Key Factors for the Successful Entry of Developing Countries into the Internet of Things

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About Me

Current

- CEO & Founder of BITA – IoT Holding Company
- Chairman & Founder of IoT Academy of Iran
- Faculty member at Iran ICT Research Institute
- Deputy of IoT & Big Data Commission in Tehran ICT Guild Organization
- Chairman of Technology Working Group in IoT & Big Data Commission
- 17 years experience in the Field of ICT and More than 3 years focus on IoT (Research, Teaching, doing Industrial Projects in the field of IoT)
- International lecturer in the field of IoT

Previously

- Superintendent of IT Faculty in Iran Telecom Research Center (ITRC)
- Deputy of IT Faculty in Iran Telecom Research Center
- Head of Multimedia System Research Group in ITRC

Hot News Related to Dubai & Internet of Things!

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TABLOID!
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Salman reaffirms support for Iraq's unity and stability

IRANIAN MILITIAS THAT ARE IN IRAQ NEED TO GO HOME NOW, TILLERSON SAYS

RIYADH

Saudi Arabia's King Salman Bin Abdul Aziz said yesterday "what links Saudi Arabia to Iraq is not just geography and common interests but ties of fraternity, blood, history and destiny. We congratulate our brothers in Iraq on the achievements made in eradicating and defeating terrorism. We affirm our support for the unity and stability of Iraq."

Meanwhile, speaking at a press conference in Riyadh yesterday, where he is holding talks with top Gulf officials, US Secretary of State Rex Tillerson demanded Iranian militias leave Iraq.

"Certainly Iranian militias that are in Iraq, now that the fighting against [Daesh] is coming to a close, those militias need to go home. All foreign fighters need to go home."

Tillerson has promoted a Trump administration aim of uniting Saudi Arabia and Iraq in common cause to counter Iran's growing assertiveness in the Middle East.

Saudi Arabia and Iraq con-

Saudi Press Agency

King Salman, Al Abadi, Tillerson and other senior officials attend the meeting in Riyadh, yesterday.

Saudi Arabia and Iraq convened a new joint body to coordinate their fight against Daesh and on rebuilding Iraqi territory wrested from the terror group.

Daesh, but will also help support

fought military gains."

ways counter some of the unproductive influences of Iran inside of Iraq," he said at a news conference with Saudi Foreign Minister Adel Al Jubeir after participating in the inaugural meeting of the Saudi Arabia-Iraq Coor-

Safeguarding digital wealth

WAM

His Highness Shaikh Mohammad Bin Rashid Al Maktoum, Vice-President and Prime Minister of the UAE and Ruler of Dubai, yesterday launched the Dubai Internet of Things, (IoT) Strategy, and the Data Wealth Initiative. SEE ALSO B4

Abe likely to retain supermajority

A large win for Japan PM's coalition will pave way for easier monetary policy

TOKYO

Prime Minister Shinzo Abe's ruling coalition may retain its two-thirds parliamentary majority in yesterday's general election, an NHK exit poll showed, bolstering his chances at becoming Japan's

Actual vote counts showed the LDP with enough seats for a simple majority. His coalition has to win about half of the seats left to be counted to clear the two-thirds threshold.

"There are many close battles still going on, which means there are still those who take a harsh view of me and of the LDP," Abe told TBS television station last night. "We want to remain aware of that, and to treat this victory with humility."

Safeguarding digital wealth

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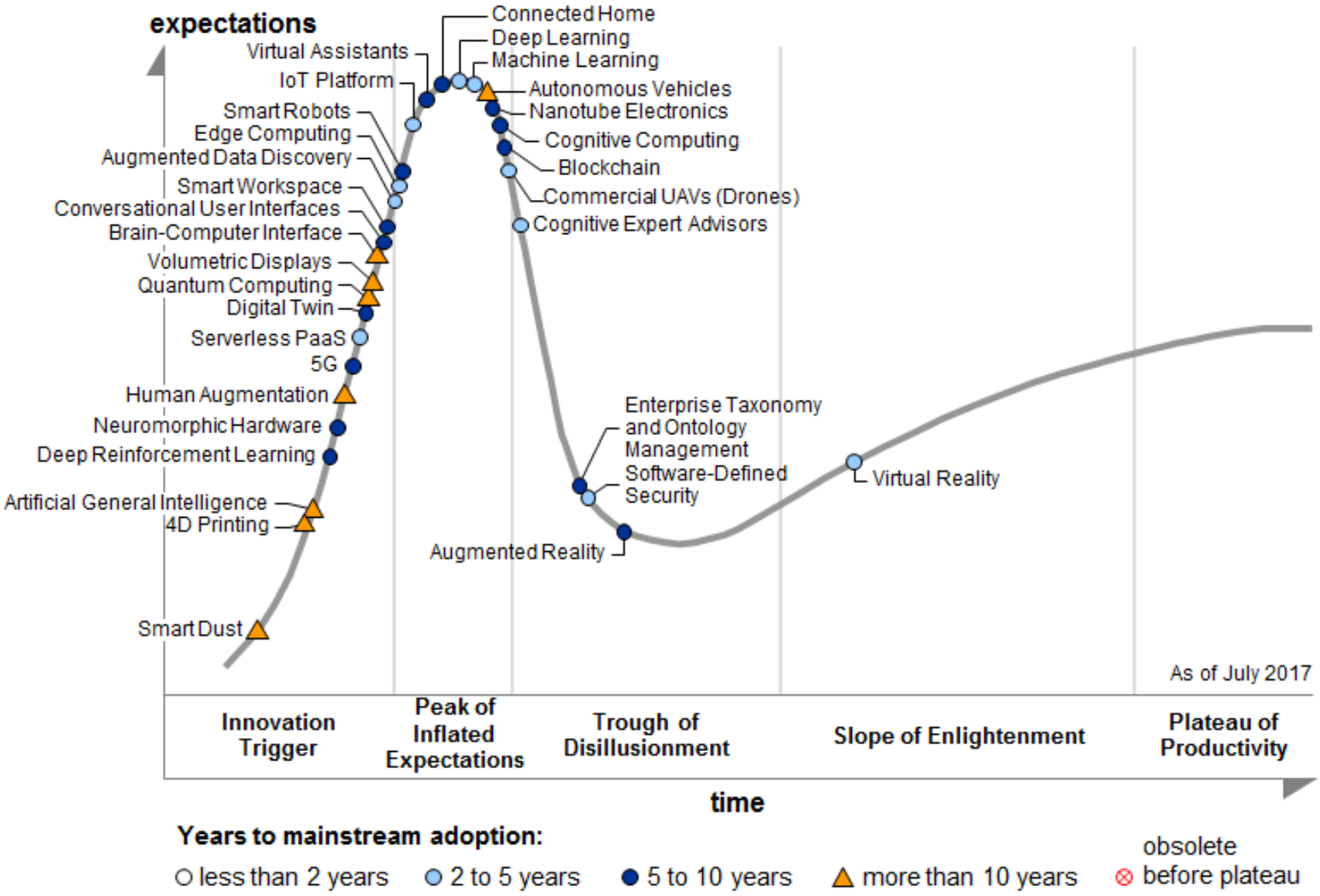
In near Future, Iran Internet of Thing (IoT) Road Map will be launched by the Information and Communications Technology (ICT) Minister of Iran, Mr. Javad Jahromi.

Internet of Things (IoT) Definition

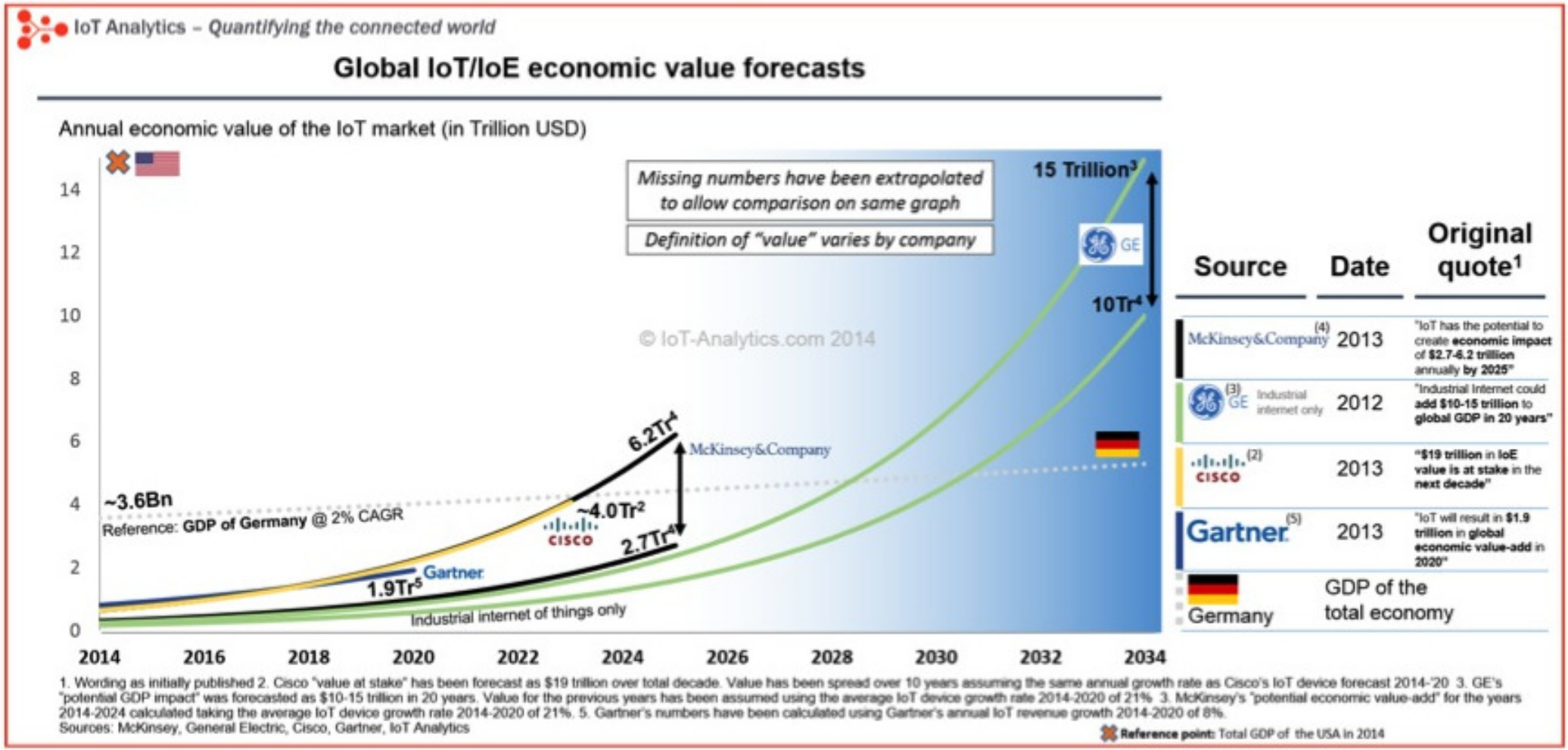
The International Telecommunications Union (ITU) defines IoT as follows: “The IoT can be viewed as a global infrastructure for the information society, enabling advanced services by interconnecting (physical and virtual) things based on existing and evolving interoperable information and communication technologies (ICT)” (Source: Recommendation ITU-T Y.2060).

Wikipedia defines the Internet of things (IoT) as a "network of physical devices, vehicles, and other items embedded with electronics, software, sensors, actuators, and network connectivity which enable these objects to collect and exchange data."

IoT Trend (Gartner Hype Cycle for Emerging Technologies)



IoT Predictions



Economic impact from the Internet of Things. Forecasts 2014-2034 by McKinsey, GE, Cisco, Gartner.

Main Characteristics of Developing Countries

- General Poverty

  Developing countries are poor. GDP and Per Capita Income are at low level.

- High Dependence on Agriculture

  Agriculture is the main occupation in developing countries.

- Underutilized Natural Resources

  Most of the developing countries are rich in natural resources.

- Lack of Industries and Enterprises

  The industrial sector in developing countries is at the primary stage of development.

- Lack of Capital and Technology

  Capital deficiency is another common problem of developing countries.

- Lack of Basic Infrastructures

  The factors that help for development are called infrastructures.

Main Characteristics of Developing Countries

- Demographic Characteristics

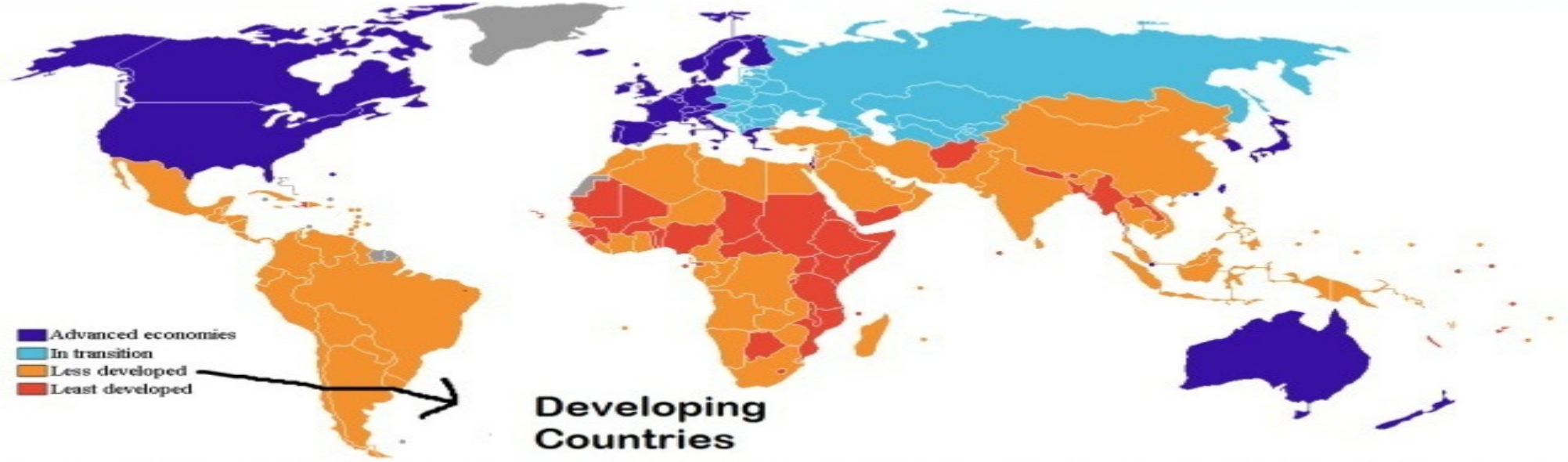
  There is high growth rate of population in developing countries.

- Socio-cultural Characteristics

  Different kinds of social groups reside in a country.

- Dualistic Economy

  All the sectors of economy have not been developed in developing countries.



IoT Features

- The need for specific manpower
  - ✓ Creative Young human resource
- Special need for training
  - ✓ IoT is not a technology
  - ✓ IoT is a concept uses different technologies
  - ✓ 6-12 month training to enter the job market
- Realizing the IoT
  - ✓ IoT is used in almost all industries and businesses
  - ✓ Not just for ICT
- The need for increasing maturity level
  - ✓ maturity level of the community is important for its use
- Startup based approach
  - ✓ The Startup approach is one of the major approaches for Internet of Things development

IoT Features

- From the perspective of technology
  - ✓ IoT Hardware: Except sensor element, other parts like boards, Modules, IoT Gateway and etc could be designed and implemented in most countries.
  - ✓ IoT Network: Based on the type of network, It could implemented by Government and Mobile operators (like NB-IoT) or SME companies (Like LoRa & LoRaWAN)
  - ✓ IoT Plarform: It could implemented in most countries (it need datacenter and server side cloud platform)
  - ✓ Applications & Services: It's based on creativity and Brainware
  - ✓ Data Analytics: Big Data Analytics is based on Brainware

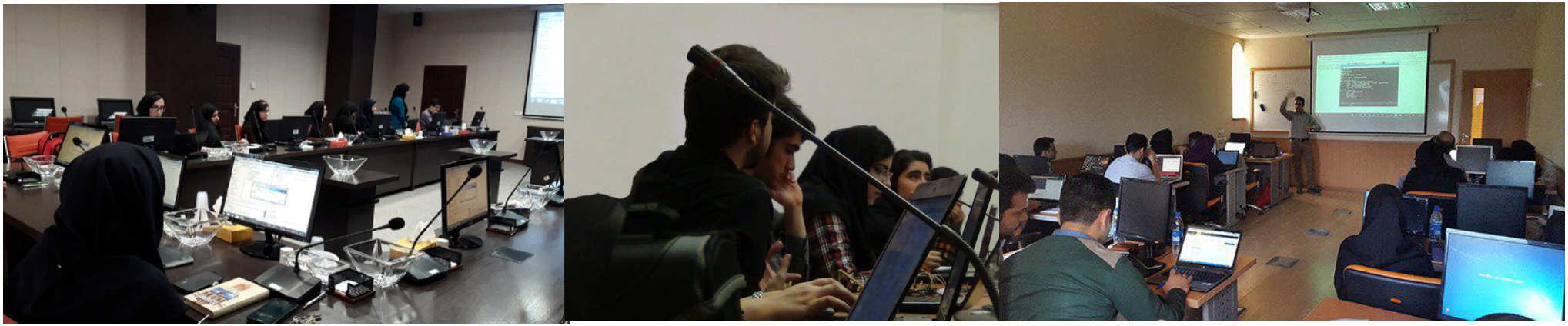
IoT Opportunities for Developing Countries (DCs)

- IoT Needs Creative Young HR, DCs have them
- Smart Agriculture is one of the main IoT Verticals, DCs based on Agriculture
- IoT spreads by Starups, DCs have this potential
- The Internet of Things can take countries out of the bipolar economy
- IoT Needs Brainware, DCs have Educated Young People



Key Factors for the Successful Entry of Developing Countries into the IoT

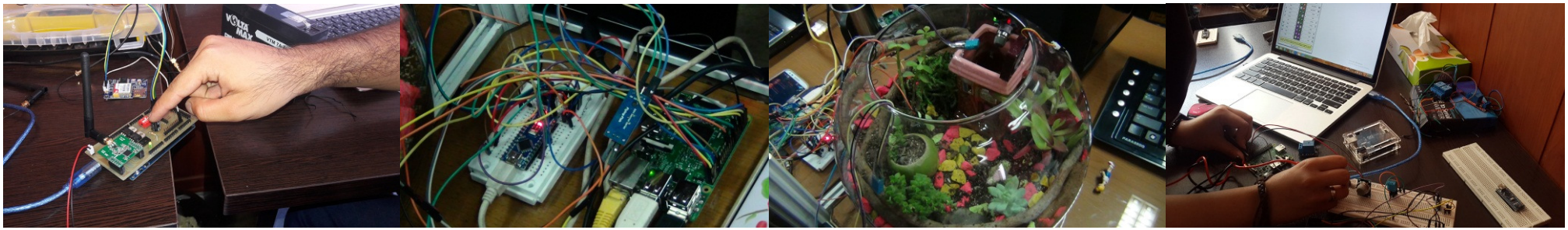
- Cultural Diffusion of Internet of Things Knowledge
- Training of Young educated human resources in the field of IoT
- Use of young creative manpower
- Startup Activities supported by Accelerators
- Creating Venture Capitals (VCs) who invest on IoT
- Right choice from the perspective of technology for Investment



Case Study: IoT Academy of IRAN History

IoT Academy of IRAN has started its activity in April 2015 with the aim of:

1. Creating Professional Didactic Ecosystem in the field of IoT
2. Cultural Diffusion of Internet of Things Knowledge over the country and training of specialized human resources in the field of IoT as an essential prerequisite for shaping IoT Market.



What we do:

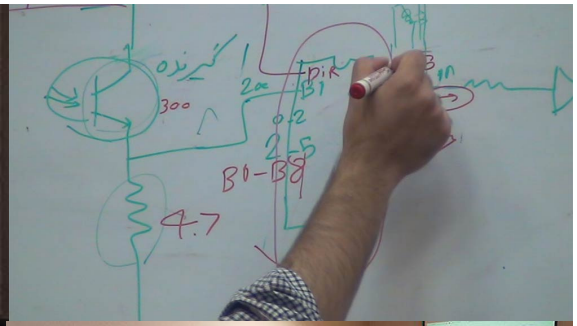
1. Practical weekly Workshops in all of the major aspects of IoT: Embedded System, Server Platform and Mobile Application (8 hours each one)

What we do:

2. 3-6 Month Training Courses with Minimum Viable Product (MVP) Creation (Free of charge for undergraduate students)
3. Specialized Training and Consultation in accordance with market needs in IoT Verticals
4. Industrial Pilots (Oil & Gas to maintain the health of the workers and etc)
5. Raising the level of community IoT knowledge through Executing Free Seminars in Schools, Universities, Industries, etc.
6. IoT Content creation & Knowledge Sharing Free of Charge with Specialist and all of the people interested in IoT (For Example IoT Academy Telegram Channel with more the 2000 member)

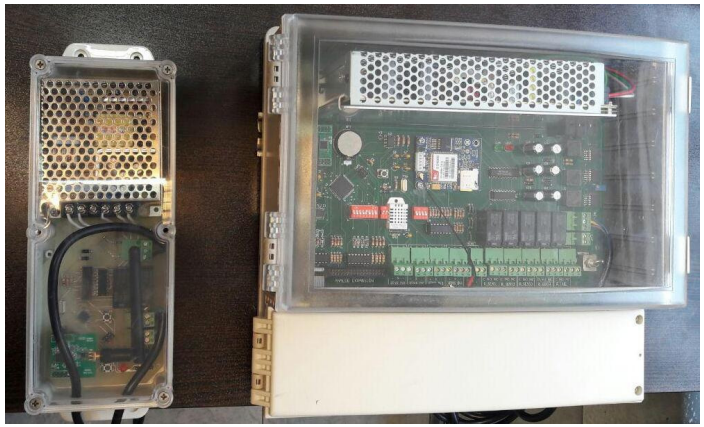
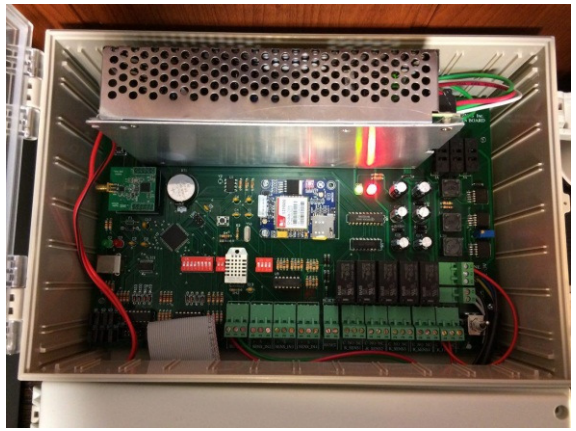
Future Activitie (some of them have begun):

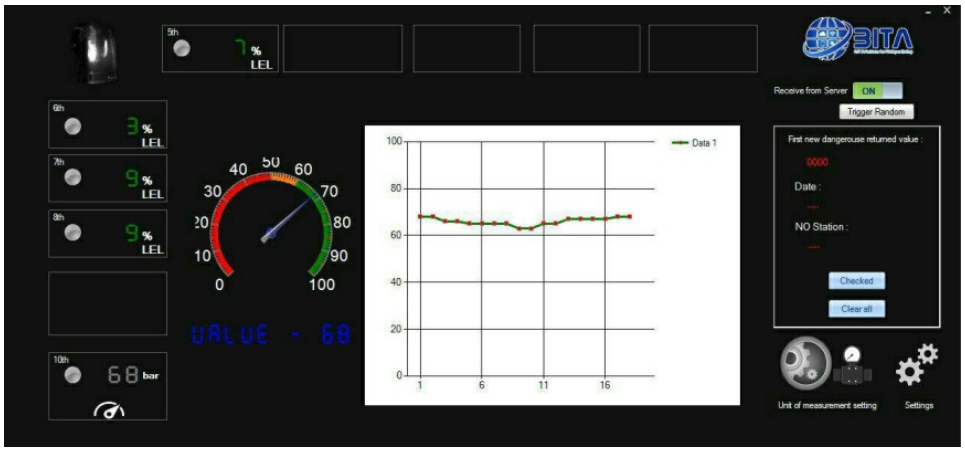
1. Participation in dissemination of the IoT Knowledge in other countries
2. Holding Training Courses and Workshops in other Countries
3. IoTKids Project
4. IoT Projects for Improving the life in Rural areas (Smart Care of Patients, Pregnant lady 24/7/365, Monitoring the quality of drinking water, Optimal use of water resources and etc)
5. Designing IoT Customized Evaluation boards for Training IoT Concept around the World specially Developing Countries.

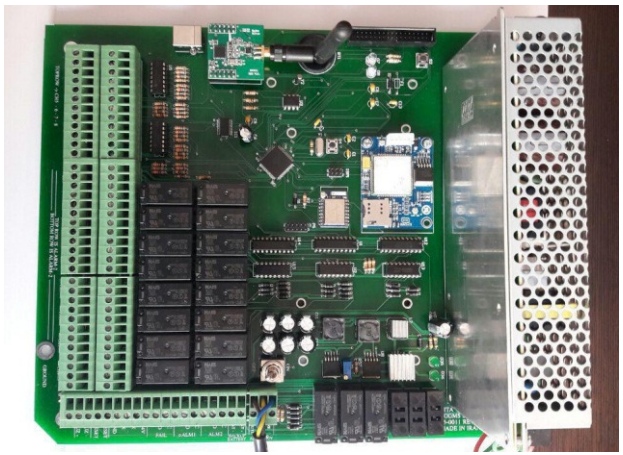


Sample Project : Oil & Gas Industry

Aimed at the health of the employees: IoT based monitoring equipments for H2S, CH4, Co and Co2 gases have been developed for use in oil rigs in Iran. This project is now being finalised and the equipment will be installed shortly.



Conclusion:

For the successful entry of developing countries into the IoT market:

- Widespread knowledge sharing is important
- Training of Young educated manpower is needed
- Supporting a Startup Culture is Essential
- Venture Capitals to invest in IoT related products and ideas are needed.
- This needs to encompass all aspects of the IoT: IoT Hardware, IoT Network, IoT Platform, Application & Services and Big Data Analytics.
- Considering the capabilities of the brainware of developing countries can not only help those countries themselves, but can further technical development worldwide.

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