



Capacity Building of Financial Technologies in Palestine

by Laith Kassis

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The Information and Communication Technology Center (ICTC) at Al-Quds Open University holds its 12th annual ICT Day, entitled “Financial Technology “Fintech” on Nov 29, 2018, at Grand Park Hotels, Rafat Street, Al-Masyoun Heights, Ramallah.

Laith Kassis



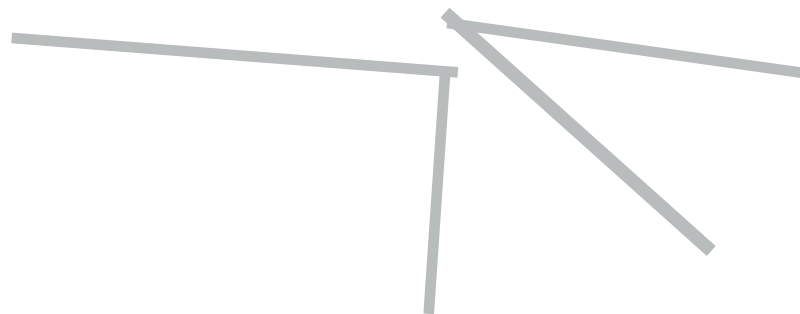
Laith Kassis Palestinian / Australian. A graduate of the University of Wisconsin – Milwaukee, USA and the Royal Melbourne Institute of Technology, Australia.

Laith advocated, wrote the concept notes and championed the development of the first Techno Park at Birzeit University and managed its program operations and construction. Laith has also championed the business and technology incubation industry. Laith is also the co-founder of RuWWad.ME and EnterVentures providing consultancy, mentoring and capacity building to entrepreneurial ventures while validating a business model for a soft-turret phone technology app. He also provides wide array of information technology project management services, market surveys and export strategies. Prior to that, his relevant experience was in managing the Palestine IT Association (PITA) of companies and the PICTI incubator.

His leadership had a direct impact on developing the entrepreneurial sector; promote start-up companies and culture. He also contributed to the growth of the ICT sector through promoting multinational R&D projects, outsourcing and investments. He is an early supporter for the development of seed and venture capital creation in Palestine. His customized technology entrepreneurship education material is widely used by local and regional accelerators in the MENA region.

Regionally, Laith has participated in the formation of the MENA Network of Incubators as its Vice President and has consulted with the World Bank infoDev program to promote high-growth entrepreneurship eco-systems in the MENA region and conduct business incubation management training.

- Why FinTech Capacity Building is Important



A REPORT BY



FINTECH IN MENA

Unbundling the financial services industry

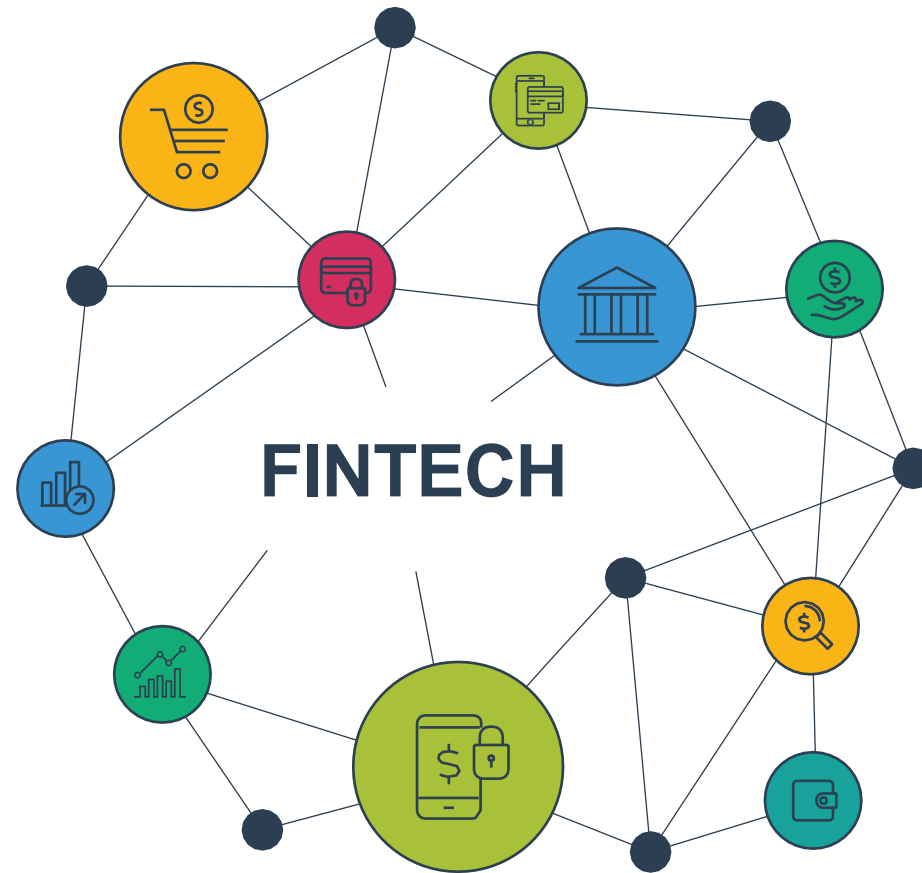
#stateoffintech

WHAT IS FINTECH?

Financial technology describes **tech-enabled products and services that improve traditional financial services. They are faster, cheaper, more convenient or more accessible.** In most cases they are developed by startups.

Startups are young companies that attempt to scale by creating new markets or by gaining a significant share in established markets through a better value proposition.

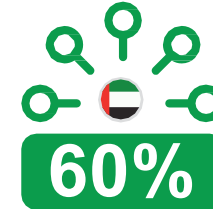
Hence, **fintech startups are young, small companies that promise to significantly improve the way individuals and companies bank by collaborating or competing with established financial service providers.**



EXECUTIVE SUMMARY

The fintech (financial technology) sector is rising globally, and has already arrived in the Middle East and North Africa (MENA). In fact, the number of startups offering financial services in the region doubled from 46 to 105 in the last three years (2013-15).

Fintech startups have sprung up in 12 Arab countries, yet 3 in 4 startups are based in the UAE, Lebanon, Jordan or Egypt. The UAE is the most dynamic hub with a 4-year CAGR of almost 60%, and payments are the most popular sector, accounting for half of all MENA-based fintech startups.



The rise of fintech in MENA is driven by four opportunities: 86% of adults don't have a bank account, and SME lending stands at half of the global average; at the same time, the volume of ecommerce is set to quadruple over five years, and 1 in 2 bank customers is interested in new digital services.

Declining customer loyalty is not necessarily bad news for banks though: the three main obstacles for fintech startups are visibility, customer education, and trust. This is why almost 9 in 10 fintech startups seek collaborations with corporations, and banks are well positioned to integrate into the growing fintech ecosystem.



MENA's fintech startups provide a wide range of services to private, corporate and governmental partners. The most mature sector, payments, includes startups offering bill payment, mobile and online payment solutions as well as wallets. Payment service providers (PSP) have sprung up as well, integrating a variety of services into a platform.

Lending startups include crowdfunding, money circle, peer lending and loan comparison platforms. Finally, second wave startups specialize in international money transfer, wealth management, insurance solutions and blockchain-based services such as cryptocurrencies.



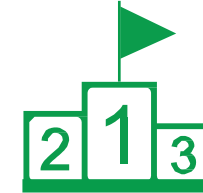
EXECUTIVE SUMMARY

The core challenges reported by MENA's fintech entrepreneurs concern regulations, hiring and retaining talent, as well as raising investments. 1 in 4 fintech startups shut down, and only 10% account for the majority of investment and employees. Taking a closer look, positive dynamics seem to improve all of the three challenges.

A variety of reforms and new regulations point to increased awareness on a policy maker level. The launch of the region's first fintech sandbox in the UAE and the new mobile money regulations in Egypt are two recent examples of this new commitment.

Professionals drop out to launch startups. The average fintech entrepreneur is a male university graduate in his late 20s or early 30s, with experience abroad. 4 in 5 startups have at least one cofounder with prior work experience in a financial services company. In total, MENA-based fintech startups employ over 1,600 people in MENA.

Only 1 in 4 fintech startups went through an accelerator, yet 2016 added two fintech accelerators and a to the ecosystem. From 5 startups, 2 already collaborate with banks and another 2 aim to do so in the near future, and 7 other industries have been mentioned as attractive partners, namely telecom, ecommerce, retail, media, insurance, logistics and aviation. MENA's fintech startups raised \$100 millions over the last decade. Pointing to a sharp increase of funding activity, around \$50 millions in investments are expected for 2017. This is mainly driven by a significant increase in Series A, B and C deals up from an average of 30% in the past to 65% moving forward.



Fintech is poised for greater visibility by 2020. With the payment sector showing early signs of consolidation especially in the GCC region, it can be expected that second wave startups enter the game wherever fintech gains a foothold.

In total, we project around 250 fintech startup launches by 2020. Their failure rate can be lowered, their market share can grow faster and job creation can increase. Unlocking a virtuous cycle requires governments to step in and provide the foundations on which entrepreneurs, investors and customers democratize financial services.

An alliance of policymakers, investors, innovative corporations and entrepreneurs can place the UAE among Asia's most promising fintech hubs. Lebanon, Jordan and Egypt stand good chances to become hubs for fintech as well.

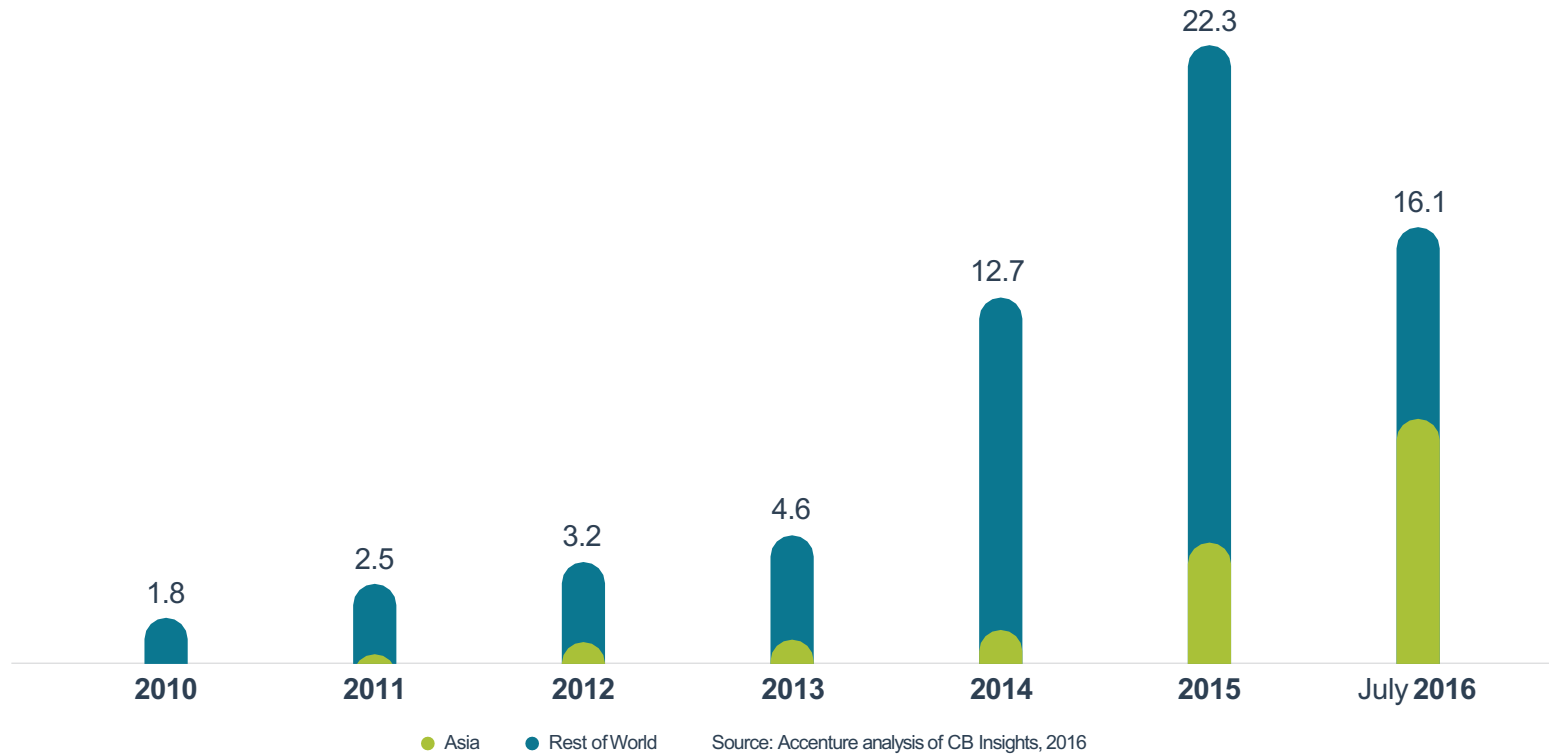




WHAT IS HAPPENING GLOBALLY?

Innovation in finance picked up later than it did in media, retail or communication. However, **since 2010 thousands of fintech startups have raised over \$63 billions** around the globe (Fig. 1).

Figure 1 | Global investments in fintech ventures (in USD million, 2010-July 2016)





THE GLOBAL FINTECH REVOLUTION



Between 2010 and 2014, the rise of fintech investments was driven mainly by three hubs - Silicon Valley, New York City, and London. However, while the US still accounted for over 50 percent of all fintech investments in 2015, Asia's share had tripled from 6 percent in 2010 to 19 percent in 2015. In fact, all regions of the world now fall into one out of three stages of the fintech cycle: frontier, emerging, and developed fintech ecosystems. (Fig. 2).

FRONTIER

In a frontier ecosystem, the vast majority of fintech startups are still in the idea and early stage. Funding is slowly picking up as entrepreneurs maneuver with little support around regulations, customer acquisition, and partnerships.

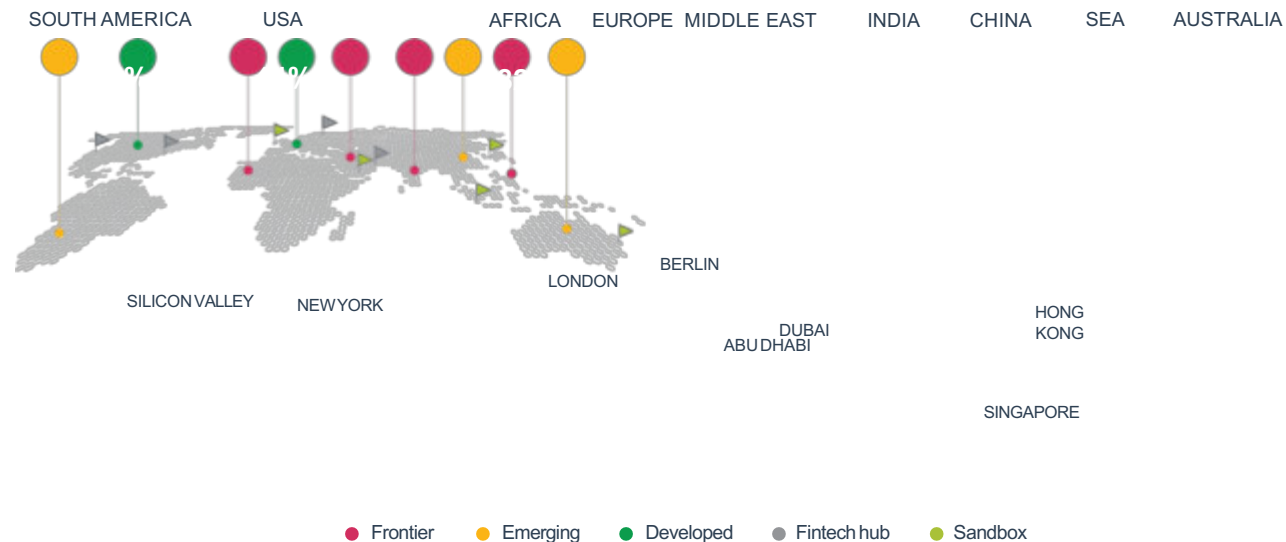
EMERGING

In the emerging ecosystem, a first cohort of high-growth fintech startups captures significant customer bases, fueling three-digit annual investment growth rates and increasing the strategic imperative for incumbents to engage with the newcomers.

DEVELOPED

Finally, developed ecosystems reach saturation. Fewer but significantly larger deals are centered around high value companies and unicorns. Hence, year-on year growth of investments is slowing down. Today, only the first-movers have reached this stage namely the USA and parts of Europe with their globally leading fintech hubs.

Figure 2 | Regional growth in fintech investments (in percent, July 2015–June 2016)



Source: IC Dowson and William Garritty Associates, EY, TechCrunch



FinTech Landscape – Disruptive Forces in Global Financial services





"In 2017, industry heavyweights completed a significant pivot towards Blockchain. PwC (Vulcan Blockchain), Microsoft (Project Bletchley), JP Morgan (Juno and Quarom), IBM (Hyperledger and IBM Blockchain), Accenture, and Deloitte entered into the Blockchain market with meaningful stand-alone projects."

A report published by Grand View Research, a San Francisco-based market research and forecasting company, has predicted that the global Blockchain market will reach \$7.74 billion by 2024.

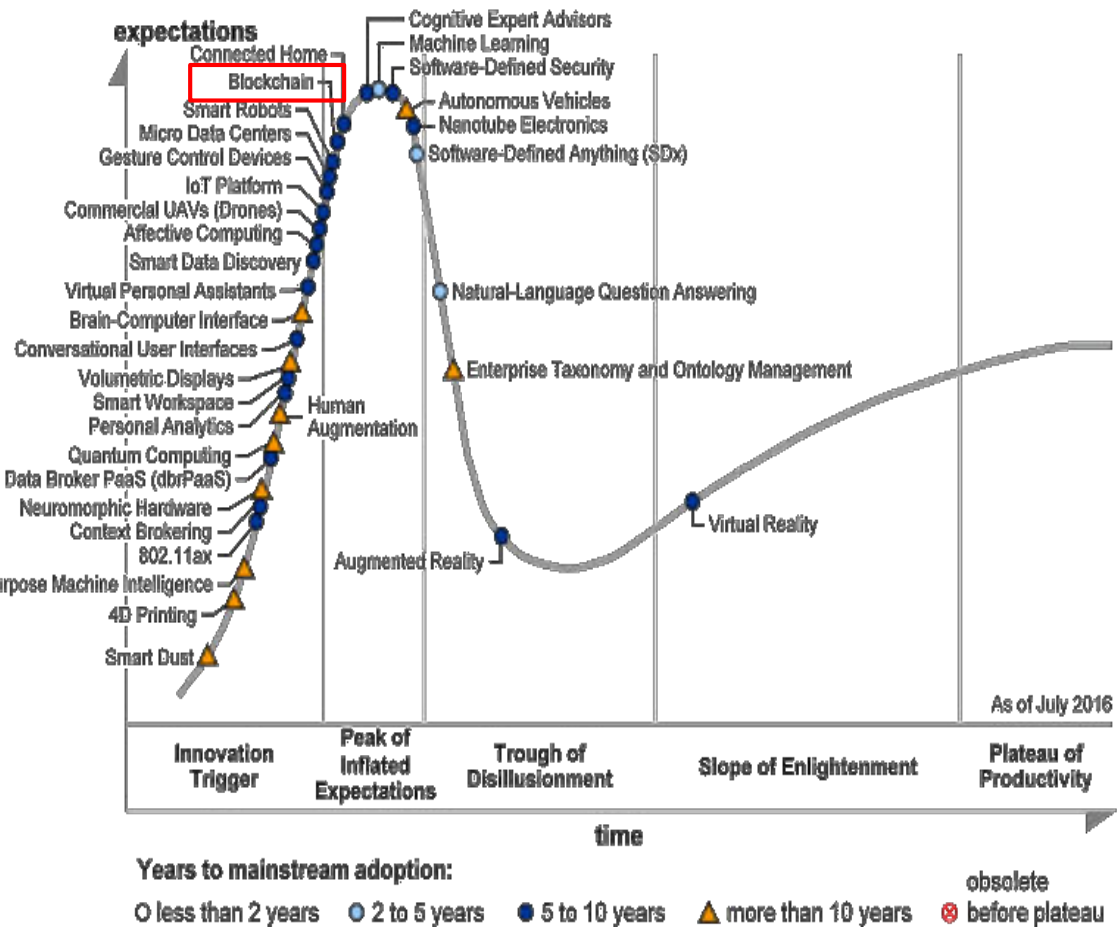
Financial institutions will lead the charge, but the public sector will dominate the market in the coming decade, the report predicts. Public institutions and governments will increasingly turn to Blockchain to facilitate open and efficient transactions for the range of services that undergird civic life — from municipal fees to vehicle inspections to voting.

"Once they understood what the Blockchain could do, the banking world rolled up its sleeves."

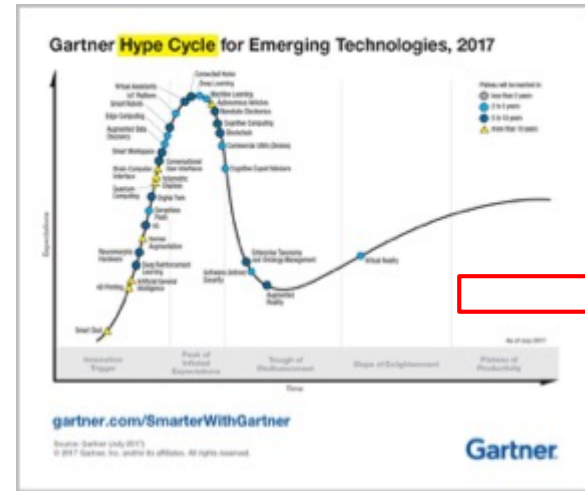
Dubai to go paperless by the year 2020

Blockchain and the Hype Cycle – It is here to stay

Gartner's Hype Cycle for Emerging Technologies, 2016

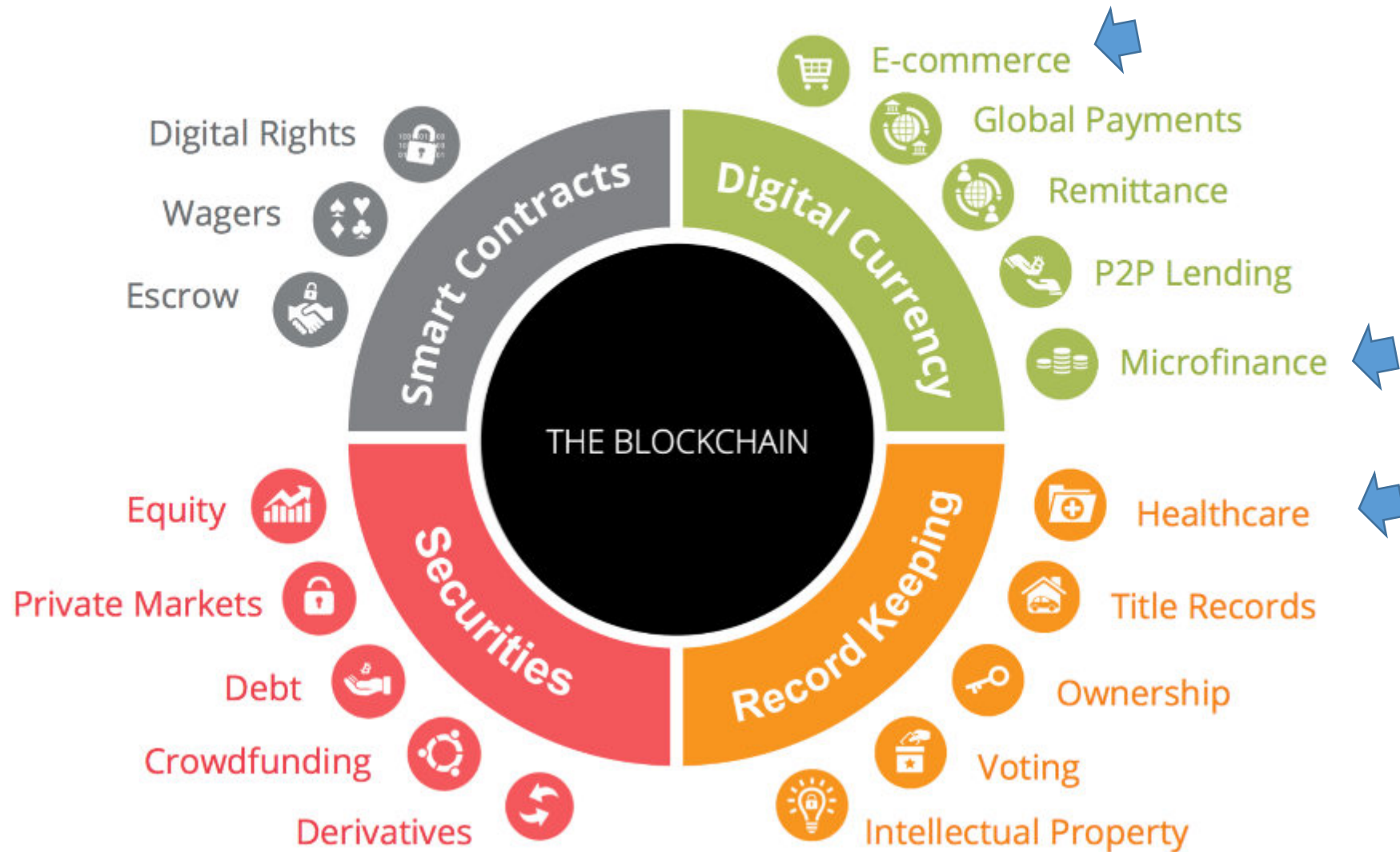


Source: Gartner (August 2016)



Blockchain Potential Applications & Disruption

The blockchain is radically changing the future of transaction based industries



50+ BLOCKCHAIN REAL WORLD USES CASES

GOVERNMENT

Essentia develops world's first blockchain solution to manage international logistics hub together with Traffic Labs and the Finnish Government



essentia.one

IDENTIFICATION


Voter registration is being facilitated via a blockchain project in Switzerland spearheaded by Uport.



uport

MOBILE PAYMENTS

The blockchain ledger that Ripple uses has been latched onto by a group of Japanese banks, who will be using it for quick mobile payments.



ripple

INSURANCE

A smart contract-based blockchain is being used by Insurer American International Group Inc as a means of saving costs and increasing transparency.



AIG


ENDANGERED SPECIES PROTECTION

The protection of endangered species is being facilitated via a blockchain project that records the activities of these rare animals.



CARBON OFFSETS


IBM is using the Hyperledger Fabric blockchain in China to monitor carbon offset trading.



IBM HYPERLEDGER

ENTERPRISE

Ethereum's blockchain can be accessed as a cloud-based service courtesy of Microsoft Azure.



Microsoft Azure

BORDER CONTROL

Essentia has devised a border control system that would use blockchain to store passenger data in the Netherlands.



essentia.one

SUPPLY CHAINS

IBM and Walmart have partnered in China to create a blockchain project that will monitor food safety.



IBM Walmart

HEALTHCARE

A number of healthcare systems that store data on the blockchain have been pioneered including MedRec.



MEDREC

SHIPPING

Shipping is a natural fit for blockchain, and Maersk have been trialling a blockchain-based project within the maritime logistics industry.



MÆRSK

REAL ESTATE

Blockchain is now being used to complete real estate deals, the first of which was conducted in Kiev by Propy.



PROPY

ENERGY

Essentia is developing a test project that will help energy suppliers track the distribution of their resources in real time, whilst maintaining data confidentiality.



essentia.one

LAND REGISTRY

Land registry titles are now being stored on the blockchain in Georgia in a project developed by the National Agency of Public Registry.



NATIONAL AGENCY OF PUBLIC REGISTRY

COMPUTATION

Digital Currency Group are helping Amazon Web Services examine ways in which the distributed ledger technology can help improve database security.



DIGITAL CURRENCY GROUP

ADVERTISING

New York Interactive Advertising Exchange has been experimenting with blockchain as a means of providing an ads marketplace for publishers.



NYIAX

BORDER CONTROL

Essentia is developing a blockchain project for border control that will allow customs agents to record passenger data from an array of inputs and safely store it.



essentia.one

JOURNALISM

Decentralized journalism, as enabled by blockchain technology, has the potential to prevent censorship and increase transparency, as Civil has shown.



CIVIL

WASTE MANAGEMENT

Waltonchain is using RFID technology to store waste management data on the blockchain in China.



ENERGY

Food importation is another industry where blockchain is proving its worth, with Louis Dreyfus Co trialling a soybean importation operation using this technology.



LDC

DIAMONDS


The De Beers Group is using blockchain to track the importation and sale of diamonds.



De Beers

FINE ART

By storing certificates of authenticity on the blockchain, it's possible to dramatically reduce art forgeries, as one blockchain project is proving.



NATIONAL SECURITY

For the past two years, the US Department of Homeland Security has been using blockchain to record and safely store data captured from its security cameras.



TOURISM

In a bid to boost its tourism economy, Hawaii is examining ways in which blockchain-based cryptocurrencies can be adopted throughout the US state.




TAXATION

In China, a tax-based initiative is using blockchain to store tax records and electronic invoices led by Miaoocai Network.



ENERGY

Chile's National Energy Commission has started using blockchain technology as a way of certifying data pertaining to the country's energy usage as it seeks to update its electrical infrastructure.



CNE COMISIÓN NACIONAL DE ENERGÍA

RAILWAYS

Russian rail operator Novotrans is storing inventory data on a blockchain pertaining to repair requests and rolling stock.



НОВОТРАНС

ENTERPRISE


Google is building its own blockchain which will be integrated into its cloud-based services, enabling businesses to store data on it, and to request their own white label version developed by Alphabet Inc



Google Alphabet

MUSIC

Arbit is a blockchain-based project led by former Guns N Roses drummer Matt Sorum seeking a fairer way to reward musicians for their creative efforts.



arbit

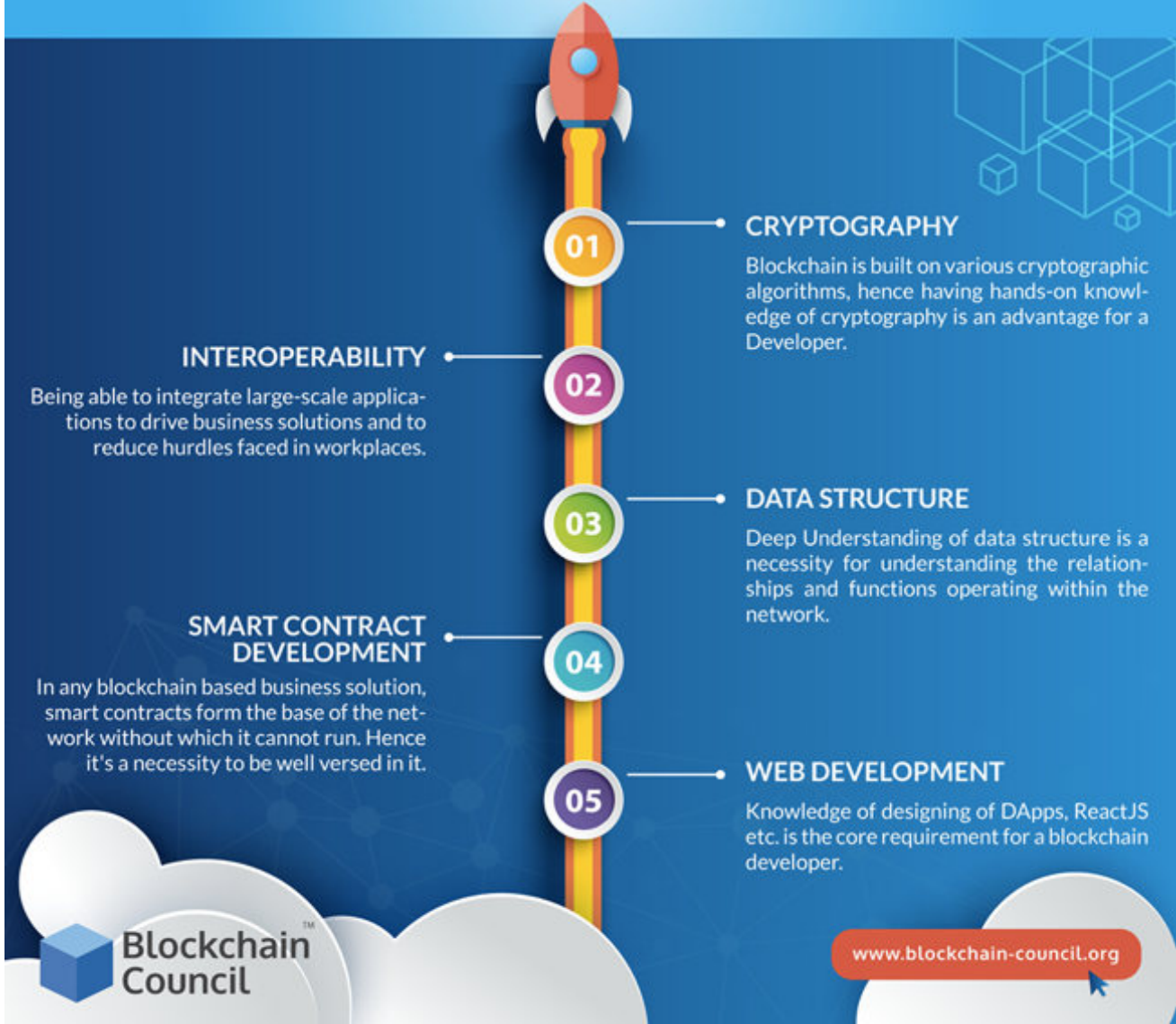
FISHING

Blockchain technology has been used to provide a transparent record of where fish was caught, as a means of ensuring it was legally landed.



- Key Skills & Resources for Blockchain FinTech Capacity Building

KEY SKILLS REQUIRED TO BECOME A BLOCKCHAIN DEVELOPER



STEPS TO DEVELOP HYPERLEDGER SOLUTION ON CLOUD SERVICE

1

LAUNCH A LINUX/
WINDOWS INSTANCE



2

INSTALL DOCKER



4

CREATE YOUR CONFIGURATION
FILES FOR BLOCKS, TRANSACTION
AND ALL THE PEERS



3

GET THE
HYPERLEDGER TOOLS



5

RUN THE
BLOCKCHAIN NETWORK
GENERATORS



6

START YOUR
NETWORK





IBM Blockchain

based on Hyperledger Fabric

Online courses that offer IBM badges:

Blockchain Essentials: <https://cognitiveclass.ai/courses/blockchain-course/>

IBM Blockchain Foundation Developer: <https://cognitiveclass.ai/courses/ibm-blockchain-foundation-dev/>

Additional tutorials that **do not** offer badges:

IBM Developer (<https://developer.ibm.com/solutions/blockchain-app-development/>): a ton of resources on Blockchain such as tutorials, courses, and codes.

IBM Blockchain 101: <https://developer.ibm.com/tutorials/cl-ibm-blockchain-101-quick-start-guide-for-developers-bluemix-trs/>

Deploy a Blockchain business network on the cloud: <https://developer.ibm.com/tutorials/cl-deploy-blockchain-starter-plan-network/>

Other tutorials from IBM Developer: <https://developer.ibm.com/tutorials/category/blockchain/>

IBM Coders (<https://ibmcoders.influitive.com/>): They have different challenges for different technologies including Blockchain

Hyperledger Composer portal (*external*): <https://www.hyperledger.org/projects/composer>. Many resources and documentation

Hyperledger Fabric portal (*external*): <https://www.hyperledger.org/projects/fabric>. Many resources and documentation

CONSENSYS
ACADEMY

<https://consensus.net/academy/>



Blockchain Council™

<https://www.blockchain-council.org/certification-training/>

\$99 - \$129 Online Programs

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- Certified Blockchain Developer™ Version 2
- Certified Smart Contract Developer™
- Certified Bitcoin Expert™
- Certified Ethereum Expert™
- Certified Solidity Developer™
- Certified Cryptocurrency Expert™
- Certified Cryptocurrency Trader™
- Certified Hyperledger Expert™



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BLOCKCHAIN BOOTCAMP PROGRAM

5 Days

Blockchain Expert Developer
 Additional Reading and Resource
 Material will be Provided

Ramallah

2-6
September, 2018

US\$100
for Students
and Entrepreneurs

Benefits:

- Potential to get hired e.g. freelance, employee or start your own Blockchain tech startup
- Acquire detailed understanding of Blockchain & how it works
- Practice newly acquired knowledge and skills in developing Blockchain projects
- Discussing some use cases where the Blockchain is applicable.
- Learn how Initial Coin Offering, Blockchain as a Service, Ethereum Smart Contracts, Solidity, Cryptocurrency work

Register now: URL link is in the first comment

Limited Seats



BLOCKCHAIN BOOTCAMP PROGRAM

5 Days

Blockchain Expert Developer
 Additional Reading and Resource
 Material will be Provided



Mr. Mohannad Amareh

A Palestinian currently lives and works in Abu Dhabi as a Senior System Analyst. He has the following areas of expertise: Oracle Application Express (APEX), Oracle SQL, PL/SQL, HTML, JS, J2, CSS, JSP, XSD, JSON, IBM DataStage, IBM CDC, Resful, SOAP Webservices, Ethereum, Hyperledger Fabric, Multichain Blockchain.

Mr. Amareh has more than 8 years in software engineering, database applications, web applications and more than one year in Blockchain development. Amareh is the founder of Oracle Ape Meme in Abu Dhabi, providing training for beginners to use the tool.

Mr. Amareh is also Certified Blockchain Expert and Certified Blockchain Developer by Blockchain-Council India. He has made his own ICO on Ethereum Blockchain from A-Z.



Mr. Basel Abu Baker

A Palestinian currently lives and works in Abu Dhabi as a Senior Application Developer, with 5+ years of experience in applications development, testing, troubleshooting, and implementation with fluent understanding of project management and software development life cycle (SDLC) and the following main skills: ASP.net, VB.NET, PHP, PHP Drupal, PHP Joomla, PHP WordPress, CK, MYC, C, C++, Java, JavaScript, jQuery, CSS, CSS3, AJAX, Kotlin, Ionic, Facebook Applications

Adept at creating classroom and web-based training and instructional materials, teaching aids, and lectures, as well as technical/troubleshooting manuals and user guides.

Mr. Abu Baker is Certified Blockchain Expert by Blockchain-Council India, (Ethereum) Solidity Developer, Smart Contract Developer, ICO, DAO, and Cryptocurrency Enthusiast.



Smart
Talk Series

BLOCKCHAIN

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Learn More:
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From:
Certified Experts

Birzeit University
Sa'ad Khoury Building for Development Studies
Hall 104

27 / 8 / 2018
10:00 am - 1:00pm



تعريف المزيد عن:
تقنية سلسلة الكتل، هابردجت،
العقود الذكية والعملات الافتراضية

مقدمة من:
خبراء معتمدون

جامعة بيرزيت
مبنى سعيد خوري لدراسات التنمية
قاعة 104

27 / 8 / 2018
10:00 am - 1:00pm

Organizing Partners:



Organized by:



FB: Blockchain Community \ Palestine Techno Park
 GitHub Code Sample
 Training Material



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