roads, it is immediately clear that the private sector is not doing well when it comes to managing the country's chaotic mobility sector. Just like urban planning, smart mobility requires a holistic vision of the city's transport needs.

Our experience as a startup taught us that the private sector can spark the creation of smart mobility initiatives, but the catalyst to activating smart mobility as a mainstream solution will be the public sector. Mass adoption of new mobility concepts takes time, and will only come once this becomes part of a national program.

Low-cost/high-value mobility solutions are among the most important investments that any city or government can initiate nowadays to improve their infrastructure. Collaboration with the private sector to create mass adoption for such mobility concepts is the role of the public sector.

This is exactly what we aim to achieve in the long-run as we seek to establish new mobility hab-

its in the minds of our users. However, apart from building a technology and updating it based on user feedback, startups have to invest resources to introduce new habits. Such investments re-

quire persistence and dedication to make a change—something that few early stage investors are willing to do. On the other hand, a big portion of public spending is directed toward

■ Collaboration with the private sector to create mass adoption for such mobility concepts is the role of the public sector.

traditional brick and mortar infrastructure solutions—projects that require time and resources to be implemented. These priorities will need to be reassessed in the near future. With smart mobility solutions, we save time and money, and build a basis for a smarter society in the future. ■

*Ralph Khairallah is the cofounder and CEO of Carpolo, a carpooling platform.*

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## Executive

By Lauren Holtmeier

## An alternate route

Apps provide more options, but may fuel congestion

**Beirut suffers from heavy congestion and a lack of proper public transportation that causes commuters to be stuck in traffic for long periods of time and fuels CO2 emissions.** The likes of shared mobility apps like Carpolo, Loop, and Careem give some Lebanese residents more options for getting around while seeking to reduce congestion and carbon emissions. Globally though, ride sharing apps have a mixed record and have even proven to contribute to the very problems they aim to solve.

In Lebanon, measuring the effect of apps like Carpolo, which launched in 2016, and Loop, which had its soft launch in May 2017, is difficult. Representatives from both tell EXECUTIVE that their companies have made strides in attracting a user base, and they are optimistic that their efforts will help make a small but positive impact on reducing emissions. Urban and transportation experts, however, tell EXECUTIVE that while apps like these do provide more options and added convenience, reversing high congestion will ultimately take large-scale efforts by the government to develop and implement a proper public transport system (see story page 30), such as a bus rapid transit system, coupled with new policies and infrastructure.

Maya Abou Zeid, an associate professor of civil and environmental engineering at the American University of Beirut (AUB), with a research focus on urban transportation planning, says that the large number of vehicles that commute in and out of Beirut each day are driving the congestion problem. A 2018 World Bank project appraisal document for the Greater



Beirut Transport Project estimated that 650,000 vehicles entered Beirut daily on what it calls “critical highway sections” referring to the northern, southern, and eastern roads leading to the capital. Road congestion costs Lebanon nearly \$2 billion a year, or 5 percent of its GDP. A Ministry of Environment report conducted in conjunction with UNDP from 2016 found that in 2012, the transport sector alone was responsible for 23 percent of total emissions, most of which came from private passenger cars.

Carpolo’s co-founder Ralph Khairallah says that alleviating this stress is one of his app’s functionalities. With its community-based sharing or public sharing option, users outside Beirut can find a ride into the city on the app, boosting car occupancy rates—currently 1.2 riders per vehicle in Lebanon, 0.2 behind the global average. “We’re a search engine for unused car seats,” Khairallah says. Carpolo seeks to “fill up those [unused] seats, reduce pollution, congestion, [and] increase productivity.” (See comment piece page 54) Khairallah figures, using UNDP statistics, that if Lebanon is able to catch

up to the global occupancy rate of 1.4, CO2 emissions would drop by 288,000 kilograms per day, and overall mobility savings—such as fuel and insurance—would be \$329,000 per day. By the Carpolo team’s estimations, reaching the global occupancy rate would reduce the number of vehicles entering Beirut daily by 85,000.

Carpolo, which currently has about 7,000 users, looks to partner with businesses so that people within the same network can find rides within it, but it also has a public option that anyone can access. It has entered into a CSR partnership with Byblos Bank as of March 2019 to form a carpooling network that Byblos Bank employees can use to find a ride to any of the bank’s branches or the headquarters, which houses more than 700 employees. Carpolo is looking to replicate this model with local universities, other companies, such as Alfa, and are seeking partnerships with organizations looking to cut down their environmental impact, Khairallah says.

### HAIL THAT RIDE

Unlike other carpooling apps, like Europe’s BlaBlaCar, no cash is ex-

changed via the app. Instead, Carpolo uses a “gamified point system” where users earn rewards—such as points that can be redeemed at Medco or Zaatar w Zeit, sponsors of Carpolo.

Where Carpolo helps link up ride seekers with drivers who are going to the same place, Careem, like the globally operating Uber, is a ride hailing app. Based in Dubai, Careem operates in 14 MENA countries and was acquired by Uber in March 2019. It launched in Lebanon in 2014. Ibrahim Manna, managing director of Careem for emerging markets, tells EXECUTIVE in an email that Careem sought to focus on the lack of easy access to reliable, affordable, and modern transportation in the region. They have recently launched the “*Servees*” function that operates like the Lebanese red plate shared taxis (see article page 24).

While both apps increase options for riders in Lebanon, specifically Beirut and its suburbs, they may only serve specific segments of society—such as the middle and upper classes and urban populations—and typically do little to alleviate congestion. Abou Zeid refers to a 2019 study on Uber and Lyft in San Francisco, conducted by the University of Kentucky and the San Francisco Transportation Authority, that analyzed data from 2010 and 2016 and found that these apps increased traffic delays by 40 percent over a six-year period due to factors including “deadheading”—or moving while out of service—and by contributing to congestion on busy streets by disrupting traffic for passenger pickup and dropoff. The study’s authors also estimate that between 41 and 61 percent of Uber trips substitute walking, cycling, or other modes of transport.

In Beirut, where biking can be treacherous and other viable options of transit are limited, the percentage of ride hailing app users opting for Careem or Uber instead of other forms of transport may be smaller. In terms of travel time, “[These apps] don’t have an advantage, but you can do in-vehicle activities,” Abou Zeid says. However,

one advantage is time and money saved in parking because parking in Beirut is scarce and costly, she adds.

Mona Fawaz, professor of urban planning at AUB, points to socioeconomic factors and says these apps are only accessible to certain segments of society. “Uber and Careem might be a good option because people don’t want the financial burden or responsibility of owning a car, but it’s class related and linked to credit cards,” she says. Poor individuals are not able to easily access these services, because they typically are slightly pricier, and will still rely on other modes, such as the informal public transportation system to get around. She explains there is also a geography factor in that these apps work better in urban population centers; for those living in rural areas access is a challenge as rides become increasingly expensive over long distances.

Carpolo and Careem may not reduce a rider’s travel time, but an option that has that ability is Loop, an electric scooter fleet management company. Because the scooters can weave through traffic, they allow users a quicker trip from point A to B. And because these are electric scooters, there is an added environmentally friendly component. “The traffic and the pollution are bad,” says Loop’s general manager Mira Raham. “This service helps attack these two major issues in Beirut.”

Raham tells EXECUTIVE that with around 25 scooters in the fleet and after rolling out a new station every two to three months, there are currently 17 stations scattered throughout Beirut, they will expand to 100 scooters and 50 stations before the year’s end. When a user finishes using a scooter, they plug it in at the station, which are equipped with chargers. Each scooter can travel 50 km on one charge with usage fees of \$.050/km and \$.01 a minute to park.

Raham says that with around 2,000 subscribers and 600 active users as of

mid 2019, the increased fleet size and reaching around 700 active users is essential for Loop to start turning a profit. Between mid 2017 and January 2018, when they fully launched, Raham says they used that period to raise awareness and introduce the concept of fleet sharing, which was non-existent here. “It was a bit challenging,” she says.

## DISRUPT THE SYSTEM

Other challenges associated with scooter sharing include the safety of operating in Beirut where traffic is hectic and roadways are often less than ideal quality, Raham says, adding that, fortunately, they have had no accidents yet. Loop also provides training for new subscribers on scooter safety. Starting with just one station in Beirut Digital District (BDD), which served as a pilot to measure interest, they have now expanded the map in Beirut. “The demand increased bit by bit,” says Raham. Once Beirut is rolled out, they will look to expand to Jbeil, and investors in Greece and Cyprus have shown interest, she says.

Loop, like Carpolo and Careem, provide options to people in Beirut looking for alternate modes of

■ Poor individuals are not able to easily access these services, because they are typically slightly pricier, and will still rely on other modes.

transportation in a city where public transport is minimal. While profit-seeking enterprises, these apps also seek to disrupt the current system, alleviate congestion, and reduce the environmental impact from cars. In terms of offering an alternative form of mobility—at least to certain segments of society—there is potential for these apps but, so far, there is little to indicate they can alleviate Beirut’s chronic congestion problem—and the experience of other cities suggests they could even add to it. ■



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*By Sami Atallah, Nancy Ezzedine, & Jana Mourad*

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## Capitalize on Lebanon's potential



Exports must be part of economic growth strategy

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**Successive Lebanese governments have largely neglected the manufacturing sector.** Policies were instead limited to a number of financing schemes, based on subsidized interest rates and several trade agreements with EU and Arab countries. Industrialists were left to contend with multiple challenges, including high production costs, inefficient provision of public services, and significant skills mismatch. Consequently, the manufacturing sector's share of the GDP has shrunk from around 10 percent in 2005 to 6.2 percent in 2017, despite employing 25 percent of the labor force. More recently, the sector's exports dropped from a high of \$5 billion in 2012 to \$3.9 billion in 2017.

Ignoring the sector is a big mistake. Empirical evidence, based on the 2006 findings of Harvard economist Dani Rodrik, shows that manufacturing-led structural transformation creates higher productivity and better paying jobs. According to UNIDO, every one job in the manufacturing sector creates 2.2 jobs in other sectors. Despite the poor performance of the sector, Lebanese exports exhibit interesting patterns that seem to have gone unnoticed by the government. For one, Lebanon's exports are well diversified both in terms of products and markets. In 2017, Lebanon exported 1,147 products, the majority of which were distributed across the following sectors (based on international classifications): 18 percent were in precious metals, which includes gold and jewelry; 15 percent in machinery, which includes computers, electric generators, and insulated wires; 14 percent in metals; 13 percent in foodstuffs, such as processed fruits, raw sugar, chocolate, and other food items; 8.7 percent in chemicals, includ-

ing packaged medicines, phosphoric fertilizers, and perfumes; 8 percent paper and wood products; and 5 percent plastics and rubbers.

Lebanon's ability to produce and export products in sophisticated sectors such as machinery and chemicals is telling. Indeed, it shows that despite the current large share of exports in less complex products such as food-stuffs and metals, the country has the advanced productive capacity and know-how to manufacture a wide variety of complex products.

### DIVERSIFICATION IS KEY

Export diversification is not only across various sectors of the economy, but also within the manufacturing sector. One way to measure this is by calculating the share of the top three products from the subsector total exports. In the processed food sector, the top three exported products make up only 28 percent of the subsector total exports. Even in the chemical subsectors, this amounts to 37 percent of the subsector total exports. In fact, in six out of the 15 sectors, industrialists produce a variety of other products within these sectors where the share of the top three products does not exceed 40 percent of exports.

Furthermore, Lebanese industrial exports are well-positioned in the global market with an opportunity for further growth. For one, Lebanese products reach more markets than some countries within the same upper-middle income group, per the World Bank's 2018 classification. For instance, Lebanon exports to 171 countries, whereas Costa Rica exports to 108, Jordan to 156, and Serbia to 159.

In terms of markets, 40 percent of Lebanese exports go to Middle Eastern countries, where the top export destinations in 2017 were the United Arab Emirates (\$265 million), Syria (\$246 million), and Saudi Arabia (\$240 million), based on data from the Observatory of Economic Complexity (OEC). Outside the region, 29 percent of Lebanon's exports go to Africa—including South Africa (\$317 million),

Gabon (\$236 million), and Ivory Coast (\$177 million)—and 23 percent to Europe, according to the OEC.

Lebanon export markets are also diversified across the manufacturing sector. In seven out of 15 sectors, the top three export destinations constitute less than 40 percent of the sector's market reach, which means that Lebanon is not dependent on a few markets. For instance, the top three importing markets import only 20 percent of basic manufactured goods, 37 percent of chemicals, and 37.4 percent of processed foods exports—noting that such export percentage shares, albeit subject to fluctuations, are generally indicative of an ability or inability by exporting economies to penetrate importing countries' markets and compete therein.

Given the country's accessibility to overseas markets and the growing global demand, an LCPS study shows that Lebanon's exports exhibit high-potential in various markets. First, the Middle East is considered the largest export potential region with an untapped potential worth \$406 million, but most of this potential is confined to the agro-food sector, with some in the machinery and chemicals sectors. Second, there is a large potential for diversification into higher complexity exports to North Africa and West Africa, with products in the machinery and electrical equipment industry, including generators, as well as the chemicals industry. Third, potential exports to Western Europe are confined to medium-complexity products, like printed books, guts, and nuts. The diversification into the production of more complex products could pave the way to further exports toward Western European markets. Fourth, North America is considered a very small potential export market that has not been penetrated sufficiently. Avenues for possible penetration into this market include

a diverse basket of goods such as food and beverages, but also other higher complexity products from the machinery, electrical equipment, and chemicals industries.

### PRIORITIZE INDUSTRY

In sum, based on its current market position, market accessibility, and global demand, Lebanon, assessed under the methodology used by LCPS for measuring export potential, can potentially achieve an increase of exports by an annual \$1.7 billion. Since this does not assume any change in the cost structure, the value of exports could even be higher if the cost of production decreases.

Lebanon must capitalize, rather than ignore, the export potential of the manufacturing sector. Providing support and public inputs such as infrastructure and proper regulation to existing manufacturing sectors with the aim of improving their productivity can lead to significant growth and advancement within the sector's ex-

■ Lebanon can potentially achieve an increase of exports by an annual \$1.7 billion.

ports. The government, represented by the Ministry of Industry, and the Association of Lebanese Industrialists, should set up regular public-private dialogues where evidence-based policy is furnished so systematic, rather than ad hoc, decisions are made. To this end, the strategy must target specific markets with specific products through promoting competitive production—i.e., reducing production and export costs—and supporting research and development to advance diversification into higher complexity production. ■

*Sami Atallah is the director of the Lebanese Center for Policy Studies (LCPS), Nancy Ezzedine and Jana Mourad are researchers at LCPS.*

## Power lines

By Lauren Holtmeier

## Closing the loop



Despite protests, Mansourieh power lines go live

**On June 17, in Mansourieh, the last 2 km power line link went live in the 369 km, 220 kilovolt (kv) loop that runs from the south of the country up to the north, out to the Bekaa Valley, and connects Lebanon's network to Syria.** For 17 years, the government has been trying to close this loop, with this latest move prompted by attempts to implement the new electricity plan adopted in April. Mansourieh residents, however, have been protesting the construction for years, citing potential health risks, specifically a possible relation to increased childhood leukemia.

Minister of Energy and Water Nada Boustani tells EXECUTIVE that completing the loop will increase current carrying capacities on the network as a whole and increase the network's stability. The government's new electricity plan seems to have provided impetus to finally complete this last link of the "electrical high-

way" that connects the country. Ramzi Dobeissy, the head of the high-voltage transmission lines department at Lebanon's public electricity utility, Electricité du Liban (EDL), says that the 220 kv loop—including the Mansourieh link—is the "backbone of the Lebanese network." At present, the link is needed to inject power from the main power plants in the north and south toward Beirut and its suburbs, he says.

The importance of this loop raises questions as to why it has taken so long to complete. Successive governments have attempted to close the Mansourieh link since 2002, but according to Dobeissy, who has worked at EDL since 2005, the project was never fully implemented on the ground due to the protests of local residents. Until the link was completed in June, there had been piecemeal progress over the years—the final pylons were erected in Man-

sourieh in 2006, and a 2016 Council of Development and Reconstruction progress report noted that all had been completed bar the Mansourieh link, which it said would be done in 2016 "if all goes well"—but there was no official reason given for why these had not been successful.

## THE OBJECTIONS

For their part, these protestors tell EXECUTIVE that their primary concerns are the potential for adverse health effects, as well as noise pollution, and safety concerns about having these lines overhead (the lines are at a minimum of 16 meters overhead to comply with EDL standards). The resident's objections predate 2002 to 1997 when the original planned path of the lines changed, according to a map from that year that protestors showed EXECUTIVE with the original straight path passing through then uninhabited land. Carole Ibrahim, a Mansourieh resident, tells EXECUTIVE that when she bought her home in 1996, no plan existed for power lines to pass near it. For them, the original path remains a sticking point in their continued objection.

Mansourieh residents also tell EXECUTIVE that construction workers entered their private property during construction, and they have filed a lawsuit against the Ministry of Interior (MoI) and the Ministry of Energy and Water (MoEW) that aims to invalidate a decree that allowed for temporary occupation of private land to place installation equipment. Boustani told EXECUTIVE that while she had read about the lawsuit, she had not yet received it. EXECUTIVE spoke with a representative from the MoI but did not receive a response prior to publication.

Boustani tells EXECUTIVE that right of way payments and temporary access payments—compensation for the lines running overhead and money paid for workers to briefly access private property for installation—will be made to all residents in the path of the new power lines. The amount offered for these payments is confidential, but Dobeissy says that it depends on how close the power line is to the home and on the area itself. In 2012, the government had offered to buy 15-20 of the apartments set to run under the cable, but no residents accepted the offer. The prices, according to Dobeissy, were set to be near the original prices of the land.

Regarding health risks, Mansourieh residents and the MoEW, in combination with EDL, both cite studies that back their own perspective on the issue. The major health concern for the protestors is a potential link to childhood leukemia. One 2005 study conducted by Oxford University, often cited by these protestors, found that children living within close proximity to powerlines had an increased risk of leukemia, but the study's author, Gerald Draper, admitted that the results were likely due to chance, with no causal mechanism found.

Other effects that protestors say are possible are anxiety, headaches, suicide, depression, and nausea; however, the World Health Organization (WHO) says that scientific evidence does not support a correlation between these symptoms and exposure to electromagnetic fields. Regarding leukemia, the WHO International Agency for Research on Cancer has classified extremely low-frequency magnetic fields as possibly carcinogenic to humans. "WHO, in the absence of certainty of adverse health effects, recommends the adoption of prevention and avoidance of potential health risks," reads a prepared statement EXECUTIVE received from WHO.

Aside from the possible carcinogenic nature of the powerlines, there is debate over to how many microtes-

las—a unit that measures the strength of a magnetic field—humans can safely be exposed. Mounir Rached, who was a speaker at a May 24 press conference on the power lines under his capacity as a lecturer in energy studies at the American University of Beirut says—in agreement with other protestors—that the allowed limit should not exceed 0.4. This, however, is disputed by EDL, with Dobeissy pointing to studies conducted by Electricité de France and other EU countries that show that values exceeding 100 microteslas have not been proven to affect human health—according to EDL modeling, no more than 20 microteslas would reach the balcony of the nearest apartment.

#### TO BURY OR NOT?

For the residents of Mansourieh, like Thomas el-Saad, the possibility that these lines could be carcinogenic is enough to ask that the government consider other options, such as underground installation. "The line is obviously very important for all of Lebanon, and nobody contests this," he says. "Of course these lines must exist, but not around our homes, and it's doable to do it beneath the earth."

Protesters, alongside Rached, point to the existence of underground lines in Beirut as evidence that these lines exist in Lebanon and would be a viable alternative, but Boustani and

Dobeissy say it is not feasible for technical reasons. In Beirut and Tripoli the lines must be underground because the density of buildings leaves no space to build pylons and string the cables, Dobeissy says. He adds that because the capacitance—the ratio of the change in an electric charge in a system to the corresponding change in its electric potential—of underground cables is 20-75 times more than overhead lines, it is very technically difficult to control voltage spikes—specifically

during times of minimal demand—when utilizing underground cables over long distances, which could lead to risk of network collapse. Because of this, no more than 5 to 8 percent of a line should be located below ground, and with the 369 km loop, 5 percent equals 18.45 km that can safely be buried. He adds that Lebanon already exceeds this with about 13 percent of the lines, primarily in Beirut, being underground.

Dobeissy also says that installing underground lines can cost up to two-and-a-half to three times what it costs to install them overhead, for which he says estimated installation costs equal 450,000 euros/km (\$503,000 at time of writing). Underground cost estimates were not completed for Mansourieh because the technical barriers rendered them unnecessary.

For the government, closing the loop is one of the first steps in expanding transmission capabilities. With the lines now live, protestors' concerns about adverse health effects have not subsided, and many tell EXECUTIVE that they will continue to organize and raise public awareness of their concerns. They say that they have started

■ For the government, closing the loop is one of the first steps in expanding transmission capabilities.

organizing with surrounding communities that have overhead lines to gain a larger foothold. And while Saad admitted that he feared the past protests would prove futile—and they did—he hopes that if they maintain momentum they can get the lines moved underground in the next 10 years. But with the percentage of the line buried already exceeding the maximum EDL tells EXECUTIVE is acceptable, burying the Mansourieh lines seems like a distant possibility. ■



## Be prepared

Lebanon needs a disaster policy for earthquake risks

**Over the past 2,000 years, Lebanon has experienced over 13 major earthquakes.** These tremors are a result of the country's location within an active tectonic system called the Dead Sea Rift, which divides the African and Arabian plates.

One of Lebanon's most devastating earthquakes occurred in 551 AD, a 7.5 magnitude quake along the Mount Lebanon Thrust (MLT) resulted in a tsunami, which, according to a 2007 paper in the journal *Geology*, "destroyed most of the coastal cities," "drowned Tripoli," and caused damage so severe that Beirut "did not recover for 1,300 years."

Seismologists predict that the MLT has a recurring cycle of every 1,500-1,750 years, meaning a major earthquake could fall anytime within the next 250 years. The World Bank's Global Facility for Disaster Risk Reduction (GFDRR) puts Lebanon at a medium-risk level, estimating that there is a 10 percent chance for a potentially-damaging earthquake and tsunami to occur within the next 50 years.

Additionally, Lebanon's offshore oil and gas operations are scheduled to begin along the MLT, and could trigger a larger earthquake in a shorter time frame. A 2016 article in *Scientific American* highlighted that "scientists are increasingly confident about the link between earthquakes and oil and gas production," while criticizing regulators for being slow to react.

To mitigate these risks, the government, with the support of international agencies, has been working to improve the country's resilience to disasters. The government established a Disaster Risk Management Unit in 2009, followed by the National Coordination Committee

on Disaster Risk Reduction in 2013, the latter of which has been setting up a network of emergency control rooms, conducting drills and simulations, and raising awareness.

Despite these steps, the GFDRR notes that Lebanon still "does not have an operational disaster management plan." With the overall risk of earthquakes in Lebanon coupled with the potential seismic tremors of the MLT and ongoing offshore oil and gas activities, it is time to begin the conversation and make a consolidated effort toward preparing for the worst. In addition to saving lives, the World Bank estimates that every dollar invested in disaster prevention saves \$4 in disaster damage.


The Sendai Framework for Disaster Risk Reduction outlines principles and global best practices that aim to improve global resilience to natural or man-made hazards. These range from governance structures to policies, tactics, and technology, as well as rescue guidelines. One key aspect is insurance. A 2015 OECD report finds that ability to mobilize finances quickly to pay for rescue operations, compensate victims, and rebuild destroyed property after a disaster is a key challenge most governments need to overcome.

Similar to conventional insurance schemes, the system works by pooling financial resources from a large number of people in advance of a disaster, and then using these funds to compensate potential victims for natural or man-made hazards. However, the technicalities of the scheme varies, which allows room for innovation.

In some developed countries, insurance firms offer private disaster insurance cover. These schemes, how-

ever, usually cover businesses and tend to be unaffordable for the more vulnerable lower-income households or companies. Alternatively, government-supported insurance programs are becoming increasingly popular across developing countries. In this system, stakeholders pay a mandatory—usually affordable—premium that is used to finance a common fund—usually reinsured on the global private insurance market—that is then accessible for disaster relief in case of a catastrophe.

In Morocco, draft law 110-14 seeks to add a compulsory, affordable tariff to existing car insurance policies to fully cover 5 million people against catastrophes. The fees contribute to a national solidarity fund that will compensate uninsured victims in case a catastrophic event causes personal harm or damage to a family's primary residence.

In my opinion, Lebanon's *caisse mutuelle* (mutual fund) system provides an excellent infrastructure for citizens to voluntarily create a common pool disaster insurance autonomously from the government. A group of stakeholders can band together, agree on the terms and conditions for payouts, and contribute directly to a mutual fund that protects against natural or manmade hazards. The same funds can likely be reinsured on the private market as well, enabling access to more money when people might need it the most. The current framework provides a good stepping stone that could pave the way—with the right reforms, control, and oversight—for a national one. It is time to start the conversation, and ensure Lebanon will be ready when the time comes. 

*Basil Mahfouz is an environmental policy researcher and entrepreneur. He's the co-founder of SynSapien, an open platform where people invent technology together.*



## WALK OR RUN 5K OR 1K FOR MYSCHOOLPULSE

The **Pulse 5K or 1K** is a most enjoyable outdoor family outing in the mountainous environment of the Faqra Club, AND an opportunity to support a good cause!

It is **MYSCHOOLPULSE**'s main fundraising event, organized with the logistical support of Beirut Marathon Association, la Fédération Libanaise d'Athlétisme and Faqra Club.

**MYSCHOOLPULSE** is a non-profit organization bringing school to hospitals in Lebanon.

Since inception in 2010, it has catered to the education of 563 children suffering from life-threatening illnesses, enabling them to continue their education during their long treatment away from school and friends.

**MYSCHOOLPULSE** is present in five major hospitals where it employs 13 permanent and experienced teachers: At Saint George Hospital, Hôtel-Dieu de France, Lebanese Hospital Geitaoui, Makassed Hospital and Hospital Notre Dame de Secours in Byblos.

To date, the organization has provided about 27,614 hours of tutorship to children aged 4 to 18. Classes take place mostly at the child's hospital bed.

In addition, **MYSCHOOLPULSE** provides art therapy sessions at hospital, private lessons at the child's home and, in some cases, tutorship fees to the sick child and his siblings. More on [www.myschoolpulse.com](http://www.myschoolpulse.com)

**MYSCHOOLPULSE**'s work has had a significant impact on the children's academic performance: 92% of children passed class in June 2018! More importantly, the support provided helps the children's morale, giving them the confidence they need when they resume school at the end of their treatment.

Join us to enjoy a fun day and help us pursue our mission!

The registration fee is \$30 per person and is all inclusive: race, food, drinks, kids activities (supervised by KidzMondo Beirut) for kids whose parents take part in the race.

For event details, please visit [www.myschoolpulse.com/pulse5k.asp](http://www.myschoolpulse.com/pulse5k.asp) or call +961 76 370589.

When	Sunday, August 4, 2019		
Where	Faqra Club (Parking & Shuttle bus provided before the Club’s entrance gate)		
Time	9:45 am (to have time to reach the start arch)		
Races		Start time	Age categories by birth year (eligible for awards)
	1K Race	10:45 am	2 age categories: 2011 & younger, 2008-2009-2010
	5K Race	11:00 am	12 age categories: 2007 & younger, 2005-06, 2002-04, 2000-01, 1995-99, 1990-94, 1985-89, 1984-80, 1975-79, 1970-74, 1965-69, 1964 & older
Entrance Fee	\$30 per ticket	Children aged 3y & below are admitted free of charge and don’t need to be registered 50% discount for 18y to 22y olds, ie YOB 2001 to 1997	
Awards	12:15 pm	1K & 5K winners will be awarded medals & prices The award ceremony will be followed by an outdoor lunch buffet offered by Myschoolpulse, Faqra Club & Taanayel.	
To Register	Online: www.myschoolpulse.com ABC Achrafieh L1 & ABC Verdun L3, from July 12 to August 3, 10am to 10pm If you wish to be timed and eligible to awards, the deadline to register is Saturday, July 27, at 10pm		
Contact	+961 76370589 or info@myschoolpulse.com		

# BUSINESS ESSENTIALS

## Company Bulletin

For the month of June, **Air France Beirut** officially partnered with **Tammana** to provide support for its mission to grant the wishes of children suffering from life-threatening illnesses.

Under the patronage of the President Michel Aoun and in collaboration with **Banque du Liban**, the 10th edition of **ArabNet Beirut** was held from June 12-13 at the Seaside Arena, bringing together more than 3,000 attendees and 250 experts and speakers from around the world to discuss the latest trends in digital business.

Under the patronage of Minister of Tourism Avedis Guidanian, and in collaboration with the **Ministry of Tourism, Le Bristol Hotel** sponsored this year's edition of **Visit Lebanon Forum**, which was held in Lebanon on May 30 and 31.

**Banque Libano-Française, Visa,** and **Air France KLM** took their exclusive six-year partnership further this year. In previous years, new Visa Air France KLM - Banque Libano-Française cardholders were offered the chance to double their Flying Blue welcome miles during a certain period, but they were able to double their double Flying Blue welcome miles, i.e. four times more miles, before June 22.

Set to renew **Mercedes Benz's** primacy in the field of SUV design, the new GLE is keen on rocking the SUV landscape with its introduction in the Lebanese market by **T. Gargour & Fils**, the exclusive and sole agent of Mercedes-Benz in Lebanon.

**BLOM Lebanon PMI** was down to 46.3 in May 2019 with faster

deterioration in business conditions during May.

**Award and Competition** is pleased to announce that the packaging work **Low Calorie** line by creative director Joumana Maalouf and graphic designer Balsam Abou Chakra has been announced as a winner of the notable **A' Design Award at Packaging Design Competition**.

The **Access Bank UK**, a wholly owned subsidiary of **Access Bank Plc**, reported its financial results for the year ended December 31, 2018. During the period, operating income advanced 47 percent, from £36.2 million to £53 million, and profit before tax increased 50 percent to £33 million, while balance sheet growth was 36 percent to 1.9 billion.

Following a series of advances and developments recently achieved by **McDonald's Lebanon**, the company completed the full renovation of its location in Amchit at **IPT Station**. A re-opening ceremony took place on June 9 in the presence of McDonald's Lebanon's Developmental Licensee Akram Miknas, Managing Partner Karim Miknas, IPT Chairman Michel Issa, IPT Vice-Chairman Toni Issa, the IPT team, the McDonald's Lebanon leadership team, managers, employees, and guests.

In line with its ambition of enhancing the livelihoods of millions under its Sustainable Living Plan, Unilever Levant, owner of global brands such as **Lipton, Dove, Lifebuoy, Axe, Omo**, launched **ASILAH** Program in Jordan, which consists of making 30 women (refugees and rural Jordanians) financially inde-

pendent and personally empowered by training them to become micro-entrepreneurs.

Engaging in the concept of home hunting all over Europe and France, **APARTE**, the consulting real estate agency, part of **ODGAMM Prime Realty**—the luxury real estate agency in Paris—is another Lebanese success story in Europe, strongly present in the market by catering to all clients' requirements through the new concept of home hunting.

**Beirut Design Week** held a press conference on June 11 at MusicHall Starco to announce the theme of its eighth edition, to reveal the program, and to introduce the names of the international and local speakers who will be leading the workshops and talks.

**Banque Libano-Française**, under the label "Lucky to be Young," supported the InterSciences competitions organized worldwide by the **Agency for French Education Abroad** and the **Groupe de Recherche pour l'Enseignement des Mathématiques**, with the aim of encouraging all students to improve their knowledge and benefit from their skills in a short period of time.

**Bank Audi** has once again raised the bar in terms of cards benefits by announcing Flavors, its exclusive dining program that enables Bank Audi Visa cardholders to enjoy discounts and privileges at many of their favorite restaurants, upon payment with a Bank Audi Visa debit.

**Cesar Debbas et Fils** celebrated the partnership between **Debbas &**

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**Flos** on June 13 at The Light Avenue showroom in Corniche el-Nahr, Beirut, during an entertaining event that hosted a large crowd of architects, consultants, interior designers, engineers, and VIP clients.

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■ **Dr Burgener Switzerland** is an exclusive and revolutionary Swiss brand focusing on face and body products for ultimate luxury and yet remaining environmentally friendly where possible. It is located in only a few hand-selected locations across the globe, which includes the Spa at **Four Seasons Hotel Beirut**.

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■ **SARA Group** unveiled a new flagship store for **Villeroy & Boch** in Downtown Beirut in the presence of VIP guests, influential personalities, and the media during a glamorous and magical event. The party, which was themed “Circus Chic,” bedazzled the city of Beirut and kept it in awe.

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■ As part of its full renovation campaign, **Gefinor Rotana Hotel** hosted media partners and social media influencers on June 18 to enjoy a tour with interactive activities in an atmosphere of joy and entertainment.

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■ Ren Zhengfei, founder and CEO of **Huawei**, was recently part of an open dialogue alongside other prominent guests examining the latest economic and political headwinds affecting the global ICT industry—and Huawei in particular. The business leader stressed that the world ultimately relies on open collaboration for shared success.

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■ In line with the bank’s new strategy for the coming five years that concentrates on customer personalization and improving customer experience, **Credit Libanais** announced the launch of “The metallic,” a metal card that is the first of its kind in Lebanon.

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■ At the World Post & Parcel Awards Ceremony that took place in Dublin, Khalil Daoud, **LibanPost’s** chairman and managing director, was gifted the prestigious “Industry Leadership Award” by his peers in recognition for his “exemplary leadership in advancing the mail, parcels and express industry, and for having a long and sustained record of success in fulfilling the organization’s mission.”

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■ **SPINMASTER** in collaboration with the famous toy stores **Joué-Club**, **Early Learning Centre** and **Toys4Less** offered 3000 gifts to 3000 kids from seven different NGOs in Lebanon.

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■ In celebration of Hilton’s 100th anniversary, **Hilton Beirut Habtoor Grand** and **Hilton Beirut Metropolitan Palace** are proving once again that Hilton is synonymous with hospitality by delivering random acts of hospitality, through simple but meaningful moments.

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■ In partnership with **SOS Children’s Villages Lebanon** and **Kayany Foundation**, **L’Oréal Levant** organized two graduation ceremonies for the technical institute students of its “Beauty for a Better Life” training program.

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■ **Samsung Electronics Co., Ltd.** sponsored the third annual QLED Summit hosted by Insight Media, focusing on the current state and future of 8K display technology at Millennium Times Square, New York City.

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■ Effective June 10, Stella Medlicott was appointed senior vice president and head of group function marketing & corporate relations at **Ericsson** and a member of Ericsson’s executive team.

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■ **International College** is proud to announce the inauguration of its newest buildings under its

expansion plan. In the presence of IC Chairman Don Selinger, Vice-Chairman Imad Taher, Najib, Taha and the Mikati family, Mu’taz Sawaf, Basim Ziadeh, and other key Lebanese figures, the new middle school building, “The Mikati Building,” and the new preschool building, “Ziadeh Sawwaf Building,” were launched at a ceremony that took place at IC’s Ras Beirut campus on June 11.

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■ As part of their global partnership, **Aston Martin Lagonda** and **Waldorf Astoria Hotels & Resorts**, Hilton’s iconic luxury hotel brand, announced first time, dual-branded activations for the 24 Hours of Le Mans.

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■ **IFP** hosted a press conference June 12 to launch the 24th edition of Project Lebanon, at the Chamber of Commerce, Industry, and Agriculture of Beirut and Mount Lebanon, in the presence of dignitaries representing Italy, France, the Czech Republic, Greece, Ukraine, Turkey, Egypt, China, Pakistan, India, Iran, and Bangladesh.

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■ This year marks 22 years since Roger Sahyoun, veteran ad man, first launched **AGA** that would later evolve into **The Network Communication Group**, one of the leading communication agencies in the region. While the agency is looking back at its history, rich with achievements, the focus of its 22nd anniversary will be the next 22 years, a bright future with more milestones to cross.

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■ Rapid early momentum and enthusiasm for 5G has led **Ericsson** to forecast an extra 400 million enhanced mobile broadband subscriptions globally by the end of 2024.

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■ **Samsung Electronics Co., Ltd.**, announced that its Exynos Auto 8890 processor will be powering German automobile manufacturer



# BUSINESS ESSENTIALS

## Company Bulletin

**Audi's** third generation high-spec modular infotainment platform.

Three months from the rendez-vous, **Beirut Design Fair** is actively preparing its next edition, set to be held from September 19-22. The organizers are pleased to announce the formation of the selection committee and the strengthening of their team for this event scheduled in parallel with **Beirut Art Fair**, which will celebrate its tenth anniversary.

**A.N. Boukather Motorcycles** organized the first stage of the 390 Cup at Karting Mania Kousba, with the support of **TOTAL** and **Commercial Insurance** and in tribute to late ANB Motorcycles club member Jean Azar.

Marking World No Tobacco Day, the **American University of Beirut**, the **Knowledge Hub on Waterpipe Tobacco Smoking**, and the **Tobacco Free Initiative of Lebanon**, in collaboration with the **World Health Organization**, organized an event to discuss tobacco control measures effectiveness and implementation in Lebanon.

As part of its efforts to safeguard cultural heritage, and in the framework of its project "Developing a Conservation Management Plan for the Rashid Karami International Fair in Tripoli," **UNESCO Beirut** organized a first technical workshop at the RKIF complex in Tripoli.

**Ericsson** announced the appointment of Lucky La Riccia as head of digital services for Middle East and Africa as of May 15.

As part of its strategy to build partnerships with other sectors, and

being part of **Spinneys Group**, **Happy** launched a cobranded loyalty card with **Careem** at an event held at Happy Hazmieh branch on May 20, bringing together Careem captains along with Happy and Careem team members.

**BEIRUT ART FAIR** is excited to announce its 2019 VIP program, celebrating its 10-year anniversary. The exhilarating five-day experience bursts with artistic discoveries epitomizing Lebanon's artistic eclecticism and cosmopolitan spirit.

**LG Electronics** announced the start of sales of the world's first 8K OLED TV (model 88Z9) with pre-orders for the 88-inch set starting in mid-June in South Korea. Availability in key markets of North America and Europe will follow in the third quarter of the year.

This May, **Spinneys** kicked off summer for pets and animal lovers in Lebanon with a two-day event full of activities in Spinneys Hazmieh branch. This is the third year in a row that Spinneys held this event, proven to be a big success.

Adrenaline junkies, wall runners, and freestyle jumpers of Lebanon, get ready. **BOUNCE** is landing in the country this summer, offering one of the largest high-energy trampoline adventure parks in the region.

**Majid Al Futtaim** organized its annual Iftar for orphans at City Centre Beirut and put a smile on kids' faces during the holy month of Ramadan.

Walid Moussa, president of the **Real Estate Syndicate of Lebanon**,

was installed as the world president for the **International Real Estate Federation (FIABCI)** for 2019-2020, succeeding Assen Makedonov from Bulgaria. Moussa is the first Arab president for FIABCI, which is considered the only international federation in the world for real estate professionals.

Away from the city's traffic and chaos, **Pasquale**, the Italian restaurant at **Grand Hills**, a Luxury Collection Hotel & Spa, this year offers an ideal retreat right in the middle of Broummana village, where authentic Italian cuisine meets the soothing breeze of summer.

**Ferrari** introduced a new chapter in its history with the introduction of its first series production PHEV (Plug-in Hybrid Electric Vehicle), the SF90 Stradale, images, videos, and information of which can be seen on the dedicated website.

**BBAC** won, for the third consecutive year, the BDL Banks Mini Football Championship organized by **Sports Mania** and held under the patronage of Riad Salameh, governor of **Banque du Liban**, Lebanon's central bank.

**Pikasso** announced that it has entered the Armenian market under the name of Pikasso OOH LLC and launched its activity with the acquisition of the inventory of locations of Arabella.

During a press conference on June 24 at its headquarters in Ashrafieh, **Byblos Bank** announced the inauguration of its new data center, the only Uptime Institute Tier III certified constructed facility in Lebanon.



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STRATEGY - FINANCE - GOVERNANCE

# BUSINESS ESSENTIALS

## Events

### CONFERENCES

	ORGANIZERS	CONTACT	WEBSITE
<b>LEBANON</b>			
3 Jul	<b>RETAIL BANKING SUMMIT</b> Efma	+33 1 47 42 52 72; info@efma.com	www.efma.com
6-7 Jul	<b>INTERNATIONAL CONFERENCE ON MANAGEMENT, ECONOMICS &amp; SOCIAL SCIENCE</b> Research Fora	+91 8895188531; info@researchfora.com	www.researchfora.com
13 Sep	<b>DIGITAL LEBANON CONFERENCE</b> Al Iktissad Wal Aamal Group	+961 1 780 200; forums@iktissad.com	www.iktissadevents.com
20 Sep	<b>OIL AND GAS EASTMED FORUM</b> Al Iktissad Wal Aamal Group	+961 1 780 200; forums@iktissad.com	www.iktissadevents.com
25-27 Sep	<b>INTERNATIONAL BEIRUT ENERGY FORUM</b> MCE Group	+961 9 900110; events@mcegroup.net	www.mcegroup.net
<b>DUBAI</b>			
1-2 Sep	<b>GCC FUTURE LEADERS CONFERENCE</b> Datamatix Group	+9714 332 6688; info@datamatixgroup.com	www.datamatixgroup.com
2 Sep	<b>GCC START UP AND SME SUMMIT</b> Datamatix Group	+9714 332 6688; info@datamatixgroup.com	www.datamatixgroup.com
4 Sep	<b>GLOBAL ONLINE SHOPPING PORTALS EFFECTS ON GCC RETAIL INDUSTRY CONFERENCE</b> Datamatix Group	+9714 332 6688; info@datamatixgroup.com	www.datamatixgroup.com
5 Sep	<b>EPAYMENT STRATEGY CONFERENCE</b> Datamatix Group	+9714 332 6688; info@datamatixgroup.com	www.datamatixgroup.com
9-10 Sep	<b>AI WEEK MIDDLE EAST</b> IQPC	+030 20913 -274; info@iqpc.de	www.iqpc.ae
17-18 Sep	<b>CUSTOMER EXPERIENCE WEEK</b> IQPC	+030 20913 -274; info@iqpc.de	www.iqpc.ae
23-26 Sep	<b>ANNUAL PROCESS SAFETY SUMMIT</b> IQPC	+030 20913 -274; info@iqpc.de	www.iqpc.ae
24 Sep	<b>CITYSCAPE GLOBAL CONFERENCE</b> Cityscape Global	+971 4 407 2528; register@cityscape.org	www.cityscapeglobal.com
24-25 Sep	<b>TELECOMS WORLD MIDDLE EAST</b> Terrapinn	+971 4440 2500; enquiry.me@terrapinn.com	www.terrapinn.com
30 Sep - 2 Oct	<b>ANNUAL ENTERPRISE RISK MANAGEMENT CONFERENCE</b> IQPC	+030 20913 -274; info@iqpc.de	www.iqpc.ae
6-8 Oct	<b>DATAMATIX GITEX CONFERENCE</b> Datamatix Group	+9714 332 6688; info@datamatixgroup.com	www.datamatixgroup.com
9 Oct	<b>GOVERNMENT AND BUSINESS LEADING CEO CONFERENCE</b> Datamatix Group	+9714 332 6688; info@datamatixgroup.com	www.datamatixgroup.com
15-16 Oct	<b>ENTERPRISE FINTECH SUMMIT</b> Naseba	971 4581 4300; chukkyn@naseba.com	www.naseba.com
16-17 Oct	<b>PROCUREMENT STRATEGY SUMMIT</b> Fleming	+421 257 272 100; info@fleming.events	www.fleming.events
21-22 Oct	<b>ISLAND AND MARINE DEVELOPMENT MIDDLE EAST</b> IQPC	+030 20913 -274; info@iqpc.de	www.iqpc.ae
28-29 Oct	<b>WOMEN IN LEADERSHIP ECONOMIC FORUM</b> Naseba	+971 4581 4300; prachid@naseba.com	www.naseba.com
30-31 Oct	<b>DIGITAL CFO FORUM</b> Naseba	+971 4581 4300; prachid@naseba.com	www.naseba.com
<b>ABU DHABI</b>			
16-17 Sep	<b>BUILDING CAPABILITY AND FUTURE CAREERS 2019</b> Advanced Conferences & Meetings	+971 4 563 1555; mailing@acm-events.com	www.acm-events.com
24-25 Sep	<b>NATIONAL SECURITY MIDDLE EAST</b> IQPC	+030 20913 -274; info@iqpc.de	www.iqpc.ae



	ORGANIZERS	CONTACT	WEBSITE
29-30 Sep	<b>FUTURE DRAINAGE &amp; STORMWATER NETWORKS 2019</b> Advanced Conferences & Meetings	+971 4 563 1555; mailing@acm-events.com	www.acm-events.com
29-30 Oct	<b>ABU DHABI SMART CITY SUMMIT</b> Advanced Conferences & Meetings	+971 4 563 1555; mailing@acm-events.com	www.acm-events.com
<b>SAUDI ARABIA</b>			
29-30 Oct	<b>COMPENSATION AND BENEFITS FORUM</b> Informa Middle East	+971 4 407 2528; info-mea@informa.com	www.informa-mea.com
4-5 Nov	<b>WET INFRASTRUCTURE SUMMIT</b> Advanced Conferences & Meetings	+971 4 563 1555; mailing@acm-events.com	www.acm-events.com
4-5 Nov	<b>FUTURE LANDSCAPE AND PLAYSPACES KSA</b> Advanced Conferences & Meetings	+971 4 563 1555; mailing@acm-events.com	www.acm-events.com
4-5 Dec	<b>ATD 2019</b> Informa Middle East	+971 4 407 2528; info-mea@informa.com	www.informa-mea.com
<b>EGYPT</b>			
11-13 Jul	<b>COMBATING ANTI-MONEY LAUNDERING AND TERRORISM FINANCING FORUM</b> Union of Arab Banks	+961 1 377800; uab@uabonline.org	www.uabonline.org
3-4 Sep	<b>SHARED SERVICES AND OUTSOURCING FORUM MIDDLE EAST</b> IQPC	+030 20913 -274; info@iqpc.de	www.iqpc.ae
25-26 Sep	<b>MEDIATION AND ARBITRATION IN ARAB BANKS AND FINANCIAL INSTITUTIONS CONFERENCE</b> Union of Arab Banks	+961 1 377800; uab@uabonline.org	www.uabonline.org
<b>KUWAIT</b>			
16-18 Sep	<b>ANNUAL MAINTENANCE KUWAIT SUMMIT</b> IQPC	+030 20913 -274; info@iqpc.de	www.iqpc.ae
25-27 Sep	<b>ANNUAL MILITARY LOGISTICS AND PROCUREMENT</b> IQPC	+030 20913 -274; info@iqpc.de	www.iqpc.ae
21-22 Oct	<b>KUWAIT ROADS, BRIDGES AND HIGHWAYS SUMMIT</b> IQPC	+030 20913 -274; info@iqpc.de	www.iqpc.ae
<b>BAHRAIN</b>			
14-16 Oct	<b>MIDDLE EAST PROCESS ENGINEERING CONFERENCE &amp; EXHIBITION</b> Middle East Energy Events	+971 442 70 739; info@mee-events.com	www.me3-events.com
14-16 Oct	<b>WORLD PETROLEUM COUNCIL (WPC) DOWNSTREAM CONFERENCE</b> Middle East Energy Events	+971 442 70 739; info@mee-events.com	www.me3-events.com
14-16 Oct	<b>3RD LEADERSHIP EXCELLENCE FOR WOMEN AWARDS &amp; SYMPOSIUM</b> Middle East Energy Events	+971 442 70 739; info@mee-events.com	www.me3-events.com
<b>JORDAN</b>			
8-9 Oct	<b>THE IMPACT OF ECONOMIC SANCTIONS AND TRADE WARS ON BANKS AND FINANCIAL INSTITUTIONS</b> Union of Arab Banks	+961 1 377800; uab@uabonline.org	www.uabonline.org
<b>QATAR</b>			
11-12 Sep	<b>QATAR WATER INFRASTRUCTURE CONFERENCE</b> IFP	+961 5 959 111; info@ifpexpo.com	www.ifpexpo.com
2-3 Oct	<b>COMBATING FINANCIAL CRIMES: COMPLIANCE WITH EVOLVING GLOBAL AML/CFT STANDARDS</b> Union of Arab Banks	+961 1 377800; uab@uabonline.org	www.uabonline.org
<b>OMAN</b>			
21-23 Oct	<b>DIGITAL REFINERIES OMAN</b> IQPC	+030 20913 -274; info@iqpc.de	www.iqpc.ae
29-30 Oct	<b>GULF FORUM FOR RISK MANAGEMENT</b> Union of Arab Banks	+961 1 377800; uab@uabonline.org	www.uabonline.org

# BUSINESS ESSENTIALS

## Events

### EXHIBITIONS

	ORGANIZERS	CONTACT	WEBSITE
<b>LEBANON</b>			
1-7 Jul	<b>BEIRUT DESIGN WEEK</b> Beirut Design Week	+961 1 759 399; nine@beirutdesignweek.org	www.beirutdesignweek.org
4-6 Jul	<b>BYBLOS EN BLANC ET ROSE</b> Events	+961 1 280 085; info@eventionslb.com	www.vinifestlebanon.com
12-14 Jul	<b>ARAB ART FAIR</b> EDUCity	+961.5.8142.32; farhat@educity.me	
30 Jul - 1 Aug	<b>BEIRUT INTERNATIONAL JEWELRY SHOW</b> MICE Lebanon	+961 1 384 791; christian@micelebanon.com	www.beirutjewelryshow.com
2-3 Aug	<b>VINIPICNIC</b> Events	+961 1 280 085; info@eventionslb.com	www.vinifestlebanon.com
18-22 Sep	<b>BEIRUT ART FAIR</b> Beirut Art Fair	+961 76 49 74 53; info@beirut-art-fair.com	www.beirut-art-fair.com
19-22 Sep	<b>BEIRUT DESIGN FAIR</b> Cedralys	+961 76 49 74 53; gth@beirut-design-fair.com	www.beirut-design-fair.com
27-29 Sep	<b>BEIRUT RESTAURANT FESTIVAL</b> Hospitality Services	+961 1 480 081; info@hospitalityservices.com.lb	www.hospitalityservices.com.lb
2-5 Oct	<b>VINIFEST</b> Events	+961 1 280 085; info@eventionslb.com	www.vinifestlebanon.com
10-12 Oct	<b>WHISKY LIVE BEIRUT</b> Hospitality Services	+961 1 480 081; info@hospitalityservices.com.lb	www.hospitalityservices.com.lb
15-18 Oct	<b>4P EAST MED</b> IFP	+961 5 959 111; info@ifpexpo.com	www.ifpexpo.com
17-20 Oct	<b>WEDDING FOLIES: THE BRIDAL EXPO</b> Promofair	+961 1 561 600; info@promofair.com.lb	www.promofair.com.lb
24-28 Oct	<b>ROYAL WEDDING FAIR</b> Wedding malls	+961 3 824364; info@weddingmalls.com	www.weddingsmall.com
<b>DUBAI</b>			
3-4 Sep	<b>SPS AUTOMOTIVE MIDDLE EAST</b> Messe Frankfurt Middle East GmbH	+971 4 3894500; info@spsautomationme.com	www.ae.messefrankfurt.com
3-5 Sep	<b>MATERIALS HANDLING MIDDLE EAST</b> Messe Frankfurt Middle East GmbH	+971 4 3894500; materialshandling@uae.messefrankfurt.com	www.ae.messefrankfurt.com
23-24 Sep	<b>SEATRADE OFFSHORE MARINE AND WORKBOATS</b> Informa Middle East	+971 4 407 2528; info-mea@informa.com	www.informaexhibitions.com
25-27 Sep	<b>CITYSCAPE GLOBAL</b> Informa Middle East	+971 4 407 2528; info@cityscapeglobal.com	www.informaexhibitions.com
14-15 Oct	<b>THE AVIATION SHOW</b> Terrapinn	+971 4440 2500; enquiry.me@terrapinn.com	www.terrapinn.com
15-17 Oct	<b>LIGHT MIDDLE EAST</b> Messe Frankfurt Middle East GmbH	+971 4 3894500; light@uae.messefrankfurt.com	www.ae.messefrankfurt.com
<b>ABU DHABI</b>			
18-19 Sep	<b>CLEANZONE MIDDLE EAST</b> Messe Frankfurt Middle East GmbH	+971 4 3894500; info@cleanzoneme.com	www.ae.messefrankfurt.com
24-26 Oct	<b>MIDDLE EAST GAMES CON</b> Informa Middle East	+971 4 407 2528; info-mea@informa.com	www.informaexhibitions.com
31 Oct	<b>INTERNATIONAL REAL ESTATE SHOW</b> Dome Exhibitions	+971 2 674 4040; domexh@emirates.net.ae	www.domeexhibitions.com
6-7 Apr	<b>CITYSCAPE ABU DHABI</b> Cityscape Global	+971 4 407 2528; info@cityscapeabudhabi.com	www.cityscapeglobal.com

	ORGANIZERS	CONTACT	WEBSITE
<b>BAHRAIN</b>			
24-26 Sep	<b>GULF INDUSTRY FAIR</b> Hilal Conferences & Exhibitions	+973 17 299123; info@hilalce.com	www.hilalce.com
24-26 Sep	<b>CHINA MACE MACHINERY FAIR</b> Pinnacle Communications	+973 17215665; info@pinnaclebh.com	www.abc-bahrain.com
24-26 Sep	<b>ITECH FOR INDUSTRY</b> Pinnacle Communications	+973 17215665; info@pinnaclebh.com	www.abc-bahrain.com
<b>EGYPT</b>			
9-12 Sep	<b>SAHARA EXPO</b> Informa Middle East	+971 4 407 2528; info-mea@informa.com	www.informaexhibitions.com
17-19 Oct	<b>NEXT MOVE</b> Informa Middle East	+971 4 407 2528; Faariss.Khalil@informa.com	www.informaexhibitions.com
<b>SAUDI ARABIA</b>			
7-10 Oct	<b>SAUDI BUILD</b> Riyadh Exhibitions Company	+966 1 454 1448; info@recexpo.com	www.recexpo.com
21-24 Oct	<b>SAUDI AGRICULTURE</b> Riyadh Exhibitions Company	966 1 454 1448; info@recexpo.com	www.recexpo.com
27-29 Oct	<b>BEAUTY WORLD SAUDI ARABIA</b> Messe Frankfurt Middle East GmbH	+971 4 3894500; elaine.oconnell@uae.messefrankfurt.com	www.ae.messefrankfurt.com
<b>JORDAN</b>			
15-17 Oct	<b>HORECA JORDAN</b> Hospitality Services	+961 1 480 081; info@hospitalityservices.com.lb	www.hospitalityservices.com.lb
<b>IRAQ</b>			
30 Sep - 3 Oct	<b>PROJECT IRAQ</b> -	+961 5 959111; info@ifpexpo.com	www.ifpexpo.com

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# LAST WORD

By Marc Haddad

## Initiatives to move forward

Sustaining mobility in Lebanon

**Lebanon's transport sector is one of the most unsustainable in the Middle East region.** This is mostly due to the continuing absence of any public transportation by bus or rail for over 40 years, and the lack of infrastructure for alternative transport means, such as bicycles and walking. The result is an exclusive reliance on cars and trucks that are overly polluting; according to local research, 98 percent of all fuels used in Lebanon's transport are gasoline and diesel, with 60 percent of all cars having large engines, and 70 percent being older than 10 years. Mobility in Lebanon has become synonymous with traffic congestion and noxious fumes, harming human health, the economy, and the environment.

It is clear from the diagnosis of the problem that serious solutions by the state are needed immediately, under the organizing umbrella of a national transportation strategy that is still missing to date. But in a tough economy and without effective state institutions today, it might be more useful to look at feasible solutions that can be done in the near-term at the level of municipalities and non-state actors, such as non-governmental organizations (NGOs) and the private sector.

Where the government is not able to fulfill its mandate, many NGOs and experts have been active, but each one working in a separate part of the sector. To increase chances for success, NGOs should unify their voice and engage the state, the private sector, academia, and international bodies in a constructive dialogue, pooling resources. This can push forward low cost, near-term projects and pilot projects with tangible positive impacts on the daily commute.


For example, in the absence of a comprehensive public bus service across all regions, smaller regional initiatives by municipalities and the private sector can be very effective in improving mobility within cities and high-density areas. Such initiatives can also serve as pilot tests ahead of any future deployment of a country-wide bus network by the state, providing valuable insights about passenger demand, service costs, and bus technology performance, potentially even becoming feeders for the main network in the future. These projects would also encourage the gradual development of local capabilities in the sector, from training and maintenance of facilities to information service providers.

However, such initiatives cannot replace the state, which has the primary role and responsibility for providing a nationwide and modern public transport service to its citizens, with all the significant infrastructure and resources needed to operate it. This is why it is equally important to continue lobbying the state for this right, especially at this critical juncture where funding pledges for the transport sector out of CEDRE amount to a third of the \$11 billion pledged.


In its current form, the CEDRE-linked Capital Investment Plan (CIP) for the transport sector is entirely focused on infrastructure projects such as roadways and tunnels, but does not account for public transportation needs. And while many of these projects are useful and needed, they will not, however, improve mobility in the long term, as more cars and trucks will eventually overfill the additional capacity—according to a 2016 Bankmed report, on average, over 35,000 new-model

passenger cars alone enter our roads each year. This is why some NGOs, like “Transport Coactives” (TRACS), which itself is formed by a number of active NGOs and experts in the transport sector including myself, are actively lobbying today to reprioritize the CEDRE/CIP spending toward transport projects that include public transportation.

In the meantime, more of the feasible and affordable initiatives can be implemented easily and can have a positive impact, if not on congestion levels, at least on human health and the environment. In a 2017 study by the Ministry of Energy and Water and the UNDP on the potential use of low carbon fuels in the transport sector, one of our short-term policy recommendations was to reduce taxes on hybrid electric vehicles in order to make this cleaner technology more affordable, and thereby encourage its adoption in Lebanon. In that study, hybrids were estimated to save nearly 30 percent in fuel consumption and greenhouse gas emissions compared to conventional engine vehicles, while also significantly reducing emission of some of the air pollutants harmful to human health. And while the government did recently reduce taxes on these vehicles down to 20 percent, more reductions are necessary to speed up their adoption, as Lebanon remains largely behind global and even regional trends.

But perhaps the most important takeaway is that collaboration on feasible solutions, while necessary and useful, is not sufficient to sustain the transport sector in Lebanon. Only a national transportation strategy that organizes efforts and resources can begin to tackle the problem at its root cause. 

*Marc Haddad, PhD, is an assistant professor in the school of engineering at the Lebanese American University and a co-founder of TRACS, a non-profit civil society organization in Lebanon.*



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