The FORTNIGHTLY

A Review of Middle East Regional Economic & Cultural News & Developments

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1.   ISRAEL GOVERNMENT ACTIONS & STATEMENTS

1.1. Israel, Greece, Cyprus & the UAE Hold Joint Strategic Meeting

Israeli Foreign Minister Gabi Ashkenazi met on 16 April in Paphos, Cyprus with Cypriot, Greek and Emirati officials in the first such meeting of its kind. Ashkenazi met in person with Cypriot Foreign Minister Christodoulides, Greek Foreign Minister Dendias and the Emirati minister of state for foreign affairs Gargash — with Emirati Foreign Minister Abdullah bin Zayed joining them virtually. The ministers held bilateral meetings before holding a four-way meeting; there are plans for the officials from the four countries to convene regularly, both at the ministerial and professional working levels.

The meeting was held against the backdrop of growing tensions between Israel and Iran, especially on the maritime front, and while discussions are undergoing in Vienna on a possible renewed nuclear agreement between Tehran and Washington. Still, the Iranian threat was just one of a series of issues discussed by the foreign affairs leaders of the four countries. Israel, Greece and Cyprus have been working closely together for several months now in the field of energy, with the Emiratis recently joining this alliance of regional energy cooperation. The leaders also discussed tourism against the backdrop of the coronavirus pandemic and other key economic issues. Similarly, the subjects of Turkey and Libya were also on the table.

The greatest importance of the meeting may have been the framework created there, and the evident feeling of trust registered by its participants. Still, it remains to be seen how Israel's next foreign minister

will take up this newly forged friendship. Ashkenazi did not run in the 23 March elections and is bound to step down from his post in the coming weeks. (Al Monitor 19.04)

1.2. Israel & UAE Sign Healthcare Agreement

On 21 April, Israel and the United Arab Emirates agreed to cooperate in the field of healthcare, the Health Ministry announced. The agreement, an initiative of the Health and Foreign Ministries, will see Jerusalem and Abu Dhabi join forces on several fronts, including in the fight against pandemics as well as the cybersecurity and data protection fields. The agreement will also see the enactment of large-scale joint economic and health-related projects.

Israel and the United Arab Emirates signed their historic peace accord normalizing relations at a White House ceremony on 15 September 2020. (Various 22.04)

1.3. Government Committee Says Haifa Petrochemicals Plants to Close Within a Decade

The committee of ministry directors general appointed by the government to formulate recommendations for the future of the petrochemicals industry in Haifa Bay said they should be closed within a decade. The committee has not, however, set a specific date, and has left the government room to decide, which could help it from a legal point of view if that becomes necessary. The end of oil refining in the area will take place subject to meeting targets required for maintain stability in the energy sector, for which a special administration will be responsible. The directors' general committee was formed in October last year based on an agreement reached between Prime Minister Netanyahu and Minister of Environmental Protection Gamliel.

Intensive industrial activity is concentrated In Haifa Bay, adjacent to densely populated areas. It includes petrochemicals plants (Bazan-Oil Refineries), a large chemicals industry zone and crude oil storage. This activity, along with two seaports and a third under construction, makes Haifa Bay one of the worst environmental pollution zones in Israel.

The recommendations state that in accordance with progress in planning and in rezoning land in such a way as to facilitate sustainable development of the Haifa Bay area and its transformation into an area for residential and commercial use, the government will set a target whereby within a decade all the relevant government agencies will complete their preparations and petrochemicals activity Haifa Bay will cease. This is subject to meeting requirements for ensuring continuity in the energy economy after activity in Haifa Bay is halted. If the relevant agencies manage to complete their work within a shorter period of time, it will be possible to end petrochemicals activity in Haifa Bay earlier.

Among the committee's proposals are government action to attract a strategic "anchor enterprise" to the area, a package of environmental measures and a switch to electric vehicles; reducing pollution from ships through the promotion of a "green ports" plan; and a national plan for a switch from liquefied petroleum gas (LPG) to natural gas and electricity for large industrial consumers and for households. (Globes 27.04)

2. ISRAEL MARKET & BUSINESS NEWS

2.1. G42 and Rafael Form a New Joint Venture

Group 42 (G42), a leading technology company based in Abu Dhabi, and Rafael Advanced Defense Systems of Israel signed an agreement to form a new Joint Venture (JV) that will commercialize Artificial Intelligence (AI) and Big Data technologies and solutions for multiple sectors. In bringing together two of

the most active and successful players in the fields of AI and Big Data, the new JV, called Presight.AI, will combine the companies' knowledge, personnel, technology, and resources to conceptualize, develop, and deploy best-in-class solutions in various programs in the region and globally.

Presight.AI will establish an R&D center in Israel, tapping into the local talent to spearhead the advancement of AI and Big Data technologies and their application across multiple sectors such as, banking, healthcare, public safety and others. The agreement is subject to regulatory approvals by Israeli and UAE authorities.

G42 brings significant expertise in the research, development and deployment of AI for both the public and private sectors and operates a powerful cloud computing infrastructure set to become the largest in the region. A frontrunner in the global fight against COVID-19, G42 has provided nationwide detection and diagnostic solutions, while also contributing to the successful rollout of the vaccine clinical trials and its distribution in the UAE. A key player in the digitization of large enterprises and governments, the company announced last week a major investment from US-based investment technology firm, Silver Lake.

With a legacy of over 73 years, Rafael Advanced Defense Systems is a national center of research and development through its wide range of cutting-edge technologies. Rafael is a world leader in AI and Big Data technologies, and has implemented its deep and extensive knowhow and expertise in these fields into many of its cutting edge defense and civilian solutions, such as Wisdom Stone and others. As a global leader in the areas of Intelligence collection and processing, as well as all aspects of the Cyberspace environment and Space technologies, Rafael's expertise in AI enables organizations and governments to achieve technological superiority. (G42 19.04)

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2.2. RadView Acquires AI-based Test Automation Startup Shield34

RadView Software announced the acquisition of AI-based test automation startup, Nazareth's Shield34 as part of its strategy of building an open end-to-end test automation platform. Shield34, an innovative test automation platform, takes a unique approach to functional testing by enriching native Selenium tests with AI-based capabilities for improved stability, self-healing, and simpler root cause analysis. Shield34 allows organizations to develop new tests using plain Selenium code or utilize their existing testing code with no changes needed while enjoying the platform's full capabilities.

RadView, known for the quality of its products, breadth of coverage, and world-class support, has been looking for ways to extend its offering to its customer base and Shield34 is an important addition to RadView's product line. With this acquisition, RadView is scaling up its offering, taking on a comprehensive approach to testing automation. WebLOAD, RadView's industry-leading performance testing solution, and Shield34's AI-based functional testing platform provide together a perfect and consistent testing automation solution for organizations who want to take their software quality to the next level.

Rosh HaAyin's RadView Software is a leading provider of enterprise-grade performance and load testing solutions that enable organizations to achieve the level of performance essential for business success today. Leveraging its innovative and reliable WebLOAD performance testing platform, RadView empowers hundreds of Enterprises and SMBs with faster time-to-market of websites and web applications. (RadView Software 21.04)

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2.3. Perception Point Raises $28 Million to Advance Messaging Protection

Perception Point raised $28 million in Series B funding, bringing the total funding to $48 million. The new funding round was led by Red Dot Capital Partners and joined by global investor NGP Capital along with existing investors Pitango Venture Capital and State of Mind Ventures (SOMV). Funds from this round will

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be used to fuel rapid growth, expand to new markets, accelerate product innovation and grow the team to support customer demand.

In 2020, Perception Point recorded its most successful year since its inception. The company tripled its recurring revenue and expanded its customer portfolio to include users from multiple industries, such as telecom, tech, retail, food and beverage, healthcare, financial services and more. The company also doubled its number of Fortune 500 customers and developed a strong network of partners, including global resellers and MSSPs.

Tel Aviv's Perception Point has formulated a comprehensive three-pillar approach for protecting businesses from content-based attacks, which provides the most effective detection, supports admins and end-users with full Incident Response services, and covers all communication channels. In addition, the solution is offered through easily implementable API technology, enabling clients to get immediate protection. This combination enables Perception Point to not only intercept more incidents prior to compromising end-users, but also ensures that all events are fully and rapidly contained and remediated. It is a cybersecurity service that works for its users, and not the other way around. (Perception Point 21.04)

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2.4. Saint-Gobain & Addionics Collaborate on Fast-Charging Electric Batteries

Saint-Gobain, the global technical material expert, will partner with the Israeli battery technology start-up Addionics to develop next generation solid-state lithium-ion batteries with novel electrode components under the Israel - US BIRD Energy program. The partnership aims to offer major improvements in EV battery performance, such as longer driving range, fast charging, enhanced safety and lower production costs.

Saint-Gobain's initial technological breakthrough with its novel solid-state battery components enables safer battery operation and low-cost manufacturing by simplifying the production flow and eliminating intermediate processes. Saint-Gobain's electrolytes have demonstrated high Li-ion conductivity comparable with the state-of-the-art solid electrolytes and offer additional potential performance, manufacturing and economic benefits.

Tel Aviv's Addionics provides smart 3D electrode technology that enables enhanced electrical current collection across the volume of thick battery electrodes and improved material usage leading to a boost in battery energy density and cycle life, as already demonstrated in more conventional battery platforms. Addionics' technology also helps solve the interfacial resistance issues commonly observed in solid-state batteries.

BIRD (Binational Industrial Research and Development) Foundation works to encourage and facilitate cooperation between U.S. and Israeli companies in a wide range of technology sectors and offers funding to selected projects. BIRD supports projects without receiving any equity or intellectual property rights in the participating companies or in the projects themselves. BIRD funding is repaid as royalties from sales of products that were commercialized as a result of BIRD support. (Saint-Gobain 20.04)

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2.5. Navya & REE to Develop a Level 4 Autonomous System

Villeurbanne, France's Navya, a leading company in autonomous driving systems and Tel Aviv's REE Automotive have signed an agreement to collaborate in the development of a level 4 autonomous system including REEcorner technology and Navya self-driving solutions.

REE is revolutionizing the e-Mobility industry through its highly modular and disruptive REEcorner technology which integrates critical vehicle components (steering, braking, suspension, powertrain and control) into the arch of the wheel. REE's proprietary x-by-wire technology challenges century-old

automotive concepts by being agnostic to vehicle size and design, power-source and driving mode (human or autonomous). Platforms utilizing REEcorners can present significant functional and operational advantages over conventional EV "skateboards" currently available in the market.

Navya is a leading player in level 4 autonomous driving systems for passenger and goods transport. Since 2015, Navya autonomous mobility solutions have been first to market and first to on-road service in real conditions. The Autonom® Shuttle, main development platform, is dedicated to passenger transport. Since its launch, more than 180 units have been sold in 23 countries, as of 31 December, 2020. The Autonom® Tract is designed for goods transport. (REE 19.04)

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2.6. WeWork Announces Agreement with Ampa Group for WeWork Israel

WeWork, the leading flexible space provider, announced the signing of an agreement with Ampa Group, one of the leading real estate companies in Israel, giving Ampa the exclusive right to operate WeWork Israel as a franchise. Ampa has played an integral role in WeWork's development across the region since the company opened its first location in Israel in 2014. Seven years later, WeWork Israel has expanded to thirteen locations across six cities, providing more than 10,000 members across the country with flexible and innovative space solutions.

This announcement is the latest chapter in the ongoing partnership between WeWork and Ampa, and solidifies the shared belief in WeWork Israel's potential for continued success. Over the past year, WeWork has been laser focused on strengthening the business and its operations around the world, with an eye towards asset light solutions that can bring local capital and knowledge to key markets. As a result, this franchise agreement will combine the strength of WeWork's product with Ampa's proven local insight and expertise. As companies around the world look to reassess their workplace needs, this partnership will ensure WeWork Israel is well positioned to meet the growing demand from enterprise clients and companies of all sizes seeking world-class, flexible space solutions. The Israel franchise deal is expected to close by the end of the second quarter and is subject to customary closing conditions and regulatory approvals.

Ampa Group is one of the largest holding companies in Israel, active in various fields including real estate, finance, industry, agriculture, and energy. The real estate activity includes the ownership and management of more than 400,000 sq. m. of offices, commercial and logistics properties, with tenants like Google, PayPal and VMware. (WeWork 19.04)

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2.7. Aquarius Engines' Strategic Agreement with Honda-affiliate Musashi Seimitsu

Rosh HaAyin's Aquarius Engines approved a strategic agreement with Honda-affiliate Musashi Seimitsu Industry Co., a leading publicly traded Japanese auto-parts manufacturer and one of the Aquarius Engines controlling shareholders. The agreement focuses on strategic collaboration on research and development, assembly, distribution, marketing and sales of the Aquarius Engines and generators. The specifics of the deal are still subject to change with negotiations ongoing.

The move comes after Aquarius Engines announced another strategic partnership with Japanese auto-parts manufacturer TPR. Aquarius Engines has also begun the process of establishing a Japanese subsidiary to extend their reach in Japan and propel Aquarius Engines towards its entry into the automotive market through a strategic partnership with a leading player in the industry.

The Government of Japan continues to encourage the development of technological innovations in the field of hydrogen as an energy source and allocates significant resources for this purpose, a move that serves as a fertile ground for the Aquarius Engines plans to revolutionize green energy.

Aquarius Engines has developed and produced a tiny 10kg linear engine for generating electricity, with an internal combustion mechanism. Unlike large traditional engines, the Aquarius Engine only has one moving part and converts fuel into electricity without the use of oil. Due to its size and light weight, the engine has high mechanical efficiency that allows for low emissions and low pollution. (Aquarius Engines 21.04)

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2.8. RapidAPI Raises $60 Million to Support Developer Growth of Leading API Platform

RapidAPI has raised $60 million in its Series C funding round. The financing was led by Green Bay Ventures and includes new investor, Stripes. Existing investors include Andreessen Horowitz, DNS Capital, M12 (Microsoft's Venture Fund), Viola Growth, and Grove Ventures, bringing the total amount raised for RapidAPI to $122.5 million. The investment comes on the heels of a high-growth year for RapidAPI amidst a pandemic that drove a record number of developers and companies to the RapidAPI platform to advance their digital initiatives and accelerate the delivery of their software and services to the market.

Driven by the explosion of APIs, federation of API programs, acceleration of cloud initiatives, and the push to microservices, companies have turned to RapidAPI to modernize their infrastructure in order to remain competitive in today's environment of digital disruption. The recent fundraise will be used to support the influx of new developers to the platform, the onboarding of leading API providers to the public marketplace, and the expansion of the API platform, including RapidAPI's Enterprise Hub, to serve the rapidly growing enterprise customer base.

Tel Aviv's RapidAPI, the world's largest API Marketplace, is used by millions of developers to find, test and connect to thousands of APIs — all with a single account, API key and SDK. For enterprise organizations, RapidAPI offers RapidAPI Enterprise Hub, a white-labeled version of the marketplace that enables the company's developers, customers, and partners to find, manage, and connect to hundreds of internal APIs, as well as external API subscriptions. (RapidAPI 21.04)

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2.9. DeepCube Acquired by Nano Dimension to Drive Industry 4.0 Evolution

DeepCube has signed a definitive agreement to be acquired by Nano Dimension. After the closing of the transaction, DeepCube will function as a division of Nano Dimension, creating first-of-its-kind, AI powered-Additively Manufactured Electronics (AME)/PE (3D-Printed Electronics) platforms and services. DeepCube's training platform and real-time inference engine will be integrated into Nano Dimension AME 3D-printers, acting as smart nodes in a Smart Fabrication Network (SFN), as well as being the AI control center for these networks. With DeepCube's expertise in machine learning/deep learning, the vision of Industry 4.0 – where machines cooperate, learn, optimize and deliver printed electronics – is now achievable.

DeepCube's breakthrough algorithms accelerate multi-domain neural models by orders of magnitude, making it an exceptional fit for complex and real-time edge problems, particularly 3D manufacturing. The novel DeepCube approach fuses together both a cutting-edge training framework and a highly optimized inference engine to accomplish aggressive performance goals. Smart 3D manufacturing nodes are equipped with many real-time, cross-disciplinary sensors, which generate Giga Bytes of time-sensitive data. DeepCube's platform transforms this massive amount of data to insights and actions, in real-time, creating the self-learning and optimizing machine infrastructure. AI-driven distributed digital fabrication, pioneered by Nano Dimension and DeepCube, will improve yield, throughput, quality, design options and optimization.

Tel Aviv's DeepCube is an award-winning deep learning pioneer that provides the industry's first software-based deep learning acceleration platform that drastically improves performance on existing hardware. Modeled after the way the human brain develops during childhood, DeepCube's patented technology is the first to be purpose-built for deployment of deep learning models in data centers and on intelligent edge devices.

Ness Ziona's Nano Dimension is a provider of intelligent machines for the fabrication of Additively Manufactured Electronics (AME). High fidelity active electronic and electromechanical subassemblies are integral enablers of autonomous intelligent drones, cars, satellites, smartphones, and in vivo medical devices. They necessitate iterative development, IP safety, fast time-to-market and device performance gains, thereby mandating AME for in-house, rapid prototyping and production. (DeepCube 22.04)

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2.10.   AirEye Raises $8 Million Series A to Extend Network Security into Digital Airspace

AirEye raised $8 million in a Series A funding round led by U.S. Venture Partners (USVP). Steve Krausz, General Partner at USVP, joined the company's Board of Directors. Canaan Partners also participated in the round. With this investment, AirEye will increase its headcount across its R&D center, based in Tel-Aviv, launch its US operations and develop new marketing and sales initiatives to accelerate global growth.

AirEye has been doing extensive research into the vulnerabilities and attacks and has coined the term of Antenna for HireTM to describe devices that attackers can remotely take over to compromise the corporate network. The vulnerable wireless devices operate as Antenna for HireTM outside the network which therefore cannot be adequately protected by today's IoT security solutions. Attackers exploit the Antenna for HireTM to gain unauthorized corporate network access, hijack a corporate device or cause data leakage. Recent AirEye research discovered that on average 40,000 potential Antennas for HireTM are in proximity of a typical organization.

Tel Aviv's AirEye Network Airspace Protection (NAP) is the only solution that provides full protection against any form of airborne attacks launched against the organizational network. Digital airborne attacks leverage wireless communications (including Wifi, cellular, 5G, and Bluetooth) in the corporate airspace in order to gain unauthorized network access, hijack the network or leak data through Antenna for HireTM. The platform monitors all wireless communications in real-time, detect violations of corporate security policies and blocks attacks automatically. (AirEye 22.04)

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2.11.   BigID Welcomes $30 Million Investment from Advent International

BigID announced a $30 million investment from Advent International, one of the largest and most experienced global private equity investors, through Advent Tech, extending the company's $70 million Series D financing raised in December 2020. BigID has raised $200 million over four rounds since September 2019, a pace that illustrates the demand for BigID's novel and modern approach to data management. This latest financing brings BigID's valuation to $1.25 billion.

The pandemic has accelerated all automation and digital transformation programs by several years as companies recognize the need to innovate, placing increased pressure on IT leaders to deliver digital initiatives and overcome issues such as data silos. BigID's platform reimagines data management for enterprises, combining machine learning-based classification, cataloging, correlation and cluster analysis to help companies better understand, protect, and derive value from their data. This additional funding will help BigID expand globally, boost its go-to-market efforts and advance product development in the areas of data privacy, security and governance.

Tel Aviv's BigID enables organizations to know their enterprise data and take action for privacy, protection, and perspective. Customers deploy BigID to proactively discover, manage, protect, and get more value from their regulated, sensitive, and personal data across their data landscape. BigID has been recognized for its data intelligence innovation as a 2019 World Economic Forum Technology Pioneer, named to the 2020 Forbes Cloud 100, a Business Insider 2020 AI Startup to Watch, and an RSA Innovation Sandbox winner. (BigID 22.04)

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2.12.   Delek - Mubadala Petroleum MoU to Buy Stake in Tamar Offshore Gas Field

Delek Drilling of Israel signed a non-binding Memorandum of Understanding (MoU) with Mubadala Petroleum of Abu Dhabi, UAE for the sale of Delek Drilling's 22% non-operated stake in the Tamar gas field offshore Israel. If finalized, the transaction will be the largest commercial agreement following the Abraham Accords Peace Agreement between the United Arab Emirates and Israel signed in August 2020.

The partners in the Tamar project are Delek Drilling (22%), Chevron (25% and operator), Isramco (28.75%), Tamar Petroleum (16.75%), Dor Gas (4%) and Everest (3.5%). 2P reserves in the Tamar lease, after production of more than 69.3 BCM, is approx. 300 BCM of Natural Gas and 14 million barrels of condensate. Under the Gas Framework, outlined by the Government of Israel, Delek Drilling is obliged to sell all of its holdings in Tamar by the end of 2021.

The Tamar field was discovered in 2009 and is located c. 90 km west of Haifa, offshore Israel, at an overall depth of c. 5,000 meters below sea level, and in waters that are 1,700 meters deep. Production began in 2013, where the Natural Gas in Tamar is extracted through five production wells. The gas flows through two c.140 km pipelines to the primary and main processing facility on the Tamar Platform where most of the gas processing takes place. The Natural Gas is then transmitted from the platform through a pipeline to the onshore terminal in Ashdod, and into the Israeli market through the INGL national gas pipeline with a proportion being exported on to Jordan and Egypt.

Mubadala Petroleum is a leading international, upstream oil and gas exploration and production company with a primary geographic focus on the Middle East and North Africa, Russia and Southeast Asia, with assets in 10 countries. Mubadala Petroleum was established in 2012 and is a wholly-owned subsidiary of Mubadala Investment Company, which is owned by the Government of Abu Dhabi.

Delek Drilling is the leading Israeli energy partnership in the exploration, development, production and sale of natural gas and condensate. Delek Drilling, together with Noble Energy, have led the natural gas revolution in Israel. Following decades of investment in financing gas and oil exploration by successive Israeli governments, a government decision was taken to let go of its involvement in oil and natural gas exploration and transfer this activity to the private sector, a move that led to significant discoveries off the coast of Israel. (Delek Drilling 26.04)

2.13.   Safe-T's Zero Trust Network Access Solutions Receives U.S. GSA Approval

Safe-T Group announced that its ZoneZero solution, developed by its wholly owned subsidiary, Safe-T Data A.R, has received U.S. General Services Administration (GSA) registration approval under the Federal Government's Multiple Award Schedule (MAS) for Industrial Products and Services. The approval was given through the company's lead distributor in North America, Philemon Security USA and its channel partners.

Safe-T's innovative ZoneZero solution is an ideal fit for the defense and federal sectors, as secure access is vital for all business aspects. Safe-T's ZoneZero unifies all remote access needs in one zero-trust network access solution: human users (VPN users, non-VPN users, internal users), applications, APIs and connected devices. It grants secure access to all corporate resources, applications, and services, including Web, SSH, RDP, SFTP, thick applications, proprietary applications, SMB, TCP, APIs and more. ZoneZero applies Zero Trust security models by orchestrating authentication first, access later concepts, with strong and continuous authentication, and multifactor authentication to all resources.

Earlier this month, the company's solutions were added as an approved vendor to NASA's solution for enterprise-wide procurement contract vehicle (SEWP). All U.S. federal agencies, including the Department of Defense, and government contractors are able to purchase ICT and AV solutions (equipment and

services) from SEWP-authorized resellers. NASA's SEWP-V is a United States Government-Wide Acquisition Contract authorized by the U.S. Office of Management and Budget and managed by NASA.

Herzliya's Safe-T Group is a provider of access solutions and intelligent data collection. Their cloud and on-premises solutions mitigate attacks on enterprises' business-critical services and sensitive data, while ensuring uninterrupted business continuity. Organizations' access use cases, whether into the organization or from the organization out to the internet, are secured according to the "validate first, access later" philosophy of Safe-T's Zero Trust. This means that no one is trusted by default from inside or outside the network, and verification is required from everyone trying to gain access to resources on the network or in the cloud. (Safe-T 26.04)

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2.14.   Materials Zone Raises $6 Million to Improve its AI Materials Discovery Platform

Materials Zone raised $6 million in Series A funding led by Insight Partners, with participation from OurCrowd. Materials Zone has created an online materials discovery platform that funnels R&D and manufacturing data into an interoperable and structured database, enabling users to achieve meaningful AI/ML insights, reduce R&D research times, and efficiently collaborate with others. The platform is domain-agnostic and can serve customers from different verticals, such as Energy Storage, Renewables and Nano-Materials, supporting both simple and complex materials architectures. The company already serves paying customers, including a Fortune 100 company.

Materials Zone plans to use the investment funds to hire additional team members, continue improving its product offering and pursue customers from additional verticals, such as Green Construction, Perovskites, Automotive and Semiconductors.

Tel Aviv's Materials Zone is an innovative materials informatics company which developed a unique AI cloud-based materials discovery platform designed to make the process of development and manufacturing of any physical product faster and cheaper. The company has spun-out of Bar Ilan University in late 2017, leveraging on years of experience and knowhow to develop its agnostic platform that can serve customers from different segments, industries and verticals. (Materials Zone 27.04)

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2.15.   Israel's Mehadrin to Grow Avocados in Morocco

In a joint venture with a Moroccan company, Mehadrin seeks to ride the global surge in demand for the nutritious, and profitable, fruit. In recent years, avocados have become one of the most profitable crops in Israel. The rate at which avocado trees are being planted around Israel has risen accordingly, at the expense of less profitable crops, such as citrus fruits.

Mehadrin has signed an agreement in Morocco, under which it will grow crops outside Israel for the first time. Under the agreement, signed with a Moroccan company with which Mehadrin had already collaborated in the past, the parties will lease at least 5,000 dunams (1,125 acres) in Morocco, and will jointly invest NIS 30 million over the first three years of activity. The start of activity is subject to obtaining the regulatory approvals required for forming a joint company and for leasing the plantation from the Moroccan government. Mehadrin will own 51% of the company. To the best of its knowledge, the plantation's maximum annual output will be some 10,000 tonnes of avocado. The avocados to be grown will be sold by Mehadrin and its partner mainly in Europe. Fruits unsuitable for export will be sold in Morocco. (Various 21.04)

3. REGIONAL PRIVATE SECTOR NEWS

3.1. Jordan's Martix Raises $300,000 in Seed Funding Round

The Innovative Startups and SMEs Fund (ISSF), an Amman based investment fund, announced a direct investment of $150,000 in Martix; a Jordan-based online marketplace platform. The investment was made following an investment round during January 2021, which raised a seed fund of $300,000 together with UAE-based investment management firm; Select Ventures Holdings.

Founded in 2018, Martix enables local merchants to smoothly transition online and strengthen their E-commerce presence by leveraging technology tools and workflows, while presenting consumers with an aggregated view of on-boarded stores for a seamless shopping experience that allows them to make purchases from multiple stores via one shopping cart. Martix also lends logistics and digital payment solutions, as well as last-mile service providers that are connected to the platform, to both sellers and consumers.

Amman's Martix is an ecommerce enabler platform, a marketplace that aggregates and empowers local shops and retailers and enable local people to connect and shop directly from those shops. Martix provides all needed services, tools and infrastructure to assure smooth and seamless cycle. (Martix 20.04)

3.2. COFE Raises $10 Million to Expand to Egypt and Turkey

Kuwaiti coffee delivery app COFE has raised a $10 million Series B funding from Al Imtiaz Investment Group, a leading Kuwaiti investment house. Founded in 2017, COFE App enables customers to order and pay for their coffee online. With the app users can get COFE at the coffee shop counter, office, car, classroom, hospital and airport departures or have it delivered to their preferred address. The entire selection and purchasing process takes place in the app, which offers comprehensive menus and drink customization options. The app also includes several customer centric features such as a referral program, rewards points, and gift cards.

The platform which placed among the top five startups in Tech Innovation category at the London Coffee Shop Innovation Expo, has grown from strength to strength since its official launch in November 2018, offering users access to both international chains like Costa Coffee, Dunkin', Coffee Bean & Tea Leaf, in addition to a host of specialty roasters. Its success has been spurred by changing consumer habits which have shown a steady shift towards online purchase and at-home brewing. A trend that is underpinned by coffee companies embracing digital transformation through mobile ordering, curbside pick-up, delivery, and e-commerce platforms for retail coffee.

The investment will be used to support vendor and customer acquisition in COFE's operational markets including Kuwait, Saudi Arabia, the UAE and the UK, in addition to its expansion in Egypt and Turkey. COFE will also use the funds to hire and build specialized teams in each of its markets and launch new products for partner vendors and baristas. (COFE 22.04)

3.3. Direct flights Between Bahrain and Israel to Begin in June

Bahrain's flag carrier, Gulf Air, will be offering direct flights between Manama and Tel Aviv starting 3 June, the airline announced on 18 April. The announcement follows meetings in recent months between Gulf Air and senior Israeli officials that saw both sides have said express support for the countries to have direct flights in both directions. Economy class tickets will cost $299 per seat.

Bahrain, along with the United Arab Emirates (UAE), Morocco and Sudan, are party to the landmark US-brokered normalization agreements with Israel known as the "Abraham Accords." Earlier this month, the first flight from Abu Dhabi landed in Israel with the UAE ambassador to Israel on board. (i24NEWS 18.04)

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3.4. Snoonu Raises $5 Million Series A Funding to Expand Regionally

Qatar's Snoonu, a Doha-based E-commerce startup, has raised $5 million in a Series A funding round, led by its strategic partner Qatar Development Bank (QDB) with participation from multiple investors. Founded in 2019, Snoonu is a one-stop application, facilitating online shopping, lifestyle, food, grocery delivery, and third-party logistics services for startups and SMEs in Qatar. The consumer application offers a range of popular vendors and a variety of features such as multiple delivery options.

With over 100,000 users, Snoonu shares that it has made online shopping seamless for its users and has also helped to maintain the livelihood of vendors who faced an economic impact due to the COVID-19 pandemic. During the pandemic, Snoonu helped merchants grow their businesses by offering lower commissions, a more comprehensive coverage option, and a takeaway feature. Snoonu also launched its 24/7 online grocery store in November 2020 which offers a wide range of locally sourced products providing greater exposure to local vendors.

In line with its vision to leverage technology for enhancing the consumer experience, Snoonu recently announced a partnership with Microsoft in March 2021, which will see Snoonu migrate its services to Microsoft Azure Platform, with the aim of creating a positive impact on their efficiency and productivity. Snoonu plans to expand regionally and diversify its offering by adding new features and services to its platform, with a goal to enter international markets. (WAYA 19.04)

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3.5. G42 Announces Investment by Silver Lake

Group 42 (G42), a leading artificial intelligence and cloud computing company based in Abu Dhabi, and Menlo Park, California's Silver Lake, the global leader in technology investing, today announced that Silver Lake has made a substantial investment in G42.

G42's artificial intelligence, cloud computing, and technology offerings have enabled its clients to address a wide range of opportunities, including digitizing large enterprises, improving regional healthcare, and enhancing government services. Over the past year, G42 partnered with the Abu Dhabi Department of Health on COVID-19 pandemic management to provide scalable diagnostics and a successful nationwide vaccine rollout. The company also expanded its capabilities through the acquisitions of Injazat, a regional market leader for digital transformation IT services, and Khazna Data Centers, a commercial wholesale data center provider. In 2020, G42 became the first UAE-based company to establish an office in Israel, following the signing of the Abraham Accords. Proceeds from the investment will be used to help G42 scale in the UAE and international markets. The terms of the investment transaction are private and have not been publicly disclosed.

Based in Abu Dhabi, Group 42 (G42) is a leading Artificial Intelligence and Cloud Computing company dedicated to the development and implementation of holistic and scalable technology solutions. G42 is founded on three pillars: 1) fundamental and applied research in Artificial Intelligence, 2) Cloud Computing capability for the most demanding use cases, and 3) high-impact industry solutions for sectors, such as Healthcare, Smart City, Fintech, Oil and Gas, Utilities, Education, Aviation and Sports. G42 has an extensive global partnership network, connecting leading international organizations that share its vision and complement its ecosystem. (G42 14.04)

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3.6. Abu Dhabi's TII Unveils UAE's First Secure Cloud Technologies Program

Technology Innovation Institute (TII), the applied research pillar of Abu Dhabi's Advanced Technology Research Council (ATRC), announced that its Cryptography Research Centre (CRC) has launched the UAE's first secure cloud technologies program which will boost advanced technologies that enhance data privacy and cloud encryption schemes.

TII said that its secure cloud technologies program aims to advance Privacy Enhancing Technologies (PETs), including fully homomorphic encryption (FHE), a form of encryption that permits users to perform computations on encrypted data without first decrypting it, and secure multi-party computation (MPC), creating methods for parties to jointly compute a function over their inputs while keeping those inputs private. This line of research will be coupled with the field of verifiable computation for Machine Learning, to cater for a proof of correctness for an Inference-as-a-Service use case when data privacy is not required.

The Centre is also among the few internationally that brings together theoretical and applied cryptographers in a research-oriented setting. The cryptographers collaborate on breakthrough research projects that lead to innovative outcomes. (TII 19.04)

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3.7. Carasti Secures $3 Million in a Pre-Series A Round

Dubai's Carasti, a car subscription platform, has raised a $3 million Pre-Series A funding round. The round was led by Net Ventures with participation from Rua Growth Fund and undisclosed investors. Launched in November 2019, Carasti operates a flexible 1 to 24 monthly car subscription service that allows consumers to choose, swap, upgrade, or downgrade their car – all through the comfort of the Carasti app. Customers can simply select a brand new or used car from the wide selection available, upload their driver's license and EID, and the car is delivered to their doorstep.

The subscription model aims to make car ownership as flexible and affordable as possible, and customers can switch their cars and subscription rates easily to suit their budgets and lifestyles. The bundle subscription also includes registration, maintenance and servicing costs, roadside assist, delivery, insurance, and even fuel on longer-term mini lease subscriptions.

Carasti offers the widest selection of cars of any car subscription app in the UAE. It is also the only subscription app to offer brand new cars with zero kilometers on the clock, via its mini lease product. The funding round has followed triple-digit quarter-on-quarter revenue growth for Carasti since the end of the COVID-19 lockdown measures in the UAE in April 2020, with Q3/20 posting more than a 200% increase on the previous quarter. Carasti plans to use the investment to fuel growth in the UAE and implement its plans for regional expansion, starting with Saudi Arabia later in 2021. (Carasti 18.04)

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3.8. Hydrojeen Secures Pre-Seed Funding

Hydrojeen announced the closure of its Pre-Seed funding round, from angel investor Muhammad Abdul Aziz Al-Arifi. The amount was undisclosed.

Hydrojeen was launched in 2020 with the aim of contributing to solving the problems of the water sector in Saudi Arabia. Hydrojeen is a smart system device that enables users to monitor water consumption on a daily basis via a mobile application and informs them immediately in the event of any sudden change in consumption. The startup aims to solve the problem of the sudden rise in water bills and damage resulting from leaks inside homes through the water consumption monitoring device. It notifies the homeowner via the app once a leak is detected. Hydrojeen wants to be the first stop for innovative water solutions in the Middle East. With the newly raised funds, the startup plans to expand the manufacturing process and reach

a greater number of customers, in addition to attracting new talent and competencies to raise the productivity of the team's work.

Jeddah's Hydrojeen solves the problem of high water bills for homeowners by providing a small device that monitors the house daily water consumption and notifies the homeowner via an app once a leak is detected. (Hydrojeen 15.04)

3.9. Carrefour to Invest EGP 400 Million in Opening New Egyptian Locations This Year

Carrefour Egypt is planning to invest EGP 400 million to set up 20 new branches this year, backed by projections of a rapid recovery in consumer demand. Three of these branches will open in the coming weeks and the expansion could potentially include two or three Upper Egypt locations and an unspecified number of stores on the north coast between Alexandria and Sahel. At least four of the hypermarket chain's new branches will be opened in partnership with Omar Effendi as part of an agreement earlier this year that will see Carrefour open mini branches inside 14 of the Egyptian retailer's outlets.

Carrefour is tapping more into e-commerce and plans on expanding home deliveries and launch its own online fresh food delivery portal, Carrefour eFood, in the coming year. The Majid Al Futtaim-owned retailer could also be going full Amazon in the near future: The company is looking to expand its Scan and Go offering, which allows users contactless payment by directly scanning items they intend to purchase at a designated station that charges their linked accounts, to more locations in 2021. (Ent 15.04)

4. CLEAN TECH & ENVIRONMENTAL DEVELOPMENTS

4.1. New Bill Seeks To Reduce Israel's Greenhouse Gas Emissions By 85% Until 2050

The Israeli Climate Law is a new bill is Israel's latest action in reducing greenhouse gas emissions, expanding the use of renewable energies, and tackling climate change in accordance with its international commitment under the United Nations Framework Convention on Climate Change. Minister of Environmental Protection Gamliel announced the new law that for the first time sets national climate goals and establishes an independent expert committee to advise the government on the issue.

According to the bill, Israel will reduce its greenhouse gas emissions by at least 27% by 2030 relative to the country's emission measurements from 2015, and by 2050, emissions will be reduced by at least 85% compared to 2015.

In the coming days, the Ministry of Environmental Protection will publish the draft Climate Law for public and government review. All input will be considered during the drafting of the bill. The bill will then be subject to the approval of the Ministerial Committee for Legislation before moving to the Knesset table for discussion and voting. (Ynet 19.04)

4.2. New Sensil BioCare Improves Textile Effects on Ecosystems

Migdal HaEmek's NILIT, a global leader in premium Nylon 6.6, introduced Sensil BioCare, a sustainable premium Nylon fiber enhanced with special technology that helps lessen the persistence of textile waste in sea water and in landfills. Sensil BioCare is the newest addition to the broad Sensil portfolio of responsibly manufactured, environmentally considerate premium Nylon products that benefit the entire textile supply chain, from polymer to finished garment. NILIT has developed these products to help the textile and apparel industry address its specific environmental challenges, such as water consumption, ecosystem impact and use of recycled content, and to respond to consumer demand for more responsible textiles.

Sensil BioCare features a built-in technology that is proven through an independent lab to break down Sensil BioCare fibers substantially more rapidly than conventional nylon. Tests were conducted in both landfill soil and sea water simulations to understand the potential impact of Sensil BioCare on both ecosystems. Sensil BioCare showed remarkable disintegration in both simulated environments during the test periods in comparison to nylon fiber that does not include the special technology.

The special technology in Sensil BioCare will not wear or wash out nor will it interfere with other performance additives, finishes, or dyes. In addition, Sensil BioCare is responsibly manufactured according to NILIT's Total Product Sustainability (TPS) criteria. Sensil BioCare fabrics are long-lasting while also being very soft and aesthetically rich, ensuring that conscious consumers will appreciate their apparel even more knowing that they are part of the sustainable solution. (NILIT 22.04)

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4.3. Ecoppia's Robotic Solar Panel Cleaning Now at AES California Site

Ecoppia has completed the installation of its robots at a solar site in California, USA, operated by The AES Corporation, a Fortune 500 global energy company that provides greener, smarter energy solutions in 15 countries worldwide. AES is the largest private owner of operating solar assets in the United States.

With this deployment, Ecoppia has reached another significant millstone, servicing more than 2,700 MW of deployed projects globally. Ecoppia anticipates that this growth trajectory will continue as the adoption of solar energy expands in the United States and around the world. The AES site in California will feature the light weight Ecoppia T4 solution, designed especially for Single Axis trackers. The completely autonomous T4 robots operate nightly, cleaning large-scale solar arrays without the use of water, human operators or electricity – the robots are solar powered.

With over 16GW of signed agreements, Ramat HaHayal's Ecoppia is a pioneer and world leader in robotic solutions for photovoltaic solar. Ecoppia's cloud-based, water-free, autonomous robotic systems remove dust from solar panels on a daily basis leveraging sophisticated technology and advanced Business Intelligence capabilities. Remotely managed and controlled, the Ecoppia platform allows solar sites to maintain peak performance with minimal costs and human intervention. (Ecoppia 20.04)

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4.4. Egypt Converting More Natgas Vehicles than Initially Planned

Cairo plans to convert 450,000 cars to run on natgas within three years under its natgas transition plan, the Oil Ministry announced. This includes the 250,000 figure that was previously announced — which the Trade and Industry Ministry is handling — as well as another 200,000 the Oil Ministry plans to convert. It remains unclear whether the Oil Ministry's target is a new addition to the government's strategy, which aims to convert 1.8 million cars over the course of a decade — a feat that is expected to cost some EGP 320 billion.

Earlier this month Cairo delivered the first batch of dual-fuel vehicles under the scheme to swap out old, gasoline-fueled cars. The strategy aims to get 70,000 new natgas cars on the road this year. The Finance Ministry is offering financial incentives for vehicle owners to take part in the scheme, and some EGP 16.2 billion is being made available by the government to provide subsidized loans through local banks. Some 68,000 people applied to convert their vehicles to run on natural gas as of early April. (Ent 20.04)

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5. ARAB STATE DEVELOPMENTS

5.1. Lebanon's Inflation Hits Record High of 147.55% in January 2021

Lebanon's currency collapsed after escalating political and financial crises, with limited inflow of foreign currency. According to the Central Administration of Statistics (CAS), the Consumer Price Index (CPI), which gives an overview about the evolution of goods and services' prices consumed by households, revealed that Lebanon's monthly inflation rate surged from 10% in January 2020 to reach a dramatic level of 147.55% in January 2021.

For decades, the fixed exchange rate regime has helped in maintaining average annual inflation rate at about 3% but starting 2020, Lebanon's currency depreciated sharply and made imports much more expensive driving about half of the population into poverty. The inflation rate in January 2021 registered a higher rate than the average inflation rate of 84.27% in year 2020. Accordingly, all sub-components of Lebanon's consumer price index (CPI) increased over the studied period. The cost of Housing and utilities, inclusive of water, electricity, gas and other fuels (grasping 28.4% of the CPI) added a yearly 18.65% by January 2021, where Owner-occupied rental costs rose by 7.21% year-on-year (YOY) and the average prices of water, electricity, gas, and other fuels increased by 34.89% YOY. Looking at the prices of Food and non-alcoholic beverages (20% of CPI), it surged by 395.29% yearly. In turn, the average prices of Transportation (13.1% of the CPI), Health (7.7% of the CPI) and Education (6.6% of CPI) all recorded hikes of an annual 214.79%, 17.26% and 10.27%, respectively, by January 2021. The costs of Clothing and Footwear (5.2% of CPI) surged by 597.23% by January 2021, and the prices of Communication (4.5% of the CPI) increased by 87.35%. Prices of Furnishings and household equipment (3.8% of CPI), Recreation, amusement, and culture (2.4% of the CPI), and Alcoholic beverages and tobacco (1.4% of CPI) increased by 627.16%, 226.04%, and 375.98%, respectively, by January 2021.

Lebanon's annual inflation reached a record high, explained by the soaring prices of food and clothing by January 2021, highlighting the dramatic impact on household's purchasing power. Moreover, the BDL continues to subsidize essential goods in order to control the catastrophic effect of the depreciation of the Lebanese Pound. However, BDL's support will definitely come to an end and the real (non-subsidized) inflation rate will go higher than ever. (CAS 20.04)

►►Arabian Gulf

5.2. IMF Staff Concludes Virtual Visit to Kuwait

A staff team from the International Monetary Fund (IMF) held virtual discussions with the Kuwaiti authorities from 4 – 8 April. At the conclusion of the mission, the IMF said the Kuwaiti authorities acted quickly and decisively to address the health and economic effects of the COVID-19 pandemic, although the challenges posed by the pandemic remain significant. As in other GCC countries, the COVID-19 pandemic, together with oil price shock and cuts to oil production under the OPEC+ agreement, weighed heavily on economic activity and fiscal balances in 2020. Growth in 2020 is estimated at -8% with a contraction of non-oil growth of -6%. The overall fiscal balance significantly deteriorated compared to the previous year.

Going forward, a gradual recovery is expected in 2021, supported by the rebound of domestic and external demand as vaccinations proceed. However, considerable uncertainty surrounds the outlook, including from the persistence of the pandemic and related global and domestic containment measures. The IMF commended the central bank's sustained proactive monitoring of credit risks and efforts to strengthen the regulatory and supervisory frameworks aimed at bolstering financial stability. The banking sector remains resilient, well-capitalized, and liquid notwithstanding the shocks in 2020. Combating the pandemic and mitigating its effects, particularly those on the most vulnerable, should remain a priority until the recovery is

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firmly underway. As the recovery firms up, strong fiscal consolidation and structural reforms would be needed to preserve fiscal buffers and strengthen growth. (IMF 15.04)

5.3. Qatar to Allow 100% Foreign Ownership of Listed Companies

The Qatari Cabinet approved a bill that will allow non-Qatari investors to own up to 100% of the capital of companies listed on the Qatar stock exchange. This new bill could trigger more than $1 billion of overseas inflows. Foreign ownership of many Qatari companies currently sits way below the 49% limit.

While implementation in Qatar is yet to be confirmed, the decision could trigger inflows of about $1.5 billion into listed companies that would earn bigger representation in global benchmarks, according to estimates by investment bank EFG-Hermes. The Cabinet has also decided to keep central bank liquidity support for local banks based on need as the country faces a second wave of the coronavirus pandemic.

GCC countries have all been making efforts to attract foreign investment as they attempt to move away from oil-and-gas-centric economies. In January 2020, the UAE announced that it would start granting citizenship to foreigners upon nomination from UAE nationals. While Saudi Arabia granted a record 466 foreign investment licenses in the fourth quarter of 2020, the highest on record since data compilation began in 2005. Additionally, the Kingdom is aggressively pushing international companies to move their regional headquarters within its borders. (Alanbat News 15.04)

5.4. UAE Sees 21% Jump in Online Shops

The Arabian Gulf region's booming regional online shopping market is expected to grow by more than a third to reach a gross value of $30 billion this year, according to a report from Wamda and the Massachusetts Institute of Technology. The e-commerce market in the region was worth $22 billion by the end of 2020, boosted by online shoppers from Saudi Arabia, Egypt and the UAE. The three countries form 80% of the region's overall e-commerce market, according to the study. In Saudi Arabia, the market volume is expected to reach $8.2 billion by 2024.

Reflecting expanded consumer choice, Mastercard's analysis shows that consumers worldwide are making purchases at a greater number of websites and online marketplaces than before. Residents in countries like Italy and Saudi Arabia are buying from 33% more online stores, on average, followed closely by Russia (29%), the UK (22%) and the UAE (21%).

The UAE's digital economy prior to COVID-19 contributed 4.3% to the country's GDP. The UAE recorded an increase in online consumer spending primarily driven by a 21% jump in the number of online shops as the world witnessed an exponential boom in retail eCommerce with an additional $900 billion being spent in 2020. The UAE, one of the leading online retail market in the region, also witnessed a 44% year-on - year jump in the number of high-volume eCommerce trading partners from 2019 to 2020, according to Mastercard's latest Recovery Insights report.

Thanks to the pandemic, essential retail sectors, which had the smallest digital share before the crisis, saw some of the biggest gains as consumers adapted. With new consumer habits forming and given the low pre-Covid user base, we anticipate globally that 70-80% of the grocery e-commerce surge to stick around for good. As global international eCommerce rose 25-30% during the pandemic, consumers increased their e-commerce footprints, buying from up to 30% more online retailers, said the report. (KT 14.04)

5.5. UAE to Allow 100% Foreign Ownership of Some Companies

The UAE's Ministry of Economy is working on new legislation to include 10 sectors to the commercial companies' law, which allows 100 per cent foreign ownership of onshore companies in the country. The legislation, which will enable investors and business in '10 new sectors of strategic importance' to come under the purview of the law, is in its final stages of formation. The list of sectors and the regulations associated with their entry into the local market will be announced by the UAE Cabinet soon. All current and previously licensed businesses in the UAE can now amend their statuses according to the new amendments to the commercial companies' law.

The UAE announced in November that foreign nationals would be allowed to own 100% of commercial companies within the country, eliminating the need for a UAE national to hold the majority share. Under new legal amendments, businesses can be fully established by non-Emiratis of all nationalities. (Various 25.04)

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5.6. Strong Growth Forecast for the Saudi Economy

The King Abdullah Petroleum Studies and Research Center (KAPSARC) forecast that the Saudi economy will grow significantly bigger over the coming decade with the size of every sector expected to increase. The Kingdom's finance, insurance, real estate and business sectors are likely to expand by 9% annually and their relative share to overall economic activity will grow by 12.7%.

KASPARC's researchers in the energy and macroeconomic programs explained that economic diversification would make the Kingdom's economy more resilient to external demand shocks, help to create higher-skilled jobs, and establish a knowledge-based economy. Research findings showed that the relative share of the Kingdom's wholesale and retail trade, restaurants and hotel sectors to the GDP was expected to reach 16% by 2030, followed by transport, storage and communication.

Meanwhile, the services sector is expected to grow about 10% annually on average, implying that its relative GDP share will climb to almost 40% in 2030. The manufacturing and services sectors will become one of the strongest pillars of sustainable economic growth and lead the diversification process. The researchers said that as the economy transformed into a more advanced and diversified one, the private sector was set to take the lead, being the carrier of high-level knowledge and skills, innovative capabilities, and research and development. Household income and private consumption are expected to benefit from these adjustments, with private consumption likely to account for more than 40% of overall expenditure in 2030, they said. (AN 25.04)

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5.7. Saudi Share of Arabian Gulf Economy Rose to Almost 50% in 2020

Saudi Arabia increased its share of the GCC economy to almost half in 2020 as it weathered the COVID-19 pandemic better than its neighboring Arab states. The Kingdom's made up 49.8% of the bloc's economy in 2020, up from 48.4% in 2019, the Al Eqtisadiah newspaper reported, citing data from the International Monetary Fund (IMF) and Gulf statistical agencies. Nominal gross domestic product (GDP) for the six GCC countries fell 14.3% in 2020 to $1.41 trillion, while Saudi GDP contracted 11.8% to $700.1 billion.

The UAE's economy shrank 15.9% to $354.3 billion, representing 25.2% of GCC output. Qatar had the third largest regional economy in 2020. It shrank 16.9% to $146.1 billion, representing 10.4% of GCC GDP. (AN 23.04)

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5.8. UAE, Oman & Kuwait Support Saudi Arabia Lebanese Fruit Ban

The United Arab Emirates, Oman and Kuwait are supporting Saudi Arabia's recent ban on consignments of fruit and vegetables from Lebanon after a failed attempt to smuggle millions of amphetamine pills embedded in the farm products. Customs authorities at Jeddah Islamic Port seized more than 7.8 million Captagon pills hidden in a pomegranate consignment from Lebanon – foiling a large drug smuggling operation and leading to nationwide ban.

The Oman and Kuwait foreign ministries of released statements saying that Arab states stand by any decision the Saudi kingdom takes in efforts to combat drug smuggling and were calling for regional cooperation in this matter. The UAE has also expressed its support for Saudi Arabia's decision to ban agricultural products coming from Lebanon.

Lebanon's fruit and vegetable trade with Saudi Arabia was worth around $24 million per year. Beirut has since pledged to take more steps to combat drug smuggling. The import ban however remains in place until the Saudi interior ministry has been assured, as it continues to monitor other products from Lebanon. Trending tweets on the issue have accused Hezbollah as the organization behind the drug smuggling operation. (AN 25.04)

►►North Africa

5.9. Egypt's Economy to Grow by 3.1% This Fiscal Year

BNP Paribas said in a recent economic research report that Egypt's economy is expected to grow by 3.1% in the government's current 2020-2021 fiscal year, down from 3.8% in the previous fiscal year, due to declining tourism revenues since the outset of the pandemic. Fiscal support and foreign assistance played a central role in the resilience of Egypt's economic activity against COVID-19. BNP Paribas' forecast for the current fiscal year is slightly higher than Fitch Solutions, whose estimates put Egypt's GDP growth at 2.9% in FY2020-2021. Fitch said Egypt is expected to be among three MENA economies to eke out pre-covid growth rates in the next fiscal year.

Egypt's current account deficit is expected to widen to 3.9% in FY2020/1 as tourism revenues slump to 40% y-o-y during the fiscal year. Meanwhile, Egypt's "limited" vaccine rollout means that the health situation remains a significant source of uncertainty that could continue to weigh on the Egyptian economy. The bank also pointed to the continued vulnerability of external accounts as a potential drag on Egypt's medium-term economic recovery.

Despite headwinds, Egypt's GDP is forecast to grow by 5.3% clip in FY2021/2, supported by a rebound in consumer spending and activity in the construction sector. A draft budget to boost local demand and pay special attention to structural spending, an uptick in oil production, and a gradual recovery in tourism could also safeguard against possible downturns, BNP Paribas said.

Much higher principal repayments of external debt are expected in FY2021/2. Though IMF SDRs are likely to ensure foreign currency liquidity in the short term, inflows are likely to suffer at the hands of higher US treasury yields in the coming fiscal year. Government debt is expected to peak at 94% of GDP by the end of FY2021-2022, given the persistent budget deficit and real interest rates that have moved back into positive territory since 2020. However, Egypt's current account deficit is expected to narrow slightly in value to reach $14.7 billion in FY2021/22, with public debt gradually rebounding to 89% of GDP by FY2023/4. (BNP Paribas 22.04)

5.10.   Egypt's Trade Deficit Remains Flat in First Quarter 2021

Egypt's non-oil trade deficit remained essentially flat in Q1/21, narrowing just 1% to reach $9.55 billion compared to $9.68 billion in Q1/20. The slim drop in the deficit came as non-oil exports rose 6% y-o-y to $7.44 billion in Q1/21 despite the impact of COVID-19 on global trade, while imports increased 2% y-o-y to $16.99 billion.

Chemical fertilizers accounted for the lion's share of Egypt's exports, clocking in at $1.53 billion during the quarter, followed by construction materials ($1.35 billion) and food industries ($965 million). Egypt's biggest export markets are Turkey, the US, Saudi Arabia, Italy and Malta, which together received nearly 31% of Egyptian exports during the first three months of the year, worth a combined $2.28 billion.

The Central Bank of Egypt (CBE) figures released lately indicated that a rise in non-oil imports drove Egypt's trade deficit to widen 6.6% in H1/20-21. Exports grew slightly during the first six months of the fiscal year by $131.5 million y-o-y to record $9.3 billion. In 2020, non-oil trade deficit narrowed 17% y-o-y due to lower imports. (Various 20.04)

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5.11.   Egypt Targets $6-7 Billion in Tourism Revenues for 2021

Egypt expects to see tourism revenues of $6-7 billion in 2021, with tourist arrivals recovering to 60% of 2019 levels, Deputy Tourism Minister Shalaby said. This is a slightly ambitious target, as around 500,000 tourists visited Egypt in the first two months of 2021, generating $600-800 million in revenues. This means monthly tourism revenues would have to nearly double for the rest of the year to push revenues over the $6 billion target. Forecasts by Bank of America note a recovery of tourism revenues to $7 billion, but not before 2022.

The resumption of direct flights between Russian cities and Egypt's Red Sea resorts next month could bring as many as 1 million Russian tourists to Egypt this year. Direct flights had been suspended for almost six years following the 2015 Metrojet crash in Sinai, denting the $3.5 billion in annual tourism revenues previously generated by the 3 million Russian tourists visiting Egypt annually.

Tourism had plunged by as much as 70% in 2020, with only 3.5 million tourists visiting Egypt last year due to global COVID-19 travel restrictions, down from a record 13.1 million tourists in 2019. Some 2 million tourists have visited the country in the nine months since commercial flights resumed, and Tourism Minister El Anany recently said Egypt could see a return to pre-covid visitor numbers as early as fall 2022. Egypt has foregone as much as $14 billion in tourism revenues as of last January due to pandemic travel disruptions, with monthly revenues declining by as much as 92% to $80-150 million by some estimates. Egypt managed to scrape together an estimated $0.8 billion in tourism revenues from July through September 2020, compared to $4.2 billion over the same period in 2019. (Ent 25.04)

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5.12.   Egypt to Build World's Largest Spinning & Weaving Factory

Egypt's Minister of Public Business Sector announced that the construction of the largest spinning and weaving factory in the world in Mahalla el-Kubra, on an area of approximately 62.5 thousand square meters, will be completed and operational by March 2022.

The minister said that this factory will contribute to achieving a great leap in the field of spinning and weaving industry, adding that it will accommodate more than 182,000 yarn, with an average production capacity of 30 tons of yarn per day, increasing the added value of cotton instead of exporting it ore abroad. He emphasized that the establishment of this factory comes within the framework of the state's plan to develop and modernize the textile industry. He pointed out that a new building was recently opened for experts who

will train workers on the modern machines that will be installed in the factory and in the factories that will be developed in Cairo, Kafr El Dawar and the Delta regions. (SEE 14.04)

5.13.   Egypt's Rail Network Could be Partially Privatized

Private rail companies will be brought on board as operators of new trains the government is adding to Egypt's existing railway network, Transport Minister Kamel El Wazir said in a statement. Ongoing plans include the purchase of six new passenger trains from Spain's Talgo, which could be operated by a foreign or multinational company, and a contract with an unnamed foreign company to run overnight trains across the country, El Wazir said.

Cairo is separately looking to set up a JV with the private sector to own Egyptian National Railways' cargo transport arm and set up companies to house several railway workshops in a bid to boost the efficiency and quality of rolling stock maintenance, the minister added. El Wazir's statement comes following backlash in parliament and in the media after a string of deadly accidents, culminating in a derailment near Qalyubia's Toukh. The minister also said authorities have a new approach to railway staff training. Part of this is the recent inauguration of a technical institute that will enroll students straight out of Thanaweya Amma and is due to graduate its first cohort this year. According to El Wazir, the institute's new screening process ensures attracting better students. (Ent 21.04)

5.14.   Unemployment Rate in Morocco Reaches 11.9% in 2020

Morocco's Directorate of Studies and Financial Forecasting (DEPF) announced that the rate of unemployment in Morocco rose by 2.7% to 11.9% in 2020 due to the COVID-19 pandemic. In the last three years, Morocco has created an average of 121,000 jobs however, the Moroccan economy suffered a net loss of 432,000 jobs, including 137,000 positions in urban areas and 295,000 in rural areas.

According to the DEPF, Morocco recorded job losses in many sectors. The "agriculture, forestry and fishing" sector lost 237,000 jobs, 37,000 in the "industrial sector", 9,000 in the crafts industry, and 107,000 in the service sector. Dividing the rate of employment into two categories shows nearly a threefold difference between rural areas (an increase of 2.2 points to 5.9%) compared to urban areas (up 2.9 points to 15.8%). The biggest increase in unemployment rates was in graduates (+ 2.8 points), young people between the ages of 15 and 24 (+ 6.3 points), and 25 to 34 (+ 3.4 points).

In 2020, the Ministry of Labor predicted that Morocco would lose approximately 712,000 jobs in addition to an unemployment rate that could rise to (14.8%) due to the coronavirus crisis. (Various 26.04)

6.   TURKISH, CYPRIOT & GREEK DEVELOPMENTS

6.1. US Notifies Turkey of its Exclusion from New F-35 Consortium Agreement

The US government has reportedly notified Turkey of its exclusion from the new F-35 memorandum of understanding (MOU) after its acquisition of the Russian anti-aircraft weapons system, the S-400. The Pentagon informed Ankara of its removal from the new agreement reached between the eight countries in the F-35 consortium, which effectively replaces the 2006 MOU that had included Ankara. The signatories to the new deal are the US, Australia, Britain, Italy, the Netherlands, Canada, Norway and Denmark.

The US maintains that the S-400 is incompatible with the F-35 and Turkey has been suspended from the program. Turkey joined the US F-35 consortium in 2002 and had planned to buy 100 of the fifth-generation fighters before buying the S-400 missile system from Russia. US officials have said they fear Russia could

use the S-400 to acquire intelligence on the F-35 and NATO members' defense systems. The S-400 acquisition was also deemed a breach of Congress's Countering America's Adversaries through Sanctions Act (CAATSA) that passed overwhelmingly in 2017 and sanctions any significant transactions with Russia.

While Turkey has lost access to the F-35, it continues to manufacture parts for the program that are then purchased by the US. The manufacturing contract ends in 2022. (Various 22.04)

6.2. Canada Cancels Permits for Drone Technology Sales to Turkey

Canada's government canceled authorizations for the export of drone technology to Turkey after an investigation found Ankara used Canadian weapons technology in last year's war between Armenia and Azerbaijan over Nagorno-Karabakh. The Canadian government previously suspended the export of drone optical technology to Ankara in 2019 amid reports of Turkey's widespread use of drones against Western-backed, Kurdish-led forces in northeast Syria. Prime Minister Trudeau later allowed the sale of a number of L3Harris WESCAM optical systems to Ankara for its Bayraktar TB2 drones last May.

Trudeau's government then suspended the export permits to Turkey in October 2020 after photos emerged from the Nagorno-Karabakh conflict appearing to show a downed Turkish drone bearing a Canadian optical system. Turkey's drones played a decisive role in the six-week war, handing Azerbaijan's forces a swift victory by knocking out Armenia's armored vehicles and tanks. (Al-Monitor 13.04)

6.3. Cyprus' GDP Growth Projected at 3.3% for 2021

According to the University of Cyprus Economics Research Centre, the island's GDP growth is projected at a slower 3.3% for 2021, accelerating to 3.6% next year. April's growth forecast for 2021 was revised downwards from February (3.7%) due to the smaller-than-projected contraction in GDP in 2020 and impediments to economic activity caused by the January lockdown. In 2022, growth is projected to strengthen to 3.6%.

The 3.3% growth forecast is close to the estimates published by the European Commission (3.2%) and slightly higher than the projection given by the IMF (3.0%). Moreover, for 2022, the growth forecast is more optimistic than the European Commission (3.1%) but slightly lower than the IMF (3.9%).

Economists said uncertainty about the outlook remains elevated because of pandemic-related factors, namely the fast rise in COVID-19 infections following the reopening of the economy in March, the presence of new variants, and the pace of vaccinations. Regarding downside risks, they stem from setbacks to reopening of economic activities and renewed pandemic containment measures. Other downside risks are also associated with the path of external demand for tourist services that depend on the epidemiological conditions, including vaccinations, in Cyprus and abroad. A slower vaccination pace and new waves due to variants may adversely affect domestic and external economic conditions.

In 2021, CPI inflation is projected at 0.9%; the forecast for inflation remained broadly unchanged from February (0.8%). Next year, inflation is forecast to accelerate 1.5% as growth strengthens. There remains "considerable uncertainty" as economic outcomes hinge on the course of the pandemic and the pace of vaccinations", said economists. (fm 21.04)

6.4. Greek Growth Forecast to Reach 6.2% in 2022

Athens is slashing its forecast for this year's economic growth to 3.6%, after doubling its economic support budget, but also upgrading its projection for the 2022 expansion to 6.2%, according to the data Finance Minister Staikouras presented the latest cabinet teleconference.

The 2021 state budget had provided for a rebound of 4.8% in 2021 (though following a projected 10.5% contraction in 2020 that was eventually contained to 8.2%). The slashing by 1.2% of this year's growth rate is attributed to the €15 billion of support measures, against an original plan for €7.5 billion, and to the long period that the market has remained closed so far this year, resulting in the widening of the primary deficit and a reduction in consumption.

On the other hand, the ministry expects the economy to improve thanks to the resources from the Next Generation EU fund and the investments that will trigger. The data Staikouras presented showed an anticipated 7% increase in investments in 2021 and a growth rate set to soar to 30.3% in 2022. Exports are also expected to jump, by 10.7% this year and another 13.8% next year.

The ministry is aiming for Greece to exit its enhanced surveillance status in 2022 and for the restoration of investment grade in the first half of 2023. It is also expecting the employment rate to grow 0.7% in 2021, 2.3% in 2022 and 1.3% in 2023 and 2024. That should bring unemployment down from 14.5% in 2020 and 14.6% in 2021 to 10.5% in 2024. Among the government's strategic objectives there also are the reduction of the nonperforming loans rate to below 10% by end-2022 and the achievement of fiscal balance through a major reduction of the deficits within 2022, followed by sustainable primary deficits as of 2023. Staikouras stressed that given this year's €15 billion of measures, the sum of the state's support in 2020 and 2021 comes to €39 billion, which amounts to more than a quarter of the country's annual GDP. (eKathimerini 26.904)

7.   GENERAL NEWS AND INTEREST

*ISRAEL:

7.1. Laylat al-Qadr to be Observed on 8/9 May

On 8 May, Laylat al-Qadr (variously rendered in English as the Night of Decree, Night of Power, Night of Destiny or Night of Measures) is according to Islamic belief the night when the Quran was first sent down from Heaven to the world and also the night when the first verses of the Quran were revealed to the prophet Muhammad.

The Prophet Muhammad did not mention when this night takes place during Ramadan, though many scholars of Islam believe it takes place during the last ten days of Ramadan. They also believe that it falls on an odd-numbered night in the month. The odd number does not refer to the actual date on the calendar, but rather to the day/night number within the month of Ramadan. It is commonly believed, especially by Sunni Muslims, that *Laylat al-Qadr* falls on the 27th night of Ramadan. This year, that night falls on the evening of 8 May.

According to many Muslim sources, it was one of the odd-numbered nights of the last ten days of Ramadan, the ninth month of the Islamic calendar. Since that time, Muslims have regarded the last ten nights of Ramadan as being especially blessed. Muslims believe that the Night of Qadr comes with blessings and mercy of God in abundance, sins are forgiven, supplications are accepted, and that the annual decree is revealed to the angels who carry it out according to God's plan.

*REGIONAL:

7.2. Universities of Canada in Egypt Successfully Launches New Partner University

Universities of Canada in Egypt announced on 23 April a new partnership with Toronto's Ryerson University, which was officially announced at the Nile Ritz Carleton. Guests attended both virtually and in-person, making it a technologically connected event that represented the innovate nature of Ryerson University's programs. It was announced that starting campus this Fall, Ryerson's Cairo Campus will offer select programs through the Faculty of Communication and Design (FCAD) and the Faculty of Engineering and Architectural Science (FEAS). FCAD's degree programming will include Media Production, Sport Media, and Fashion, while FEAS' offerings will include Civil Engineering, Electrical Engineering and Mechanical Engineering. As such, the Universities of Canada invited many prestigious members of the creative, media, and engineering fields to the event.

Ryerson University is Canada's leader in innovative, career-oriented education. With the launch of a satellite campus in Cairo, Egypt, Ryerson's expansion into the Middle East and North Africa (MENA) region will give local students the opportunity to earn a Ryerson degree in an environment that emulates the Canadian university experience. Ryerson will oversee academic programming, course quality and admission decisions, as the Cairo campus programs will follow the same curricula as those offered to students in Ontario. All faculty and staff – at least 50% of whom are anticipated to be Canadian citizens – are being hired by Ryerson and are subject to Canadian post-secondary hiring standards. Ryerson will also determine tuition fees for programs according to Egyptian market rates.

Universities of Canada in Egypt is a Canadian campus hosting top Canadian universities with innovative & unique programs. UofCanada offers an all-round dynamic and diverse student life. It is the first International Branch Campus in the New Administrative Capital. (Various 26.04)

7.3. Survey Reveals Growing Popularity of English Among Young Moroccans

A survey commissioned by the British Council in Morocco has revealed the growing popularity among young Moroccans of English. The survey, which was conducted among over 1,200 respondents aged 15 - 25, measured the shift to English among Moroccan youth across the country. More than two-thirds of young Moroccans believe English is set to replace French as Morocco's primary foreign language within 5 years, according to the survey's findings. Moreover, 74% believe the shift to English will benefit the country's ambitions to become an international business and tourism hub. They also believe English will assist them in their education and career aspirations, while 85% expect the number of young Moroccans using English to increase over the next decade.

According to the findings, 82% of respondents have positive associations with English, while 65% of young Moroccans regard English as important. English appears to be gaining ground as young people recognize its value and importance in today's world. When asked which languages were the most important to learn, 40% choose English, while only 10% mentioned French. The objective of the report is to deliver insights into the appetite and demand for the English language among the next generation in Morocco. (Yabiladi 26.04)

8. ISRAEL LIFE SCIENCE NEWS

8.1. NeoTX Gets FDA Clearance for its Tumor Targeted Superantigen Candidate

NeoTX Therapeutics (NeoTX) received clearance from the U.S. FDA for the Company's Investigational New Drug (IND) application for naptumomab estafenatox (NAP). NeoTX is developing targeted anticancer immunotherapies utilizing its proprietary Tumor Targeted Superantigen (TTS) platform. NAP, the company's lead TTS molecule, binds a genetically engineered bacterial determinant to the tumor surface while simultaneously activating and expanding tumor specific immune cells. NAP has demonstrated preliminary safety and anti-tumor activity in early-stage clinical trials in solid tumors.

The Phase 2a open label trial will evaluate NAP in combination with docetaxel in 35 patients with checkpoint inhibitor pretreated, advanced or metastatic non-small cell lung cancer. The primary endpoint is objective response rate as measured by RECIST 1.1 criteria. The trial will also evaluate safety, duration of response, progression free survival, overall survival, pharmacokinetics and pharmacodynamics.

Rehovot's NeoTX is a clinical-stage immuno-oncology company which is developing targeted anticancer immunotherapies utilizing its proprietary Tumor Targeted Superantigen (TTS) platform. TTS binds a genetically engineered bacterial determinant to the tumor surface while simultaneously activating and expanding tumor specific immune cells that are then redirected from the periphery to the tumor to mount an effective response. The company's lead TTS molecule, naptumomab estafenatox (NAP) is currently in clinical development for advanced solid tumors. (NeoTX 19.04)

8.2. Weizmann Uncovers the Secret of the Hunger Switch in the Brain

In a study published in Science on 15 April, researchers at the Weizmann Institute of Science, together with colleagues from the Queen Mary University of London and the Hebrew University of Jerusalem, have revealed the mechanism of action of the master switch for hunger in the brain: the melanocortin receptor 4, or MC4 receptor for short. They have also clarified how this switch is activated by setmelanotide (Imcivree), a drug recently approved for the treatment of severe obesity caused by certain genetic changes. These findings shed new light on the way hunger is regulated and may help develop improved anti-obesity medications.

The MC4 receptor is present in a brain region called the hypothalamus – within a cluster of neurons that compute the body's energy balance by processing a variety of energy-related metabolic signals. When the MC4 is activated, or "on" – as it normally is – it sends out commands that cause us to feel full, which means that from the brain's perspective, our default state is satiety. When our energy levels drop, the hypothalamic cluster produces a "time to eat" hormone that inactivates, or turns off the MC4 receptor, sending out a "become hungry" signal. After we eat, a second, "I'm full" hormone is released. It binds to the same active site on the MC4, replacing the hunger hormone and turning the receptor back on – bringing us back to the satiety default. Mutations that inactivate the MC4 cause people to feel constantly hungry. MC4 is a prime target for anti-obesity drugs, such as setmelanotide, precisely because it's a master switch: turning it on can control hunger while bypassing all other energy-related signals. But until now it was unknown how exactly this hunger switch works.

A 3D structure revealed that setmelanotide activates the MC4 receptor by entering its binding pocket – that is, by directly hitting the molecular switch that signals satiety, even more potently than the natural satiety hormone. It also turned out that the drug has a surprising helper: an ion of calcium that enters the pocket, enhancing the drug's binding to the receptor. In biochemical and computational experiments, the scientists found that similarly to the drug, calcium also assists the natural satiety hormone. MC4's structure also revealed that the drug's entry causes structural changes in the receptor; these changes appear to initiate

the signals within the neurons that lead to the sensation of fullness. The study has explained how mutations in the MC4 receptor can interfere with this signaling, leading to never-ending hunger and ultimately obesity.

Moreover, the scientists have identified hotspots that crucially distinguish MC4 from similar receptors in the same family. This should make it possible to design drugs that will bind only to MC4, avoiding side effects that may be caused by interactions with other receptors. (Weizmann Institute 15.04)

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8.3. Teva Launches Generic Canasa Suppositories to Treat Active Ulcerative Proctitis

Teva Pharmaceuticals USA, a U.S. affiliate of Teva Pharmaceutical Industries, announced the launch of its 1000 mg strength generic version of Casana®1 (mesalamine) suppository medicine used to treat adults with active ulcerative proctitis (ulcerative rectal colitis), in the U.S. Ulcerative colitis (UC) results in inflammation or swelling of the rectum (the area between the colon and the anus). This inflammation may cause symptoms like bleeding, stomach pain, diarrhea, and urgency (a sudden urge to go to the bathroom). Ulcerative proctitis is common in people who have inflammatory bowel disease (IBD) and three times more common than Crohn disease (CD).

Mesalamine suppositories are a prescription medicine used to treat adults with active ulcerative proctitis (ulcerative rectal colitis). It is not known if mesalamine suppositories are safe and effective in children.

Teva Pharmaceutical Industries has been developing and producing medicines to improve people's lives for more than a century. They are a global leader in generic and specialty medicines with a portfolio consisting of over 3,500 products in nearly every therapeutic area. With nearly 550 generic medicines available, Teva has the largest portfolio of FDA-approved generic products on the market and holds the leading position in first-to-file opportunities, with approximately 100 pending first-to-files in the U.S. Currently, 1 in 11 generic prescriptions dispensed in the U.S. is filled with a Teva generic product. (Teva 23.04)

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8.4. BrainsWay FDA Clearance for 3 Minute Theta Burst Treatment Protocol

BrainsWay announced that the U.S. FDA granted 501(k) clearance for the company's Theta Burst three-minute protocol utilizing its proprietary Deep Transcranial Magnetic Stimulation (Deep TMS) system for the treatment of major depressive disorder (MDD). In support of its successful application to the FDA – the company's seventh to date – BrainsWay submitted safety and efficacy data from 146 subjects who had received either the standard Deep TMS protocol or the three-minute Deep TMS protocol. Subjects in both groups demonstrated a statistically and clinically meaningful reduction in depression scores, and the results met the equivalence criteria needed for clearance of the shorter treatment. The BrainsWay Theta Burst protocol will be immediately available on all BrainsWay systems already installed.

Jerusalem's BrainsWay is a global leader in advanced noninvasive neurostimulation treatments for mental health disorders. The Company is boldly advancing neuroscience with its proprietary Deep Transcranial Magnetic Stimulation (Deep TMS) platform technology to improve health and transform lives. BrainsWay is the first and only TMS company to obtain three FDA-cleared indications backed by pivotal studies demonstrating clinically proven efficacy. (BrainsWay 26.04)

9. ISRAEL PRODUCT & TECHNOLOGY NEWS

9.1. BioCatch Augments Behavioral Biometrics Platform with Real-time Risk Notifications

BioCatch released a powerful new fraud protection capability that offers continuous visibility into online banking sessions to detect the slightest sign of cybercriminal activity. The new functionality provides companies with greater protection than competing offerings by delivering proactive notifications of high risk, allowing for immediate action.

The BioCatch platform continuously analyzes an online user's physical and cognitive behavior throughout the entire digital session, rather than simply at a single point such as at log in or point of payment. With this new capability, BioCatch customers can define their acceptable level of risk and now receive proactive alerts during sessions via Push API to benefit from real-time risk insights and an extra layer of security.

Tel Aviv's BioCatch is the leader in Behavioral Biometrics which analyzes an online user's physical and cognitive digital behavior to protect users and their assets. Our mission is to unlock the power of behavior and deliver actionable insights to create a digital world where identity, trust and ease seamlessly co-exist. Leading financial institutions around the globe use BioCatch to more effectively fight fraud, drive digital transformation and accelerate business growth. With over a decade of analyzing data, over 60 patents and unparalleled experience, BioCatch continues to innovate to solve tomorrow's problems. (BioCatch 14.04)

9.2. Guardicore Infection Monkey Provides Zero Trust Assessment of AWS Environments

Guardicore unveiled new Zero Trust assessment capabilities in Infection Monkey, its open source breach and attack simulation tool. Available immediately, security professionals will now be able to conduct Zero Trust assessments of Amazon Web Services (AWS) environments to help identify the potential gaps in an organization's AWS security posture that can put data at risk.

Infection Monkey is an open-source Breach and Attack Simulation (BAS) tool developed and maintained by Guardicore Labs. Designed to be 100% safe for production environments, the tool helps IT security teams assess their organization's resiliency to unauthorized lateral movement both on-premises and in the cloud. Infection Monkey enables organizations to see the network through the eyes of a knowledgeable attacker - highlighting the exploits, vulnerabilities and pathways they're most likely to exploit in your environment.

Tel Aviv's Guardicore is the segmentation company disrupting the legacy firewall market. Our software-only approach is decoupled from the physical network, providing a faster alternative to firewalls. Built for the agile enterprise, Guardicore offers greater security and visibility in the cloud, data-center and endpoint. (Guardicore 14.04)

9.3. D-Fend Solutions Offers Significantly Expanded Counter-Drone Coverage

D-Fend Solutions announced the general availability of its new Multi-Sensor Command & Control system (MSC2). MSC2 is a central management solution designed to control multiple sensors of EnforceAir, D-Fend Solutions' flagship anti-drone solution that detects rogue drones, identifies them and takes control. By controlling multiple EnforceAir sensors remotely from a single server, MSC2 facilitates expanded and uninterrupted coverage for rogue drone detection and mitigation, without increasing the number of personnel needed to operate the multiple EnforceAir systems.

The Fortnightly may also be found at: https://atid-edi.com/category/fortnightly/

MSC2 seamlessly integrates into third-party C2 systems. This fusion enables top law enforcement and military system operators to view EnforceAir's drone information on general, map-based C2 platforms, with an option to trigger mitigation via the third-party platforms. Organizations can seamlessly integrate EnforceAir into their work processes and expand operational awareness beyond the tactical team operating EnforceAir. By aggregating information from all sensors across the site, MSC2 provides unified, intuitive operational awareness to support mission-critical decisions. It also eliminates duplications if multiple sensors detect the same drone. The MSC2 server then selects the best sensor to initiate mitigation, after factoring for interference, radio parameters and ranges.

Ra'anana's D-Fend Solutions is the leading counter-drone takeover technology provider, enabling full control, safety and continuity during rogue drone incidents across complex and sensitive environments, to overcome both current and emerging drone threats. With hundreds of deployments worldwide, EnforceAir, the company's flagship offering, focuses on the most dangerous drone threats in military, public safety, airport, prison, major event and critical infrastructure environments. (D-Fend Solutions 13.04)

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9.4. BARAK ER Interceptor Successful Trials

Having completed a successful series of trials of the BARAK Air and Missile Defense System, Israel Aerospace Industries (IAI) on 19 April unveiled documentation of the challenging trials, which tested the system's capabilities in a range of scenarios and threats, including the interception of an assaulting ballistic target by the BARAK ER (Extended Range) interceptor.

The BARAK ER Air Defense System, developed by IAI, combines the capability to intercept airborne threats at an extended range of 150 kilometers and ballistic targets. The ER interceptor is part of IAI's BARAK Air Defense System's family, capable of various ranges. The extended range capability is made possible in part by adjusting the interceptor and MMR radar capabilities to a 150 km range, and can be fitted for both naval and land platforms.

The BARAK ER interceptor tested in the trial series was taken directly from the company's production line. The BARAK ER revolutionizes air defense with unprecedented flexibility, both in real-time full net-centric combat management as well as with unique smart launchers. The launchers are capable of independently launching and managing any mix of interceptors without a dedicated command post on site. The sophisticated battle management system optimizes the interceptors to match threats in real-time. Thanks to these features, an operator can create unique responses to a mix of interceptors across different threats, as well as phase their procurement gradually according to budget constraints.

IAI's BARAK is one of the world's most advanced defense systems. Operationally proven, it is used by several armies worldwide, including the Israeli Navy, India's air-force, army and navy and additional customers. BARAK provides wide-area protection against a range of air, sea and ground threats, including ballistic, ground-to-ground, and cruise missiles, UAVs, and helicopters. Barak consists of several systems representing the forefront of technology, including: interceptors for a variety of ranges and advanced homing seekers, digital MMR radar or MFSTAR radar for naval platforms, command and control system, and unified launchers for different ranges. These systems are complemented by breakthrough communication and connectivity capabilities, providing the user with optimal force activation using several batteries or ships for the multidimensional battlefield. (IAI 19.04)

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9.5. Gilat Wins Over $20 Million in Orders for Support of Low Earth Orbit Constellation

Gilat Satellite Networks received orders of over $20 million for support of gateways of Low Earth Orbit (LEO) constellations. Gilat's subsidiary, California based Wavestream, was chosen as the vendor of choice to supply Gateway Solid State Power Amplifiers (SSPAs) to a leading satellite operator to support the LEO constellation gateways. The orders were received as part of the previously announced contract.

Wavestream's Gateway-Class PowerStream 160Ka SSPAs, designed specifically for networks using wide bandwidth uplinks and high order modulation schemes, were selected because of their best-in-class technical performance and their unmatched reliability in harsh environments, best addressing the stringent requirements of Non-Geostationary Satellite Orbit (NGSO) constellations. Wavestream is an industry leader in the design and manufacture of next generation satellite communications high power transceivers for In Flight Connectivity, Ground Mobility and Gateway markets.

Petah Tikva's Gilat Satellite Networks is a leading global provider of satellite-based broadband communications. With 30 years of experience, Gilat designs and manufactures cutting-edge ground segment equipment, and provides comprehensive solutions and end-to-end services, powered by their innovative technology. (Gilat Satellite Networks 19.04)

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9.6. Sapiens & Atidot Offer AI-based Predictive Insights for Life Insurance Providers

Sapiens announced today an agreement with Atidot to facilitate new ways for North American and European insurers to generate revenue through analytics and actionable insights. The joint solution empowers life and annuity insurers to maximize the value they gain from their books of business. The solution produces actionable insights enabling better service for policyholders and new revenue generation as it is integrated with Sapiens CoreSuite for Life Insurance, Sapiens IllustrationPro, as well as Sapiens' analytics and digital offering.

Together, Sapiens and Atidot offer a unique software solution that is dynamic, real time and trained with industry data. The joint platform leverages external data and machine learning capabilities to provide business insights far beyond those that traditional analysis methods using static modeling are able to show. The solution is relevant to organizations' marketing, distribution, product and data departments.

Ramat Gan's Atidot is a leader in predictive analytics, artificial intelligence and machine learning solutions for the life insurance and annuity industry. Atidot's cloud-based platform provides insurers with data-driven, actionable insights that create new revenue-generating opportunities to increase sales and customer retention.

Holon's Sapiens International Corporation empowers insurers to succeed in an evolving industry. The company offers digital software platforms, solutions and services for the property and casualty, life, pension and annuity, reinsurance, financial and compliance, workers' compensation and financial markets. (Sapiens 21.04)

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9.7. Papaya Announces Tools for Best-in-Class Employee Experience

Papaya Global announced a series of tools for companies to provide a first-rate employment experience to their remote employees across the globe. The roll out is part of Papaya's ongoing commitment to innovation and the constant development of new capabilities for all types of employees in more than 140 countries – including senior-level employees, all tailored to each client's specific needs.

The new suite of tools includes a solution for delivering a uniform and customized set of benefits to all global employees so that remote teams feel they are part of the same company. Papaya's global equity management solution allows companies to grant their employees equity without regard for location. From plan assessment and management to ongoing tax calculations through execution, Papaya administers the whole global program. Papaya's payments solution makes it easy to deliver cross-border payments and allows for alternative payment systems such as card payments for employees who prefer direct payments globally. Papaya's innovative org chart brings all remote teams together. The org chart unifies the

company, brings distributed teams closer, and presents each employee as equal and important to the entire organization.

Tel Aviv's Papaya offers a people, payroll, and payment management solution supporting all types of global employment (payroll, EoR, and contractors) in over 140 countries to remove barriers to global hiring, enhance collaboration and engagement, and provide a first-rate employment experience. The automated, cloud-based SaaS platform provides an end-to-end solution, from onboarding to on-going management and cross-border payments. The platform integrates with all existing HRIS management tools, provides real-time business intelligence, and eliminates errors. It gathers all employee information into one place, creating a highly visible system for tracking payroll spending. The platform ensures GDPR and SOC compliance to maintain the highest standard of security. (Papaya Global 21.04)

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9.8. Source Defense & Prevalent Extend Visibility into Third Party Web Vulnerabilities

Source Defense announced its partnership with Phoenix, Arizona's Prevalent, the company that takes the pain out of third-party risk management, to identify threats and protect online businesses against automated and client-side attacks exploiting third-party code and website access. Prevalent and Source Defense's joint solution offers deeper visibility on the true array of code and vendor relationships powering websites, with automated policy enforcement and remediation features to defeat malicious activity and prove regulatory compliance.

To improve visibility into risks Source Defense identifies and analyzes the areas targeted by client-side threats and open-source risks. Source Defense is then able to determine what scripts are doing on the webpage, report what actions the scripts take and provide recommendations for remediation all in real-time. Prevalent then provides the third-party risk report as a component of the vendor profile, delivering a closed-loop view of the risks that third-party code can introduce to your mission-critical web assets.

Rosh HaAyin's Source Defense is the market leader in Client-side Security for websites, providing real-time threat detection, protection and prevention of vulnerabilities originating in JavaScript. The Source Defense patented Website Client-side Security Platform offers the most comprehensive & complete solution addressing threats and risks coming from the increased usage of JavaScript, libraries and open source in websites today. (Source Defense 20.04)

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9.9. Gilat Receives Over $5 Million for Cellular Backhaul Expansion in Japan

Gilat Satellite Networks received over $5 million for cellular backhaul over satellite expansion from Tier-1 Mobile Network Carrier in Japan. The Mobile Carrier will utilize Gilat's SkyEdge II-c platform to quickly expand coverage to rural zones that are lacking fiber access, as well as to provide emergency response in the case of earthquakes or other natural disasters. An aggressive deployment schedule was put in place to fulfil the carrier's requirements.

Petah Tikva's Gilat Satellite Networks is a leading global provider of satellite-based broadband communications. With 30 years of experience, they design and manufacture cutting-edge ground segment equipment, and provide comprehensive solutions and end-to-end services, powered by their innovative technology. Gilat's comprehensive solutions support multiple applications with a full portfolio of products to address key applications including broadband access, cellular backhaul, enterprise, in-flight connectivity, maritime, trains, defense and public safety, all while meeting the most stringent service level requirements. (Gilat 22.04)

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9.10. Ermetic Platform Provides Anomaly Detection to Protect Cloud Infrastructures

Ermetic announced a new version of the Ermetic platform that continually monitors the access behavior of user and machine identities to detect suspicious activity and prevent security threats. The new capabilities enable organizations to protect against unusual data access, suspicious configuration changes, privilege escalation and more, in multicloud environments. Using analytics-driven policies, Ermetic continuously analyzes access behavior, creates a baseline for every identity and monitors for anomalous activity in AWS, Microsoft Azure, and Google Cloud Platform.

Tel Aviv's Ermetic enables enterprises to protect cloud infrastructures (IaaS/PaaS) from access-related risks and misconfigurations by maintaining continuous visibility into identities, their entitlements and data usage. By combining analytics with granular, full stack insight, Ermetic makes it possible to enforce least privilege access at scale even in the most complex cloud environments. (Ermetic 22.04)

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9.11. Varada Delivers 100x Speed Improvement on 10x More Data in Security Data Lakes

Varada announced a new capability of its flagship platform designed to help cybersecurity teams deliver faster time-to-insights on exabytes of data directly on the data lake. As security teams seek powerful and swift threat detection tools to stay a step ahead of adversaries, Varada's technology offers a way to leverage 10 times more data and deliver results up to 100 times faster than other data lake-based analytics platforms. Varada's dynamic and adaptive indexing technology enables security analytics workloads to run at near real time, especially on highly selective queries seeking "a specific needle in a stack of needles" at a speed that has never been achieved before, without moving, duplicating or modeling data.

Varada's adaptive and autonomous indexing technology leverages machine learning capabilities to dynamically accelerate queries to meet evolving security requirements. Varada indexes data directly from the data lake across any columns. Indexes adapt to changes in data over time, which is critical for effective anomaly detection across vast datasets. Based on the data type, structure, and distribution of data, Varada automatically creates an optimal index from a set of indexing algorithms including text-optimized search and index (based on Apache Lucene), bitmap, dictionary, trees, etc.

Ramat Gan's Varada, named by Gartner a "Cool Vendor in Data Management," enables data practitioners to go beyond the traditional limitations imposed by data infrastructure and instead zero in on the data and answers they need—with complete control over performance, cost and flexibility. In Varada's world of big data, every query can find its optimal plan, with no prior preparation and no bottlenecks, providing consistent performance at a petabyte scale. (Varada 22.04)

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9.12. KELA Unveils Major Updates to Industry-Leading Technology DARKBEAST

KELA announced many of the recent major improvements applied to their cybercrime research and investigation technology, DARKBEAST, during Q1. KELA's DARKBEAST automatically penetrates the hardest-to-reach corners of the cybercrime underground to enable federal investigators, security practitioners, intelligence analysts, and threat hunters to safely and simply research through the darkest corners of the internet. KELA's industry-leading technology helps expose underground digital dangers to its clients by collecting, analyzing, and storing data from numerous sources in the cybercrime underground and making it accessible for users to search through – saving them the time, risk, and complexity of needing to locate and access the sources themselves.

Tel Aviv's KELA takes away fear of the unknown cyber threats all organizations face. Trusted worldwide, KELA's industry-leading threat intelligence technology automatically penetrates the hardest-to-reach corners of the cybercrime underground to provide organizations with unique, contextualized and actionable insights at the tactical, operational and strategic levels. KELA analysts' deep expertise and customer-focus

provide customers with tailored intelligence on strategic and tactical threats gathered from external network and deep, dark, and open-web monitoring. (KELA 22.04)

9.13.   Montfort Transforms Mental Health into an Exact Science

Binyamina's Montfort (Mon4T), an innovative medical startup specializing in neurological disorders, announces a new platform to help diagnose and treat psychiatric disorders, such as schizophrenia. The development is based on 'Brain Profiler', a new science-based method that looks at mental disorders as brain disturbances, which can be accurately diagnosed in a clinical manner. Its approach aims to bridge between classical Psychiatry and computational neuroscience. Based on vast literature of computational neuroscience, the method could also allow effective intervention in the future, to fix disturbance, possibly resulting in a cure.

Montfort uses smartphone technology and AI in order to provide FDA-cleared digital neurological tests for patients with conditions such as Parkinson's disease, Huntington's disease and more. So far, the company has focused on motor and cognitive test protocols, routinely used by neurologists around the world. Over the past year, Montfort added to its test protocol affective indicators assessing the patient's anxiety, depression and more.

The new app on Montfort's platform will allow a self-collection of patient's indicators such as his movement, social interaction patterns, and many more. Part of these indicators are already collected by researchers and companies. For the first time, a comprehensive collection of all required indicators will be available, in parallel to collecting data by the psychiatrist at the clinic, and using the AI model to predict any brain connectivity disturbances, which could explain the disorder. (Montfort 22.04)

9.14.   Kornit Digital Announces MAX Technology for On-Demand Fashion Production

Kornit Digital announced the release of its new MAX technology, establishing a new standard for on-demand fashion and apparel production. MAX technology surpasses industry norms for retail quality on multiple fabric types and breaks new grounds of versatility with previously unattainable print applications, significantly expanding the reach of digital on-demand textile production into the center of mainstream fashion and apparel.

A key feature of Kornit's MAX technology is XDi, which delivers revolutionary 3D capabilities for new, high-density graphic decoration that can simulate embroidery, vinyl, and heat transfer in a single, waste-free digital process. The new XDi, which is based on Kornit's patents, allows fulfillers and brands to expand their offerings to include new-to-market, innovative decorations without the inefficiencies and cost of operating analog technologies.

Kornit also debuted the ActiveLoad Automation technology, a new robotic system to significantly ease the burden of manual and labor-intensive media handling in the textile decoration industry. This increases total output per shift while ensuring minimal downtime and exceptional reliability. The new patent pending ActiveLoad Automation technology ensures continuous production and consistency, while decreasing human error and fatigue, regardless of employee experience and training, for ultimate results and best operational efficiency.

Rosh HaAyin's Kornit Digital develops, manufactures and markets industrial digital printing technologies for the garment, apparel and textile industries. Kornit delivers complete solutions, including digital printing systems, inks, consumables, software and after-sales support. Leading the digital direct-to-garment printing market with its exclusive eco-friendly NeoPigment printing process, Kornit caters directly to the changing needs of the textile printing value chain. Kornit's technology enables innovative business models based on web-to-print, on-demand and mass customization concepts. (Kornit Digital 26.04)

10. ISRAEL ECONOMIC STATISTICS

10.1.   Israel's CPI Rises by 0.6% in March

The Central Bureau of Statistics announced that Israel's Consumer Price Index (CPI) rose by 0.6% in March, slightly higher than the pundits' forecast of 0.5%. Since the start of 2021, the CPI has risen 0.8% and over the past 12 months, the CPI has risen 0.2%. The high inflation figure for March would seem to suggest a return to normalcy after 12 month in which the COVID-19 pandemic has hit economic activity.

There were significant price rises in March in clothing (5.8%), entertainment and culture (2.2%), transport (0.9%), and furniture and household equipment (0.8%). There were significant price declines in fresh fruit and vegetables (1.5%). The housing prices index, which is separate from the CPI, continued to rise in the period January-February, in comparison with December-January, climbing by 0.3%. Housing prices have risen 4% over the past 12 months. (CBS 14.04)

10.2.   Israel Enters Top 20 Club of Nations With Highest GDP Per Capita

For the first time in its history, Israel ranks among the top 20 economies based on GDP per capita, Forbes Israel reports, based on International Monetary Fund data. According to the data compiled by the publication, with GDP per capita of $43,689 for 2020, Israel ranked 19th out of the top 20, above No. 20 Canada, with per capita GDP at $43,278; No. 21 New Zealand, with $41,127, and the UK with $40,406 at No. 22. Luxemburg tops the ranking with GDP per capita of $116,921, followed by Switzerland, with $86,849, and Ireland with $83,850. Norway comes in fourth at $67,176, and the US fifth, at $63,416, the data showed.

In 2019, Israel ranked 21st, and a decade ago it wasn't even in the top 30 leading economies, Forbes said. In 2010, Israel was ranked 32nd globally for per capita GDP.

Israel seems to be emerging from its battle against COVID-19 in better shape than other developed nations. Israel's GDP shrank by 2.5% in 2020, its worst contraction on record, compared to an average 6.6% drop last year for the European Union, a 3.5% decline in the US, and a 5.5% contraction on average in OECD countries. The fact that Israel fared better economically in coping with the crisis than other developed nations, thanks to its booming tech sector, helped the country climb up in its GDP per capita ranking, Forbes said. (Various 26.04)

10.3.   Israel's Government Debt Rises To Nearly NIS 1 Trillion in 2020

Israel's government debt rose 20% in 2020 to nearly NIS 1 trillion, as the country raised capital for assistance programs related to the COVID-19 crisis, according to the Ministry of Finance Account General. The debt is comprised of NIS 551 billion in domestic tradable bonds, NIS 272 billion in domestic non-tradeable bonds, and NIS 161 billion in foreign currency bonds.

Israel government fiscal policy during the COVID-19 pandemic was to raise debt in order to pay for unemployment including people on unpaid leave, grants to the self-employed and small businesses, small handouts to all Israel's citizens and postponements in tax payments. As a result, the public debt to GDP ratio rose by 12.4% last year to 72.4% at the end of 2020.

Israel raised a record NIS 265 billion debt last year, more than double the usual annual amount. This is included NIS 165 billion in tradeable domestic bonds, NIS 26 billion in non-tradeable bonds and NIS 74 billion in foreign currency debt. This level of debt sets Israel back ten years, after over the last decade the

debt to GDP ratio has consistently fallen. The last time that the debt to GDP ratio was above 70% was in 2010, when it was 70.9%. By 2019 it had fallen to 58.5%. (MoF 20.04)

10.4.   Israel Sees Record Job Vacancies After Economy Only Contracts 2.6% in 2020

On 18 April, the Central Bureau of Statistics announced that Israel's economy contracted by 2.6% during 2020, despite the effects of COVID-19, revising from an earlier estimate of a 2.5% decline.

In Q4/20, Israel's Gross Domestic Product (GDP) grew by an impressive annualized rate of 6.5%, buoyed by the beginning of the vaccine rollout and an increase in car imports. According to the third and final revision issued by the CBS, private consumption in Israel in 2020 shrank by 9.5%, as it underwent three nation-wide lockdowns to curb morbidity.

In a separate report detailing the number of job vacancies in Israel for the period of January to March 2021, the CBS announced that the number of vacancies was at a record 112,500 as of last month. While the unemployment rate has fallen to below 10% in April, compared to 16% at the height of the pandemic, it remains relatively high. (i24NEWS 18.04)

11. IN DEPTH

11.1.   EGYPT: Egypt Sees Pre-COVID Growth Rates Return in 2021

Fitch Solutions announced on 19 April that Egypt is one of three MENA economies that will see GDP growth return to pre-COVID levels in 2021, buoyed by expectations of a strong rebound in the oil and gas and tourism industries this year. "The Central Bank of Egypt's (CBE) monetary easing of 400 bps last year, as well as expanded fiscal spending and well-executed stimulus policies, helped to cushion the economic blow of the pandemic," MENA country risk analyst Selim Elbadri said.

Egypt's GDP is expected to grow at 2.9% in FY2020-2021, marking a slight downwards revision of the 3% Fitch predicted in January due to a bumpy vaccine rollout. "Vaccinations for priority populations are expected to run from 21 March to 21 September," deputy head of country risk Julie Beckenstein said, noting that Egypt's vaccine rollout is lagging behind regional peers such as Israel, Morocco, and the GCC.

Increased natgas production will be a key driver of economic growth. Fitch Solutions sees Egypt ramping up its output of natural gas to hit pre-covid production levels in FY2020-2021. Production is expected to plateau at these rates, with a marginal decline of 10% at most throughout FY2021-2022. That's a steeper decline than the 4.5% dip in production Oil Ministry has penciled in for the upcoming fiscal year, with daily natural gas production expected to come in at 7.2 bcf/d, down from 7.45 bcf/d during the current fiscal year.

A robust tourism sector recovery is also expected to drive medium-term growth, with the economy expected to expand at a 5% clip in FY2021-2022, according to Elbadri. Some 500,000 tourists visited Egypt in Q1/21, generating $600-800 million in revenues, with some 2 million tourists visiting the country in the nine months since commercial flights resumed following the initial wave of the virus. Tourism Minister Khaled El Anany recently said Egypt could see a return to pre-COVID visitor numbers as early as fall 2022.

Israel and Qatar are also expected to be among MENA's best-performing economies, with the latter leading the recovery in the GCC as the only Gulf nation to return to pre-covid GDP growth rates in 2021. The slowdown in the recovery of other regional economies was attributed to the contracting oil sector as a result of the OPEC+ mandated production cuts. However, Fitch is optimistic that an OPEC+ agreement to gradually increase oil production from May to July as fuel demand rises will drive growth in GCC countries such as Saudi Arabia and the UAE, though likely not enough to return them to pre-pandemic growth rates, Elbadri said. (Fitch 20.04)

The Fortnightly may also be found at: https://atid-edi.com/category/fortnightly/

11.2.   EGYPT: The State of Egypt's Railways

Enterprise issued a report on 22 April surveying the state of Egypt's railway system. They found that poorly trained staff, regulations that aren't enforced — alongside theft and vandalism — could be more significant contributors to a rash of recent rail accidents than are problems with physical infrastructure.   As investigations into the causes of the accidents are still underway, Enterprise looked into what has been done to upgrade and modernize Egypt's railway network and what other factors — besides physical infrastructure — need to be dealt to limit future deaths and injuries.

Over the past month alone, Egypt witnessed at least five train accidents. There was the train crash in Sohag, which killed 19 and injured 185. Then 11 people died in a derailment near Toukh in Qalyubiyah which also injured 100 people. Similar, but less fatal, incidents in Sharqia, Assiut and Minya Elkamh also took place, injuring over a dozen passengers. These are just the latest in a string of train accidents in Egypt over the years.

What Enterprise found is that human capabilities have not been keeping up with the change in the infrastructure. Yes, there is significant room for improvement on the infrastructure side of things, and several insiders Enterprise spoke with tell that work on those upgrades is underway. But frequent accidents attributed to "human error" point to a need to upgrade training of the people who run the country's rail lines, they tell us.

Railway upgrades have been a "national priority" for some time now: Egypt's modern railway reforms have been guided by the national modernization program. The price tag for the program — which seeks to develop the entire network — was reported early last year to be around EGP 141 billion until 2022. That number is now at EGP 220 billion, with reforms running until 2024, according to Transport Minister Kamel El Wazir. This includes importing new trains, coaches and locomotives, overhauling old ones, improving railway signaling systems, building new routes, revamping stations and level crossings, building new towers, and securing signal towers via camera surveillance systems. French rail manufacturer Alstom completed the installation of an automated signaling system along a part of the Beni Suef-Assiut railway tracks, covering 14 km. New financing is also coming; after the Sohag crash, the African Development Bank approved a €145 million loan to finance railway upgrades via the Egypt National Railways Modernization Project.

But physical infrastructure is not the sector's main issue: Insiders Enterprise spoke with are not worried about the railway infrastructure, given ongoing upgrade plans and the future projects in the pipeline. The stations and areas in which the recent accidents happened were recently refurbished and upgraded, former VP of the Egyptian Railway Authority Sami George said.

The main problem: The unskilled staff employed running the nation's rail lines. Initial investigations into the Toukh train accident point to a case of "human error," House Transport Committee chairman Alaa Abed said on TV. In the Sohag collision, gross negligence and drug use by the driver and his assistant were found to be contributing causes, the Prosecution General said about a week ago. Despite billions of EGPs spent on upgrading the tracks and signal systems, as well as using automatic driving aids, drivers aren't trained to adapt to these systems, he adds. The human element is what causes these accidents, Abed believes.

This assessment is backed by the World Bank: About 1,000 train accidents happen annually in Egypt due to the lack of safety enforcement and human errors, the World Bank wrote in its 2020 Railway Improvement and Safety for Egypt (RISE) research paper. While reports on fatalities and train accidents in Egypt are not conclusive, it estimates that Egypt has about five times as many serious accidents as Europe, seven times as the UK, and 20 times as Japan. "People's behavior, poor supervision and safety enforcement on illegal crossings, robbery of assets, misallocation of maintenance funds, and poor training leading to human error / malpractice stand as the main culprits," the World Bank writes.

The shoe certainly fits: "There is also an inherited culture of misuse of public property such as stealing railway tracks, throwing garbage on the tracks and establishing markets on level crossings, as well as trespassing on the tracks," it added.

Egypt's railway network is passenger-heavy, making accidents fatal: Egypt's network is one of the highest density railways in the world, according to the World Bank. It transports 1.4 million passengers a day via 3.5,000 coaches, and 6 million tonnes of goods annually, the Egyptian National Railways website says. Considered the "backbone of passenger transport," it spans across 9.5k km and boasts 705 stations across the country. 60% of the network is concentrated in the Nile Delta.

Only 1% of Egypt's cargo is moved nationwide via the tracks, which is very low, compared to an EU average of 18% for instance. With passengers over-represented on the rails, any accident therefore stands a higher chance of humans being harmed.

One solution being proposed to the issue is a dedicated licensing and training institution, says George. In partnership with the Higher Education Ministry, the institution should set quality standards for driving and operating new trains and teaches new drivers how to handle the equipment, he states. This would also require a clear promotions and career paths plan, so that new graduates and calibers can easily join it.

Legislation is also needed to protect tracks and infrastructure from vandalism: A big part of the problem lies in the way people treat the railway network. Misuse of public property and the frequent stealing of cables, tools and equipment are at the core of the railways' trouble, undersecretary of the House Transport Committee Mahmoud Eldabaa said. This requires clear legislation and punishment to be stopped, he adds.

The Transport Ministry seems to be moving in the right direction: The new head of the subsidiary, Shaaban Mahmoud, the new head of the Egyptian Company for the Renovation and Maintenance of Railways — a subsidiary of the Egyptian Railway Authority — already vowed to focus on training the railway's human resources on how to operate modernized equipment, Al Shorouk wrote. But the devil is in the details - there's still no clarity on how (or how much) the ministry will invest into building up capacity. (Ent 22.04)

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11.3. EGYPT: University Entrepreneurship Programs - What Are They Getting Right?

Enterprise is examining how universities play a vital role in Egypt's growing entrepreneurship scene, providing concrete skills for students to start their own businesses. University entrepreneurship programs offer services ranging from informal drop-in advice to tailored acceleration programs, and broader awareness-raising to reach a wider audience.

Enterprise asked the experts: We polled startup program leaders, entrepreneurs and VCs on the biggest strengths of university entrepreneurship programs and where they still see room for improvement. Today, we're looking at what they tell us these programs do well, particularly in early-stage awareness-raising, access to resources and sector-specific knowledge, mentorship and helping students develop skills with market applicability.

Being sector-specific, aligned with university expertise: The best university startup programs complement the universities' own specialized experience, says founding director of AUC's V-Lab Ayman Ismail. "Creating programs aligned with what's happening at the university is extremely important, so they benefit from and provide benefit to the university." The Arab Academy's startup incubator program focuses on logistics, while the Heliopolis University program focuses on sustainability. iHub was initially focused on engineering innovations in the Ain Shams School of Engineering.

Fostering connections and scaling: By replicating successful models in different locations, or sharing experiences that other programs can adapt, more students can benefit from university startup program

services. iHub now serves 26 universities from 44 locations, with over 97,000 beneficiaries, says founder Maged Ghoneima. "We scaled from Ain Shams across other universities. I've recently created a new advisory committee with eight other university entrepreneurship program leaders, to plan more interventions and replicate our success."

Early-stage entrepreneurship awareness-raising: Sparking an interest in entrepreneurship among students who've never been exposed to it before is probably the biggest service university entrepreneurship programs offer, say multiple sources. iHub, Cairo University's FEPS BI, Assiut University's Hemma, and Nile University's Nilepreneurs have all done well informally engaging students inside their universities through meetups, info sessions, webinars, seminars and film nights, says Ghoneima. V-Lab spreads awareness about entrepreneurship to AUC students, says Falak Startups Managing Director Youssef ElSammaa. "This awareness wasn't there when I was at university," he said. V-Lab works with many non-student entrepreneurs, giving AUC students valuable startup exposure, he adds.

More formal entrepreneurship courses let students dip their toes in the water: Elective courses at Cairo and Ain Shams universities have done this well, says Ghoneima. Nile University and BUE's undergraduate courses in entrepreneurship (taken as business minors) encourage students to start their own small businesses — even if they don't continue after graduation, Nilepreneurs founder Nezar Sami tells Enterprise.

Connecting industry mentors with students: Technical and business mentorship is a key component of most university startup incubator programs, says Sami. Having industry mentors — particularly CEOs and COOs — enhances program credibility for students, he adds. FEPS BI has very good mentors, including graduates and alumni, says one expert.

Holding competitions where students apply skills to real-life challenges: University programs excel in holding competitions that require creative thinking and problem solving — from iHub's Electric Vehicle Rally (EVER) to the AASTMT Entrepreneurship Center's Rally Startup Competition, FEPS BI executive director Heba Zaki tells Enterprise.

Focusing on ready-to-market ideas: Programs built around market needs, rather than student interests, create startups that are more likely to survive, says Sami. FEPS BI has just launched its Sustainable Innovation Lab program, focused on creating startups aligned with the Sustainable Development Goals, says Zaki. V-Lab, meanwhile, is now targeting more mature entrepreneurs and pushing for commercial value, says Ismail. "The average age has increased. Most of our entrepreneurs are now in their early-mid 30s. We're launching programs that produce companies that can go to market, and bringing investments with a decent degree of success."

Creating a clear, in-program link with the job market: FEPS BI's recently-launched Student Consultancy Program sends talented university students to startups and NGOs to work where there's no in-house capacity, says Zaki. This hands-on practical experience is highly beneficial, she says. FEPS BI also runs the Nielsen Technology & Operations Academy, a nine-month program where Cairo University students are trained in market research, before the highest-ranked are offered jobs at Nielsen.

Universities are natural environments to foster early startup growth, because of the resources they can leverage. Generally, universities have access to space, equipment, labs, manufacturing workshops, and expert academic knowledge, says Ghoneima. They're great environments for testing, validating, and prototyping ideas to address particular issues, he says.

The goal of most university programs? To build an early-stage pipeline of entrepreneurs: There are six key stages in a startup's development, says Ghoneima:

•	Ideation and looking for problems to solve.
•	Creating teams, and transforming ideas into proof of concept.
•	Product development.
•	Acceleration.

- Looking for angel investment, and scaling across market sectors and locations.
- Maturity, making sure the startups have proper market share, and seeking acquisition.

"Generally, university startup programs target the first two stages," says Ghoneima. "They have access to youth and can transform their mindsets through education."

A rich pipeline is essential, because startups are high-risk — and most will fail: A certain amount of failure is simply part of the entrepreneurship model, say sources, which is why building a strong pipeline is vital. "Entrepreneurship is high-risk, and this means there's the risk of failure," says Ismail. "As an investor, you have to know that ultimately if you invest in 10 startups, 8 of them may fail and you hope a few will do well."

But could programs be doing even more? Despite these successes, our insiders tell us that there are things universities get wrong or could stand to do better in. These include fostering deeper connections with the broader entrepreneurship ecosystem, and offering young entrepreneurs more training on governance and leadership. (Enterprise 20.04)

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