A DETAILED EVALUATION OF GHANA’S DRONE PURCHASE AGREEMENT BETWEEN FLY ZIPLINE GHANA LTD AND THE MINISTRY OF HEALTH

BY

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INTRODUCTION

During the swearing in of H.E. President Nana Addo Danquah Akuffo Addo on January 7, 2017, he made an audacious call to all Ghanaians to be “Citizens, not Spectators”. This was a call to action for all Ghanaians to eschew passivity and be actively involved in nation building. We, Ghanaians, we goaded on by this call and have embraced that call with all our might. As a procurement professional, I have spent almost my entire career working for multinationals with policies that prohibited executives from making political statements or actively participating in politics or making political comments and contributions publicly.

So why now? Why do I wade into matters that are so politically-tainted? I am doing so because observing the assault on the procurement profession I have chosen and practiced for more than 20 years, I fear that if some of us do not rise up now, those following us will never understand and practice the very concepts, principles, ethics and ethos of our calling – To “Preserve the Purse” and to be the “Creators of Value”.

I have observed past NDC and NPP government manipulate the country’s procurement laws to serve their parochial interests. In my opinion, the ACT 663 and its amendment ACT 914 are carefully crafted to provide some form of credence and legitimacy to the interest of the people versed with power. It has become a convenient alibi for plundering the state’s resources with legitimacy. I don’t believe the current government should worry, if it believes it is not guilty of organised theft of state resources.

When the drone story broke, the facts as were presented were that Ghana had signed a $12.5m contract which will run for 48months or 4years. There would be 4 distribution centres each with capacity to make 150 deliveries a day or 600 delivering daily in total. The cost per delivery was presented as $17.00. There was no mention of what is driving the need for 600 hundred drone deliveries a day? How many lives have been lost as a result of this lack, resulting in this need? Anecdotal quotes of a father’s death are not enough to expend $12.5 million, or at today’s rate, 61.25million Ghana Cedi.

The first thing I did was to pick my calculator and divide $12.5m by 48 months. The answer is $260,416.67 a month. Then I divided this by 30days which make it $8,680.56 per day. Further divide this by 600 deliveries and the cost per delivery will be $14.47, NOT $17.00. This is when I felt something was not adding up. 600 deliveries daily @ $17? But this is not breaking down to $17 so is it an arithmetic error or there more to it? If on a straight line methodology, the unit cost is $14.47, where did the Director of the Ghana Health Service get the $17.00 from? As soon as the numbers were not added up at a cursory glance, I felt obliged to probe further. That is when my curiosity was aroused. Where is the empirical data to
support this level of emergency need? This presupposes a colossal failure of the cold chain management system.

I worry for the direction of procurement as a function and a profession. I worry for the obvious lack of rigour in all the allied functional areas, especially with respect to finance and accounting as well as legal. I can see a future where politics could destroy the careers of trained professionals and all the tenets and ethos of the practice of procurement will become political ping-pong, unless we, the professional forbearers, educate the citizenry enough for them to see through the wiles of the political class.

Therefore, I am going to spend time to explain the basic underlying principles first, so we understand what should be, then we can compare the principles to the practice per our public procurement to see how badly we are faring or have fared as a nation, as far as this particular procurement exercise is concerned.

**The rationale for this write up therefore is**

- Not to criticize and chastise the current regime because this goes beyond a regime;
- Not to kick against the use of drones as complement to the existing cold chain management systems in place, if they do exist and are working effectively;
- But engender a conversation around “what are we doing so wrong” and why are we blatantly destroying a profession that is supposed to be so important to the financial security of the country;
- To cause the nation to pause, go back to review this particular purchase and correct any mistakes, be it acts of omission or commission.

**CONCEPTS & PRINCIPLES**

There are foundational principles that globally govern the procurement professionally. Those do not change with geography. It means, we cannot say that in Ghana we can do it differently. They are universal, they are what they are for a reason and they do not change to suit the whims and caprices of those given charge to superintend the function and its administration. It is these principles and concepts that make the function both a science and an art simultaneously and as such is not one that is to be left in the hands of untrained and unethical persons, without a conscience and a commitment to excellence and good governance.

1. **PROCUREMENT IS A STRATEGIC PROCESS.** It means, it a process that is supposed to facilitate the fulfilment of not just today’s needs but also tomorrow’s needs, sustainably and affordably.
2. **PROCUREMENT IS THE ACQUISITION THROUGH ANY LEGAL MEANS** of the needs of an organisation, or in this case a country, in a sustainable manner by obtaining the right quantities, at the right price, in the right quality, from the right sources, delivered to the right place, at the right time. We call them the 6 RIGHTS of Procurement. At the end of the day, that is the acid test any procurement activity must pass.
3. Acquisition is NOT just about buying or owning something before it fulfils your needs. It means sometimes renting, leasing or even borrowing to use temporarily, on a pro-bono basis is a better option. It is not any need that you must expend to fulfil.
4. CATEGORY MANAGEMENT is currently the methodology that is globally accepted as the BEST PRACTICE that helps to unlock value in any procurement activity.

5. KRALJIC’S PORTFOLIO MATRIX, the ARJAN VAN WEELE’S DUTCH WINDMILL PORTFOLIO MATRIX and PORTER’s 5 FORCES remain the most widely accepted tools for assessing supplier market relationships and how to approach them. These tools determine whether or not a need qualifies for sole or single sourcing, restricted tendering or competitive bidding and whether there is potential for success if any of these procurement methods are adopted.

6. TRUST, OPENNESS, TRANSPARENCY AND INTEGRITY ARE CORE VALUES. Procurement involves holding and spending other people’s monies on their behalf. It is therefore imperative that at all times, all stakeholders are carried along as the process unfolds, briefing, seeking their views and approvals at specific intervals. It is therefore important for all stakeholders to be identified at inception and engaged consistently all through the process in a transparent and open manner.

**CATEGORY MANAGEMENT**

It is a strategic approach to buying which organises procurement resources to focus on specific areas of spends with a view to finding sustainable value creation opportunities and unlocking that value. Furthermore, it is a continuous process, a strategy as well as a structure. These three dimensions of category management enables management to assign activities by category to category managers, who focus their time on a specific category, conduct in depth market analysis to fully leverage their procurement decisions on behalf of the whole organisation.

The strength of category management is in research. It dwells on focusing procurement efforts on understanding the market. By understanding the market, one needs to understand everything about the product from its origins, through its evolution to what the future is. It involves understanding the size of the market and kind of influence your budget could likely have. It involves understanding the different commercial models that exist and which ones will best suit your interests and possibly creating one that best works for you. It involves understanding the supplier market dynamics, knowing who are the key players (suppliers) in the market and their strength or level of control or balance of power, the barriers to entry, the level of competition that exists between them and how to pull all the levers at your disposal to be able to wield significant influence.

As a process, it is an 8-Step continuous process that starts with:

1. **SPEND ANALYSIS** – This involves data gathering from the organisation’s own systems. Historical data is assembled to help the entity understand its past performance. How much have we been spending? On what? On who? How did we do the spending? When did we do the spending? At what intervals and frequencies? What mistakes did we make? Were our needs or objectives met? Have our needs changed? Do we have any inherent or potential risks? Again you ask how much (quantity) is needed now and how much will be needed over a medium to longer term? During this period, one takes a fine comb and fishes out all the information and data it can marshal so as to make informed and data-driven decisions.

2. **NEEDS DEFINITION AND SPECIFICATION** – Having spent a tremendous amount of time and effort to look back to understand where you are coming from, you use all the information, historic data, gathered from this performance review to inform the definition of the new need and to specify in
close to exact terms as possible what is needed (quality), how much of it is needed (quantities), how it is needed (delivery), where it is needed (place), when it is needed (time), how much is available to spend (cost and budget). Being mindful that at this stage, you’d note that the only missing factor in the 6 Rights is the Source or Supplier.

It is instructive to note that at this point, there are two types of specification that can be made – a conformance specification and a performance specification. The former is used where the buyer has all the known variables on hand and is certain of exactly what is needed and how to receive it. A performance specification is used when there are more unknown variables than the known, where the buyer is unsure of how to deliver the outcomes but is somewhat certain of what the outcomes should be. This step in the process is subject to an approval gate from the sponsors as per the governance. The type of specification that is chosen goes a long way to influence the procurement methods that may be available to the buyer.

3. **SUPPLY MARKET ANALYSIS** – This is where the supply market is evaluated to understand the dynamics of the market. The objective is to find the RIGHT SOURCES. I use the word “sources” because ultimately the objective is to find alternate sources of supply, reduce your supply risks first and foremost but eventually to be in a position where you have more control over the market enough to be able to influence the markets behaviours through leveraging on numbers, scale and scope to reduce the financial impact.

Here, the exercise is to understand who is available to supply, what are the prevailing commercial models, conduct a supply chain cost modelling to understand how the chains integrate into the final product, what the costs are at each level and how they consolidate to determine the “right price”. The cost modelling informs the company’s budget, internal estimate or price points for negotiation.

4. **CATEGORY STRATEGY DEFINITION** – Armed with reliable, accurate and timely insights from the supply markets, a strategy and its associated tactics needed to be defined and documented to direct all and sundry as to how to approach this market, when to do so, creating various scenarios as options available to address the market in an ethical, open, transparent and competitive manner. There may be instances where competition may not be the best option available BUT that is only so because some detailed work had been done to reveal this as the best option. This step in the process is also subject to an approval gate from the sponsors as per the governance.

5. **TENDERING & MARKET TESTING** – Tendering is that stage of the process where potential and incumbent suppliers are invited to submit their offers which are subject to the buyer’s sole discretion to accept. The cost of submitting offers should not be a liability for the buyer. This is the actual implementation of the category strategy. The market engagement could be in one or more ways, and where more than one method is going to be applicable, the bidders must be informed. It is important to understand that how you approach the market will be dependent on two critical variables – 1. the cost implication or the financial impact to the buyer and 2. the level of risk the buyer is exposed to in the supply market. The more there are many suppliers with similar capabilities, the more competition the buyer can enjoy. Below are the various market testing options:

   a. **Expression of Interests (EoI)**– This is used when the supply market is opaque to the buyer such that he’s unable to determine the size of the supply market i.e. how many suppliers
are available with capabilities to meet their needs as has been defined in step 2 of the process. The aim is to expose his requirements to the public and to tease out as many potential suppliers as possible to the fore.

b. **Requests for Information (RFI)** - This is applied where the outcomes of steps 1, 2 and 3 conclude that there is little information available to make informed decisions and that the market will have to be relied upon for more information and data. The objective is to receive more information from the supply market to inform the definition of the need and its specification. It is used as a first or second step in a multi-step tender processes where there is a performance specification.

c. **Requests for Proposals (RFP)** – This is used to solicit offers or proposals. It is most suitable where the buyer has a performance specification which requires the potential supplier to offer a proposal on how to achieve the outcomes the buyer seeks. Each supplier is therefore evaluated on the strength of his proposal after which the one with the best offer or the lowest evaluated bid is considered for award. The objective of using RFPs is to solicit different approaches to achieving the same outcomes and used where there is a performance specification.

d. **Requests for Quotations (RFQ)** – This is used for sourcing low value, high volume items which has standardised specification or products which have similar quality standards therefore price is the only differentiation factor. Selection of a supplier is largely based on price. The objective is to engender a price competition amongst the suppliers of similar or the same items.

e. **Invitations to Tender (ITT) in International or National Competitive Bidding** – This applicable where the specification is known, there are very little unknown variables, there are many potential suppliers in the market and the transaction has a high financial impact (High Value High Volume). This solicitation may be open to the global or international market (ICT) or may be limited to only national suppliers only (NCT). The objective of this method is to allow competition to force the price/cost down.

f. **Restricted Tendering** – This is applicable to oligopolistic markets where there are not many suppliers. Aside that, this is used to support affirmative action or to limit participation in a competitive tendering process to a specified number of suppliers who are pre-qualified.

Prequalification involves taking suppliers through a rigorous assessment process to prove beyond doubt their competencies and capabilities in readiness for any future opportunities that may arise. This assessment starts with a documentary assessment of their registration and incorporation documents, tax and social security registration and compliance, specific industry and regulatory licensing qualifications etc. The next phase is a financial due diligence to ensure that they have a minimal working capital to be able to fulfil the size of the potential business. Another level of assessment is a quality assessment where the ISO standards are verified, the products are taken through rigorous field tests, lab tests, stress tests etc. A further subjection to a health, safety, security and environmental management assessment could be carried out as part of the prequalification.
All these are supposed to ensure that the potential risks of the buyer are reduced if not mitigated. The potential suppliers must have either historic performance records with the entity or have very proven performance records beyond reasonable doubt. The objective is to attempt to force some form of competition amongst a limited supply base to force pricing down.

g. **Sole Sourcing** – This is applicable in monopolistic markets where there is only one supplier available and there is little choice than to deal with only one and the same. The monopoly may stem from either intellectual property rights, unique skills and competencies that are available from only one source, where there are licensing restrictions and only one supplier has the legal mandate or license to undertake such business.

h. **Single Sourcing** – This is where even though other players may exist in the market, the entity consciously makes a choice to avoid competition by engaging with only one supplier. Typically, this method is used when there is an emergency, time is of the essence and there’s the need to make a sourcing decision impromptu. Emergency in this instance is defined as any situation where without an immediate response there’s the higher probability of loss of lives and property.

At the end of the bidding period when all offers have been received, the offers are subjected to an evaluation, the criteria and the panel of which should have been pre-determined before the bids were received. In instances where the suppliers did not undergo prequalification, like in the case of ITTs, the prequalification criterion are incorporated into the tender requirements.

Subsequently, the lowest evaluated bid, which is not necessarily the lowest price, is recommended for award, where it is a one step process or for negotiation where it is a two-step process. This step in the process is subject to an approval gate from the sponsors as per the governance, if it is a one step process.

6. **NEGOTIATIONS / CONTRACT AWARD** – Irrespective of which methods are employed to engage the market to solicit offers, an acceptance has to be made to one or a few suppliers as the case may be due to the strategy that was approved. In a two-step process where the suppliers should have been pre-informed prior to bidding of the possible negotiation as a next stage, the supplier is then engaged in a series of negotiations which will not just border on price but on all other terms and condition necessary, the details of which are eventually captured in a draft contract for concurrence, subject to prior approval. This step in the process is subject to an approval gate from the sponsors as per the governance.

7. **CONTRACT DELIVERY / SUPPLIER PERFORMANCE MANAGEMENT** – This is the stage in the process where the selected supplier(s) handed their contract or purchase orders and they mobilise or begin to deliver on the contract. The supplier’s performance is managed and monitored actively and proactively with the view to ensuring that quality, cost and time is not lost in the process.

8. **CATEGORY REVIEW / ITERATIVE TRANSITION TO NEW STRATEGY** - During this period, learnings are identified and recorded. The objectives are reviewed to see if they were met in the manner that was anticipated. The category strategy is reviewed to see if the decisions and choices made
were apt. During this stage, opportunity for creating further value or optimising the value created is pursued. All the outcomes of this review is passed on to the next cycle of spend analysis

Fig. 1
In this illustration, we see that Ghana’s procurement does follow the 8 step process. It follows a triangular process of needs identification and specification, then we cross over to tendering and it ends at award. Ghana doesn’t have a documented regime for contract management which is standardised across board neither do we take any learning from one cycle of sourcing to make it inform the next cycle. This explains why we make the same mistakes every single time.

APPLICATION OF THESE CONCEPTS AND PRINCIPLES TO THE DRONE PURCHASE AGREEMENT

I have deliberately spent a tremendous amount of time to explain the procurement philosophies, methodologies, principles and values, I would now proceed to test them against one of Ghana’s most controversial procurement exercises undertaken in recent times – the acquisition of drone services for the Ghana Health Service by the Ministry of Health.

On December 12, 2018, the Parliament of Ghana approved a 4-year, $12.5million contract for the provision of emergency drone services to the Ghana Health Service through the Ministry of Health. The parties to this contract are Fly Zipline Ghana Limited and Ministry of Health.

Following the hue and cry, The President and The Vice-President have at separate times stated that it is not going to be at the expense of the tax payer.
STEP 1 – SPEND ANALYSIS

The state should be telling Ghanaians how many public health facilities in the various categories there are in the country. I have heard a moving number which ranges between 2000 to 3000 ranging from CHPS compounds to Tertiary facilities. It is important to evaluate the existing cold chain management systems already in place. Such data must show the range of drugs that SHOULD be held in stock at all times and what the stock norms should be. If there are stock outs, what are the reasons for the lack of availability.

As we speak, I am informed that there is a lack of anti-rabies vaccines and serums for snake bites for the past 6 months.

It is important to have the statistics to show that there have been X number of instances where there was the need for administration of these drugs on an EMERGENCY BASIS but their non-availability led to the loss of lives or the near death of the patients.

It is not enough to use anecdotal evidence as basis to justify why Ghanaians should spend 62,250,000.00 Ghana Cedis, in four years, for something are not sure is useful.

STEP 2 – DEFINING THE NEED & SPECIFICATION

The service is described as emergency delivery of blood and 148 types of medicines. Question is that, have there been instances where the inability to administer these 149 essential products has led to loss of lives? If yes, how often? Why do we not have these products not readily available in the cold chain, necessitating the need for emergency deliveries? Again, it has been specified that these products will be held in new distribution centres to be built by Zipline. What happened to the existing cold chain systems? Why introduce parallel cold chain systems? Each region has a medical store. Do these not have cold rooms? Each health facility should have a cold room, a refrigeration system for holding products? If not, how have we been administering healthcare? As the case may be, if it turns out that the problem is widespread and a national crisis then will the planned 4 distribution centres be adequate to cover the entire country? The maximum distance the drone covers is 80km, the same distance as from Accra to Ankamu (Apam Junction). That is shorter than Enchi to Juaboso (82.9km), shorter than Sunyani to Kintampo (122.1km). That is shorter than from Tamale to Damango (124.6km). So really, where is going to be the sweet spot in the middle that can reach the towns, talk less of the spatially scattered villages around?

The critical point here is that, failure to use data to inform the specifying of the need will mean that we will most likely be buying an orange when an apple is what we need. Further, not addressing the core of the challenge, which is the failure of the country’s cold chain management systems, will mean money will be expended to window dress the issue, addressing the symptoms instead of dealing with the causative agents.

In procurement, the biggest risks always lie with wrongly specifying the need. I am given to believe that Ghana is going to waste resources because we have failed to do the detailed analysis of at the first two stages.

STEP 3 – SUPPLY MARKET ANALYSIS

The contract describes the services as “first-of-its-kind autonomous Remotely Piloted Aircraft System” and as such procurement the method employed was SINGLE SOURCING. This is factually inaccurate. As far back as 2016 Ghana under a UN and Bill Gates Foundation delivered contraceptives via drones. Who
was the service provider them? What were the learning gathered from that programme? It is not the first of its kind, neither is it the only type of service available to warrant single sourcing.

A search through the internet shows that using drones to make deliveries, including healthcare deliveries have been done successfully in several countries including China, Vanuatu, Tanzania and Iceland. Swoop Aero is Australian, DHL the German parcel company and Flytrex, an Icelandic company, have provided similar services. There are similar drone delivery services operations by Flirtex, Matternet is delivering for Mercedes Benz, Horsefly, JD.Com is delivering to remote locations in China and WingCopter piloted in Vanuatu.

A further analysis of their modus operandi would reveal that DHL and Scoop Aero have better technologies in the sense that whiles both are able to carry payloads of 2kg which is more than Zipline’s payload of 1.75kg per the contract, their drones do not require massive land for building a takeoff system since their drone liftoff the ground like helicopters, they do not drop the packages from midair but rather land and finally while Zipline is capable of making only one-way deliveries, their services offer two-way deliveries by sending the products and bringing back products like blood samples for testing. This also means that they would not be the need for building any distribution centers as the drones can be operated from any location as long as that the location already has the cold chain facilities. This is a major and significant cost driver.

Furthermore, a benchmark of Zipline’s own operations would have revealed that since they started operations in Oct 2016 in Rwanda, they had completed 5000 deliveries by May 2018 (20months). This averages 250 deliveries a month OR 8.33 deliveries a day. They would have known that Rwanda still operates a single Distribution Center. That the cost per delivery is circa $15.00 and that the contract is a unit rates contract NOT a guaranteed volumes fixed price contract.

Again, in Tanzania where Zipline operates, Tanzania Health Ministry run pilots with both Zipline and DHL Courier.

Aside this, the commercial model in this market reveals that fees are charged on a unit rate basis based on the number of deliveries made. This is so because the service providers are not obliged to build infrastructure, they simply do pick-up and delivery like any other courier service. However, because we failed to do the necessary commercial due diligence, we have signed up to a fee for service contract where we are paying a fixed amount monthly whether we fly or not. The PPA issued a letter to MoH granting approval for single sourcing on the basis of a National Security Due Diligence was conducted. It would be worth evaluating what they (National Security) did, if it covered the entire scope. A simple supply chain cost modelling would have given us an idea of the RIGHT PRICE, the price ceiling, price floors etc. for the purpose of negotiation.

**STEP 4 – Category Strategy**

Fact is we do not have a category strategy. In fact, we do not apply strategy in sourcing in Ghana. As soon as the need was scoped, a request was made to the Public Procurement Authority (PPA) for approval to engage in Single Sourcing. I have sighted a PPA letter granting that approval. Question. Did PPA conduct any evaluation of the need like is professionally done? Did the PPA conduct a supply market analysis and what was the outcome? How come such easy to find information did not inform their ability to guide the ministry to pursue a competitive tender process. The PPA has a due diligence unit that is supposed to
evaluate such requests, issue a report/recommendation, based on which the CEO authors an approval letter. Is there such a report? If there is, it would be worth sharing with the people of Ghana who pay them, it cannot be that confidential.

The bane of Ghana’s procurement law is that it is completely bereft of any thinking and strategy. It lays out a mundane process and practitioners are not obliged to apply any strategic sourcing techniques nor the creation of sourcing strategies. Everywhere, professionally, the number 1 performance measure of a procurement function is SAVINGS. In the UK public procurement, there was always a 3 – year savings target for the Office of Government Commerce when it existed under HM treasury. While entity tender committees and the Central Tender Review Board (CTRB) exist as gate approvers together with the PPA itself, they are consistently failing to employ the professional tools to assessment and approve.

Worst is the fact that all the people who are supposed to be guarding and protecting the public purse are politically appointed and often than not do not have the will to withstand the pressures from their political masters. This problem was recently highlighted by Dr. Ishmael Yamson who was the Guest Speaker at the investiture session of the Ghana Institute of Procurement & Supply (GIPS), the local professional body made up of procurement practitioners, of which I hold a Chartered Member Status.

This purchase would not pass for single source if the Kraljic, Van Weele and the Porters tools are applied. This is a service which has more than 6 vendors with capability. It is clearly a leverage product and the routine is to apply competitive tendering as a procurement method. It is a technology service. The usual practice in technology sourcing is to use an RFP to invite the technical and commercial proposals. This will be followed by a proof of concept (PoC) where the vendor has to demonstrate the effectiveness of their technology at their own cost for a period of time usually between 1 and 3 months. It is after a successful PoC that the successful party go into a negotiation and a selection is made. This is a strategic option that government could have chosen. It would have been more cost effective.

STEP 5 – TENDERING

Government chose not to hold a competitive tender but rather handpick a supplier for this service. Yes, the MoH applied to PPA for their approval to use the Single Sourcing method in accordance with Act 663 and its amendment and duly received the PPAs blessing to proceed. Therefore, it is safe to say no law has been broken, nor a crime committed. The Act 663 has conveniently legitimized the purchase. The implication is that it failed to test the market for options, gave away its benefit of using competition as a lever to drive cost down. Curiously, under the Act 914, the amendment to Act 663, this $12.5m contract did not require the concurrent approval of the Central Tender Review Board as such once the Entity was done with its processes it could proceed for Parliamentary assent. Why did it have to go to parliament, because by law all contracts with foreign entities must be approved by parliament. Its revocation must follow a similar process; the government will have his say at the end of the day. Is politics holding sway professional judgements?

In any situation where the supplier has no competition, you pay far above what the market rate will be because there was no market force pressure. Use Porter’s 5 Forces and you would see that MoH by its own acts, raised the barrier to entry by, ceded the balance of power needed in any negotiation and created an artificial supplier market, and its attendant risks, when in actual fact, this is supposed to be a buyer’s market with low barriers to entry. What is the inference here? Can we begin to suspect graft? Is it collusion or corruption? Why on earth would a government that has little resources clearly choose a
I state with emphasis and without any equivocation that the Public Procurement Act 663 and its amendment Act 914 are weak laws that do not in any way empower practitioners to focus on extracting value for money. Rather it compels its practitioners to focus on compliance to, and executing a process, irrespective of whether it delivers value or not.

That explains why we always end up with value for money audits after the harm is done. For every value for money audit undertaken, it is a testament of the failure of the system to conduct the necessary due diligence and evaluation usually carried out at steps 1 to 4. Unfortunately, this drone agreement will most likely suffer the same fate.

STEP 6 – NEGOTIATION AND CONTRACT AWARD

Negotiation has three phases the Pre-Negotiation, the Negotiation and the Post-Negotiation phases. The pre-negotiation phase is the most important. This is where you prepare for, plan your strategy and tactics, determine your entry and exit points and your best alternative to a negotiated agreement (BATNA), form your negotiation team, investigate the members of the opposing team etc. It is at this stage that all the information from the spend analysis, the supply market analysis and the category strategy become relevant.

The negotiation phase is where you now trade positions, using the designed strategies and tactics, to ensure that there is a win-win outcome but being mindful that the entities needs and objectives are being met, value is being optimized whiles risks are being minimized.

When there is little preparation for these two phases, a weak contract is agreed which puts the buyer at a disadvantage. That is why at law, the principle of “Caveat Emptor” is very critical. The contract and its terms and conditions are supposed to mitigate all risks. In this contract, a lot of risks were assumed willfully, including breaching existing laws of the land to satisfy Zipline. Shoddy negotiation!

In this drone case, it is obvious that we did not do the necessary pre-negotiation preparation neither did we go into negotiation from a strong position. This is evident in the language of a PPA letter they wrote to the ministry on November 16, 2018 accepting Zipline’s pricing. It stated to the effected that even though the PPA requested for a downward review of pricing, the prices had actually gone up. That Zipline mounted a forceful argument to justify their pricing and that their pricing was comparable to their services elsewhere. Where was our spirited fight back and factual justification to pay less? Was Zipline forced to produce evidence to support that assertion? Referencing in procurement is common practice. Did MoH write to other countries to seek the confirmation and comparison of the said “comparable prices”? If National Security conducted the due diligence that the PPA should have conducted, can we see the subsequent report? What was the Terms of Reference given to them (National Security)? What was our exit point for negotiation where we call a no-deal and what was our BATNA? **A competitive tender alone would have put us in a stronger negotiation position if we were minded to protect the state purse.**
I am unable to evaluate the performance of the contract at this point because the contract is now in the mobilization and set-up phase so we will be keenly monitoring to ensure that Ghana is not the loser.

This is another problem with public procurement in Ghana. I have been personally involved in the drafting of a contract management/supplier performance management guidelines which is supposed to follow through with the monitoring of the performance of the contract so as to ensure that we do not lose value. We are interested in signing the contract but we go to sleep and allow contractors and suppliers to do what they want. It cuts across categories — roads, ambulances, hospitals, the list is endless.

**REVIEW & ANALYSIS OF THE CONTRACT TERMS OF THE DRONE PURCHASE AGREEMENT**

I wish to issue a disclaimer at this point, this exercise is for academic purposes only, to educate the publics and our burgeoning cadre of procurement professionals, both in training and in practice on the legal aspects of procurement. The facts and details as stated below are based on the document I received, after tirelessly seeking from official sources. I stand corrected if any or all are not found not to have been accurate.

The wording found in italics, in parenthesis and in Times New Roman font below are all quotations from the “contract document”. For emphasis, I have highlighted some portions for the benefit of stressing a point.

My personal comment, views, reviews, deductions, contributions, conclusions and recommendations are in regular Calibri fonts.

At this point, I want to expatiate on the elements of contracting for the education of the public.

a. A contract is not the existence of a sheet of paper. Very often you hear people say, where is the contract? The sheet(s) of paper are the evidence of a contract. A contract is established if there is proof of an offer, an acceptance and consideration, which need not be adequate and should have passed.

b. A contract is usually between two parties, who must be adults (above 18yrs), who must have capacity to contract and this capacity must be demonstrated by 1. their business objects under incorporation laws and 2. in practice as to whether they have the competency and financial wherewithal to deliver the scope of works.

c. The scope of works and all the other terms agreed must not itself not be illegal, and all the promises, representation, data, information, proposals, content of email, letters, brochures etc. must be true, correct, factual, accurate and done without any preconceived intent to deceive, to defraud and to misguide. If that happens, the contract either becomes void ab initio (as seen as though it never existed) or becomes voidable (can be abrogated without liability).

I establishing these premises on the basis that there are aspects of this contract that suggests that this contract may not stand the test of a reasonable man and if the people ceased with power are minded to save Ghana, they will have the political will to revoke the contract.
PARTIES:

In well drafted contracts, the parties are described referring to the name of the legal entity, its registered office or domicile, its company registration number and its postal address. In this case, all these details are missing. One can argue a case of style but I know that when it comes to litigation and the service of suits, these are areas where a technical “knockout” may be dished out.

RECITALS:

In Clause B, service is described as a “first of its kind”. That is factually inaccurate since it is not the first globally, neither is it locally too. In February 2016, the Huffington Post carried a news report where the UN Population Fund & Bill and Melinda Gates sponsored a project in Ghana where drones were used to delivery contraceptives to women in remote areas in Ghana. This obviously is not known to many and it is surprising that the MoH will make such representations in a legal document as this, when this project couldn’t have been without their knowledge.

DEFINITIONS:

- “Activation Date” means, for a given Health Facility, the date on which Zipline has provided notice to MoH that the Zipline is prepared to make Delivery of Medical Products to such Health Facility, and MoH confirms such notice in writing as set forth in Section 5.1 (Phasing);
- “Demonstration Delivery” means a delivery that is a condition precedent to achievement of the Activation Date for a Health Facility, as set forth in Section 5.1 (Phasing);
  - Please read the two definitions together. From the definitions, if Zipline provides notice and MoH confirms the notice in writing but the demonstration is not successful, will that still qualify to be an activation date? I stand corrected but I believe the intent is to say that the date that both parties agree that a facility is ready to receive service from Zipline. This is because for each facility that is being brought under the programme, there is supposed to be a demonstration delivery and once that is successful that becomes the activation date.
- “Effective Date” means the date that this Agreement has been approved by Parliament;
- “Service Period” means the time period starting from the beginning of Phase 1 at Zipline’s first Distribution Center and ending on the date that is four (4) years after such date
- “Setup Phase” means the time period between execution of the Agreement and the beginning of Phase 1, during which period MoH shall have no obligation to pay Zipline the Service Fee.
- “Signature Date” means the date this Agreement is signed by the last of the Parties to sign the Agreement;

CLAUSE 3 – TERM

“The rights and obligations of the Parties under this Agreement shall run for a period (hereinafter called “the Term”) starting from the Effective Date and ending at the end of the Service Period.”

- This clause is inconsistent with the definitions given. Carefully read all four definitions above. There is no definition for execution as has been mentioned in the definition of Set Up Phase however it is common practice for the execution date to be the same as the Signature Date as has been defined above. If that is the case, then that date was earlier than the effective date when parliament
approved. Since we know that Parliament approved on Dec12, 2018, it is safe to say this is the start date for the term. But what will the end date be? The service period as defined suggests a four-year contract. Meaning that this contract should end on Dec 11, 2022. However, the defined service period names a start date which is tied to Phase 1. Phase 1 is supposed to be a time period after the effective date and a time period after the Set Up Phase as well. This means there is a conflict in the end date. This is a material clause of the agreement which is incoherent and going to be potentially a point of dispute if we want to consider termination.

**CLAUSE 4.4 DELIVERY TIME COMMITMENT.**

“Zipline shall ensure that Medical Products are delivered within:

a) an average of one (1) hour or less from the time of receipt for an Emergency Order received during Day Hours to the time of first Delivery responsive to such Emergency Order;

b) an average of two (2) hours or less from the time of receipt for an Emergency Order received during Night Hours to the time of first Delivery responsive to such Emergency Order; and

c) an average of four (4) hours or less of the time of receipt for all other Orders to the time of first Delivery responsive to that Order.”

- Delivery Response or first delivery response is not defined. Is this supposed to be the date the UAV takes flight? Is it supposed to be the time that the package is received at the Health Facility? If it is the later, it means the flight time is inclusive of the time commitment but if it is the former then it is the time commitment plus the flight time. Typically, in service contracts like this, the clock starts ticking from the time the Order is received at the distribution centre.

- This clarity is needed because usually where performance measures are being monitored and there are liquidated damages or penalties for non-performance, this parameter will be critical. Instructively, the contract did not make provision for any penalties for this performance commitments. It presupposes that this can be violated without any effect to Zipline.

**CLAUSE 4.8 - INSURANCE.**

“Zipline shall obtain and maintain reasonable insurance policies and, upon the request of the MoH, provide certificates evidencing that such insurance policies are in effect.”

- I find it intriguing that the state is not able to state the type of insurance and the minimum sum assured. This leaves Zipline to take any paltry or cheap policy and display it as a matter of course. What if product is contaminated in their care and its use exposes a patient to significant injury or death. Is there insurance cover for compensation? What if the drone drops from the sky and injures a person or persons or leads to a loss of property? Professional Indemnity, Comprehensive Motor/Equipment Insurance, Property Insurance for DC, Workmen’s Compensation for workers etc. are all policies that should be made mandatory with a minimum cover limit.

**CLAUSE 4.11 - PARLIAMENTARY APPROVAL.**

“MoH shall use its best efforts to obtain approval of this Agreement by the Parliament of Ghana in accordance with the 1992 Constitution of Ghana as soon as reasonably practicable after the execution of this Agreement, with a goal of obtaining approval by 31st October, 2018.”
• This approval was secured on 12/12/2018 with much protestation from the minority in Parliament. Therefore, the deadline set by the parties had lapsed. You would note further down, that this lapsing has material effects on the contract.

CLAUSE 4.12 - AGREEMENT CONDITIONAL ON PARLIAMENTARY APPROVAL.

“Notwithstanding any provision herein to the contrary, this Agreement shall not take effect until Parliamentary approval.”

• This clause is proof that the signature date precedes the effective date. Without the signatures in place, the contract could not be presented to parliament for ratification.

• This is proof that until Parliamentary ratification, there is no agreement so there could not be a set up period before this time. This confirms that the effective start date is Dec 12, 2018 and therefore the end date should be Dec 11, 2022. That clarity must be brought to be in an addendum to the agreement. This is dispute waiting to happen.

CLAUSE 4.13 - OTHER GOVERNMENT APPROVALS.

“Zipline’s obligations are conditional on the receipt of other Governmental Approvals described in Sections 4.10 and 4.11 (Government Approvals; Parliamentary Approval). Zipline shall have no obligation to make any Delivery for which it has not received a required Government Approval. The Parties acknowledge and agree that Zipline cannot guarantee the pricing set forth in this agreement or the availability of Zipline equipment if Parliamentary approval or other Government Approvals are not obtained by 31st October, 2018. Accordingly, in the event that (i) Parliamentary approval is not received by such date or (ii) other Government Approvals necessary for the installation of the RPAS and provision of the Service are not received within six (6) months of the Effective Date, Zipline shall have the option, exercisable in its sole and absolute discretion, to terminate this Agreement, and in the event of such termination, neither Party shall have any further obligations or liabilities to each other, except as set forth in Section 14.11, or as mutually agreed by the Parties in a new agreement setting forth an increased Service Fee for the provision of the Services.”

• This where one of the biggest risks lie. Zipline’s pricing ceased to be valid after 31/10/2018. This pricing is what parliament approved. As of today, it lies in Zipline’s bosom to decide that they will keep the pricing or increase it. Don’t forget that according to the PPA, their pricing was already high.

• The variation clause (in bold) fails to say that any such variation is subject to parliamentary approval. It means the parties could potentially agree to a rate increase without any scrutiny.

CLAUSE 4.14 - REGIONAL TRAINING CENTER.

“Zipline shall establish a regional training center in Ghana for the training of Zipline employees who will work at Distribution Centers operated by Zipline or its Affiliates in other countries in West Africa.”

• The DG of Ghana Health Service and H.E. the President at different media encounters were clear that 200 Ghanaians would be employed. There is no provision made in the contract that obliges Zipline to employ X% or 200 Ghanaians. As is always the case, we’d end up with all the management positions and even the mundane roles being filled by expatriates like most of the Chinese and Indian businesses.
CLAUSE 6.1 - SERVICE FEE.

“On the commencement of Phase 1 as set forth in Section 5.1(b), MoH shall, for every month of the Term until the end of the Term, pay the Service Fee to Zipline as set forth in the Agreement. The Service Fee shall be calculated as follows:

a) For each month of the Term, the “Monthly Base Service Fee” shall be the sum of the Monthly Base Service Fee set forth in Schedule 2 for each Distribution Center, given (i) the Phase each such Distribution Center has achieved at the beginning of such month and (ii) whether each such Distribution Center offers Deliveries during Night Hours as set forth in Section 5.5 (Deliveries during Night Hours). For the avoidance of doubt, the Monthly Base Service Fee for any Distribution Center that remains in the Setup Phase shall be USD0.00, and any test deliveries agreed to by Zipline and MoH during such Setup Phase will be made by Zipline free of charge; or

b) The “Monthly Adjusted Service Fee” shall be equal to the Monthly Base Service Fee plus the Import Duty Service Fee Adjustment. The “Import Duty Service Fee Adjustment” shall be calculated as: the actual amount of import duties and taxes paid by Zipline to the Government of Ghana as a condition precedent to the import into Ghana of equipment required by Zipline for the performance of Zipline’s obligations under this Agreement, and documented by Zipline to MoH (or if actual amounts are not known prior to Zipline’s initiation of Phase 1 at the first Distribution Center, the estimated amount as documented by Zipline to MoH’s reasonable satisfaction), divided by forty-eight (48), which is number of months during which Zipline will be paid for Service under this Agreement. For the avoidance of doubt, if the MoH obtains exemptions for the import of Zipline equipment from applicable import duties and taxes, the Monthly Adjusted Service Fee shall be equal to the Monthly Base Service Fee; or

c) The “Monthly Gross Service Fee” shall be equal to the Monthly Adjusted Service Fee plus applicable VAT. For the avoidance of doubt, if the MoH obtains exemptions for Zipline’s Service from VAT only, but not exemptions for the import of Zipline equipment from applicable import duties and taxes, then the Monthly Gross Service Fee shall be equal to the Monthly Adjusted Service Fee”.

• While addressing the public, The DG of Ghana Health Service again averred that this is a unit rates contract, at a rate of $17.00 per delivery. The wording of this clause doesn’t in anyway suggest that assertion. It makes in clear and unambiguous terms that there’s a fix monthly base fee. This means whether the drones operate or not, the taxpayer will pay for the services.

• As if that not enough, the contract is structured for Zipline not to pay any import duties, taxes and VAT. In the event that MoH is unable to procure a tax exemption for them, there is an adjusted fee mechanism which allows Zipline to claim back any and all taxes paid spread over the term of the agreement.

• The bad news is that these waiver was granted with the Parliamentary ratification.

CLAUSE 6.2 - ON-TIME PAYMENT DISCOUNT.

“Provided that MoH paid the previous month’s Service Fee by the deadline set forth in Section 6.5 (Invoices), the On-Time Payment Discount set forth in Schedule 2 shall be deducted from the Monthly Service Fee.”
There is an $11,000.00 on time payment discount provided for in schedules. On the face of it seems ok. BUT?

On the face of it, it looks like an early payment incentive but it is not. An early payment discount encourages you to pay before time in exchange for the discount amount.

This is payment on time, when it is due. It assumes that payment will be delayed anyway. Technically what it is indicative of is that the pricing has been frontloaded with a late payment penalty.

Despite this provision, there is a 20% late payment provided for already in the agreement.

This means the state will suffer a double jeopardy. More below.

CLAUSE 6.3 - NATURE AND INTENT OF SERVICE FEE.

“The Service Fee is a fixed monthly amount, not a Per Delivery fee. In exchange for the Service Fee, Health Facilities receive unlimited access (up to the Available Capacity limitation) to Delivery of any Medical Product within the Delivery Time Commitment set forth above. Accordingly, the Monthly Service Fee shall be paid to Zipline irrespective of whether the MoH fully utilizes the Available Capacity in any given month.”

BINGO!!!! That is contrary to what the DG of Ghana Health Service will have all Ghanaians believe that if we don’t use the service we will not pay anything. That is a lie!! In black and white in the agreement is stated for the avoidance of doubt. Again the $17.00 that was quoted is factually inaccurate, it is nowhere in the agreement.

CLAUSE 6.4 - Currency.

“This is in contravention of the Exchange Control Act. Fly Zipline Ghana Limited is a locally registered company domiciled in Ghana and as such should be pricing in USD. This should not have been approved by Parliament. Our Parliament have breach the constitution by failing to uphold our laws.

If the same rates were converted at current rate and locked in at today’s prevailing, it would save Ghana foreign exchanges losses on this contract. As it stands now, even if MoH agrees to pay in GHS at the prevailing rate at the time of payment, Zipline will be making significant exchange rate gains and a windfall for no extra work done. Ghanaian’s must not allow this to happen. The people paid with the tax payers money are letting Ghanaians down!

CLAUSE 6.5 INVOICES.

“By the first week of each month, Zipline shall issue to the MoH an invoice for the Monthly Service Fee for such month, which the MoH shall pay not later than the fifteenth day of the next month.”

a) It beats my mind that such a lax term was agreed. This actually allows Zipline to invoice in advance. They can invoice in the first week of the current month, even before the services have been delivered. Question, if they are supposed to invoice based on the number of deliveries, how will they be able to tell what volume to invoice? This is a calculated attempt to defraud Ghanaians. It means each Distribution Centre has a budget volume of 150 deliveries a day. **So we will be paying for 600 deliveries a day, whether or not deliveries are made. As stated in 6.3 above, this is the available capacity which will be paid for, whether it is used or not.**
b) **Ordinarily, payment terms are 30days NET in Arrears.** Meaning the supplier must complete the services before invoicing. Typically, the 30days starts counting from the date that the invoice was received, not the date the supplier issued the invoice. **This ensures the buyer will get adequate time to plan his cash flow to meet his liabilities.** I am at a loss as to how the state is in a hurry to pay for services not rendered. Is there something Ghanaians should worry about?

c) **Contrary to what the President and the Vice President will have us believe that this will not be funded from state resources and that private companies will fund it as their CSR, here’s my responses.**

   (i) This is a legal relationship between Zipline and MoH. The invoices will be made to The Order of MoH. How is a private entity going to pay for an invoice that is not in its own name or being its own liability? International Accounting Standards (IFRS) which Ghana is signed to does not allow such creative accounting. Any CFO who pays such an invoice will either lose his job or potentially will lose his practice license.

   (ii) Even if private companies were able to creatively find a way to account for and pay for this cost, it will be an expense item which will eventually impact their EBITDA. The next effect is that their **TAX payments to the state would have been reduced.** Ghana would have paid for it indirectly through loss of tax revenue. GRA’s Large Tax Payers Unit will not meet its collection targets. **That, Mr. President, is tax payers indirectly paying for the service!**

   (iii) Assuming the likes of GNPC, Ghana Gas and other SOEs are coerced to fund it as sponsorships, **those enterprises are owned by the state therefore it is still tax payers’ money that will fund it.**

   (iv) Assuming Private Corporate Ghana is coerced to sponsor it, **they will have to pay into a Government of Ghana kitty. That immediately makes is public funds.** This is because there is no legal basis to ring-fence such funds so it cannot be referred to as anything other than state funds.

   It is insulting to the intelligence of Ghanaians to say that the burden will not be on the taxpayer. Sorry, It will! Is there something we should be worried about?

**CLAUSE 6.6 - INTEREST ON LATE PAYMENTS.**

“**MoH will pay annualized interest at the lower of: (i) twenty percent (20%) and (ii) the maximum amount allowed by law on any overdue amount, compounding monthly beginning the day after the final day of the Payment Period of an invoice if MoH has failed to pay the relevant invoice in full within the Payment Period.”**

- This clause says we will pay a late payment interest at a rate of 20% per annum which is usually on a pro-rata basis. OR the maximum interest charge allowed by law. For your information, **In Ghana we do not have a late payment law which specifies a rate so Ghana has to pay a late payment interest of 20%.** I can promise you we will pay every day because we will default every single month, trust me. I can prophesy!!!

- That is not the only problem. Why the hell did MoH agree to a 20% figure when inflation rate is lower, when prime rate is lower and treasury bill rate is lower. Usually, the rate is pegged at the prevailing interest rate because it is assumed that if you had paid on time and it was invested it would have a yield, OR if the supplier was working with a loan, he’d have to pay for the default on the interest
payments. **It would be cheaper for the MoH to go to the Bank of Ghana to borrow to pay Zipline at a lower rate, than to agree to pay 20%.**

- That is also not the only problem. Prevailing 2018 annualized LIBOR rate is 3.02% on USD transactions. This is a USD priced transaction. If anything at all, the penalty is supposed to be LIBOR plus 2% max. **This means on a dollarized transaction, we should not pay more than 5% interest on a pro-rata basis so I ask again, were the financial gurus sleeping on the job? How the hell did they make three significant blunders on this contract in penalties only?**

**CLAUSE 7.2 - LEASES FOR DISTRIBUTION CENTER SITES.**

“The Distribution Center Sites shall be located in the vicinity of the locations identified in Schedule 1, or at such other locations as may be agreed on by the Parties. The Distribution Center Sites may be located either (i) on land leased or purchased by Zipline from private parties or (ii) on land leased or purchased by Zipline from the Government of Ghana. If Zipline elects to lease one or more Distribution Center Sites from private party, MoH shall, for each such Distribution Center, reasonably assist Zipline to acquire such lease(s). If Zipline elects to request land for one or more Distribution Center Sites from the Government of Ghana, MoH shall use reasonable efforts to lease to Zipline land for a Distribution Center Site that is: (i) in the general vicinity of the Distribution Center’s location as designated in Schedule 1 (Distribution Center Sites); and (ii) meet Zipline’s requirements, in Zipline’s sole and absolute discretion, for its Distribution Center Sites, including availability of electricity and other utilities at reasonable cost, clear launch and recovery flights paths, proximity to reasonable housing accommodations for local employees, and proximity to good road access for re-stocking of Medical Products. If so requested by Zipline, MoH and Zipline shall collaborate and MOH shall facilitate the execution of leases and all other documents required (if any) to convey to Zipline exclusive rights to each Distribution Center site for at least the period necessary for Zipline to discharge its obligations under this Agreement and, such documents shall contain reasonable and customary provisions mutually acceptable to the Parties”.

- Is it really necessary to build the Distribution Centers (DC)? These are going to be parallel cold chain management systems. The cost of such is not for free. What is the estimate cost? What is the depreciation period? Any item with a depreciation exceeding 4 years means Ghana has lost value. The cost would have been built into the pricing to recover all investment in the first term to minimize any risks. In the DHL and Scoop Aero as well as the Bill Gates Foundation pilots in Tanzania, Vanuatu and Ghana, no DCs were built.
- If the MoH and the PPA had taken time to do the supply market analysis, they would have known that there are other technologies that could deliver without these cost laden structures. We could have used existing infrastructure.

**CLAUSE 7.4 - EXEMPTIONS FROM CERTAIN TAXES AND DUTIES.**

“MoH shall obtain exemptions from applicable taxes and duties for the import of all Zipline equipment to be used for the provision of the Services (or “zero-rating” of the value of such equipment), or, in the alternative, pay the Import Duty Service Fee Adjustment as set forth in Section 6.1 (Service Fee). MoH shall obtain exemptions from all VAT applicable to Zipline’s performance of its obligations under this Agreement, or, in the alternative, pay VAT to Zipline as set forth in Section 6.1 (Service Fee)”.

- This clause is testament of the fact that Zipline is not supposed to pay taxes. **The obligation is on the state to procure the exemptions failing which it will be recovered in the mechanism outline under clause 6.**
• The intention was there from the word go that Zipline will not be paying taxes. This is grossly unfair to local and indigenous firms, it is anti-competition and discriminatory that foreign companies are always allowed preferential terms which are not extended to local firms.

CLAUSE 7.5 - DATA.

“MoH shall provide Zipline access to and copies of all relevant data owned or controlled by the MoH regarding public health supply chains of the Medical Products list, including but not limited to data extracts from the MoH’s systems regarding the source, quantity, type, price, destination, and use of the Medical Products in Ghana.”

• Please do not read this clause in isolation. Read it together with 9.2 License to Data. While Zipline could register to with the Data Protection Authority, there is a breach of Ghana Data Protection Laws. I will outline that subsequently.

CLAUSE 8.3 - ZIPLINE REPORTING.

“Zipline shall report to the MoH in a timely manner any condition that is likely to prevent Zipline from successfully fulfilling Orders (technical downtime, weather, or any other condition).”

• For the avoidance of doubt, usually such contracts will have the list of required reports, their reporting formats, and sample formats as schedules at attached to the contract. This
• Save force majeure conditions, any failure to meet the delivery time commitments should result in liquidated damages being charged. Conspicuously missing from this service agreement are the services standards and their associated penalties for non-performance.

CLAUSE 9.2 - LICENSE TO DATA.

“The MoH hereby grants to Zipline a non-exclusive, royalty-free, perpetual, transferable, sublicense-able worldwide license to data provided by the MoH to Zipline pursuant to Section 7.5 (Data), and authorizes Zipline’s use of operational, geographical, or medical supply data collected by Zipline from other sources in the course of its operations in Ghana, subject to the applicable Laws of Ghana.”

• This again is another provision we have committed Ghana to in this agreement. We have practically committed to giving a carte blanche to Zipline on the use of the data, irrespective of the nature of data, that they receive. THIS IS A CLEAR VIOLATION AND BREACH OF OUR DATA PROTECTION LAWS. Allowing them royalty-free rights means we cannot even make money off the data if they start to sell the data. DUMB!!! The rights are granted PERPETUALLY, FOREVER!!! The rights are transferable and can be sub-licensed globally. DOES THE DG OF GHANA HEALTH SERVICE AND THE MINISTRY OF HEALTH UNDERSTAND THE VALUE OF OUR HEALTH DATA TO THE GLOBAL PHARMACEUTICAL COMMUNITY? IF I’D BE BLUNT, THAT RATHER DAFT!!!!

CLAUSE 10.1 - MOH REPRESENTATIONS AND WARRANTIES.

“MoH hereby represents and warrants that:

a) it has the right, power and authority to enter into this Agreement and to perform all its obligations hereunder on behalf of the Government of Ghana;
b) the execution, delivery and performance of this Agreement by MoH has been duly authorized by all necessary competent authorities pursuant to the applicable Laws of Ghana and this Agreement constitutes valid, binding and enforceable obligations of MoH;

c) there are no outstanding judgments against MoH in relation to the Service, the Distribution Center Sites, and, to the best knowledge of MoH, no action, claim, suit or proceeding is pending or threatened against the MoH before any court, or competent authority that could reasonably be expected to materially adversely affect the ability of the Parties to perform their obligations under this Agreement;

d) no Law of Ghana, contract or agreement is violated by the execution and delivery of this Agreement by MoH or the performance or satisfaction of any term or condition herein contemplated upon its part to be performed or satisfied;

e) there are no MoH regulations which would render a responsibility or obligation of Zipline under this Agreement, impossible or illegal under the Laws of Ghana; and

f) Relevant approval has been obtained from the Public Procurement Authority before the execution of this Agreement and the Agreement will be subjected to parliamentary approval.

- As at the execution of the agreement, MoH was in breach of this warranty because it had not secured the due authorization from Parliament but this breach is now cured.

- As of today, MoH is in breach of its own warranties as per 10.1.d since it is in violation of the Exchange Control Act and the Data Protection Act.

CLAUSE 12.3 - LIMITATIONS OF LIABILITY.

"Except as expressly set forth in Section 12.1 (Mutual General Indemnity Against Claims Arising from Breach) and Section 12.2 (MoH Indemnity Against Medical Product Claims), under no circumstances shall either Party be liable (whether in contract, tort, or otherwise) for any incidental, or special or consequential damages, arising out of or relating to Delivery or non-Delivery of Medical Products. In no event shall Zipline’s total liability under this Agreement exceed the total amount paid to Zipline by the MoH for the Term of the Agreement. Except for the MoH’s liabilities and responsibilities under Section 12.2 (MoH Indemnity Against Medical Product Claims), which shall not be limited, the MoH’s total liability shall not exceed the total amount paid and or due to Zipline by the MoH for the term of this Agreement. The parties have agreed that the limitations specified in this section will survive and apply even if any limited remedy specified in this Agreement is found to have failed the Agreement’s essential purpose ".

- While this is a pretty standard clause; it must be noted that liability resulting from the loss of life cannot be limited.

- The part of the clause which is bold is out of place and makes no sense.

CLAUSE 13.3 - EFFECT OF FORCE MAJEURE

"(c) if a Force Majeure Event has occurred and is continuing, either Party may terminate this Agreement upon sixty (60) days’ written notice if such Force Majeure Event prevents either Party from performing its obligations under this Agreement for a period of three hundred and sixty-five (365) consecutive days."

- Waiting for 12 months to call a force majeure by giving another 2-month notice means losing 14 months of service. Can the need wait? Can another service provider offer the services under the same conditions? If YES, then waiting 14 months makes no sense. Maximum should be 180 day FM period. Normally 90 days is enough time to call a FM.
**CLAUSE 14.4 - CURE PERIOD.**

“Following the delivery of an Event of Default Notice, the Parties shall consult for a period of up to thirty (30) days (or such longer period as the Parties may mutually agree in writing) (the “Cure Period”), as to what steps shall be taken with a view to mitigating the consequences of the Event of Default, taking into account all the circumstances. During the period following the Event of Default Notice, the Party in default may continue to undertake efforts to cure the default, and if the default is cured at any time prior to the delivery of a Termination Notice (as defined in Section 14.5 (Termination)), then the Party in default shall immediately resume its obligations under this Agreement and the non-defaulting Party shall have no right to terminate this Agreement in respect of such cured default.”

- Carefully peruse 14.4. whiles as 30day cure period has been clearly spelt out and the party in breach is supposed to get on with curing the breach, the wording is couched in a manner that makes it flexible for the cure period to extend for as long as the other party has not served a Termination notice, such termination which should take immediate effect.

**CLAUSE 14.5 - TERMINATION.**

“Upon expiration of the Cure Period, if the Event of Default has not been cured and the Parties have not agreed in writing to extend the Cure Period, the Party that gave the Event of Default Notice may terminate this Agreement by delivery of a written notice of termination (a “Termination Notice”) to the other Party. This Agreement shall terminate, subject to Section 14.6, and each Party shall cease to have any right or be subject to any obligation pursuant to this Agreement immediately upon the date specified for its termination in any Termination Notice.”

- The contract can be terminated “FOR CAUSE” only. It means, can be terminated before the 4-year term only when a party in breach has been unable to cure the breach. It failed to make provision for Termination for Convenience. This means as I write this, irrespective of the many errors, breaches, risks and failures, the state is not in a position to set the contract aside without incurring liabilities. We are sold out!

**SCHEDULE 1 – DISTRIBUTION CENTER SITES**

Schedule one provides a map of Ghana with a zoning of the proposed 4 distribution centres with estimated population data and estimated number of health facilities within each zone. It fails to list the specific facilities that fall under these centres.

- Usually in contracts of this kind, specify the scope, in terms of volume, is a material term and must be clearly spelt out and included in the contract prior to execution and coming into force. This is symptomatic of a lack of detailed preparation and a definite scope.

- Bearing in mind the fact that the UAVs have capabilities not exceeding 80km radius, certainly the three northern regions where population and by inference health facilities are significantly sparsely distributed would be under served. The question that begs is that, “would the regional hospitals which already have or are supposed to have cold chain facilities not have better served as distribution centers”? 
# SCHEDULE 2 - SERVICE PHASING AND ON-TIME PAYMENT DISCOUNT

<table>
<thead>
<tr>
<th>Phase per Distribution Center</th>
<th>Conditions Precedent to Incremental Initiation of Phase at Each Distribution Center</th>
<th>Monthly Base Service Fee (USD/Distribution Center/Month)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Setup</td>
<td>Zipline receives all regulatory approvals needed to operate in Ghana</td>
<td>USD0.00</td>
</tr>
<tr>
<td>Phase 1</td>
<td>Zipline provides notice in writing that it has completed installation of a Distribution Center and at least one of the following conditions has been met: (i) the Activation Date has been achieved for at least 5% of public Health Facilities within Service Range and selected for Delivery by MoH; or (ii) during the immediately preceding 30 days, Zipline has made an average of at least 15 Deliveries per day.</td>
<td>If no deliveries available during night hours: USD10,000.00</td>
</tr>
<tr>
<td></td>
<td></td>
<td>If deliveries available during night hours: USD11,000.00</td>
</tr>
<tr>
<td>Phase 2</td>
<td>Zipline provides notice in writing that it has completed installation of a Distribution Center and at least one of the following conditions has been met: (i) the Activation Date has been achieved for at least 25% of public Health Facilities within Service Range and selected for Delivery by MoH; or (ii) during the immediately preceding 30 days, Zipline has made an average of at least 50 Deliveries per day.</td>
<td>If no deliveries available during night hours: USD25,000.00</td>
</tr>
<tr>
<td></td>
<td></td>
<td>If deliveries available during night hours: USD27,000.00</td>
</tr>
<tr>
<td>Phase 3</td>
<td>Zipline provides notice in writing that it has completed installation of a Distribution Center and at least one of the following conditions has been met: (i) the Activation Date has been achieved for at least 50% of public Health Facilities within Service Range and selected for Delivery by MoH; or (ii) during the immediately preceding 30 days, Zipline has made an average of at least 75 Deliveries per day.</td>
<td>If no deliveries available during night hours: USD55,000.00</td>
</tr>
<tr>
<td></td>
<td></td>
<td>If deliveries available during night hours: USD59,000.00</td>
</tr>
<tr>
<td>Full Operations</td>
<td>Zipline provides notice in writing that it has completed installation of a Distribution Center and at least one of the following conditions has been met: (i) the Activation Date has been achieved for at least 75% of public Health Facilities within Service Range and selected for Delivery by MoH; or (ii) during the immediately preceding 30 days, Zipline has made an average of at least 100 Deliveries per day.</td>
<td>If no deliveries available during night hours: USD80,000.00</td>
</tr>
<tr>
<td></td>
<td></td>
<td>If deliveries available during night hours: USD88,000.00</td>
</tr>
</tbody>
</table>

**On-Time Payment Discount**

USD11,000.00
Comments on Schedule 2:

1. Reviewing the conditions precedent, it is shocking how low the bar has been set for the triggers for payment.
   1. Phase 1 – achievement of “Activation Date” of only 5% of health facilities;
   2. Phase 2 – achievement of “Activation Date” of only 25% of health facilities;
   3. Phase 3 – achievement of “Activation Date” of only 50% of health facilities;
   4. At Full Operation – achievement of “Activation Date” of only 75% of health facilities;

   • Typically, in service agreements, and in technology agreements in particular, at full operations, “uptime” or service levels has a margin of error of less than 1% therefore it is surprising that in this agreement a whopping 25% is allowed. This means that at full operation when we are paying the full cost per DC per month, 25% of Health Facilities will not be ready to receive services because they wouldn’t have achieved “Activation Date”.

   • The service levels should not be lower that the below if we want to optimize out spend and get value for money under a fixed rate contract model:
     o Phase 1 – achievement of “Activation Date” of only 80% of health facilities;
     o Phase 2 – achievement of “Activation Date” of only 90% of health facilities;
     o Phase 3 – achievement of “Activation Date” of only 95% of health facilities;
     o At Full Operation – achievement of “Activation Date” of only 99% of health facilities;

2. While the Director General of Ghana Health Service would have all Ghanaians to believe that this is a unit rate contract at a rate of $17.00 per delivery, Schedule confirms that this is not the case. The table below breaks down the lump sum payments to a cost per delivery:

<table>
<thead>
<tr>
<th>Monthly Payout</th>
<th>Del/Day</th>
<th>Del per Month</th>
<th>Cost per Delivery</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>15</td>
<td>450</td>
<td>-</td>
</tr>
<tr>
<td>11000</td>
<td>15</td>
<td>450</td>
<td>24.44</td>
</tr>
<tr>
<td>27000</td>
<td>50</td>
<td>1500</td>
<td>18.00</td>
</tr>
<tr>
<td>59000</td>
<td>75</td>
<td>2250</td>
<td>26.22</td>
</tr>
<tr>
<td>88000</td>
<td>100</td>
<td>3000</td>
<td>29.33</td>
</tr>
</tbody>
</table>

This table explains the pricing model per the contract.

   o Phase 1 – achievement at least 15 deliveries daily and get paid $11,000.00. This translates to 450 deliveries per month which means we will pay $24.44 per delivery;
   o Phase 2 – achievement at least 50 deliveries daily and get paid $27,000.00. This translates to 1500 deliveries per month which means we will pay $18.00 per delivery;
   o Phase 3 – achievement at least 75 deliveries daily and get paid $59,000.00. This translates to 2,250 deliveries per month which means we will pay $26.22 per delivery;
   o At Full Operation – achievement at least 100 deliveries daily and get paid $88,000.00. This translates to 3,000 deliveries per month which means we will pay $29.33 per delivery;
Note that, to qualify for invoicing, Zipline has meet this volume target or that activation date target. Either way, both are very low targets to meet as such Ghana will pay. In fact, per clause 6.3 above, we would pay for the service whether we use the service or not.

This pricing table defies all logic and the principles of economics. Economics principles explain that as successive units are consumed, marginal cost reduces which presupposes that the unit price on this table should be reduced from $18.00 after Phase 2 but surprisingly, the cost rather the unit rate shoots up. The figures are not where near Dr. Nsiah Asare’s $17.00. Where did this figure come from then?

3. There is a supposed $11,000.00 on time payment which is supposed to be an early payment incentive clause. Typically, incentive clauses are used to reinforce a certain behaviour. An early payment clause will seek to encourage the buyer to pay earlier than the due date in exchange for the discount. This clause is not saying pay earlier but pay when its due. What this means is that at full operation, the real cost is supposed to be $77,000.00, if government pays when due.

This is a double/triple-whammy clause. Ghana is being subjected to a double/triple jeopardy. This is so because, government has a bad reputation of being late payer and as such the late payment costs (liquidated damage) has been added to the cost. This $77,000 + $11,000 will then be subjected to a 20% per annum interest, which should actually be not more than LIBOR +2 (5%).

I am wondering what we were thinking when we accepted such horrible terms!!

SCHEDULE 3 – RPAS SPECIFICATION

I like to make the following remarks:

DISTRIBUTION CENTRE -

• What is the full cost of the DC?
• What is the Full Depreciation Period of this Infrastructure?
• What Proportion of this Cost has been apportioned in the price build up?
• Did we receive a Bill of Quantities for this build?

OPERATIONS MANAGEMENT –

“The Zip UAV is provided with a complete electronic flight plan prior to launch, via a Wi-Fi connection or via a memory card. The flight plan describes flight corridors that the Zip UAV will fly to reach one of a list of predetermined delivery sites, and to return. Each flight corridor is defined as a region of airspace. The flight computer of the Zip UAV is configured to only fly within the flight corridors described in the flight plan. The Zip UAV cannot be manually directed to go to a destination that is not in the list of predetermined delivery sites.”

• For a very technical operation as this, MoH failed to secure a commitment to a Business Continuity Plan, a Disaster Management/Contingency Management/Disaster Recovery Plan, A Health, Safety, Security and Environmental Management Plan. These are necessary to ensure that “UP TIME” can be maintained at 99% per service level standards.
This is one of the weaknesses of the Zipline operation, which is why I believe they are yet to be operational in the USA. This means the UAV will not be able to avoid anything object or bird in its pre-set flight path. Since it will fly either at an altitude (troposphere) where birds fly or light aircrafts fly, how do we deal with mid-air clashes?

**COMMUNICATIONS –**

“The Zip UAV has three modes of communication:

- **Line-of-Sight Radio:** the FreeWave GXM-T14.
- **3G Cellular Radio:** Multi-Tech Systems MTSMC-H5-SP.
- **WiFi:** Microchip Technology ATWINC1510-MR210PB.

The Line-of-Sight Radio provides a robust, low latency, and long-range link from Nest to Zip UAV and between Zip UAVs. The Line-of-Sight Radio provides a direct communication link with approximately 32 KM range when there is clear line-of-sight between parties.

The 3G Cellular Radio provides a link to the Zip UAV wherever there is cellular service available through third parties. Both the Line-of-Sight Radio and Cellular Radio can be used to send commands to the Zip UAV and to receive status updates from the Zip UAV. WiFi is used when the aircraft is at the Distribution Center. In some circumstances, where cellular service is not available, the Zip UAV may be equipped with a modem that can receive Internet service through a satellite (such as the Iridium 9603).”

- What are the IT Security precautions in this case? Can a saboteur hack into and divert the cause of the UAV? -What firewalls are in place?
- 32km communications link requires a clear line of sight, meaning any intrusion can cut communication.
- Even though the ZIP 2 is pitched as having an 80km travel capability, if its communication capability is only 32k it means it can’t do more than 32 km.
- What happens when there is a loss of connectivity from either a switch between Cell Sites, a flight into black hole areas, or a switch between Cell site and Satellite?
- Most of these targeted remote locations do not have 3G coverage.

**CONCLUSIONS & RECOMMENDATIONS**

- Act 663 and its amendment 914 have become a mundane process guide which do not compel, oblige and direct its practitioners and regulators to
  
  a. apply strategic thinking in sourcing decisions. Decisions are all task and transaction oriented.
  
  b. set strict and enforceable performance targets like deliver any savings. There must be a savings target annually and the definition of what constitutes savings and what constitutes cost avoidance, as is universally and professionally known must be embedded, like it pertains in the UK.
  
  c. apply digitally available tools. Today there are reverse auctions, eSourcing, artificial intelligence and other data driven decision sources.

- Act 663 and its amendment is a convenient alibi that the political class and their cohorts in the chain use to legitimize graft, perpetuate nepotism and bleed the nation of its scarce resources.
✓ This contract, as is has not demonstrated the value for money the letter and spirit of Act 663 and its amendment 914 envisioned for the country.

✓ The capacity and competencies of some of the practitioners and managers of the process are questionable and doubtful giving the myriad of errors of professional judgement ranging from legal, accounting, finance and procurement.

✓ This contract has portions which are in violation of the country’s laws and as such cannot be continued.

✓ This contract lacks the rigour and due diligence that should accompany contracts of this nature. I recommend that it must therefore be reviewed.