

**An Energy-Efficient Economy** Through Conservation

onsumers of power are now hit by increasing costs of electricity. Many Ghanaian workers regard the rising costs of electricity as a serious problem that depletes their income.

In 2013, the Trades Union Congress threatened a nation-wide strike to press home their demand for a reduction in the increase in power tariffs. The threat forced the government to appoint a Technical Working Group (TWG) to review the tariffs. Not satisfied with the outcome of the review, the TUC's threat was heightened.

The government quickly reduced

# ENERGY CONSERVATION USE POWER WISELY SAVE MONEY

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the utility tariffs by 25%, that is, from 78.9% to 59.18%. But even at that level, the VRA could recover just 60% of its operating costs.

However, consumers demand reliable electricity supply. Several significant challenges account for unstable service delivery. Foremost among these is insufficient capacity reserve margin. Over the years the system capacity reserve margin has gone down from about 15% to less than 5%, when the ideal level is about 20%. The rapid growth in electricity

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#### **OUR VISION**

SETTING THE STANDARD FOR PUBLIC SECTOR EXCELLENCE IN AFRICA

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demand in Ghana - over 10% a year for the past 10 years - itself propelled by significant GDP growth, is largely responsible for eroding this reserve margin.

Growth in new capacity has not kept pace with demand. Energy infrastructure projects are capital-intensive, which typically cost not less than US\$100 million and take three to four years to complete in the best of circumstances.

To reduce the risk of power outages, it is important to reduce the demand for, and the use of energy, more efficiently. Our environment will be richer when we practice energy efficiency and conservation.

In April 1989, the VRA and the Kwame Nkrumah University of Science and Technology (KNUST) School of Engineering signed a Collaboration Agreement and identified various fields of cooperation. One significant item of the agreement was a "Sabbatical Leave at VRA for the KNUST School of Engineering." Prof. Jackson of KNUST, who did a one year sabbatical, used the opportunity to introduce energyconservation programmes. The impact was nationwide, and Prof. Jackson's name became associated with the introduction of energy saving lamps, in particular the Compact Fluorescent Lamp (CFL). Prof. Brew-Hammond also used the VRA as a case study for his doctoral thesis.

In 1996, the VRA introduced Compact Fluorescent Lamps (CFLs or energy saving bulbs). The VRA initially imported 150,000 VRA branded Philips CFLs and sold them at subsidised prices (GH¢ 0.05p). Thereafter it was left to interested traders to import and sell them. To demonstrate kilowatt savings, the VRA embarked upon a nationwide energy conservation programme, using jingles, drama, group communication, print and electronic media, trade associations, churches and mosques, etc, to advise consumers to replace incandescent lamps with compact fluorescent lamps (CFLs).

This article provides general energy-efficiency techniques and methodologies that could be reasonably implemented in homes and offices, and have immediate effects on energy-saving and costs. For instance, the following methods could be implemented immediately, to reduce demand and cut energy costs:

Turn off all lights, especially in unused rooms.

Set computers, monitors, printers, copiers, and other business

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#### **Corporate Social Responsibility**

— Social Enhancement Projects
Social Enhancement Projects for the Communities include:

- Classroom blocks
- Cold Store
- Potable Water
- Health Facility
- Public Place of Convenience (KVIP)
- Asphalted Road from Inchaban to Aboadze
- A first Class Road from Inchaban to Dwomoh

— Community Development Programme

To continually provide support for communities, the Authority has a Community Development Programme (CDP) under which communities also benefit from:

- Youth Training Programme
- Education
- Income Generating Activities
- Social Infrastructure
- Support for cultural activities



#### Working at VRA

A career at VRA is one to be proud of. Opportunities abound in personal development, rewards and aspirations. What is more, you will be challenged to thinking outside the box, while contributing to the growth of an industry leader. Whatever it is you do at VRA, you will know you are contributing to a cause which not only impacts Ghana, but also the West Africa sub-region. All these, and an organisation deeply committed to accountability, teamwork, integrity and trustworthiness. Welcome aboard!



equipment to energy saving mode and turn them off at the end of the day.

 Minimise energy use during peak hours (6.00pm to 10pm). The Energy use at this time can be reduced by "load shedding," reducing demand at a time the country needs energy most.

Use laptop computers when possible. They consume
90% less energy than standard desktops.

◆ Use inkjet printers on print jobs not requiring the highest quality. They consume 90% less energy than laser printers.

• Use e-mail instead of sending memoranda and faxing documents.

One of the biggest drains on the electrical grid is air-conditioning. Key strategies for cost-effective use of electricity for space cooling include:

Improving installed efficiency of air-conditioning equipment.

• Cleaning the vents regularly and keeping to regular maintenance schedule.

A variety of current and future methodologies and

technologies that could provide measurable cost savings include:

• Day lighting in rooms (use of sunlight in lieu of conventional power).

 Adding controls or sensors (to shut off energy use when no one is present.

Adding a rheostat (to control watt usage)

• Adding switches that minimise light use, when pos-

sible, (instead of turning off all lights).

- Higher efficiency-rated air-conditioning units.
- Updated ventilation.
- Higher rated insulation.

Need to differentiate between Energy Efficiency Standards for Residential and Non-residential Buildings

There is the need for a bill to incorporate cost-effective energy-efficiency measures in buildings, that would reduce electricity demand and provide for more efficient use of electricity. Designing buildings that would make for 20% to 25% energy savings could make for significant *Contd. on pg.6*→

## **KTTP and TT2PP to Deliver 260MW of POWER**

INI-AM ISSAH SULEMANA — NATIONAL SERVICE PERSON, CORPORATE COMMUNICATIONS UNIT, ACCRA

s part of efforts to bridge the generation deficit and ease the energy crisis, the Volta River Authority is expected to deliver about 260MW of power to the national grid by the end of the 4th quarter, 2015.

The information was provided to a cross-section of journalists who undertook a facility visit to the Authority's operational areas recently. The journalists toured the Tema Thermal Power Complex (TTPC), Kpone Thermal Power Project (KTTP), and Akosombo and Kpong Generating Stations (AGS & KGS).

Briefing journalists on KTTP, the Project Manager, Mr. Francis Yaw Agbenyo, told them the estimated cost of the project was \$200 million and would on completion generate 220MW of power. He expected the project to be completed and come online in November 2015, after precommissioning tests currently on-going. He said the project was funded from the Authority's internally generated funds and the plant would be powered either by gas or diesel.

At Tema, the Operations Manager, Edward Ekow Obeng-Kenzo told journalists that the 38MW Tema



An Aerial view of the Kpone Thermal Power Plant



Mr. Edward Ekow Obeng-Kenzo addressing journalists

Thermal 2 Power Project (TT2PP), referred to as the Siemens Expansion Plant, was progressing steadily and was expected to come online in October 2015. The project is estimated to cost about \$43m.

Briefing the media at the Kpong Generating Station, the Manager Mechanical, Mr. Korsi McCarthy explained that after operating the plant for the past thirty years, it was prudent to undertake a retrofit of the system to ensure the machines were able to operate optimally for the next



Mr. Ebo Amoah interacting with media men

30 to 35 years. "Currently, work is about 57% complete and is expected to be completed in 2017." He added that on completion, the project would add a little over 1.5MW to the existing capacity.

Mr. McCarthy said the project's estimated cost of 46 million Euros was being provided by Agence Francaise de Development (AFD). He disclosed that the plant generates about 108MW, depending on how low or high the dam rises or falls.

The Manager, Electrical Mainte-Contd. on pg.8→

## VRA Board Members Inspect Projects

JOHN CHOBBAH & LOERITA APPIAH

ome members of the VRA Board in the company of the Chief Executive, Ing. Kirk Koffi, have inspected the Authority's ongoing projects.

Welcoming the delegation to the Kpone Thermal Project site, the Project Manager, Mr. Francis Agbenyo indicated that the pre-commissioning tests are still ongoing and was hopeful it would be completed on schedule. He noted that the initial challenges, especially those of financing had been resolved.

At the Kpong Generating Station, Lead Mechanical Engineer on the Retrofit Project, Mr. Korsi Mc-Carthy told the delegation that work on the first unit (Unit 2), is about 52% complete. He disclosed that the cost of the project could increase to 4.4 million Euros because of some cracks on the Discharge Rings and Intake Roller Gates.

The Board was also informed that refurbishment and installation works were on-going on the Turbine, Generator, Intake Gates and Electrical Protection Systems (EPS), to ensure that the remaining 48% of work was completed for commissioning by February 2016.

The Kpong Generating Station retrofit project, first estimated to cost 42 million euros, is likely to increase *Contd. on pg.10→* 



**On-going KTPP Project** 



Ing. Kirk Koffi and VRA Board Members inspecting the on-going project



Mr. Tim Dean explaining a point to VRA Board Members

### An Energy-Efficient Economy through Conservation - Contd. from pg.3

energy cost-savings in homes, offices and factories.

Construction costs on building designed to achieve energy-efficiency standard would depend on the level of energy-saving desired. This could be achieved by the installation of energy-efficient equipment and materials.

Incorporating energy conservation products or materials in a design would obviously increase the cost of construction, but the energy savings that result would offset some, or all, of the higher construction costs.

Short and Long-Term Activities that would Result in Significant Savings

#### SHORT-TERM ACTIVITIES

The following are short-term activities that could reduce the demand for electricity, lead to more efficient use of energy, and provide energy savings. Some of these would require modest funds to implement.

#### Day – lighting

Day-lighting has a major impact on the functionality of buildings, not only on costs associated with illumination and space conditioning, but it may also enhance the comfort and ambience of buildings while increasing the effectiveness and productivity of its occupants. The technique of Day-lighting, which is the use of natural light instead of electricity, can reduce your daily consumption by 100 percent. In addition, studies by US Pacific Gas and Electric (PG&E) show that children taught in classrooms illuminated by natural light achieve significant gains in Mathematics and English, with scores 7% to 16% higher than those in classrooms with poor natural light.

#### **Rethink Lighting Systems**

Lighting accounts for 40% of commercial energy use. Upgrading lamps are extremely cost-effective. Energy-efficient equipment can reduce lighting costs by 30%. Install motion-sensing fixtures and timers for inside and outside lights for the control of lighting in frequently unoccupied areas. Fluorescent fixtures and bulbs provide light using a fraction of the energy and last six to 10 times longer than incandescent bulbs. In addition, new Energy Star fixtures use up to 75% less energy than standard fixtures but give the same warm light as incandescent lighting. Energy Star is a registered trademark and symbol for energy efficiency. It is a label created by the US

Environmental Protection Agency and the US Department of Energy to help consumers save money and prevent air pollution.

#### **Clean Light Fixtures**

Clean lighting fixtures each year to maintain designed lighting levels. The dust and dirt accumulation in one year could reduce light effectiveness by 44%.

#### LONG-TERM ACTIVITIES

The following are long-term activities to reduce energy use and produce energy savings:

#### Modify your Landscaping

Planting trees on the south and on the west would help keep buildings cool.

#### **Future Programmes**

Knowing what we know today, it would be a good idea to introduce energy conservation and efficiency programmes in the school curriculum, from the primary to the senior high school, so that energy conservation and efficiency can become second nature. When these measures are practised we would be laying a good foundation for an efficient energy economy.



## Chinese Ambassador Calls On Chief Executive

MICHAEL DANSO - CORPORATE COMMUNICATIONS UNIT, ACCRA

he Chinese Ambassador, Ms Sun Baohong, has paid a courtesy call on the Chief Executive, Ing. Kirk Koffi.

The two officials discussed how China could provide technical expertise to the Authority in its bid to improve Ghana's energy supply.

Welcoming the Ambassador, the Chief Executive commended the Chinese government for its contributions to the energy sector, and referred to collaboration between VRA and the Sunon Asogli Power Ghana Ltd. and the Akosombo Textiles Limited.

Ing. Koffi stated that the VRA was willing to engage with the private sector to ensure the provision of adequate, regular, and sustainable power, to promote Ghana's economic development. "We are looking more into the future than today. There is the need, therefore, to strategise well, in order to catch up with China in terms of development," he noted.

Ms Sun told the Chief Executive and his management that she had visited a number of energy installations across the country, including the Akosombo Generating Station, Bui Dam, Asogli and



Ing. Kirk Koffi exchanging pleasantries with Madam Baohong



Chief Executive explaining a point to Chinese delegation



The Chinese delegation in a pose with the VRA team

the Atuabo Gas Processing Plant and was impressed with work being done.

She noted that electricity plays a critical role in economic transformation, productivity and industrialisation hence Ghana's power crisis was of great concern to China. She expressed willingness to offer support in addressing the crisis.

The ambassador recommended to the VRA to partner credible Chinese companies to improve power generation and supply.

### Agbezukey and Bamongya Receive 40 years Long Service Awards

MICHAEL DANSO - CORPORATE COMMUNICATIONS UNIT, ACCRA

essers Emmanuel Agbezukey and Richard Bamongya of the VRA Hospital (Akosombo) have received the Authority's prestigious 40-years Long Service Award.

Emmanuel Agbezukey and Richard Bamongya who joined VRA as general labourers and rose to the ranks of Medical Assistant and Administrative Assistant respectively received their awards from the Chief Excutive, Ing. Kirk Koffi, at the Accra International Conference Centre.

In a keynote address, the Chief Executive commended the recipients for their contributions to the development of the Authority and urged those still in the service to continue working hard in spite of current challenges.

He said management was taking the necessary measures to ensure the Authority resolve the difficulties.



Mr. Emmanuel K. Agbezukey, beaming with smiles as he receives his award from the Chief Executive

Mr. Koffi noted that last year's poor inflows had greatly affected the Authority's hydro operations. "This explains our decision to cut back on hydro generation."

He blamed the current enrgy crisis on inadequate, or erratic, gas supply from Nigeria, adding that the coming online of the Atuabo Gas Processing Plant would make a great impact on VRA's thermal operations (Aboadze). Another challenge he mentioned was the unavailability of some thermal plants. "Over the last few years, our thermal plants have experienced frequent breakdown. It is for this reason the Authority has engaged Electricity Supply Board (ESB) of Ireland to provide technical support for successful operation and maintenance of VRA's thermal portfolio," he said.

Ing. Kirk Koffi expressed hope

#### 260MW of POWER to be Added to NATIONAL GRID

← Contd. from pg.4

nance at AGS, Mr. Ebo Amoah, told journalists the water level in the dam had dropped significantly, accounting for the cut-back in the Authority's hydro generation. He indicated that the Authority is expecting a rise in the coming months.



Mr. Ebo Amoah (first left) granting an interview to journalists at the dam Site

that ESB would restore stability to the thermal operation and ensure provision of capacity additions, to help reduce the generation deficit.

The VRA Chief Executive said work on the 220MW Kpone Thermal Power Project (KTPP) was progressing steadily and that the station was expected to come on stream by the third quarter of the year. He said, VRA had signed an agreement with Tecnicas Reunidas of Spain to build the 186MW T4 Combined Cycle Plant at an estimated cost of \$239 million. The project, according to Ing. Koffi was to be completed in 30 months.

Touching on VRA's restructuring, he said a fivemember Board had been constituted to provide strategic direction. The restructuring, he noted had become necessary to ensure VRA remain competitive in the emerging energy market.

"We are confident that PROPCo, VRA Schools and VRA Hospitals, operating under the strategic directions of their boards and management, would be able to compete favourably and succeed as business entities," he said.

Talking about the essence of the awards, the Chief Executive emphasised that it was a corporate package designed to reward staff and, most importantly, motivate them, to ensure that the core of VRA's experienced and dedicated staff was maintained.

A former Director of Real Estate, Mr. Seth Asante, who chaired the function, entreated staff to be proud of being a part of VRA's pool of experienced and skilled personnel. "VRA has become a University of power generation, where others come to poach staff." He said, it was prudent to have the Long Service Awards to honour committed and dedicated staff. The VRA holds this bi-annual event to express its appreciation to staff for their commitment.



Mr. Richard Benemi Bamongya receiving a pat on the back



Ing. Kirk Koffi and some management staff, family, friends and colleague staff of the 40 years award recipients dancing

# AKOSOMBO Dam Reservoir begins RISING

SAMUEL deGRAFT-JOHNSON — CORPORATE COMMUNICATIONS UNIT, ACCRA

Following torrential rains within the catchment areas of the Bargre Dam, managers of the dam, SONABEL have commenced spillage of water to protect the dam.

The situation is expected to result in the

gradual rise of the water level at the Akosombo dam.

It would be recalled that VRA has had to cut back on its hydro operations following poor inflows into the dam last year.

## **TULLOW** BUILDS NEW TRANSPORT YARD FOR SEKONDI NAVAL BASE

#### MICHAEL DANSO - CORPORATE COMMUNICATIONS UNIT, ACCRA

ullow Oil Ghana has built and inaugurated a modern mechanical transport yard and a multi-purpose sports complex for the Sekondi Naval Base.

The mechanical transport yard, designed for the servicing of vehicles, would cater for vehicular operations of the Western Naval Command.

Mr. Charles Darku, Managing Director of Tullow Oil, commended the Base for supporting the company build a fabrication yard and said relations between the two organisations would strengthen farther.

He noted that work on the Tweneboa Enyera Ntome (TEN) project, Ghana's second offshore oil and gas development, was progressing steadily. He expressed hope that work on the fabrication side would be completed on schedule.

Mr. Darku said he was happy the anchor pipes for the second Floating Production Storage Offshore (FPSO) vessel were being built by local companies- OSAM and Seaweld.

The Chief of Naval Staff, Real Admiral Godfrey Mawuli Biekro, expressed happiness that the projects had been completed at a time they were most needed. He referred to assistance given to the Ghana Navy including; construction of a fence wall around the Sekondi Naval Base and the asphalted roads.

"The multi-purpose sports court would help improve the Command's sporting activities, recreation, games and keepfit programmes and enable the unearthing of talents," Real Admiral Biekro said.



Rev. Commander Anaman of the Western Naval Command dedicating the Yard. (Inset) Mr. Darku cutting the tape to commission the facility.

#### Board Members inspect projects - Contd. from pg.5

by 16.5 million euros as a result of estimated additional works.

Mr. McCarthy explained that the only way to have avoided the upward changes in the cost of works was to have completely shut down for a thorough inspection before awarding the contract. But the Authority could not afford to do that due to the energy crisis.

The Board also inspected the 38MW Siemens Expansion Plant at Tema.

Members of the Board led by the Board Chairman, Mr. Lee Ocran commended the staff for their efforts and urged them to work hard to ensure the projects are completed on schedule.



Mr. Tim Dean, making a powerpoint presentation to the Board

## VRA Allays Fears Of Lower Volta Communities (2)

NATHANIEL EKUE MENSAH — CORPORATE COMMUNICATIONS UNIT, AKOSOMBO

#### This is the continuation from the last issue.

#### THE DANGER WATER HYACINTH POSES

Speaking about the water hyacinth on the Volta Lake, an Environmental Officer of the Authority, Mr. Andreas Andoh, said when the weed is not controlled, it will grow to cover the entire lakes and ponds.

He said this will have an effect on water flow, block sunlight from reaching aquatic plants, and starve the water of oxygen, and kill fish and turtles.

The plant also creates a habitat for mosquitoes, and a parasitic flatworm that causes schistosomiasis (snail fever).

"The water hyacinth is often problematic in manmade ponds if uncontrolled, but can also provide food source for goldfish, keep water clean and provide oxygen to man-made ponds. It often invades bodies of water that have been impacted by human activities. For example; the plant can unbalance natural lifecycles in artificial reservoirs or in lakes that receive large amounts of nutrients," the environment officer said.

#### WHAT WATER HYACINTH IS

Water hyacinth are free-floating perennial aquatic plants (or hydrophytes) native to tropical and subtropical South America. Water hyacinth may rise above the surface of the water by as much as one meter. The leaves are 10–20 cm across and float above the water surface. They have long, spongy and bulbous stalks.

Water hyacinth was introduced into the US in 1884 at the World's Fair in New Orleans, also known as the "World Cotton Centennial." The plant had been given away as a gift by a group of visiting Japanese. Soon afterwards, the plant started choking rivers, killing fish and stopping shipping in Louisiana, and an estimated 50 kilograms per square meter choked Florida's waterways. There were many attempts to eradicate the plant. One method employed by the U.S Water Department was to pour oil over the plants. But none worked. In Africa, the water hyacinth appeared in the north, in Ethiopia, where it was first reported in 1965 at the Koka Reservoir and in the Awash River, where the Ethiopian Electric Light and Power Authority has managed to bring it under moderate control, at considerable cost.

It was introduced to Rwanda by Belgian colonists to beautify their holdings but then advanced, by natural means, to Lake Victoria, where it was first sighted in 1988.There, without any natural enemies, it has become an ecological plague, suffocating the lake, diminishing fish reserves, and hurting the local economy.

#### CHEMICAL CONTROL

Mr. Andoh noted that there are three commonly used methods to suppress water hyacinth infestations: physical, chemical, and biological. He noted that no one method is better than the other, because each has its advantages and disadvantages. The choice of method, he added, depended on the specific conditions of each affected location, such as the extent of the infestation, regional climate, and proximity to human and wildlife.

He noted VRA has been using a chemical, known as glyphosate to help eradicate the plant on the lake.

"The application of glyphosate for the control of water hyacinth is expected to reduce the intensity of infestation and restore the ecosystem value of the Volta River in the Lower Volta Basin," he stated.



Mr. Michael Dade educating a community on the use of Glyphosate

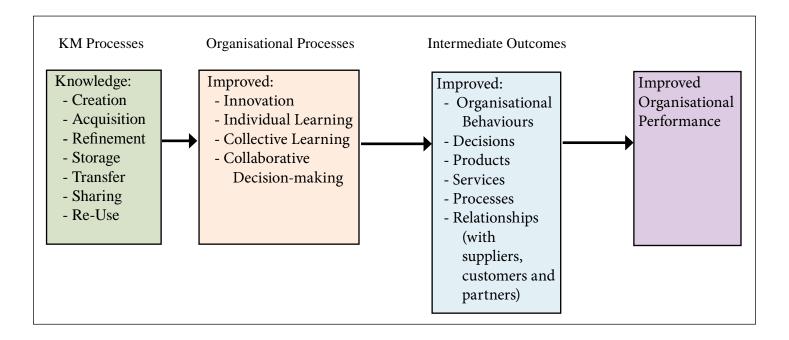
# Knowledge Management in GHANA



RANDY COMMEY — PROJECT & SYSTEMS MONITORING, AKOSOMBO

"When there is no formal Knowledge Management approach, organisations are likely to suffer from vague benefit realisation and are unlikely to meet their business objectives" (Zyngler and Brstein)

There are two important concepts: Communication and Consultation, and Monitor and Review – that apply to every step of the term 'Knowledge Management' used by business analysts to describe a great number of busi-



ness practices, replications and approaches connected with the creation, processing and diffusion of knowledge and know-how. In other words, it is the process of capturing, storing, tracking and using knowledge within an organisation. It is the most important intangible asset and the only sustainable competitive advantage.

Technological developments are fundamentally changing how we gather, analyse, track, organise and disseminate information in Ghana.

There is an overload of information-the difficulty a

person may have understanding an issue and making decisions, when there is too much information. This overload of information is making Knowledge Management increasingly more important. Ghanaians use data every day. According to David Derbyshire, "Scientists have worked out exactly how much data is sent to a typical person in the course of a year – and this is equal to every person in the world reading 174 newspapers every single day".

Investment in Knowledge Management will clearly

enhance the way we do business in Ghana. Knowledge Management can play a key role in supporting the information needs of managers in Ghana and assist with the mentoring and coaching skills needed by modern managers. It is seen as an element of strategic management for which the highest level of an organisation is responsible. According to the Knowledge Management survey carried out by the Organisation for Economic Co-operation and Development (OECD), Finland is one of the countries where Knowledge Management (KM) is well advanced. It will, therefore, be very good for Ghana to emulate this example.

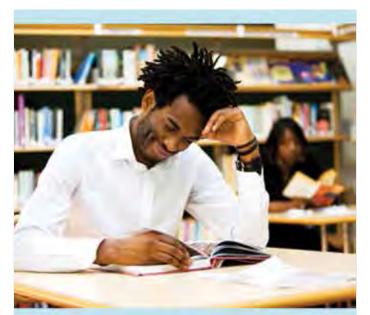
It is widely recognised that Knowledge Management (KM) can provide an organisation with the capability to understand customers' needs, effectively extract new ideas from suppliers and customers alike and turn them into innovative products and services. Some of the functions in Knowledge Management are After-Action Reviews, Best Practices, Communities of Practice, Coop Internships, Expert Interviews, Job Aids, Knowledge Fairs, Learning Games, Mentoring, On-the-Job Training [OJT], Storytelling,

E-learning, Training and taxonomy development, among others. It must be noted that most companies in Ghana do not have the composition, capabilities and roles of Knowledge Management departments and units. The only organisations that have Knowledge Management departments are Bank of Ghana and the Volta River Authority.

The future and the success of companies in Ghana will be determined by their ability to use the most valuable resource, which is business knowledge. This means that KM must be given particular importance in the structure of a company's internal organisation, as well as on the mechanisms and relationships that the company develops with its business partners.

Knowledge Management therefore, is about recognising the value of intellectual assets in the country, the information and knowledge available and then finding a way to apply these assets to benefit the organisations financially, physically and culturally in order to be abreast of the times. Besides, Knowledge Management (KM) principles will enable Ghana to capture, organise, analyse, share, and reuse both tacit and explicit

Contd. on pg.15 $\rightarrow$ 



EXPLICITRecorded in BooksDatabasesReports

• Files

#### TACIT

- Highly personal
- Hard to formalize
- Rooted in practice
- Experience
- Competence



# VRA *Engages with* Aquaculture Operators

ANDREAS ANDOH — ENVIRONMENTAL OFFICER, E&SDD

principal National Resource Officer of the Environmental & Sustainable Development Department (E&SDD) of the Volta River Authority, Mr. George Bamford has stated that the VRA is concerned with the multicipility of aquaculture operators on the Volta Lake.

He made this known at a sensitisation workshop organised to provide education for the operators with the aim of intensifying efforts at regulating aquaculture operations on the lake.

Mr. Bamford explained that aquaculture operations if regulated would help the VRA not only preserve the water and ensure sustainable hydro generation but would also improve livelihoods and the ecosystem value of the Volta Lake.

He said since aquaculture was introduced in the Northern Region in 1950, more than 58 individual fish farms have been established, with 1,700 cages sited on the Lake. The VRA he indicated, had developed the "Framework for Aquaculture Development on the Volta Lake" document, which provides general guidance for aquaculture operators to enter into leases with VRA for effective use of the water resource for sustained hydropower generation.

Speaking on the modalities for granting land and water leases an Environmental Officer with E&SDD, Mr. Andreas Andoh, explained as follows:

 Aquaculture operators should identify suitable sites along the Volta Basin System and apply to the VRA to confirm their appropriateness. ◆ VRA would reject any application showing the land to be within 85 meters (280 feet) above sea level. Again, no applicant could acquire land within 1.60 km (1 mile) from the shores of the lake at its maximum fill or within the Volta Gorge Protected Area, without explicit approval from the VRA.

Based on VRA's acceptance of a selected site, an applicant would be required to prepare a site map and a business proposal and submit them to VRA for review. VRA would then issue a "No Objection" and applicants would be required to apply for a permit from the Environmental Protection Agency (EPA), Water Resources Commission (WRC) and the appropriate District Assembly and submit these to the VRA.

 VRA would then enter into a Water Lease agreement with the operator with the conditions of the agreement being subject to review and renewal every five (5) years.

• No water lease agreement would be renewed if the operator had reneged on the conditions of the Agreement.

Mr. Andoh added that fresh-water aquaculture development was increasingly becoming the world's answer to the dwindling fortunes of artisanal fishing in the sea. However, if aquaculture activities were not regulated sustainably, they could lead to a variety of environmental and public health problems.

In his closing remarks, Mr. Bamford advised all aquaculture operators, who had not regularised their operations with VRA, to do so. He said this would ensure the sustainability development of aquaculture.



Fish farmers and regulators at the workshop

#### Knowledge Management in GHANA - Contd. from pg.13

knowledge (tacit knowledge is expertise held by people within the organisation that has not been formally documented; explicit knowledge is knowledge that has been articulated, codified, documented and stored) to make for better and faster decisions across geographical, functional, and virtual teams. The cornerstones of Ghana's Knowledge Management system are people, processes, and technology. All three aspects are needed to capture and harness knowledge within the country.

In a knowledge society, organisations need innovation and creativity to survive in a competitive market. In order to create this new environment inside the office, organisations have to offer to employees more flexible work schedules, less hierarchy, more autonomy and more life quality. Creative people, supported by the right software and applications, will certainly be the most useful resource to organisations in this knowledge era in the country.

In a way, long-serving workers have a depth of knowledge that is and can be relied upon by other workers, particularly in environments where little effort has been put into capturing, or managing, knowledge at an organisational level. In such situations, the loss of these key workers can have a major impact upon the level of knowledge within an organisation. Knowledge Management can assist by installing a structured mechanism for capturing or transferring this knowledge when workers retire. And political parties should have in their manifestoes Knowledge Management Governance and Policies to capture tacit and explicit knowledge of their members. This can be readily transmitted to others. Knowledge gained from positive or negative experiences has to be managed well, since this is one of the important sources of knowledge today.

Data overload is making knowledge management increasingly more important. Data can offer managers a wealth of information, but processing overwhelming amounts can get in the way of writing at high-quality decisions. While information overload can handicap managers, installing Knowledge Management systems can facilitate better, more informed decisions. The U.S. Army's After-Action Reviews (AARs) are an example of a Knowledge Management system that has helped build the Army into a learning organisation, by making learning routine. This has created a culture in the USA, where everyone continuously assesses himself, his unit, and his organisation, looking for ways of improvement. After every important activity or event, Army teams review assignments, identify successes and failures, and seek ways to perform better the next time.

Actively managing organisational knowledge can also stimulate cultural change and innovation by encouraging the free flow of ideas. For example, General Electric's Change Acceleration Process (GECAP) programme includes management development, business unit leadership, and focused workshops. From time to time workers are briefed on organisational issues and new developments.

The new business environment in Ghana will demand foresight, superior performance, innovation, best practices, and adaptation, rather than the traditional emphasis on optimisation. Effective and complete planning for Knowledge Management is critical in our day to day activities. Knowledge Management provides stock market valuation, assists in growth through acquisition of knowledge, leads to better-developed products, and encourages intelligent leadership for tenacious early adopters in other countries.

Finally, to achieve the desired best business performance in Ghana, managing knowledge should be undertaken explicitly and deliberately. According to Zyngier and Brstein; "When there is no formal Knowledge Management approach, organisations are likely to suffer from vague benefit realisation, and are unlikely to meet their business objectives."

Companies in Ghana should have Knowledge Management Strategies with the support of IT solutions as a way of harnessing information and knowledge for competitive advantage. There should also be cultures that encourage best practices, sharing which can unlock the rich store of knowledge in each worker.

# TYPES OF RISKS — Human Resources Risks and How To Manage Them

We shall be looking at some types of risks that organisations face, in the next editions of the VRA News Letters and explain how these risks could be managed. These types of risks include: Strategic, Financial, Operational, Information and IT.

In this edition, we shall discuss Human Resources Risks, which are sometimes considered as part of operational risks. Operational Risks are risks that can result from inadequate or failed internal processes, people and systems or external events.

#### **HUMAN RESOURCE RISKS**

Human Resource risks can simply be defined as the people factors that can either have a positive or negative effect on the realisation of the objectives of an organisation.

Organisations have visions and missions to which objectives are set. Clever strategies and advanced technologies are established and carried out through processes, procedures and systems to achieve the objectives. These will, however, not be effective without great people to put them to work. It is human beings who bring all these into realisation and in their attempt to work for the achievement of the



objectives, risks are encountered or generated. This human element in organisations can make or break the whole organisation.

#### The following are among Human Resources functions Where risks can be encountered:

- Succession Planning and Talent Management
- Employee Training and Development
- Alignment of pay and performance
- Alignment of HR Strategy and activities with business strategy
- Over/under use of external talent to fill key roles

- Ineffective selection processes, resulting in poor hiring
- Excessive turnover/failure to retain critical talent
- Staff/Employee behavior
- Intellectual property security
- Compliance/regulatory issues
- Employee engagement
- Inadequate or declining productivity

- Organizational culture that does not support desired behaviours or encourages undesirable ones
- Unrealistic employee expectations
- Shortage of critical skills within the workforce and external labour force

#### MANAGEMENT OF HUMAN RESOURCE RISKS

Effective management of HR Risks will ensure a happy and motivated workforce. Explained below are some of the above-mentioned risks, their management and benefits arising:

#### SUCCESSION PLANNING AND TALENT MANAGEMENT

Succession Planning focuses on mitigating the risks of retirees taking their skills and knowledge with them and leaving nothing behind, as well as untimely departures of critical personnel. Lack of succession planning negatively impacts on the continuity and performance of a company.

It is important for an organisation to identify and develop key talent to provide solutions for filling key positions of leadership.

Empirical evidence abounds that succession planning and management development can and do contribute to extraordinary business success. Effective succession planning will ensure continuity across all levels of an organisation.

Talent management ensures that an organisation will have the people with the right skills and knowledge needed to achieve its objectives. It is important for a company to have the right talent in the right job at the right time. This requires a clear plan for selecting the appropriate talent, managing it and replacing that talent in the future. Talent management begins with selection. Selecting the right person for the job increases the likelihood that the individual will be able to do what is expected and also stay with the organisation. A complete screening of all applicants is necessary, with the selection process being free and fair. Poor recruitment and selection add to the cost associated with turnover, which can be substantial, and can have a negative impact on the morale and productivity of other workers.

### EMPLOYEE TRAINING AND DEVELOPMENT

The risks involved in not training and developing employees include a workforce that is inflexible and unable to grow and adapt as key stakeholders need change and develop over time.

All employees must be given the appropriate training and development, needed to equip them with the experience, knowledge, skills and the abilities necessary to succeed in their positions. A mentoring system can also be established, where new and inexperienced employees are mentored by the old and experienced ones.

Providing opportunities for employees to continually grow and learn professionally, provides several areas of value to an organisation. Training and learning create a workforce that can adapt to the changing needs of key stakeholders and ensures that an organisation doesn't become stagnant. These also create a pool of available talent within the organisation that can be tapped into, as positions become available.

### ALIGNMENT OF PAY AND PERFORMANCE

Employees can become dissatisfied and look for new opportunities, if they don't understand the link between their performance and the rewards provided by a company. A solid and effective communications program can help to minimise these risks. Implementation of a good work and reward management structure, periodically reviewed, in line with current trends is a further mitigating strategy.

#### COMPLIANCE/REGULATORY ISSUES

In the area of compliance, clear rules can be established and made available to employees to comply with e.g. code of ethics and conditions of service. Strong systems must be established to check misconduct (e.g. fraud and corruption).

Increasing regulations adds risks for organisations, especially in the areas of compensation and benefits. Employee benefits are areas ripe with regulatory requirements. These risks can be minimised by organisations, working with qualified professionals who have experience in these areas.

#### CONCLUSION

By adopting a proactive approach to people risk management, organisations can play a critical role in driving operations and taking the initiatives required to succeed. Although people are a key source of risk, they are also the solution. By understanding people risk, organisations are able to turn their risks into opportunities.

The Only Way To Do GREAT WORK Is To Love What You Do

Steve Jobs

# **Document Management** — What It Is and How It Works!

FOSTER OPARE — PROJECTS & SYSTEMS MONITORING, ACCRA

The Document Management Software (DMS) is designed to organise business files and records digitally, whether they were started in paper form, or generated by software applications.

Paper files are converted into electronic format, first by scanning, which provides a more efficient means of file storage, universal access to retrieval and higher levels of document control and data security. Document management also controls digital files that are generated directly through applications such as those in the Microsoft Office suite (Word, Excel and PowerPoint), accounting software, CAD, e-mail, and so on.

Even with a digital archive, it could still be difficult to track down a document if a management system were established that employed a network folder structure. Finding a document filed under a generic or misleading folder name could make a search ineffective, leading to many of the same issues that face the paper-based businesses.

This is where one DMS solution may differ from another. Those that institute a metadata-driven architecture store and manage documents in a database-like fashion, using a customisable set of document attributes, such as the document class (e.g. purchase order, meeting memo, receipt, etc.), creation date, language, author, amount, customer, etc. This makes storing of information in static folder structures unnecessary - enabling the user to find, store, secure and share a document by what it is and not where it is. This is a powerful and more effective way to access, organise and track vital business information.

#### THE BENEFITS OF THE DOCUMENT MANAGEMENT SOFTWARE

Organisations with an overarching document management system, for all their information, operate at a vastly superior level of efficiency than do those that still rely on paper files and folders. Even companies with most of their documents in digital form, organised within



a traditional network folder structure, suffer many of the same drags on productivity as paper-filing systems. Time is wasted looking through several folder locations for misplaced documents. This is often compounded by the proliferation of multiple versions of the same file, resulting in errors and repeated work.

Without a document management framework, businesses find it very difficult to enforce reliable file organisation and optimise their internal processes.

Efficient and easy-to-use Document Management Software (DMS) makes it simple for everyone in an organisation to quickly find the right information when they need it, without having to run to the file cabinet or worry about navigating an unnecessarily complicated network folder structure.

The advantages of the Document Management Software extend beyond improved productivity. Potential areas for operational cost reductions in using a document management system include office space, physical storage space, server space, paper, filing cabinets, copying and supplies.

Document Management Software streamlines workflows and business processes

While faster file retrieval, better organisation and increased data security are the immediate results of installing a Document Management System, organisations can also make significant improvements in their workflows and business processes. Contd. on  $pg.20 \rightarrow$ 

## **"DUMSOR-DUMSOR" A BATTLE LOST AND WON**

SAMUEL M. CANN - CORPORATE COMMUNICATIONS UNIT, ABOADZE

n Shakespeare's drama of Macbeth, when the three witches were discussing when their next meeting would take place, their decision was: "When the battle is lost and won." Surely in life, what is lost to someone is won by another. The issue of 'Dumsor-Dumsor' has not been an exception; as in the midst of the challenges some successes have been won by our dedicated engineers.



Ing. Geoffrey Barnes, leader of the team of Engineers/ Technicians

Again, contrary to what some people including some government officials would want others to believe, that Volta River Authority (VRA) Engineers receive fat salaries for little or no work done, a team of Mechanical Engineers/Technician, using ingenuity early this year, has achieved a feat which has increased generation by as much as 45 MW.

What was the problem? Earlier on, Gas Turbine No.2 (32G2) had been experiencing high tunnel temperatures above 220°C resulting in base load back down with associated loss of about 60 MW of power.

Hard working engineers at the Takoradi Thermal



Engineers and technicians celebrating their achievement

Power Station have been diligent in solving some of the technical challenges at the thermal station. The engineers/ technician introduced a blower nicknamed "Punny Blower" into the system and succeeded in bringing down the high temperatures to 130°C. An action, which resulted in efficiency gain of 45MW of energy.

Ing. Geoffrey Barnes, leader of the team praised his colleagues who assisted in making history.

Commenting on their achievement, Ag. Plant Manager, Ing. Stephen Owusu said their performance was exceptional and deserved commendation.

#### VRA DONATIONS IN PICTURES



Manager, Corporate Communications, Mr. Fletcher making a presentation to the Ag. Commanding Officer, 37 Military Hospital, Col. Aygapong.



Mr. Fletcher sharing VRA's words of encouragement with Deputy Director, Nursing Services of the Ridge Hospital, Mrs. Dinah Asante Mensah.



Deputy Director, Nursing Services, Police Hospital, Supt. Marufatu Essie Braimah, receiving donation on behalf of the victims.

# VRA Supports PESE Community Library Rehabilitation

NATHANIEL EKUE MENSAH — CORPORATE COMMUNICATIONS UNIT, AKOSOMBO

he Manager of the Corporate Communications Unit of the Volta River Authority, Mr. Samuel Kwesi Fletcher, has called on communities impacted by VRA's operations to take advantage of the Authority's quality education programme, under its Community Development Programme (CDP).

Reading a speech on behalf of the Manager, Corporate Communications at a ceremony to reopen the Pese Community Library, Information/ Publicity Assistant, Mr. Nathaniel Ekue Mensah, noted the vital role education plays in the development of every society.

He expressed the Authority's ideals in education and support for rehabilitation of the community library. Mr. Fletcher was hopeful that the project would encourage the youth to embrace reading as a habit to prepare them for the future.

Receiving a donation of GH¢ 2,500, Kamenahene of Pese, Nana Osae Nyampong IV thanked the VRA for the kind gesture.



Kamenahene Otwasuom Osae Nyampong IV in a group photograph after the re-opening of the Pese Community Library



The Pese Community Library

He used the occassion to advised parents within the community to ensure their wards take up the challenge of making the best out of opportunities.

#### Document Management — What It Is and How It Works! - Contd. from pg.18

By using Document Management to automate document-centered workflows and processes, companies benefit from higher levels of productivity and quality. Managers can use automation to impose a disciplined approach to complicated, multi-user workflows, where

a single misstep can affect an entire chain of actions. In addition, they can apply configurations on a wide variety of simple tasks to automate recurring procedures and eliminate repetitive work.

# **VRA INSPECTS "SAFE HAVENS"**

SAMUEL deGRAFT-JOHNSON — CORPORATE COMMUNICATIONS UNIT, ACCRA

he Volta River Authority's (VRA) Environmental Management and Emergency Preparedness Plan team led by its Coordinator, Mr. Kwame Dakwah (Senior Civil Engineer) have inspected areas earmarked "Safe Havens".

Identification, demarcation and maintenance of these "Safe Havens" have become necessary following a study which earmarked those communities as potentially impacted in case of a declaration of any phase of emergency, following the Authority's operation of the Kpong and Akosombo dams.

Inspection of the "Safe Havens" were conducted as part of this year's EMP/EPP workshop organized annually by the Authority to sensitize stakeholders in the communities on their roles and responsibilities during emergencies.

Commending their efforts, Mr. Kwame Dakwah urged the Assemblies to conduct periodic inspection of the locations to ensure they remained as "Safe Havens". He tasked them to ensure the routes to the "Safe Haven" is well maintained to prevent encroachment.

The EPP Coordinator noted that it was prudent the VRA team visited the locations to satisfy itself that the stakeholders were doing the right thing.



Mr. Amekor making his presentation



VRA and Keta Municipal Assembly officials at one of the unmarked Safe Havens

Mr. Samuel deGraft-Johnson of the Corporate Communications Unit suggested that the Assemblies mount huge sign posts with the inscription "Safe Haven" boldly written to ensure easy identification by the inhabitants.

According to him this would facilitate movement of people to the designated "Safe Havens" during emergency situations, adding, an easy identification of the location would avert a possible chaotic situation in the future resulting from a lack of information.

Prior to the inspection, the EPP Coordinator took representatives of the Assemblies through the EPP tools to ascertain their levels of understanding and appreciation.

The VRA team included; Mrs. Rhoda Arthur, Information/Publicity Officer; Mr. Ulysses Hammond, EMP Coordinator and Mrs. Afua Adwubi, Deputy EPP Coordinator.

## FAREWELL MESSAGE TO ESTHER and TONY ON THEIR RETIREMENT

or all are gone, the old familiar faces! Silently, they bring before me faces we shall see no more on regular basis! These lyrics automatically popped up on my lips when it suddenly dawned on me that we were no longer going to experience the physical presence of Esther and Tony at the office as we are used to.

We are gathered here today at the separation social engineering interface for Esther and Tony as a farewell. Esther diligently served the Authority for 41-years (1974). Similarly, Tony meticulously served VRA for 34-years (1981). I believe some of us here today were not born then.

Nevertheless, I believe you would all agree with me that the two have been a few of the hardworking, dedicated, and committed employees we have seen in our directorate and the Authority at large. Their attitudes to work are worth emulating. They were dedicated, hardworking and committed employees, always ready to "go the extra mile" without complaint. They had excellent interpersonal working relations with all of us - Superiors, Supervisors, Peers, and Juniors. Age was not an issue for them when it comes to taking instructions for duty or interacting with us for any reason whatsoever. As the Latin saying goes: "Exampla bonorum vinorum imitatis pueri bene vivant". Good Examples



Esther Kudalor

of men should be imitated by boys so that they can live well.

Farewells are more than a time to bid adieu; they are moments to encourage and express our best wishes for the new journeys ahead. Those of us you leave behind are overtaken by reminiscence and nostalgia. Over the years that we have been together, we celebrated, laughed, shed a few tears, and said goodbye to some loved ones. Today, we publicly wish to acknowledge graciously with much appreciation and gratitude your contribution to the course of VRA. We sincerely acknowledge the support you provided most of us during our working lives and even on personal levels.

It is time to move on to conquer new battles and scale new heights. We hope you do not forget the old friends who loved you always. Keep us informed about your welfare! Do not miss our end of year get-togethers. Feel free to visit the department anytime you could afford.



Tony Asu

Farewell, our friends, we would miss you!! In the journey of life, you meet several people who are hard to forget. We are glad to have met personalities like you. Hope the path ahead is smooth for you to reach your goals without encountering storms. Thanks for all those times when you helped us in our various tasks. It would be difficult to fill the void created by your absence at the office. We are really going to miss you. Not always do you find a friend in a colleague. Nevertheless, here I must say we were lucky. Hope we retain this friendship until thy Kingdom come.

May I invite you all to rise and give a memorable standing ovation to both Esther and Tony!

Cheers, Cheers, Cheers.

Thank you all.

James Jabari Napour DIRECTOR AUDIT

## VRA Pursues Private Sector Partnership In Dredging And Aquatic Weed Project

SAMUEL deGRAFT-JOHNSON - CORPORATE COMMUNICATIONS UNIT, ACCRA

Volta River Authority (VRA) is to partner interested private sector entities in the management of aquatic weeds and dredging of the Volta River in the Lower Volta Basin.

This was made known by Manager, Environment, Mr. M.K. Amerkor during sensitization workshop(s) organized as part of this year's Environmental Management Plan and Emergency Preparedness Plan Workshops.

The annual EMP/EPP workshop is organized to sensitize communities identified to be potentially affected as a result of the operation of the Authority's dams.

Explaining further, Mr. Amekor pointed out that over the years VRA has solely undertaken the dredging and management of the aquatic weeds. He said the venture was capital intensive and was becoming impossible for the Authority to do it alone hence the idea to look for partners with the necessary expertise and capital to partner VRA. This he maintained was to ensure an effective and sustainable management of the problem.

He noted: "If implemented, the aquatic weeds that would be harvested would be converted into commercially useable weeds (organic fertilizer, animal feed, etc.). He continued that the dredging of sand from the river channel and shorelines had become necessary since there was the need to deepen the original river channel to prevent proliferation of both submerged and floating aquatic weeds.

The Manager, Environment, stated that the sand that was dredged was to be sold and the proceeds spilt between the investor and the community. The money he disclosed was to be used to undertake economic developments in these communities.

He assured that the venture would incorporate all stakeholders, traditional authorities, landowners, etc. to ensure its success.

### **DANGME KAKE-PEM KPE Donates to** *Mrs. TAMATEY*

MICHAEL DANSO - CORPORATE COMMUNICATIONS UNIT, ACCRA

three member gelegation from the staff social group, Dangme Kake-Pem Kpe has made a donation to the wife of the late James Tamatey.

Presenting the cheque of GH¢700 to Mrs. Susana Tamatey, chairman of the Association, Mr. Albert Larnyoh, noted that the donation was in fulfillment to a pledge made by the Association at thier last annual meeting following the death of their member.

Receiving the cheque, Mrs. Tamatey expressed gratitude to the association for their support.

Dangme Kake-Pem Kpe, literally translated to mean "Dangame Unity Association" comprises staff of the VRA and GRIDCo. from the Gadangme origin. The Association exits to promote the welfare of Gadangme staff.



Mrs. Susana Tamatey receiving the donation from Mr. Albert Larnyoh



#### Come Partner us to make a Huge Difference!

**Our Mission:** The Volta River Authority exists to **Power Economies & Raise** the living standards of the peoples of **Ghana & West Africa** 

#### **OUR VALUES**

- Accountability
- 🜣 Commitment
- 🔅 Trust
- 🌣 Integrity
- 🜣 Teamwork



#### Are We Still Procrastinating?

LOVERTH KUFE – NATIONAL SERVICE PERSON, CORPORATE COMMUNICATIONS, ACCRA Continued from last Issue

Why can we not just get it done? How can we move beyond our self-imposed mental blocks? Here are a few simple considerations to effectively deal with procrastination.

1. Fix your mindset. The sooner you can get your mind in a positive state regarding the task being avoided or delayed, the sooner you will get the bottom-line benefit. Identify the EXPLICIT BENEFIT that you will get once the task is completed. For example:

- The sooner I get a new product developed and launched, the sooner it can generate REVENUES for my business.

- The sooner I invoice, the sooner I shall get paid, improving CASH FLOW.

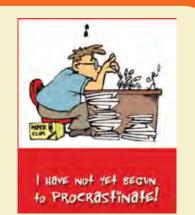
2. Focus on one thing only. Your mind-space may be overloaded with

clutter that is distracting you, negatively impacting your clarity and focus. Our minds are capable of processing multiple thoughts at once, but this is NOT ideal when we need to focus. You may want to employ some simple focusing techniques to clear your space. For example:

- Deliberately decide to minimise external distractions – switch off the cell phone and email; close the office door; inform others that you are not available while working on an important task that needs to get done.

- Deliberately decide to "park" disruptive thought processes that are not relevant to the task at hand.

3. Deal with Perfection-Paralysis. It is easy to get stuck on a task, when you



want to get it "perfect" before moving forward. Get over what! You are merely delaying your own success. Successful entrepreneurs and businesses get new ideas, products and marketing launched quickly and do the fine-tuning later. Where would Richard Branson be if he first wanted to create the perfect record company or perfect airline before launching it?

To be continued.

#### **IN THE NEXT ISSUE:**

Writing Workshop 6

Please send your concerns, questions, congratulatory messages, issues, worries, suggestions, etc., to corpcomm@vra.com

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