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# Dr. Izzeldin Kamil Amin

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## Brief Profile

### Personal Statement

An IT and telecommunication expertise that brings a rare combination of extensive managerial experience, solid technical skills and strong academic involvement. With over twenty years working with early-stage, medium-size and large businesses and organizations, I have a proven track record of successful leadership and delivering business results. Planning and managing large public and private sector projects.

Main position held during my career:

- I was appointed as the first general manager of Sudan Telecommunication company (Sudatel) to start development of the **first business strategic plan** (Leapfrog) for the company to cover five years period (1996-2000) of its formation. I was a main driver for the plan as a GM of the company.
- I was a main contributor in the inception of the establishment of Electronic Banking Services (EBS) in 2020, as a company, to transform the Banking and financial sector in Sudan, Lead by the central Bank of Sudan (CBOS), to deliver electronic banking services to customers in the Sudan. EBS started a transformation process through the automation of banking and financial services. The company was originally envisaged to grow to become a private public company with major shares held by private sector and shareholders.

The main achievement of EBS was the fast launch of banking services starting with a core banking that was modified to suit the requirements of the Islamic Sudanese banks and was successfully run in 16 of the banks in Khartoum. It served the banking sector for more than fifteen years and still serving few remaining banks now.

- I was a member of the board of director for the **Sudanese Microfinance Development Company** for THREE years period. During this period, I got exposed to the challenges facing the microfinancing sector in Sudan; and in particular, the IT as an aid to assist in the process of microfinancing and in tracking the loan funds. During the last year, I was acting as a Chairman of the Board of Director for the Company.
- I have developed vast technical knowledge in IT and telecommunication. I have also been devoting time to teaching and research in the University of Khartoum and was the acting dean in the School of Mathematical Sciences during several periods.

### Key Experience.

- Member of the team who developed the first National ICT Policy for Sudan in 1998-1999.
- A Pioneer shareholder and manager of the first company in Computer Aided Design (CAD) in the field of Architecture (1992).
- Head of a team who lead the computerization process of Bank of Khartoum.
- First General Manager of the First privatized Telecommunication Public company working as a private Telecom operator in Sudan (Sudatel). And main contributor to its first strategic Business Plan (Leapfrog).
- One of the Key Founder and planner in the establishment of first Electronic Banking Services (EBS) as a private company with major shares held by the central bank of Sudan (CBOS) and all Sudanese Banks. EBS led the automation process of the Banking and financial Sector in Sudan. Main contributor to the Central Bank of Sudan IT strategic plan; called "IT Horizons".
- Manager of the National Telecommunication Corporation (NTC); now known as Telecommunication and Post Regulatory Authority (TPRA), the Telecommunication regulatory authority in Sudan. During the period (2009-2014), the institutional process for all licensing and issuance of directives for the Telecommunication sector in Sudan were developed.
- Contributing and approving of the formation of the first **computer incident response team (CIRT)** team at the NTC.

## *Detailed Resume.*

### 1 Education

<b>1979 to 1983</b>	<b>Ph. D. in Electrical Engineering – University of Essex.</b> Electrical and Electronic Engineering Department, Essex university, Essex, United Kingdom. Thesis topic: Distributed Control Within Telephone Exchange System
<b>1977 to 1979</b>	<b>M. Sc. in Electrical Engineering (by research) - University of Essex.</b> Electrical and Electronic Engineering Department, Essex university, Essex, United Kingdom. Thesis topic: Distributed Control Within Telephone Exchange System
<b>1974 to 1977</b>	<b>B. Sc. in Computer Communication Engineering (Hons) - University of Essex.</b> Department of Electrical Engineering, University of Essex.
<ul style="list-style-type: none"> <li>➤ Planned and contracted the establishment of the first Internet Exchange Point (IXP) to signify a start of growth of local application internet usage.</li> <li>➤ Delivered a number of courses and seminars in Sudan and in the Arab and African regions as a consultant to international organizations such as ITU, COMESA, .... etc.</li> <li>➤ Contributor in the first blueprint for the establishment of the Public Key Certification Authority in Sudan (CA).</li> </ul>	

2 Career History & Accomplishments: <a href="#">Consultancy</a>	1986-Current
I worked as a consultant to a number of Government and commercial establishments:	
<b>2.1 Management and Business Consultation.</b>	
<ul style="list-style-type: none"> <li>• Worked as a consultant for COMESA under the contract no. COM/IRCC/2/2015/015 to provide Technical Assistance to COMESA secretariat in identifying main challenges faced by Member states and developing frameworks for cyber security and critical information infrastructure protection during the period April 30-May 4<sup>th</sup> 2015.</li> <li>• Delivered two sessions for the ITU regional office on Mobile Money and Financial inclusions: one in Bahrain and the second in Khartoum, Sudan.</li> <li>• Private Consultant to Local Companies and Commercial Banks: Islamic Development Company, Faisal Islamic Bank, Tadamon Islamic Bank, ... etc. to help them in implementing their banking systems to be able to provide modern banking services such as ATM, e-Banking ...etc.</li> <li>• <b>Currently:</b> <ul style="list-style-type: none"> <li>◦ working as a consultant to Omdurman National Bank to assist in designing and implementing their Technology strategy for the years 2022-2025.</li> </ul> </li> </ul>	
<b>2.2 Telecom Consultation.</b>	
<ul style="list-style-type: none"> <li>• Acted as one of the consultants in a team of 4 experts to Sudan telecom Co (SUDATEL) after its formation in 1993</li> <li>• <b>Currently:</b> Working as a consultant member in a technical advisory committee to the Board of directors of the Telecommunication and Post Regulatory Authority (TPRA).</li> </ul>	
<b>2.3 Software Consultation.</b>	
<ul style="list-style-type: none"> <li>• Acted as Computer Consultant to UNION CARBIDE (SUDAN) during the period 1985-1986.</li> <li>• Consultant to the Customs and Excise Duty Department to computerize customs procedures. This project was carried out in conjunction with UNCATD and proved to be one of the most successful computerization projects implemented in Africa that was accomplished within budget and schedule, the total budget of which was more than \$10 Million USD.</li> <li>• Analyzed, designed and supervised a project to computerize the work of Sudan News Agency. It covered all aspects of receiving news from different agencies and correspondents, editing, and compiling them to be distributed electronically.</li> <li>• Carried out a performance evaluation of a banking System used at Khartoum Bank, one of the largest commercial banks in SUDAN. As a result of the evaluation, the core banking software package, called 'MODBANK', was ported to a different platform and modified to meet Local Sudanese banks requirements. This process had enabled the system to work on small PC to serve small branches. In this project I technical mastermind to port the software package from being operating on minicomputer system to be distributed processing among all branches of the bank.</li> </ul>	
<b>2.4 IT Consultation.</b>	
<ul style="list-style-type: none"> <li>• Coordinated, designed, and carried out survey work to collect and analyze data on Sudanese working abroad as a project supported by the US-AID during the period 1985.</li> </ul>	

- I had taken a post as a consultant to a commercial company called “Computer Aided Design Co.” which conducted training, software development, and digitization of maps and architecture works.
- Acted as a consultant to Computer Communication Company in the Sudan (CCS). During that period, CCS had the largest share of IT equipment sales in the Sudanese Market at that time.
- Acted as a consultant to the Ministry of Energy. Assisted and advised in establishing the Petroleum Information Centre consisting of a data center, a network interconnecting all points of the ministry with data centre, and the selection of all Business Applications. The project budget was around \$ 18 million USD
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### 3 Career History & Accomplishments: [Management](#)

#### 3.1 Director-General, National Telecommunication Corporation (NTC), [Jul 2009-Mar 2014](#), [Khartoum](#)

The National Telecommunication Corporation (NTC) is the national regulatory body for the Telecom Sector in Sudan. My main goal when I assumed the position of Director-General of NTC was to enhance the procedures and the methodology of the decision-making process in order to adopt the best practices in the IT and telecommunications field. The role of the NTC as a regulatory body was made visible by:

- Introducing and enforcing policies and strategies that regulate competition between service providers to promote free competition and investment while meeting all requirements of the incessant technology development. Consequently, clear licensing requirements and terms were defined. Also new conditions and terms for the numbering plan was adopted to remove bottlenecks in the capacities of the existing mobile operators and to facilitate the entry of new operators in the field of mobile and fixed phones.
- Designing and implementing measures to control the quality of service (QoS) provided in order to protect the interests of end users. Local quality of service standards and specifications were developed based on those laid down by regional and international organizations. The internationally recommended practice of Type Approval of telecommunication equipment was adopted to ensure the safety of networks and the high quality of services. A QoS campaign was held to measure all communication Towers specification parameters all over the country. A QoS Customer complaint procedure was implemented in order to receive customer complaints and deal with them effectively. Healthier environmental rules were applied through an independent regulatory system. Besides, the following achievements were made:
  1. An integrated security plan for internet safety and monitoring has been adopted to ensure safe surfing and first line protection against malicious attacks hacking on national sites offering services to public.
  2. A national spectrum policy was adopted to cope with new trend in spectrum utilization and to ensure fair and efficient usage of the current spectrum.
  3. A broadband strategy was planned to include advocating of applications that utilize the new broad highway channels to extend services that are needed by the public to provide basic services in key development areas such as education, health, and agriculture and to ease their life providing Government services to pave the way to e-Government adoption.
- Encouraging innovation and education in order to develop a knowledge-based society. A systematic program to improve performance and build human resource capacities was adopted. Through the universal service fund, NTC was able to execute hundreds of projects including carrying technical researches, supplying IT labs for universities and schools and developing comprehensive information

centers. Numerous studies, consultations and workshops were carried out to capture new technologies in the ICT sector through the exchange of expertise with pioneer nations.

- During the time I assumed the responsibility of managing the NTC, the Postal services in Sudan were privatized and the regulation of the services has been entrusted to the NTC. A separate department for the regulatory affairs for the postal services was established and a plan for assuming the regulatory role was approved. The regulation of the sector was a challenging matter both to the regulatory body and to the active players in the market who used to have Sudan Post as a regulator and a competitor. The private sector agents were very much enthusiastic to welcome the NTC as a regulatory body.
- The Head of a joint team formed between the NTC and the central bank of Sudan to investigate the use of Mobile Payment and the impact of payment by “transfer of fund using credit balance” for Mobile phones and recommended the introduction of a **Mobile Payment System** and its regulation. As an outcome of this, an ad hoc committee was formed to review the regulation and update it as need arise.
- The Complete Computerization of the NTC work starting with Financial accounting was revised to be part of a full fledge ERP system for the NTC. This project was delivered with minimal cost around \$ 500 thousands, including human resources training, and was the first practical project used to generate well trained human resources in ERP implementations and customization.

### 3.2 General manager of Electronic Banking Services Co., Khartoum, Sudan

2000 –2009

This company was established as a result of consultation with the Sudan Banks Association to introduce electronic banking services to the Banking Sector in Sudan. The Central Bank of Sudan (CBOS) has approved and adopted the idea to motivate the banks to hold shares in this company. In addition, Sudan Telecom. Co. was invited as a strategic partner to hold shares in the company.

EBS was started to offer SWIFT services to all Banks through a National gateway to SWIFT Network; one of its kind in Africa and the third in the Middle-East.

In 2004, CBOS decided to fund Major Banking services and to outsource these National projects to EBS. These National projects included two major projects: the National Switch controlling the Sudanese payment network of ATMs and POSs and connecting all Sudanese banks, and the National Electronic Cheque Clearing Service which was the first electronic cheque clearing system in Africa and the second in the Middle-East.

EBS made some preparatory work to make the Banks ready to offer electronic services. This work included:

- A complete core banking system was selected and modified under the supervision of EBS to cater for the banking services offered in Sudan. The core banking system had a significant role in transforming the work of the Banks to be ready to offer electronic banking services through multiple communication channels including ATM machines, internet banking, ...etc.
- Software Development Centre to support and maintain banking application software. In 2005, due to change in company strategy to become a partner to the Central Bank of Sudan, the software development center was separated as an independent private company, called Financial and Banking Services company (FBS).
- Sudanese Banks Information Network (SBIN) Centre which serves to connect each bank with its branches and interconnects all the banks in one secure, reliable with optimum running cost

Furthermore, each of the following services were expanded to cover:

- The S.W.I.F.T Service Bureau was expanded to link all the banks to the international network for inter-banks fund transfer and offered additional services to the banks to link their core banking directly to service.

- National Switch Centre to manage all Electronic Payments through ATM, POSs, etc. in a network, called (Sudapan), which serves to provide electronic banking payment to banks and to the public; e.g., debit cards, ATM machines, etc. In addition to the Sudapan, two more centers were established to assist in delivering related services to the Switch. Point Of Sale (POS) and card issuing and personalization centers were established to serve the banking community and trades in issuing plastic bank cards and distributing POS equipment.
- National Electronic Cheque Clearing Center to clear and reconcile cheques exchanged through images between banks connected to SBIN.
- Introduction of various services through the ATM Network such as card-less transaction transfer, Mobile bill payment, Mobile recharge, etc.
- Training was a major concern for EBS to introduce new electronic services. The training was needed for both the bankers and for the public to use the new services introduced. A separate agreement was signed with Sudan Academy for Finance and Banking; being the responsible body for the training of the employees in the banking sector, to set up a special Lab to deliver specialized training on SWIFT and other electronic banking services.

**It was estimated that a saving of more than \$50 million USD was made in budget for banks due to the formation of EBS and the starting of all banking services as shared central hub operations. The idea was to use EBS to ignite the competitions in IT services among banks and motivate the private sector to invest in the provision of IT services to banks and similar sectors. Hence, the transformation of EBS to a private public company was planned but never executed completely.**

### **3.3 Deputy General Manager, Sudan Currency Printing Press co. Khartoum, Sudan**

**1997 –2000**

Main achievement during this period is the starting of a complete computerization ERP project at SCPP, Review of the organization to propose some changes and document the procedures and workflow within the organization.

### **3.4 General Manager, Sudan Telecom Co. (SUDATEL), Khartoum, Sudan**

**1994-1997**

SUDATEL is a private public company, which was formed to replace the government owned Sudan Telecommunication Public Corporation (STPC), and took over the operation of the Telecom. Network in the Sudan. This company was formed in 1993 and took over the operation in Feb. 1994. I joined the company after its formation as a consultant in Jan. 1994 and took the post as a Deputy General manager in March 1994. In Nov. 1994, I was appointed as GM to replace the Dutch Manager. Since that time, Sudatel has become a well-established, profitable operator in the Sudan.

During this period, a number of projects were planned, implemented and started to operate. Some of these projects were:

- Replacement of the Earth Station at Um-Haraz.
- Replacement of the International Exchange.
- Replacement of Khartoum Centre Exchange System.
- Establishing the first PDH Optical network connecting all exchanges in Greater Khartoum.
- Planning and concluding a contract for 125,000 Subscriber digital lines with Siemens. Some of these exchanges were installed and started operation in 1995: Khartoum North, Omdurman, etc.
- Planning of the Main Fibre Backbone based on SDH to the whole of Sudan and concluding a contract with Siemens for the first phase of the project covering: KHARTOUM-ATBRA-PORTSUDAN, KHARTOUM-MEDANI-KASSLA, MEDANI-GADARIF, etc.
- Planning a VSAT network and starting the first phase of the network with 7-10 station.

<b>3.5 General Manager of Computer Aided Design Company (CADCO), Khartoum, Sudan</b>	<b>1992 –1994</b>
This company was the first company in Sudan to design computer systems compatible with the Arabic language. Analyzed and designed systems for various organizations in Sudan.	

<b>4 Career History &amp; Accomplishments: <a href="#">Teaching and Training</a></b>	
<b>4.1 Associate Professor, School of Mathematical Science, University of Khartoum, Khartoum.</b>	<b>1984-To Date</b>
<ul style="list-style-type: none"> <li>Gave a number of courses:</li> <li><b>In addition to academic Teaching, I delivered a number of training courses to employees from different organizations in Sudan and in some of the Arab Countries (Oman, Jordan, Dubai, Bahrain).</b></li> <li>Held a number of posts at the University among which is the Acting Dean of the School during various periods.</li> </ul>	
<b>4.2 Lecturer, Electrical Engineering, Essex University, Essex, United Kingdom</b>	<b>4.3 1982-1983</b>
<ul style="list-style-type: none"> <li>Delivered two courses to M.Sc students studying Informatics.</li> <li>Delivered Training program to British Telecom (BT) staff at Martelsham in IPSWICH (ESSEX 1982).</li> <li>During my Postgraduate study, I worked as a trainer in IEE Summer School on Stored Program Controlled System at Essex University.</li> </ul>	
<b>5 Publications</b>	
<p>I have various publication in (<b>The full list is available upon request</b>):</p> <ul style="list-style-type: none"> <li>Different System Analysis Problems: Analysis of Sudan Customs System, A proposed System for Library of Khartoum, Analysis and Design of a System for Sudan News Agency (SUNA), etc.</li> <li>Various Papers on Medical Data Analysis Work carried out jointly with Medical Practitioners and specialized Doctors,</li> <li>Various M.Sc. Dissertation on Computer Science research problems,</li> <li>More than 10 Ph. D dissertations in Information Technology and Computer Science.</li> <li>Recent publication in the area of Sentiment Analysis and Data Mining as a supervisor to a number of projects.</li> </ul>	

<b>6 Other Activities</b>
<ul style="list-style-type: none"> <li>Member of Association for Computing Machinery (ACM)</li> <li>Contributed towards a number of IEE vacation schools held at the University of Essex during 1977-1982</li> <li>Conducted with other colleagues from Essex University, 'C' programming training course to British Telecom (BT) employees in Ipswich, Essex.</li> <li>Member of board of directors to a number of commercial companies.</li> </ul>

<b>1. Languages</b>
<ul style="list-style-type: none"> <li>Arabic (Mother Tongue)</li> <li>English (Fluent)</li> </ul>

