



**T E C H N O L O G Y**  
**P A R T N E R S**

## **Company Profile**

**The MENA Region's Telecommunications  
and Smart Grid Experts**

November 2010

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## INTRODUCTION

**Technology Partners FZ, LLC** is an Information Communication Technology (ICT) infrastructure and services integration company. The company is a trusted integrator to the **Telecommunications, Utility, Government and Oil and Gas** sectors with the regional and domain experience to deliver technically innovative and complex projects. Technology Partners' solutions are focused around metro-scale, national-scale and Smart Grid network infrastructure, applications and services. Designed, deployed and supported by its highly skilled technical and management team, these solutions are created from best-of-breed, industry-standard components, acquired through international partnerships with the world's leading technology vendors.

As a trusted partner to government and enterprise across the region, the Company's portfolio of next generation ICT technologies includes software solutions from SAP, Microsoft, Oracle and Ericsson, Cisco network infrastructure, and computer hardware systems from DELL, HP, SUN and IBM. TP has also delivered satellite communications, fibre backbone and fibre-to-the-premises (FTTP) data systems, voice and data converged networks, metro and national-scale wireless networks and network infrastructure components across the private and public sectors.

Technology Partners range of complete solutions includes **Telecommunications Infrastructure, ERP and Operations Support Systems and Business Support Systems (OSS/BSS), Smart Grid Applications** such as **Automated Meter Reading (AMR/AMI)**, and **Smart City Applications** including **public safety communications, parking systems, intelligent traffic control systems (ITS)** and **Public and Private Security Systems**.

An additional unique TP capability is **Technology Partners Iraq**. Since 2003, TP has taken an active role in ICT construction projects for Iraq Government entities such as the Prime Minister's Office, the Ministries of Oil, Electricity and Communications, and ITPC. With over 85 dedicated employees company wide of which 45 are permanently based in Iraq, TP has been able to establish a unique centre of technology excellence in that country. In 2008, TP became the country's first Microsoft Gold Partner and was awarded Iraq's first certified Cisco Silver Partnership in 2009. Established partnerships with SAP, DELL, Oracle, Sun, and other world-class vendors complete the portfolio. The Company is able to offer both in-country and out-of-country accreditation training for many of these companies.

**Technology Partners Federal Systems** is a wholly owned TP subsidiary based in McLean, Virginia in the United States. TP Federal Systems is an ITAR Certified company that supports our ICT integration business with US Federal Government agencies in the MENA region.



## CORPORATE INFORMATION

Technology Partners' currently employs over 85 information technology and telecommunications professionals across the Middle East and North Africa region. Due to Technology Partners continued success it has continued to be a profitable company with an annual turnover exceeding US \$25 Million for the 2009 financial year.

**The Corporate Head Office** of Technology Partners FZ LLC is in Dubai, United Arab Emirates. They operate from offices in the Dubai Media City Free Zone, a warehouse in the Jebel Ali Free Zone, and branch offices in Baghdad, Erbil, Basra and Sulaimaniyah in Iraq.

**Formed** in 1997, Technology Partners has been focused on delivering the MENA region's most complex telecommunications and Smart Grid infrastructure and services projects on time and to the highest standard. The company started as a professional consultancy offering international start-ups a foot-hold in the Middle East. In 2003, the company expanded to take an active role in the reconstruction of critical IT and telecommunications infrastructure in the country of Iraq to help facilitate its progression into a new era of economic and social freedom.

Using extensive international experience, Technology Partners has developed **partnerships** with best-of-breed technology vendors, investing time and resources in new technology evaluation to select proven, high performance system components. This allows it to deliver truly world-class solutions from commercial off-the-shelf (COTS) components with unprecedented price/performance.

Technology Partners delivers complete end-to-end projects, by integrating these products with the best technical, deployment, support and maintenance expertise.

**Vision:** To be the leading telecommunications and Smart Grid infrastructure and services company in the MENA region.

**Mission:** To deliver technically innovative and complex telecommunications and Smart Grid infrastructure and services that transform the business and consumer landscape.

**Success:** Technology Partners has over a decade of telecommunications and Smart Grid infrastructure and services experience with a history of successful projects delivered on time and to the highest standard across the MENA Region. The company is measured by its ability to create a portfolio of unique and high value-add solutions that appeal to a broad, regional market; complete solutions capable of changing established business models. Technology Partners must continue to implement these solutions reliably with high levels of expertise and professionalism, and focus on customer satisfaction that delivers a competency based trust to continue turning its customers into long term, referencable accounts.

**Culture:** Technology Partners strongly believes in management by "tacit interaction": fostering organizational effectiveness through learning, collaboration, innovation and increasing the effectiveness of its interactions with its customers, suppliers, vendors and the business environment. Technology Partners' team is highly empowered to differentiate themselves by increasing their productivity through a complex mixture of team innovation, problem solving and information exchange.



**Values:** Innovation, expertise, trust, agility, value.

**People:** Technology Partners takes enormous pride in the depth of experience within its team in a wide range of subject matters. The team comprises dedicated experts for telecommunications and Smart Grid infrastructure and services projects across industry verticals. Telecom and IT professionals, Electronics, Electrical and Mechanical Engineers, Professional Accountants with MBA's and extensive international commercial experience bring experience of world-first telecommunications and Smart Grid infrastructure and services projects from across the globe to the MEA region. Currently they employ over 90 personnel between the UAE and Iraq.

**Solutions:** Technology Partners primary activities are built around five strategic business units: *Smart Grid Solutions, Digital City Solutions, Software Services, TP Iraq and TP Federal Systems*. These units offer a wide range of specialized and valuable consultancy and integration services to utilities, government, regional GSM operators, Internet service providers, telecommunication service providers, municipalities, infrastructure service providers, and municipal-scale developers.

**Industry Focus:** The *IT and Telecommunications* industry continues to grow at a rapid rate in the Middle East. The deregulations in the telecommunications market where second and third GSM licenses are being awarded is providing many business opportunities for Technology Partners. More Telecommunication IPO's and increased liquidity in the region drive the operators to expand and spend more on their infrastructure as well as their Operational Support and Business Support Systems.

*Utilities* throughout the MENA Region are looking at *Smart Grid* systems to improve operational efficiency, reduce peak demand, and enhance customer relationships. As the developer of the largest Smart Grid network in the Middle East, Technology partners is ideally suited to leverage this trend in the critical *Utility* sector.

*Digital City applications* such as next generation digital video surveillance and intelligent transportation systems (ITS) have been created by the convergence of IP appliances (IP video cameras, parking meters, and traffic light controllers, etc.), converged municipal-scale fibre and wireless networking technology, and distributed management and control systems. Security, management and control applications can now be implemented on a scale never before possible, and are becoming increasingly important components of the rapidly expanding Middle East infrastructure.

Technology Partners has invested heavily in understanding next generation, metro and national-scale networking and telecommunications infrastructure, and Smart Grid technology and its potential applications. They have deployed ground-breaking systems applications for some of the MENA Region's most influential organisations on an unprecedented scale. The company has developed and strengthened strategic relationships with world-class component vendors, and trained its personnel in all of the new technologies.

#### EXECUTIVE TEAM:

Chief Executive Officer	Omar Barzanji
Chief Technology Officer	Kenneth Kriel
VP Marketing	Roy Hodges
VP Engineering	Nadim Shaikli
Commercial Manager	Hayder Atrakchi

## ORGANIZATION

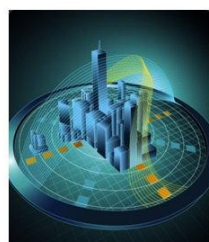
Each of the business units has a functional director focused on managing and growing that business. Technology Partners is not organized into a pyramid structure, it is an open organization where each individual within the team is encouraged to provide input to the general direction and strategy of the company.

**Strategic Business Units:** Technology Partners is organized into five business units, organized around specific focus areas and industry solutions:



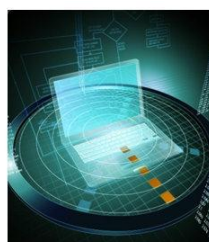
### Utility Smart Grid Solutions

- High capacity, multi-use Distribution Area communications infrastructure
- Multi-layer fibre, copper and wireless networks
- Supporting all Smart Grid applications in real time
  - AMR/ AMI
  - Billing/ CRM
  - Distribution Management
  - SCADA control
  - Mobile workforce mgmnt
  - Infrastructure security



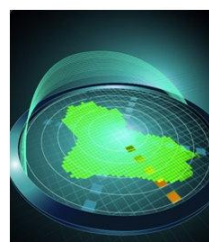
### Digital City Solutions

- Metro-scale and enterprise broadband fibre and wireless infrastructure
- Supporting multiple, secure applications
  - Intelligent Traffic Systems
  - Intelligent parking Systems
  - Mobile workforce management
  - Mobile public safety
  - Video surveillance
  - Internet access
  - Public transport management



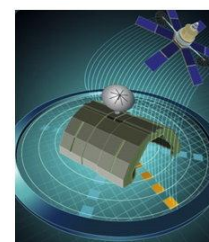
### Software Services

- ERP and CRM solutions from SAP, Oracle and Microsoft
  - Financials
  - Human Resource Management
  - Production Control
  - Supply Chain Management
  - Service Management
  - Project Management and Accounting
- OSS/BSS solutions for telcos and service providers



### Technology Partners Iraq

- Over 45 technical personnel in country
- Offices in Baghdad, Erbil, Sulaimaniyah and Basra
- Cisco Silver, Microsoft Gold partners
- Proven track record of major IT projects for Iraq ministries, telcos, ISPs and corporations



### TP Federal Systems

- Technology Partners US subsidiary
- Established to support US Government sponsored technology projects
- Middle East provisioning and logistics centre
- Specialising in complete ICT solutions
  - Satellite, fibre communications
  - IT infrastructure provisioning and support

## PARTNERS

Experience has proven that the way to ensure success in a project is to create strong partnerships, not only with the customer but also with the vendors. Technology Partners is proud of the partnership portfolio which allows flexibility in design and fast turnarounds. Partners are selected along the following principle guidelines:

- **Technology:** Solutions comprise of many elements and technologies. The overall solution is a sum of these elements and the ability for these components to work together

### Networking

	<b>Cisco</b> Networks
	<b>Tropos</b> Mesh Wireless
	<b>Pepwave</b> Wireless CPEs
	<b>BlueCoat</b> Network Security
	<b>Motorola</b> Wireless Networks
	<b>Avaya</b> Networks
	<b>General Dynamics</b> Communications
	<b>Skyfiber</b> FSO Networks

### Integration





	<b>SAP</b> ERP Software
	<b>Oracle</b> Systems and Software
	<b>LHS</b> OSS/BSS Software
	<b>Microsoft</b> Software
	<b>i-conX</b> Interconnect Solutions
	<b>Comptel</b> Mediation Software
	<b>Ericsson</b> Communications
	<b>Nokia Siemens</b> Communications

- **Support:** Customers rely on support throughout the lifespan of their project. The support offering Technology Partners receives from its partners dictates the level of support they can offer their customers
- **Commercial viability:** Partner products must offer leading edge technology but not be cost prohibitive
- **Strategic alignment:** The entire product portfolio and product roadmap must appeal from a strategic perspective on where a partner believes the industry is heading and strategic path they are taking to get there.

**Applications**

 <b>ONSSI</b> NVM Software
 <b>Axis</b> Surveillance Cameras
 <b>Sony</b> Surveillance Cameras
 <b>S2</b> Access Control
 <b>Econolite</b> Intelligent Traffic Systems

**Systems**

 <b>Dell</b> Systems
 <b>Sun</b> Systems
 <b>HP</b> Systems
 <b>IBM</b> Systems

**TECHNOLOGY PARTNERS SAMPLE PROJECTS**

Below are brief descriptions of a sample of Technology Partners’ projects. Most have been successfully delivered, others are nearing completion:

**SMART GRID NETWORK FOR A MAJOR GULF UTILITY**

Technology Partners is currently completing the implementation of a shortly to be announced broadband wireless network to cover the entire service of a major Gulf utility company. The main application for this network is real time Automated Meter Reading (AMR) for electricity and water meters.

This solution is utilising several thousand Tropos MetroMesh WiFi mesh routers to provide ubiquitous WiFi connectivity for hundreds of thousands of utility meters and data collection devices. The mesh network is supported by a redundant, multi-gigabit fiber infrastructure.

Like the hundreds of other Tropos deployments around the world, the WiFi infrastructure is inherently multi-use, and has enough capacity to support a variety of additional utility and municipal-scale applications. These include SCADA control for electrical sub-stations and water plants, mobile workforce automation, and Internet access for residents and businesses.

When completed, this wireless deployment will provide over 4,000 sq. Km of wireless coverage and will be the largest Smart Grid network in the MENA Region (and one of the largest in the world). It will also become the world’s largest WiFi hotspot for one of the Region’s major telecommunications providers.

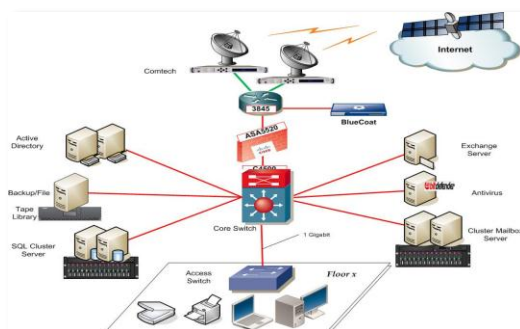


## INTERNET DATA CENTRE: IRAQ PRIME MINISTER'S OFFICE

In 2008, TP completed the successful deployment of a Data Centre to deliver secure and reliable Internet connectivity for the Iraq Prime Minister's Office. The system consisted of a complete Cisco security solution, with load balancing and caching, and VSAT backhaul.

Components included:

- Dell servers and storage
- Microsoft OS, DB and applications
- Cisco Catalyst 4500 core switch
- Cisco 3845
- Cisco ASA5520 Firewall
- Bluecoat SG510-25
- Comtech modems for VSAT connectivity



## EMAAR PROPERTIES & MARCONI COMMUNICATIONS

This was the first Ethernet fibre to the home project in the Middle East. The project involved design and implementation of a fibre network infrastructure serving up to 100,000 homes in Dubai, UAE. The network is operational today and delivering 55 TV channels, 2 VoIP connections and 2-10MB Internet access to each home.



## BASRA FIBRE INFRASTRUCTURE

Currently being completed by Technology Partners is a major communications infrastructure project for Iraq Telecommunications and Postal Company (ITPC).

The project requires the deployment of some 270Km of redundant fiber infrastructure to connect the Basra International Airport area to ITPC's Southern SDH Network. This project is a critical component of Iraq's Regional Core NGN Infrastructure upgrade to develop nationwide fibre communications.



## INTELSAT 4.8M VERTEXRSI DISH IN RAS AL-KHAIMA (UAE)

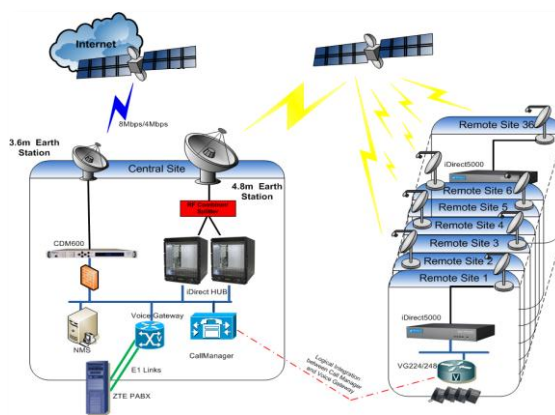
As a VertexRSI partner, Technology Partners was contracted to install a 4.8m antenna for Intelsat on an Etisalat (UAE) site in Ras Al-Khaima. The contract included conducting a site survey, install the concrete foundation, assemble the antenna parts, test and help commissioning the service. This project lasted 1 month and was completed in February 2006.



## IRAQ MINISTRY OF OIL (SCOP) NATIONWIDE VSAT WAN INFRASTRUCTURE

Completed this year (2010) is a major telecommunications infrastructure project for the Iraq Ministry of Oil.

35 remote sites from all over the country have been connected through a central MoO site using a VSAT Wide Area Network. Ministry applications supported include a centralised, redundant Internet service, and Ministry-wide IP telephony with unified communications. This system has also been designed to support backbone communications for the multi-site ERP applications which are the subject of this proposal.



## NEWROZ INTERNET SERVICE PROVISIONING

Technology Partners implemented a major project for Newroz, the Internet Service Provider licensed to deliver ISP services in Erbil, Kurdistan. The system supports dialup, DSL, and CDMA wireless connections as well as an MPLS VPN service.

The IP/MPLS core network utilises a Cisco 12000 series GSR router and a Cisco 7606 router at each remote POP. The project also involved implementation of Microsoft Active Directory, Microsoft Exchange Server and Microsoft SQL Server at the Data Center to host the billing database and user authentication, authorisation and accounting (AAA) system.



## ITPC ARABSAT SATELLITE EARTH STATION

Technology Partners, together with General Dynamics and Commtech, designed and implemented the ArabSat Standard B Earth Station project for the Iraq Telecommunications and Post Company. The earth station was damaged during the war and was part of the Iraq Reconstruction Program.

The ArabSat consortium provides voice communications between all member states. The project, based around an 11 meter Standard B earth station, provided ITPC with 40 E1 (2.048 Mbps, G.703) trunk circuits with at least one E1 circuit for each of the 14 member states.

The system utilizes compression techniques to convert the forty trunk circuits to ten bearer circuits. The bearer circuits are then connected to a microwave system for transmission from the customer demarcation location to the earth station. This project was completed in August 2005.

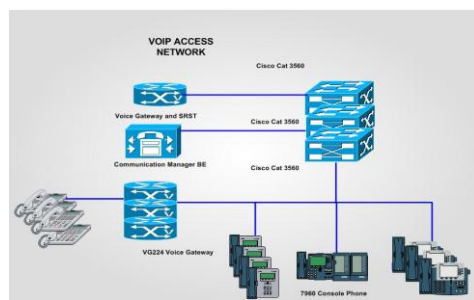


### BASRA AIRPORT DWDM AND VOIP

This recently completed Technology Partners project provides a new IP infrastructure based on a DWDM/SDH core between the Basra Airport and the Andalus ITPC PSTN network in Basra.

The link delivers E1 voice channels for the Cisco Communication Manager server. The project also includes a microwave redundant link in addition to the fiber network.

Basra Airport is now equipped with the latest IP platform to support a full range of triple play services.



### AWCC (AFGHANISTAN)

AWCC was the first GSM cellular provider to launch in Afghanistan in 2000. In 2006 they upgraded their core IN platform to Siemens IN along with LHS BSCSiX billing, again supplied by Siemens but sourced from LHS. Siemens undertook an evaluation of LHS system integrators in the market place and selected Technology Partners.



The scope of work included billing and customer care integration, subscriber migration as well as custom functionality related to interfacing with the Siemens IN platform.

### IRAQ MINISTRY OF ELECTRICITY

The Iraq Consolidated Fiber Network (CFN) is a national voice and data communications network that supports the service requirements of the Iraqi Ministries of Electricity (ME), Transportation, Telecom, and Communications using a common fiber optic backbone. The scope of work included design and installation of voice and data network in sixty sites located throughout Iraq.

Technology Partners, as the main subcontractor to Bechtel, delivered the design, procurement, installation, testing, and commissioning services for this project on a complete turnkey basis. The design included deploying a fiber optic core with Cisco switches and routers to more than 40 sites. The project was completed in 2006.



### MTN (SYRIA)

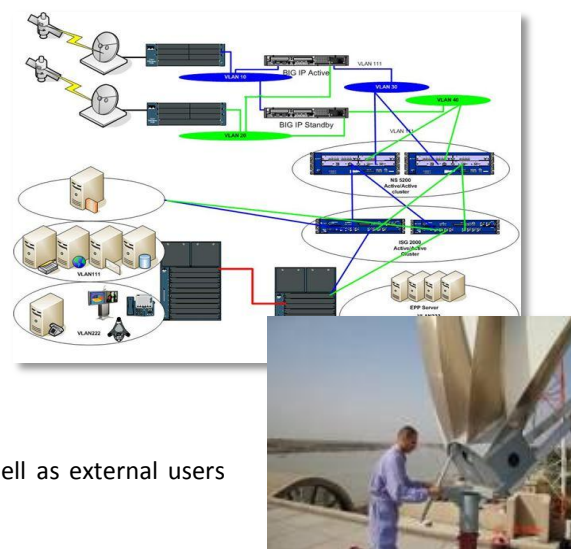
MTN is an established GSM provider in Syria. They had been using LHS BSCSv7 for the previous 3 years and required an upgrade to BSCSiX. After evaluation of the available system integrators in the market MTN selected Technology Partners as their preferred choice.



### IRAQ COMMUNICATIONS AND MEDIA COMMISSION

In 2007, Technology Partners completed a state-of-the-art infrastructure network for the Iraq Communications and Media Commission in Baghdad. This network included:

- 24 application servers,
- 1 cluster storage system,
- 200 desktops, 50 laptops,
- 2xCisco 4507 layer-3 switches,
- 14x3560 switches
- 3x7206 routers
- Cisco Call Manager servers, with 200 Cisco IP phones
- 2VSAT connections for the Baghdad site with load balancing and fail over

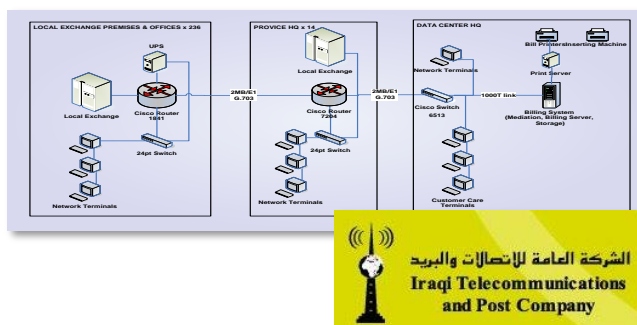


The network serves the internal users of the commission as well as external users applying for RF licenses and web domain registration for DOT IQ.

### IRAQ TELECOMMUNICATIONS AND POSTAL COMPANY

Iraq Telecommunication and Postal Company (ITPC) is the incumbent wireline service provider in Iraq. In 2005 Technology Partners was awarded the project to completely overhaul ITPC's antiquated billing system.

The scope of work included an LHS billing and customer care system running on the latest Sun platform, with interfaces to more than 200 remote exchanges.



TP was also responsible for the supply and installation of Xerox and Pitney Bowes production printing and enveloping machines. The project included furnishing a 200 square meter data centre. This state-of-the-art deployment included under floor air conditioning, card access security system, automatic fire system, generators, and 8 hour UPS.

The entire hardware deployment (servers, network components, printers, enveloper) was staged at TP's Jebel Ali logistics facility before shipping to the client. The network components included 2x Cisco 6509E core switches, 250 x Cisco 1841 routers for remote sites and 14 x 7204 for provincial operations. The initial project was completed in 18 months.

### PALTEL (PALESTINE)

Paltel is the incumbent wireline service provider in Palestine. During 2006 Paltel selected LHS BSCSiX for the replacement of its existing in-house billing solution. Paltel utilized its own in-house IT system integrator, Hulul to implement the project who in turn selected Technology Partners to lead the project and guide them.



Following the migration of the wireline customer base to BSCSiX it is expected that the GSM service will migrate to BSCS as well as a Siebel migration.

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