Programs Management
Origins of Energy Giant Ltd.

In 2011, EG was organized as a ‘sister company’ to LFTR Energy LLC. LFTR Energy was organized to develop an internationally based private sector supply chain for a small modular denatured molten salt reactor. This initiative requires a government sponsor. To facilitate this regulatory effort, Energy Giant was formed to develop power generation systems based on natural gas and liquid petroleum gas that to capture electricity grid customers for future evolution to the less expensive and more reliable DMSRs.

Technology First. EG developed relationships in the U.S., Europe, the Middle East, India, and the Philippines – in addition to its southern Africa market focus.

Gas turbines are cheaper and faster to build than coal-fired power plants. However, gas turbine power plants. But gas turbine power plants were very expensive to operate: They were normally operated as a ‘peaker’ source of electricity 6% to 10% of the time to address spikes in demand because it costs 5 to 8 times more to make electricity than a ‘base-load’ plant that stays on all the time, and generates low cost electricity [e.g., coal-fired and nuclear power plants]. EG determined it was necessary to identify, qualify, and verify the appropriate technology components that could transform the gas turbine power plant to an affordable ‘base-load’ electricity resource.

EG determined that inlet fogging [Mee Industries] – NOT active ‘chiller’ refrigeration and NOT media-based evaporative coolers -- is highly effective in both humid and arid high temperature environments: A gas turbine can lose 40% of its power trying to pressurize hot air to feed its combustor. High pressure steam injection [‘STIG’] offered higher power, but EG discarded STIG due to its destructive impact on the generation system. Combining the steam cycle boosted the electricity generated per unit of heat produced [‘heat rate’]. But the very large configurations – Siemens 800 MW CCGT achieved a 62.8% heat rate -- presented a single system failure risk of major business interruptions in location remote from the factory that could prove catastrophic to Power Purchase Agreements [stopping debt service]. Groups of small aero-derivative 60 MW combined cycle gas turbines [Siemens Rolls Royce Trent 60 MW turbines] deliver efficiency and resilience – generation capacity continues to be available regardless of a component’s or unit’s failure. Finally, EG arranged a relationship with Petr Hayek a lead engineer of Prague. Czech Republic’s Quality Assurance Institute, who came up with a Brayton-cycle ‘flow acceleration’ heat exchanger. This innovation could harness the final exhaust waste heat (about 100˚ C. is required) to boost the heat rate up to 40%.

Operating for our Own Account. EG works to obtain its own customer base on which to build its DMSR roll-out. Power projects in undeveloped countries are the objective. We developed power barge projects for the Bangladesh Power Development Board. Investors stayed away from Bangladesh’s credit rating. We crafted power plants for Kurdish Iraq, but nearing war precluded financing. Meanwhile, in South Africa, Rooi Sehube, former ANC Army chief of
staff now retired in Norway, brought us together with Transnet, the SA parastatal responsible for railroads, highways, and pipelines, and SACOIL, a publicly-traded oil & gas company. Transnet was suffering from Eskom’s dearth of generation capacity. Transnet needed new on-demand electricity throughout its transport networks. Too much congestion at Durban’s deep-water port was stifling commerce for the country. Inkanyezi Yezulu Investment teamed with Transnet to build the Cato Ridge ‘dry port’ logistics hub about 60 km northwest of Durban. Transnet rails would carry exports from the port to a switching center where national distribution to all SA points would be re-routed. A pipeline would be needed to bring in fuel from the port. EG was charged with putting up power plants as an independent power producer. We would sell electricity directly to Transnet, and as more plants were built we would sell electricity to all the region’s municipal power grids. EG re-cast a discarded demand management system as an accounts receivable management platform. This platform can detect power loss anywhere in the grid, even from outlet to outlet in a customer premises – without requiring any customer premises equipment. The platform recovers control of electricity for the grid [up to now a ‘dumb pipe’ victim of non-payment & power theft] – power theft can be instantly detected and cut off. But this platform enabled enforcement of payment for electricity bills – without meters and without corrupt meter readers (source of much power theft in SA). The A/R management platform provided the financial guarantor of the municipal grid’s Power Purchase Agreement with a risk management facility to enforce accounts receivable collection and prevent default.

EG also selected a special pipeline technology for the Durban-Cato Ridge link – Zap-Lok™ enabled a no-weld construction of new pipeline at a 1,000 ft per hour – dropping the construction costs radically. The 24-inch fuel Durban-Gauteng pipeline was delayed repeatedly & forced over-budget by re-welding problems, & mismatching storage facilities vs. pipeline capacity. EG planned for ten 200 MW CCGT power plants centrally located at the Cato Ridge head of the new fuel pipeline that would electrify not only Transnet but many regional municipal grids made individually creditworthy by the A/R management platform. ESKOM’s long distance transmission network would be paid to distribute the electricity. All constituencies would win.

B.A. Jaafar collaborated with EG almost from its inception to source finance for our projects. Jaafar had cultivated a group of Malaysian private investors that were prepared to back our Cato Ridge project. In January 2016, Jaafar called to inform EG that the Malaysian investors were no longer willing to invest in South Africa because of labor problems they had encountered there and because of recent corruption trials that had embroiled the ANC president in SA. These Malaysian investors asked EG to come up with an appropriate energy project in Namibia -- a 2.3 million population, with rampant unemployment, most land largely desert, a few diamonds and some deposits of low-quality uranium.

**Seeing Problems as Opportunities.** EG keeps a dialogue going with its chemists in the DMSR project. A fluid-fueled nuclear reactor high temperature fluid thermodynamics that are radically different from other power plants – nuclear or otherwise. It was quickly apparent that ‘frightening’ chemicals [fluorine, beryllium, uranium-235, et al] when appropriately compounded, liquefied, then mixed into specific recipes – provide far better safety, simplicity of management, and sizing versatility than other power generation technologies. Indeed, the functional utilities of these molten salts in non-nuclear applications was revealed to be stunning. Namibia’s energy play was the Kudu gas field, discovered in 1973, yet to be monetized – with
1.3 TCF [at least 5 TCF is required to justify liquefaction for LNG shipping] of dry NG reserves 170 km off shore of southeastern Namibia. Kudu would require USD $10 per thousand cubic feet of NG [today’s global market is about USD $5 per MCF] to justify its funding. Making electricity requires about $0.1545 per kWh to cover its production and delivery costs [in a $0.12/kWh southern Africa market]. EG developed a business case that accommodated these gas and electricity prices and delivered a 100% return on investment per year after fully implemented. The Malaysian investors committed to funding the $3.5 billion project. Meantime, Namibia has contracted with a gas operator to develop and commercialize Kudu. By coming in as the ‘buyer of last resort’ at these above-market prices at Final Investment Decision scheduled for 4th Quarter, 2017, EG will be able to reduce its startup investment costs by $2 billion, and still deliver the same projected revenues, greatly enhancing return on investment.

**Subject Matter Experts.** EG is more than anything else a **System Integrator**.

- EG assembles the most effective technologies to build an ironclad business case with exceptional return on investment.
- EG evaluates each technology provider on the value its innovation can contribute. EG selects the right engineering that can execute the vision of our business case.
- EG’s objective is to miniaturize each technology solution into a transportable container-sized factory module.
  - This factory module must conform to the performance criteria of its technology claims.
  - This factory module must also conform to the operational, safety, and pollution protocol of all relevant U.S. regulatory agencies.
- The setup team must be trained and certified professionals able to implement or modify the factory module so that it performs satisfactorily on the ground in the Host Country.
- The operations team must be trained and certified professionals able to operate, troubleshoot, and maintain the factory module in accordance with all U.S. regulatory protocols, regardless of location within a Host Country.

EG sees its major responsibility as the identification and perfection of all operational and safety procedures in training curricula that are continuously upgraded with ‘Lessons Learned’ and design/operating refinements.
PROGRAM MANAGEMENT

EG’s Beneficiation Programs each entail the commercial realization of several new technologies in an integrated system that will provide unprecedented returns for its Host Countries, its workforce, its management, and its investors. Coupling coal with electricity and natural gas – generating 5,000-plus permanent jobs by producing 5 billion+ gallons of liquid petroleum products annually requires innovation, discipline, and large-project management skills.

A select interdisciplinary management team with delivery and operational experience in diverse international projects in disparate fields as well as basic industries is assembled to marshal the change management expertise to break new ground with these Programs.

The Program team is composed of entrepreneurs, business executives, engineers, educators, program / project directors / managers, financial management executives, and international operations managers.

The areas of expertise of the team are in: energy, programme governance, portfolio management, migration planning, risk mitigation, procurement, international business development, program development, information technology, design and development of engineering systems, financial / fiscal management, auditing and assessment analysis, security, eCommerce, training and education, knowledge management (KM), supply chain management (SCM), enterprise resource planning (ERP), national information systems infrastructure, systems analysis and design, team building, and organizational development.

The team has a combined 295 years of experience in these areas.
G.R. Langworth, Managing Director

Mr. Langworth has 40+ years in business and technology development. He was a member of the startup team for Sperry/Unisys’ SNAPnet retail brokerage support system. He was a member of the startup team for Fiber Link Around the Globe submarine cable system. Mr. Langworth was responsible for all FLAG cable circuit sales to African telecommunications carriers, where he traveled regularly to 38 of the 52 countries in the continent. He developed the PC-based circuit forecast and sales agreement data base for the FLAG cable, the first non-mainframe application of its kind. Mr. Langworth was made head of global new product development for the FLAG cable where he developed the global buyers’ cooperative network, convinced PSInet, a global ISP, to convert itself into a U.S. international telecom carrier that could buy circuits on the FLAG cable system, and developed the U.S. Defense Information Systems Agency’s Tampa to Bahrain private network demonstration on FLAG before he left to form GBCN.

Consulted on the design and architecture for Marubeni Trading / Global Crossing terrestrial network in Japan.

Led GBCN to develop and implement [a] business-to-business ‘Data Call’, [b] ‘Local Fulfillment Facility’ providing 500% more broadband capacity in a macro-cell footprint at 30% of the cost of the micro-cell, [c] the ‘Power Grid Network’ a fiber optic application based solution generating telecom revenues from residential & business networked application services to fund smart power grid solutions.

Mr. Langworth developed a vertically integrated business model for ‘base load’ energy generation using gas turbines powered by LPG, expanding heat-to-electricity conversion to dramatically lower electricity costs with specific subsystems for inlet fogging, steam injection, combined steam turbine, and a new ‘tail-end’ flow acceleration heat-exchanger.

Mr. Langworth devised a vertically-integrated business model for small, modular denatured molten salt reactors to deliver pollution-free power generation and fresh water for developing countries. He worked with molten salt chemists to define ‘chemical control rods’ that manage evolution from uranium fuel cycles to pure thorium fuel cycles within the same reactor design.

As its principal architect, Mr. Langworth conceived the beneficiation program for Namibia, Mozambique and India; and identified and designed the deployment strategies for all technologies required for the full solution.
B.A. Jaafar MBA, PhD– Chief Financial Officer

Mr. Jaafar has over 35 years of involvement in Money and Banking. He was Chief Economist of the Reserves Bank of Malaysia, Chief Executives of a premier Malaysian bank and was involved as Financial Advisor to a Malaysian Corporative Society and a financial institution with the onset of the East Asia Financial crisis.

He served at the International Monetary Fund as Executive Director covering the South-East Asia Voting Group (ASEAN plus Fiji and Nepal).

He had served as Executive Director for Africa Operations for a Multinational Corporation. The mission was to consolidate and sell off their banking, hotel and shipyard operations in various countries in Sub-Saharan Africa.

He was the chief architect for the rescue and restructuring of a premier Malaysia bank hit by a major property collapse in Hong Kong which led to a joint takeover of the Bank, briefly by PETRONAS and the Malaysian Airline System.

Under the IMF Technical Assistance Program, Mr. Jaafar served as Governor of the Reserve Bank of Namibia. The mission was to institute financial sector reforms and capacity building. His latest contract (2016) was as Professor of Economics at the Malaysian University Kelantan.

He is an elected Fellow of the Institute of Bankers Malaysia and received numerous national awards for country contributions. He is a qualified economist specializing in the fields of Econometrics and Money and Banking.
P. Carrillo, Director for Operations and Training –

Mr. Carrillo has been affiliated with Mr. Langworth in Energy Giant LLC and GBCN since 1999. In addition, the following are highlights of Mr. Carrillo's relevant experience:

*National University, San Diego, CA* - Adjunct Faculty in the School of Engineering and the School of Business (20+ years). Developed Graduate Coursework (online and classroom) in Ecommerce, Leadership, Organization Management, Fiber Optics, Technology Management, Information Systems Management, Knowledge Management, Supply Chain Management, Data (Wired and Wireless) Networks, Business Management for Information Systems, Project Management, Globalization, and Ethics. The opportunity to present these graduate courses continues, as well as the presentation of other courses in business and technology.

*Thrunet, Inc. South Korea* - Responsible for the design and implementation proposal of the nationwide (South Korea) network for Thrunet, Inc., a leading telecommunications company, headquartered in Seoul, during this period. As Vice-President of Research & Development, the proposal included due diligence of vendors, equipment verification, network design, RFP’s, RFQ’s, partner/vendor collaboration, and training of the R&D hardware/software engineering group, was successfully completed in 7 months.

*McDonnell Douglas Aerospace Information Systems, Cypress, CA* - Leader for the successful design and implementation of the fiber optic network for the Mesa, Arizona Apache Helicopter Plant. This network was designed for administrative, engineering, and the manufacturing floor supporting the entire facility. Responsible for vendor due diligence, selection, and monitoring.

Co-Team Leader for the successful design and implementation for the fiber optic network for the Long Beach, California C-17 Globemaster Program. This network was designed for the engineering and manufacturing floor of the interconnecting facilities in Long Beach.

Accomplished the security assessment of all Telecommunications (worldwide) for McDonnell Douglas Aerospace. This included systems in Hong Kong, Spain, Canada, and throughout the United States. Used tools common to assessment efforts and improvised with tools common to due diligence efforts -- embraced by the consultant team verifying the assessment report.

RFP Team member for the entire McDonnell Douglas Aerospace Information Services organization (MDAIS) effort to improve performance and cost. Reviewed proposals from AT&T, IBM, and CONTEL. The effort resulting in a multi-company contract saving the organization an estimated $1M USD/year with improved performance.

Organized and coordinated a company-wide monthly meeting for network engineers and managers. This meeting started out as a cross-organization effort to share knowledge, growing from the first meeting of 12 engineers to 35 engineers and managers from the entire organization. It also evolved from 1 hour to 4 + hours and lunch. From a meeting to a seminar environment, which was also attended via audio by engineers in the St. Louis and San Jose facilities. This effort led to increased collaboration and the sharing of knowledge regarding network design, vendor justification, wiring and panel design, vendor
negotiations, implementation procedures, software and hardware tools, and leadership skills required to perform in Team Leader and Project Management positions.

Member of the following standards groups: MAP/TOP Network Committee, the IEEE 802.3H Fiber Optic Committee and the NIST ISDN committee

_NATO, Izmir, Turkey_ - Responsible for communications to the NATO fleet and ground forces in the Eastern _Mediterranean Sea_ (NATO’sSoutheaster Flank). Developed and implemented a leadership and training program resulting in a 35% improvement in Performance. Mr. Carrillo received the Defense Meritorious Service Medal, the military’s highest non-combat Award for his efforts. Leadership responsibilities, for 129 personnel (operators, technicians, administrative, and engineering) from Turkey, the United States, and the United Kingdom was successful due to the collaborative and sharing climate introduced by Mr. Carrillo.
P. Bronsveld, Programs Relationship Manager

Mr. Bronsveld has more than 25 years’ experience in communications, marketing, and international business development with an emphasis in promoting new programs and fundraising for non-profit projects and NGO’s. Mr. Bronsveld is a founding board member of the Dutch branch of the Jubilee Campaign, formed in 1987 by Lord Alton in the UK.

This organization has a consultative status at the United Nations that allows direct submission of its reports to the General Assembly and the International Criminal Court in The Hague.

Mr. Bronsveld has been able to build informal relationships with diverse governments across the world. He has taken advantage of Jubilee Campaign's UN consultative status to organize ‘side events’ at the United Nations, raising human rights issues at the General Assembly on many occasions. Mr. Bronsveld and his team periodically exercise the privilege of informing Dutch Parliament directly, which is only possible if a relevant number of members of parliament are willing to endorse the program’s agenda.

These activities have enabled Mr. Bronsveld to develop [a] an in-depth involvement with the inception and establishment of the ‘Democratic Self Administration’ (DSA) in Northern Syria, [b] based on relationships developed with the Kurds, Syriacs, and other groups in Syria, Jubilee Campaign was able to develop a comprehensive proposal in liaison with the ‘Christian Political Foundation for Europe’ (PCPF) to work with the Kurdish forces to counter the advances of ISIS. Later on, Jubilee Campaign was able to introduce the same proposal to the State Department in Washington, DC, which later changed its policy and started supporting the Kurds in Iraq as well. [c] In 2012, Mr. Bronsveld joined a Dutch Member of parliament on a working visit to Pakistan whose focus was on the Human Rights situation of minorities, and especially the Ahmadiyah and Christian communities. Mr. Bronsveld has recently established the ‘Pakistan Christian Political Foundation’, the first ‘think tank’ at the European Parliament to represent the concerns of the Christian minorities in Pakistan. [d] In a March 2015 Thailand visit, Mr. Bronsveld learned of hundreds of Pakistani asylum seekers kept in the central jail in Bangkok. After he visited the jail, the Jubilee Campaign published a report on the situation, leading several Dutch MP's to raise the issue in Parliament. Other governments also responded to the report, resulting in the BBC fielding an investigative team to review the situation. The follow-on international pressure resulted in the liberation of most people from jail. Mr. Bronsveld continues with ‘quiet diplomacy' with the UNHCR and the Thai Government to seek sustainable solutions for the Pakistani asylum seekers in Bangkok. [e] Since May 2012, Jubilee Campaign has submitted reports to the UN General Assembly about the atrocities committed by the extremist organization ‘Boko Haram’ in Northern Nigeria at the International Criminal Court in The Hague. Mr. Bronsveld was given the opportunity to develop personal relationships with Nigeria’s President Buhari and the Muslim leaders in the North of Nigeria close to the president. Mr. Bronsveld developed a “Leaders of Integrity” model, endorsed by President Buhari, for a select group to select & invest in feasibility studies of Nigerian business projects in agriculture & mining.
F. MacLeod, Director of Administration

Mr. MacLeod has more than 25 years international IT experience, delivering business aligned results in the Financial, Oil and Gas Production, IT, Telco, Multi Media, and sectors for the Enterprise Corporate / Financial / SME markets (B2B, and B2C). A few of the recent highlights of his experience include the following:

**G4S Operations UK and Ireland:** Operations and Programme delivery, established a Target Operating Model to enable best shoring of resource and ongoing supply side of IT goods and services, leveraging third party capabilities. Provided elasticity of IT service supply and conversion of Capex to Opex spend turning fixed into variable cost. Operational budget of £49M. Delivered Operations services to multiple customers: Finance, Government and to other basic industries.

**WorldPay:** Carve out the card processing services from Royal Bank Of Scotland (Bain Capital, Apex), design development and implementation of new Card Processing services. Transformation budget of £300M+. Established and transitioned to a retained operational production service organisation for UK and ROW.

**First Data:** Programme managed a major business transformation (KKR): Application centric consolidation of 18 EMEA Data Centres, Command Centres and offices, reducing Data Centre occupancy to drive annualised benefits of $20M. Internal user base of 6000, 500 external customers, 5.3 million merchant Point of Sale Terminals and multiple ATM. Retooled the management team across EMEA with best shoring resourcing, Capital budget of $50M.

**British Telecom:** Managed and operated 23 UK Data Centres, 73 ROW and associated Network Command Centres. Programme managed and delivered upgrades to nine existing data centres and three new builds, budget of £63M. Hosted and delivered IT services for internal and external customers. Implemented energy saving measures reducing energy costs by 16%. Decommissioned IT assets; reducing annual operating costs by £16M. Internal user population of 140,000 and multiple hosting services for external customers: Retail, Manufacturing, Government and Financial Institutions.
N. Reda, Project Management Portfolio Manager –

Mr. Reda’s project management experience encompasses the nuclear engineering, power generation, and telecommunications infrastructure businesses.

With nearly 25 years of experience in engineering and 18 years in telecommunications. Mr. Reda’s relevant experience began in Nuclear Power Services Inc., where he spent eight years of project management positions related to the design, manufacture and supply of products for national and international power plants.

Mr. Reda joined NYNEX Corporation where he was assigned to develop special telecommunications initiatives for the company. Much of that time he held the position of director of International Ventures in Several NYNEX companies, including NYNEX Network Systems, NYNEX International Company, NYNEX Information Solutions Group and the NYNEX Development Company.

Mr. Reda was named managing director of Fiberoptic Association for International Research to define the feasibility of the Fiberoptic Link around the Globe, a submarine fiberoptic cable that would stretch from the United Kingdom to Japan and Korea via the Red Sea and Indian Ocean. As president and COO of FLAG Limited, Mr. Reda was responsible for the construction, operations and business development of the FLAG system, a US $ 1.55 billion capitalized infrastructure. He served on the Board of Directors, and as a member of the FLAG Executive Committee, the FLAG Policy Council, and the FLAG Management Committee.

The FLAG [Europe-Asia] system, started at Porthcurno, England, and proceeds to Estepona, Spain; through the Strait of Gibraltar to Palermo, Sicily; across the Mediterranean to Alexandria and Port Said, Egypt; overland from those two cities to Suez, Egypt; down the Gulf of Suez and the Red Sea, with a potential branching unit to Jeddah, Saudi Arabia; around the Arabian Peninsula to Dubai, site of the FLAG Network Operations Center; across the Indian Ocean to Bombay; around the tip of India and across the Bay of Bengal and the Andaman Sea to Ban Pak Bara, Thailand, with a branch down to Penang, Malaysia; overland across Thailand to Songkhla; up through the South China Sea to Lan Tao Island in Hong Kong; up the coast of China to a branch in the East China Sea where one fork goes to Shanghai and the other to Koje-do Island in Korea, and finally to two separate landings in Japan - Ninomiya and Miura, which are owned by rival carriers. The project connected countries that represented 70% of the world’s population.

The FLAG cable system was successfully placed into commercial service on November 22, 1997 with an initial group of 62 international carriers with purchase agreements for capacity. After 2002, the system’s 10 Gbps capacity was doubled by installing Raman optical amplifiers in the Indian Ocean to overcome the long distances between the original install erbium amplifiers. In 2005, the FLAG cable system, extended across the Atlantic and throughout the Persian Gulf and reported a capacity of 80 Gbps west of Mumbai to South Korea and Japan. RCOM, the FLAG system’s current owner, reported lit capacity reached 7 Tbps on the Europe-Asia reach in 2015, responsible East to West connections of RCOM’s 63% share of the global data demand as measured by lit capacity.
J. W. Chalice – ERP Planning, MD for Power Generation

Mr. Chalice is a world-class ERP subject matter expert, with 20-plus years of experience in international business development.

Matriculated in 1980, Data Processing Diploma (P.E. Technikon), BCom Information Systems (UNISA), Business Management (Paris Chamber of Commerce)

Managing Director of ARMADA from 1998 through 1999.
Managing Director of A2A Global Technologies from 2002 through 2003

President, TalkWithUs (Pty) Ltd. operator of outdoor wireless networks, covering more than 100,000 square km of under serviced rural areas in South Africa. Projects include Kwa-zulu Natal Network, Magaliesburg, Thabazimbi, Vaal Triangle Network, Majhabeng Municipality, BHP Billiton Mine Group in Hotazhel, Illovo Sugar Mills in Natal, Alazon Connexions, Metro Rail’s video surveillance network, and Gateway VoIP at shopping centers across SA, working in conjunction with BCX and Datapro.

Mr. Chalice, Mr. L. Samuels, and Mr. Langworth formed SA LFTR LLC to commercialize denatured molten salt reactors for future power generation, and Energy Giant LLC to build and operate CCGT systems for real-time power generation.

Most recently, Mr. Chalice has conducted ERP consultations for a number of Hong Kong-based financial- and retail-service enterprises.
Sola Idowu, Ph.D., is the University and Agricultural Systems Director.

Dr. Idowu has worked in Nigeria, the USA, the UK and India. Technology start-up companies he has pioneered since 2010 include
e-Therapeutics plc, UK – http://www.etherapeutics.co.uk, a network pharmacology and drug discovery company
BlueGate Software Technologies, India – http://bluegate-soft.com, software development and consulting across industrial domains
Hexislab Ltd., UK, www.hexislab.com, research and development of cosmetic and nutritional products
Novia Cosmetics, UK, www.noviacosmetics.com, research and development of cosmetic products
Africa Emerging Partners, UK, www.aep.africa.com, Africa-focused commercial consultancy

PhD Mathematics, Newcastle University
MASc Mathematics, Cambridge University
BSc Mathematics (First Class Honours), Logos State University

INSTITUTIONS.

Newcastle University – Under Dr. Idowu’s leadership, Newcastle University oversees several projects that source relevant technologies for mentorship and deployment in African countries. Newcastle’s International Water Management Institute [IWMI] is growing the evidence base on groundwater availability and management in Sub-Saharan Africa to enable sustainable use of this water for indigenous populations in poverty there. Research is now being conducted in Ethiopia, Ghana and South Africa. Newcastle is the UK’s leader in the study of sustainable agriculture and food security, the number 1 university for agriculture and forestry in the UK in 2016, ahead of Cambridge and Oxford. Newcastle collaborates in Africa with universities and institutions that facility on the ground agricultural projects. Representative institutions Dr. Idowu will integrate into our Programs include, in addition to Newcastle University:

• **Sarian Farm, Zac B. Sarian, Alfonso G. Buyat** – A new follor fertilizer formulation has been shown to accelerate the growth of Pakchong 1, up to 15 feet tall in 70 days from planting. The yield can reach more than a thousand tons of herbage per hectare in a single cutting. VB Tall was formulated by Alfonso G. Puyat, a seasoned researcher on plant growth acceleration. His past efforts include the Power Grower Combo and the Heavy Weight Tandum, which demonstrated significant efficacy in accelerating the growth of various crops resulting in much higher harvest yields.

• **Netafim Ltd, Tel Aviv, Israel** – Netafim is the global leader in drip and micro irrigation solutions for a sustainable future. With 27 subsidiaries worldwide, Netafim agronomists and engineers deliver optimal solutions to growers in over 110 countries, with 16 manufacturing
facilities around the globe and over 3,000 employees. Founded over 45 years ago, Netafim pioneered the drip irrigation revolution that has created a paradigm shift in low volume irrigation technology.

- **Thailand Department of Livestock Development** – Dr. Krailas Kiyothong developed Pakchong 1 Super Napier grass by crossing ordinary napier grass and pearl millet. It yields 16% to 18% more crude protein that bolsters dairy output. It can also be ratooned once the plant is established in a field and can be harvested every 45 to 48 days.

- **Chiang Mai University, Center for Agricultural Research System Research** - Research led by Tupthai Norsuwan investigated effects of various irrigation treatments including rainfed conditions, drip irrigation, and nitrogen application rates on Pakchong 1 super napier grass crops during the dry season in Chiang Mai province.
TEAM SUMMARY

G.R. Langworth –
1. Number of years: 40 years
2. Skills: Technology [telecommunications, energy, new product development]. Financing and new business development
3. Areas of Work: Africa, Europe, Middle East, Asia

B. A. Jaafar –
1. Number of years: 35 years
2. Skills: Financing, fiscal governance
3. Areas of Work: Malaysia, Africa, Middle East

P. Carrillo –
1. Number of years: 40 years
2. Skills: Organizational Development/Program Development/Information Technology/Training and Education
3. Areas of Work: North America, Asia, Marshall Island & Philippines, Australia, NZ, Turkey, Malaysia, Singapore, Caribbean

N. Reda –
1. Number of years: 30 years
2. Skills: Nuclear / electrical engineering, project management, started, built and operated $1.55 billion global telecom fiberoptic network
3. Areas of Work: U.S., Europe, Middle East, Asia

J. Chalice –
1. Number of years: 25 years
2. Skills: New business development; telecommunications, energy, financing
3. Areas of Work: Africa, Middle East, Asia

F. MacLeod –
1. Number of years: 25 years
2. Skills: Programme governance, portfolio management, migration planning, transformation & business operations
3. Areas of Work: UK, Europe, Middle East, Africa

P. Bronsveld –
1. Number of years: 25 years
2. Skills: International business development / communications / marketing
3. Areas of Work: Africa, Middle East, SW Asia

S. Idowu –
1. Number of years: 15 years
2. Skills: International business development, educating entrepreneurs

M. Gross – [Director, FloChem America]
1. Number of years: 30 years
2. Skills: Operational management in diverse technologies; and financing
3. Areas of Work: U.S., Europe