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PACKAGING IN WEST AFRICA RESOURCE GUIDE

Overview

West Africa Trade Hub Technical Report

December 2007

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PACKAGING IN WEST AFRICA RESOURCE GUIDE

Overview

West Africa Trade Hub - Technical Report

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1. Why this Guide?

Most small and medium-sized African businesses have difficulty sourcing affordable quality packaging for their products. Few packaging suppliers exist within the region and even fewer have the ability to create packaging that meets international standards and satisfies consumer preferences. Many African producers therefore turn to Europe and North America for packaging supplies, which significantly increases operating costs. In spite of the lack of quality packaging supplies in West Africa compared to Europe and North America, some sources do exist within the region; it is simply a matter of identifying them.

It is in this context that the West Africa Trade Hub developed this resource guide for packaging in West Africa. The guide's main objective is to offer practical suggestions on packaging and help food industry operators access information about packaging that will support the growth of their businesses. A case study is included that applies these suggestions and demonstrates the utility of this guide.

The guide begins with an overview of the demand for packaging in West Africa and reviews different types of packaging, examining their relative advantages and disadvantages. The guide highlights the importance of good packaging, which can significantly influence sales of the finished product. High quality packaging is defined not only by its visual appearance, but also by the choice of words and graphics on labels as well as its compliance with local and international standards for marketing the product on store shelves. Finally, the guide offers a list of firms in the region that manufacture cardboard and plastic packaging. Manufacturer information details are presented for each country.

2. West Africa: Growth Potential of Packaging Sector

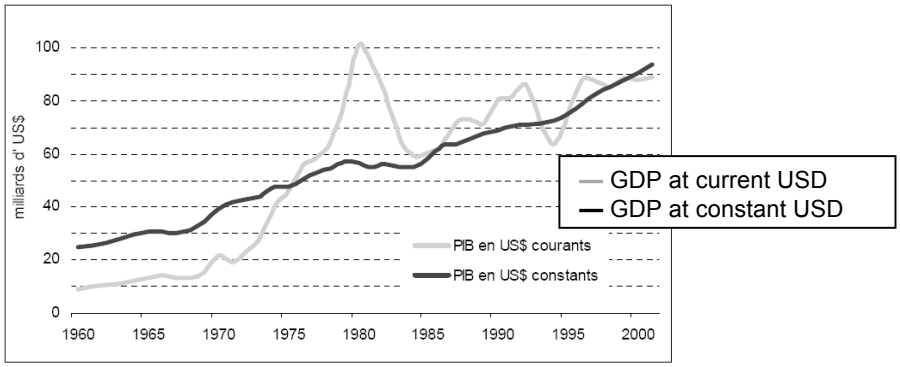
2.1 A region of economic growth

The West Africa region consists of 21 countries covering an area of 7.8 million km². It is comprised of the member countries of ECOWAS (the Economic Community of West African States) plus Mauritania, Chad, Cameroon, Gabon, and Sao Tome and Principe. In 2004, the region had nearly 290 million inhabitants, half of whom were Nigerians.

Figure 1. Map of West Africa.

West Africa has experienced overwhelming changes in the last 20 years. The region has considerable capacity for adaptation and progress and has undergone significant social, economic, institutional, and political changes.

PIB régional entre 1960 et 2001



Source : WDI 2003, Banque Mondiale

Figure 2. West Africa region gross domestic product (GDP), 1960–2001 (in billions USD).

The economic growth of the last 40 years is likely to continue. Demographic growth, structuring of the markets, and investments in the manufacturing sector will be the engines of this economic growth.

2.2 Development of packaging demand in West Africa

The packaging industry is an important market for West Africa. This industry has developed in the subregion largely as a response to growth in the farming and food industries. Nigeria—Africa's demographic and economic heavyweight—is the number one packaging market in the subregion.

Initially, the food packaging industry developed primarily to collect, handle, and transport farm produce. Then, glass and metal packaging appeared to satisfy a growing demand for packaging food industry products: beer, soft drinks, mineral waters, dairy products, flour products, etc. Currently, the industrial supply of packaging is diverse. The principal types of containers marketed in the subregion are made from various materials: cardboard, metal, glass, plastic, natural fiber, etc.

Cardboard packaging has always been valued for its price, appearance, and convenience. However, in recent years, the use of plastic packaging has increased. Various plastics now constitute the majority of the packaging supply because of their advantages relative to other types of packaging:

- **Relatively inexpensive**
- **Less intensive industrial investment**
- **Flexible and adaptable materials in numerous sizes, colors, and textures**

Plastic has become the "king" of packaging and is gradually taking the place of glass and metal. Keen interest in plastic has encouraged manufacturers to invest in this technology. In spite of this, the local supply remains inadequate because of many factors, internal and external to the regional market:

- Inadequate supply of flexible plastic packaging, particularly for complex products
- Total dependence on imports for manufacturing materials
- Increase in imported packaging from Asia
- Lack of information on locally available capacity and supply
- Limited capacity of local manufacturers to respond to significant but fragmented demand
- Lack of knowledge and technical capability among food industry manufacturers for drawing up specifications and precisely defining their requirements
- Absence of quality packaging supply (premium)

There is a trend toward improved quality of finished products. Cardboard and plastic packaging is in demand, and manufacturers are investing in production units to produce greater quantities and better quality. The food industry is increasingly interested in the marketing aspect of packaging for their finished products. The intensification in international trade, the push for exporting to other countries, and the arrival in Africa of low-priced, attractively designed products is forcing companies to assess and revamp their packaging to better deal with their competition.

3. Packaging: Varied Materials

Packaging production is a viable economic activity. It uses mainly plastic, cardboard, and byproducts of those materials. This section describes the main types of packaging and their features, focusing on the technical properties and detailing their advantages and disadvantages. Note that using a particular type of packaging will often depend on cost and availability of the product in the region, but should also consider the findings of a marketing study (to be discussed in the following section).

Worldwide, more than 70% of packaging consumed uses plastic and cardboard.

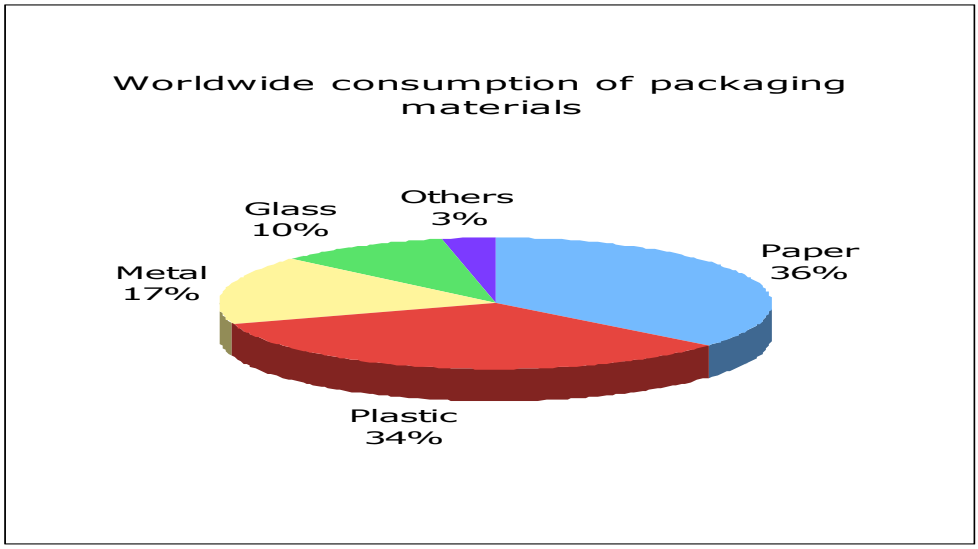


Figure 3. Worldwide consumption of packaging materials by type.

3.1 Cardboard packaging

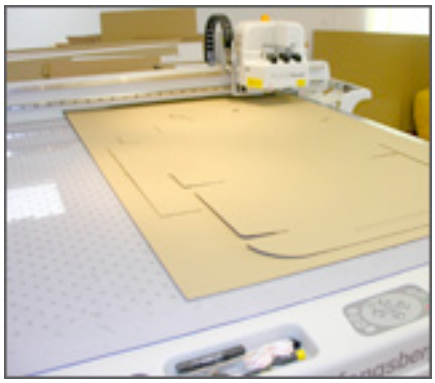
Cardboard accounts for nearly 40% of the worldwide packaging market. It is presently the cheapest material relative to its weight. Its capacity for adaptation to consumer trends is its major asset and explains why it is among the most widely used materials in the food industry.

Today's challenge is to respond to ecological constraints by reducing the volume of packaging. These constraints form the basis of eco-design as well as efforts to improve traceability of products for food safety. In addition, innovations in paper manufacturing have made it possible to produce more and better value paper in terms of the quality/price ratio. Furthermore, scientific advances in paper manufacturing will alter the physical properties of paper. The principal advantages and disadvantages of cardboard are listed in the table below.

Advantages of cardboard	Disadvantages of cardboard
· Relatively economical to make and offered in a wide range of types, qualities, and sizes · Light and easy to work with when cutting and folding · Adaptable to printing (e.g., in offset) · Supports different types of assembly (stapling, gluing, flaps) · Easy to store flat, not bulky · Easy to repair · Adaptable to constraints for lamination (protection, waterproofing, contact with food, etc.), varnishing (sheen), gilding or embossing (exclusive cover) · Recyclable and biodegradable	· Cannot be adapted to all shapes · Untreated, it is sensitive to humidity and is flammable during storage and use

3.1.1 Corrugated fiberboard

There are two main categories of cardboard: corrugated fiberboard and paperboard. Corrugated fiberboard is of natural origin and is derived from cellulose fiber, 85% of which comes from recycled paper and 15% from new fibers. This type of board has a *corrugation coefficient*: the length in meters of ribbed paper required to manufacture a linear meter of corrugated fiberboard.



Corrugated fiberboard is a “sandwich” material, assembled by gluing together one or more layers of flat paper sheets separated by a corrugation flute, the profile thickness of which varies from approximately 1 mm to 8 mm and with an average weight of 575g/m². The flat sheets contribute to the mechanical and climatic resistance of the packaging and also provide a medium for communication and/or information. The corrugation flutes give the packaging rigidity and maximum elasticity to absorb shock. Its main drawback is that when crushed flat, it loses rigidity.

The number of layers determines the type of fiberboard (see Figure 4):

- SINGLE OUTER LAYER: a single sheet adhered to a corrugated flute
- DOUBLE OUTER LAYER: a corrugated flute is sandwiched between two flat sheets
  DOUBLE WALL CORRUGATED: two double-corrugated flutes are adhered together
- TRIPLE WALL CORRUGATED: three corrugated flutes are combined

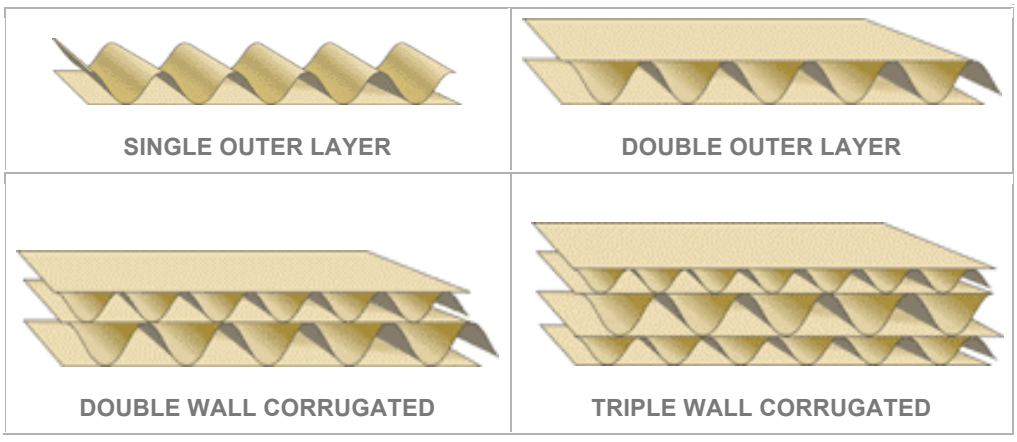


Figure 4. Composition types of corrugated fiberboard.

Corrugated fiberboard is widely used for ordinary packaging with a printed surface (chocolate covers/boxes, rice, coffee, brown goods, etc.) and for transport and storage packaging, including large sizes (e.g., container box measuring 3 x 1.5 m).

Eight types of flutes are currently manufactured; from largest to smallest:

Symbols	Types of flute	Thickness of fiberboard notch formation
K ou D	Huge flute	Greater than 7 mm
A	Very large flute Large flute	Typically measuring more than 4.5 mm
C	Medium flute	3.5 to 4.5 mm
B	Small flute	2.5 to 3.5 mm
E	Micro flute	1.5 to 2 mm
F	Minimicro flute	Approximately 1.2 mm
G ou N	Nano-flute	Approximately 0.8 mm
O	Nano-flute	Approximately 0.5 mm

Some of these flutes can be combined depending on the purpose. For example, combining EB or BC produces double-fluted fiberboard or “Double-Double” packaging with strong mechanical resistance and optimal printability. Combinations of up to three or four flutes are possible (e.g., triple fiberboard or quadruple-flute.

3.1.2 Paperboard

There are five types of paperboard, depending on the material used to make it.

Chipboard

Cardboard very often recycled, with neutral pH. Very solid, it is available in several thicknesses from 1 to 3 mm. It is the most frequently used type of paperboard for amateur packaging and flat binding.

Mechanical pulp board

Wood pulp base. This cardboard is very rigid and has a smooth surface resistant to dents. It is also available in a wide range of thicknesses from 0.75 mm to 4 mm.

Folding cardboard

Cellulose base with neutral pH. This type of cardboard is used for printed packaging of products such as pharmaceuticals, quality white cardboard used for artistic packaging (e.g., framed pictures), and printing works (covers of books, etc.). Bristol cardboard, which is dense and fine (210g/m²), falls into this category.

Plate-finished board
Thin, very rigid cardboard. Playing cards are a good example of this type of medium.

Laminates
Cardboard is often laminated.
a) *Mill-lined board*: covered with a sheet of aluminum and/or fine polyethylene; for packaging liquid foods.
b) *Laminate:* white core color and colored laminates (framed pictures, etc.).
c) *Plume cardboard*: sheet of rigid polyurethane foam (2 to 5 mm thick) glued between two sheets of very thin layered cardboard (available in sheet sizes of 40 x 50 cm). This panel cuts easily using a tool type cutter without being damaged.
d) *Scraperboard*: white cardboard coated with a black-varnished surface which is engraved with a pen allowing downstrokes and upstrokes.

Depending on its intended use, the cardboard you select should be neither too stiff nor too flexible. Its resistance to folding does not depend on thickness: Layered cardboard can easily break on folding. The direction of the cardboard fibers should be taken into consideration for any transformation when the package is designed.

Before use, cardboard sheets should not be damaged by bad stocking.

The direction of the corrugated flutes is an important consideration when the package is designed: A fold across is more rigid than a lengthwise fold, which can be an area of mechanical weakness.

3.2 Plastic packaging

Plastic packaging, number one in terms of customer sales units worldwide, uses several types of materials depending on the application. Plastics can be rigid: (e.g., tin of butter, pot of yoghurt, bottle of water, etc.) or pliable (e.g., pack of juice, pack of spices, etc.).

3.2.1 Polyethylene (PE)

Polyethylene is the most popular film for packaging, accounting for 70% to 80 % of the protective film market. It is available in LDPE (low-density polyethylene) and HDPE (high-density polyethylene) forms. LDPE is adaptable to many products like shopping bags, carrier bags, stretch-wrapping film, and packaging for frozen products and fresh produce, including meat and poultry. HDPE is more rigid and is increasingly replacing LDPE for promotional bags and shopping bags. Polyethylene is the primary material used for contact with food contents in multilayered plastic packaging. The demand for polyethylene is likely to continue to grow significantly, in large part because of its low cost compared with other plastic products.

Advantages of LDPE	Disadvantages of LDPE
· Low cost · Neutral odor · Heat sealable · Heat shrinkable · Good barrier against moisture · No interaction with contents	· Permeable to gas and oils · Poor odor resistance

Advantages of HDPE	Disadvantages of HDPE
· Compared to LDPE, it is more resistant and thicker · It is less permeable to gas, odors, and moisture · Option of sterilization · Better seal strength & quality · Impermeable to water · No interaction with contents	· Compared to LDPE, it is more brittle and less pliable

3.2.2 Polyvinyl Chloride (PVC)

Use of PVC was questioned for a time because it was not biodegradable. However, it uses less energy and fewer nonrenewable resources than other plastic materials, and the technology now exists to recycle it. For these reasons, PVC use should increase in years to come.

Advantages of PVC	Disadvantages of PVC
· Resistance and strength · Impermeability to gas and moisture · Heat shrinkable · Heat sealable · Recyclable	· Takes on brownish color during some handling of materials

3.2.3 Polypropylene (PP)

PP stretch-wrapping is suitable for imprinting, lamination, and plating. It can be used in replacement of PE, PET, and other laminated products. In Africa, PP is often used in woven plastic bags.

Advantages of PP	Disadvantages of PP
· Resistance and strength · Puncture resistance	· Average permeability to humidity, gas and odors · Stretches less than PE

3.2.4 Polyethylene terephthalate (PET)

PET is used mainly as support material onto which another film is flattened or coextruded. This material is being used increasingly as a replacement for glass packaging (bottled water and soft drinks, jars of dried fruit, etc.).

Advantages of PET	Disadvantages of PET
· Strength (unbreakable) · Heat resistance · Impermeability to odors, gas, and humidity · Wide range of shapes, colors, and sizes	· Heat sealing impossible

3.2.5 Polystyrene (PS)

Several forms exist. The first, purest type is a hard plastic used to package rigid products. Polystyrene can also be expanded or extruded as a foam film, commonly known as Styrofoam, which is an excellent material for vegetable and fruit packaging. Its lightweight and heat-insulating properties make it the most popular form of packaging for food-service applications.

Advantages of polystyrene	Disadvantages of polystyrene
· Strength · Puncture resistance · Thermal insulation	· High permeability to gas · Flammable · Environmental waste–very long decomposition time

3.2.6 Cellulose film

Use of cellulose film, also called Cellophane, slowed down after the 1970s. It was replaced by polypropylene (PP), which is less expensive and more resilient. However, it is regaining popularity as a food wrap because it is 100% biodegradable.

Advantages of cellulose film	Disadvantages of cellulose film
· Odorless and completely biodegradable · Strong and puncture resistant · Low permeability to air, grease, and bacteria	· Tears easily · Stretch-wrapping impossible · Variable permeability to humidity and gas

3.2.7 Polyamide

Nylon is the base material of polyamide, but it is not a major raw material for flexible packaging.

Advantages of polyamide	Disadvantages of polyamide
· Technical flexibility · Strength	· Stretch-wrapping possible at high temperature · Variable permeability according to humidity · Expensive to produce

3.2.8 Multilayers

Multilayers from PE and PP

Multilayers from PE, PP, and aluminum

Plastic multilayer films were introduced a few years ago thanks to the emergence of effective binders for different polymers. These films combine different materials to produce stronger, more watertight products. The combinations and applications are countless. For example, using a thin layer of aluminum makes the product impermeable to odors, humidity, gas, oil, and light (see table below for more examples).

Film type	Coating	Barrier to moisture	Gas/Odor	Strength	Clarity	Standard thickness (in micrometers)
Cellulose	-	*	***	*	***	21 – 40
Cellulose	PVC	***	***	*	***	19 – 42
Cellulose	Aluminum	***	***	*	-	21 – 42
Cellulose	Nitro-Cellulose	***	***	*	-	21 – 24
PEBD	-	**	*	**	*	25 – 200
PEHD	-	***	**	***	*	350 – 1000
Polypropylene	-	***	*	***	***	20 – 40
Polypropylene	PVC	***	***	***	***	18 – 34
Polypropylene	Aluminum	***	***	***	-	20 – 30
Polyester		**	**	***	**	12 – 23
Polyester		***	***	***	**	-
Polyester		***	***	***	-	20 – 30

Prices of raw materials, particularly for making plastic, have fluctuated widely because of the rising price of oil. Although margins from higher productivity have increased significantly over these last few years, they have only partially offset the combined low sales prices and rise in raw material costs. Thus, the plastic industry's profit margins are shrinking, with the possible exception of PET manufacturers.

3.3 Glass packaging

Glass has long been used as a method of storing and distributing food products. In the mid-1800s, the Mason jar was created; it uses heat to hermetically seal the jar and preserves food items for an extended period. At the turn of the 20th century, machines were built that quickly and efficiently produced standard-sized bottles and jars. Currently, these machines can melt and recycle used glass into a wide variety of shapes, sizes, and colors.

The manufacture of glass base is a capital-intensive industry. The construction and maintenance of a furnace requires significant investments, and its operational life varies between 8 and 12 years. For this reason, there are few glass manufacturers in the packaging industry; we were able to find only three in West Africa, all located in Nigeria.

Advantages of glass	Disadvantages of glass
· Recyclable and reusable · Impermeable to humidity, gas, odors, and microorganisms · Many options for shapes, colors, and sizes · UV barrier (colored glass) · No interaction with food contents · Sterilization option · Does not rust · Does not discolor	· High price (three times the cost of plastic packaging) · Price of foil lid and identification tag adds to the cost · Compared to other packaging, transportation cost is high because glass weighs more · Obligation to protect primary packaging if transported · Fragile to shock and differences in temperature · Broken glass is a serious danger to health when it is in contact with foodstuffs

· Vertical storage more important than for other packaging	

Compared with alternative packaging materials, glass has advantages and disadvantages; in our professional opinion, the cost of glass outweighs its benefits for the typical product in the West African food industry. However, not all products are alike; thus, the decision about packaging should be made on a case-by-case basis. Glass is often used for products with a high profit margin (high-end products).

3.4 Metal packaging

Following the example of glass packaging, this sector is also highly concentrated: Metal packaging is used primarily in the food industry for tinned food and canned drinks. The metal packaging sector is dealing with competition from other packaging types by innovating: for example, by designing more environmentally friendly, lighter products. Consequently, the demand for metal food packaging is growing at nearly 5% per year. Tinned food and canned drinks make up more than 50% of the volume of metal packaging.

Metal packaging requires more substantial investments than other types of packaging, with the exception of glass. In addition, the high cost of metals and high production costs make the price of this packaging very high. Finally, this packaging weighs more than the others, with the exception of glass, and therefore has higher transport costs.

Aluminum continues to be one of the main metals used for food containers (more than 1.5 billion per year) and for sheets in flexible packaging. But it is declining in the canned drinks market in favor of steel.

Advantages of metal	Disadvantages of metal
· good protection of contents · Is suitable for storage at room temperature	· Expensive compared to other types of packaging · Higher transport costs · Risk of oxidation

3.5 Wood packaging

Used widely for bulk packaging and transport of foodstuffs, wood packaging is rarely used as primary packaging for the finished product. Plastic and cardboard packaging are less expensive and offer more aesthetic choices than wood.

4. The Importance of Good Packaging

4.1 Functions of packaging

4.1.1 Protection

Packaging protects the product against external wear and tear. The sensitivity of the product is dependent upon the product itself as well as the hazards that it is exposed to.

- Physical hazards: shock, heat, cold, dust
- Chemical hazards: humidity, corrosion, spatters of detergent
- Microbiological hazards: yeasts, mold, pathogenic germs in food

4.1.2 Transportation

This is one of the primary functions of packaging and allows:

- Simplified storage for wholesalers
- Rapid sorting for the distributor
- Easy handling for the customer

4.1.3 Information

A function that is increasingly crucial to the consumer. This enables:

- Regulatory facts and information on the product's use to be circulated to the customer. Legal information is sometimes illustrated by pictograms. Packaging supports traceability, which enables the freshness of a food product to be checked against its use-by date and best-before date.
- Promotion of the product, that is, encouraging customers to purchase it.
- The product's niche or market to be defined, through the design, so that there is no confusion with regard to the nature of its contents.

4.1.4 Facilitating use

The product's packaging facilitates ease of use, with appropriate instructions:

- Examples include: carton has a pouring lip, the cap becomes a measuring glass, the flask provides a handle, the food container goes in the microwave and becomes a plate, etc.

4.1.5 Safeguarding consumers and suppliers

- Protecting the consumer: Packaging should incorporate tamper-protection systems to protect the consumer from fraud or dishonest handling. Packaging can prevent children from obtaining dangerous chemical or pharmaceutical products, while remaining easy to use for elderly or handicapped people. These are ergonomic aspects of packaging.
- Protecting the supplier: Some packaging is deliberately oversized so that it does not disappear into thieves' pockets. For example, software that is shipped as a disc is packed in a box which could potentially hold dozens of discs. Finally, processing tricks (e.g., invisible marking, hologram, microelectronic chip, etc.) can help reduce fraud.

4.1.6 Preserving the environment

- Packaging, following use, should be designed in such a way that its environmental impact is minimized. Eco-friendly packaging is a popular trend at the moment.

Developing packaging should be carried out carefully; nothing should be left to chance.

4.2 Key elements in packaging design

4.2.1 The visual appearance

To enhance the product's visual appearance, solicit the help of design agencies that specialize in packaging. Their services will help you refine and focus the visual elements of the packaging:

- Identity of the product and the company
- Message to be conveyed
- Values to be promoted
- Most appropriate material for use
- Color(s)
- Shape and ergonomics
- Function and practical use of the product

The packaging must convince consumers of the product's quality and motivate them to purchase it. This presupposes that the packaging:

- Is appropriate for the product
- Corresponds to the consumer's image of the product
- Is original in its presentation, such that it attracts the consumer's attention
- Is self-explanatory; the consumer must grasp quickly the benefits of purchasing the product

4.2.2. The text

The limited area on which to display text narrows one's options for making a direct impression on the consumer's perception of the brand. As early as the 1970s, many companies understood that packaging could be a tool for reinforcing the relationship between the customer and the brand. Take, for example, the simple packaging of a bar of chocolate. It is not uncommon for the outer wrapping to display a child's game, a recipe, or a reassuring slogan—any of which add a bit of creativity and value to the product.

Devote some time and thought to the wording of text. Beyond the legal requirements, it is essential to consider packaging not only in terms of aesthetics, which is the responsibility of the design agencies, but also in terms of keeping text to a minimum while conveying the best possible impression.

A few well-chosen words are most effective. Whether choosing a brand name or determining the best strategy for using text on the packaging, the choice of words can help you achieve the goal.

Quite often, difficulty in finding the right words reflects inadequately defined product identity or market niche. Defining product identity can help specify the limits of the product's use.

We do not address children and adults in the same way; however, it is possible—and sometimes necessary—to convey a message to both groups on the same package. A cereal box is a case in point. The box should contain a few words to engage a child or make him keen to open the box in search of a small toy. The adult seeks reassurance that the cereal contains appropriate ingredients and is safe for their child to eat.

The short texts that appear on packaging should be developed by written communication specialists who are experts in using language to address the target audience(s). It is a serious endeavor; one inappropriate word can mislead or turn consumers off of the product.

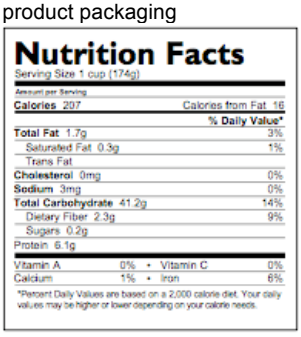
It is essential to have outside assistance with these tasks so that the manufacturer can concentrate on what he does best.

4.2.3 Legal notices and U.S. and European standards

Packaging and labeling

When they are introduced for retail sale in the United States and European Union markets, all foodstuffs should conform to legal regulations and market codes for packaging. These regulations and codes enhance the likelihood that consumers can make informed choices. In addition to reviewing the data summarized below, you should seek advice from professionals—such as graphic designers, who have experience in designing labels.

	United States	European Union
Regulations for packing and contents	Some products, such as wine and alcohol, require special packaging or special sizes to enter some markets. Some countries, such as France, have their own packaging requirements for a large variety of products including beer, fermented beverages, pre-packaged breakfast cereals, non-alcoholic drinks, coffee, milk, oil and vinegar, ice cream, frozen fish, frozen fruit and vegetables, dried fruit and vegetables, and animal food. (*Note that French regulations regarding labeling and*	

	product ingredients are among the strictest in the EU.)	
Basic requirements for labeling	In the United States and the EU particularly, labels should contain the minimum information: • Name (legal title and description of the product) under which the product is sold (accurately and clearly). • List of ingredients, preceded by the word "Ingredients". Should show all ingredients (including additives) in descending order of weight as registered when used in manufacture and designated by their specific name. When an ingredient is mentioned in the list, it is essential to declare the amount included—for example: "strawberry jam (50%), sugar, water, pectin…", etc. The name of this type of list is QUID. • Net quantity of pre-packaged foodstuffs in metric units for Europe: liter, centiliter, milliliter for liquids; kilograms and grams for non-liquids. In a double item name, metric units and American units (ounces [oz.] or pounds [lb.]) should be provided. • Name of the company and address of the producer, packer (or co-packer), or importer. • Place of origin or source. • Expiration date for consumption, including the day, month, and year. The expiration date is shown in one of two formats: (a) "Use by *x* date" for products with a short shelf-life. Consumer use after the given date can pose a danger to food safety (e.g., fresh salads, fruit juices). (b) "Best before *x* date"— after this date, food safety is not an issue but the quality of the product (taste, texture, etc.) may be compromised. • Any special condition of preservation or usage. All of this information should appear on the packaging or on the label adhered to the pre-packaged foodstuffs. In the case of pre-packaged foodstuffs for restauranteurs (foodstuffs sold in bulk), information on the external packaging is required.	
Basic requirements for labeling		Indicating the batch on pre-packaged foodstuffs with marking preceded by the letter "L". The batch number can also be 4 figures with the "Julian code" without the letter "L" (e.g., 7050, the 50th day of year 2007, or February 19, 2007).
Reference to food additives	Can appear on the list of ingredients with the abbreviated name if one exists, such as "FD&C No. 40" or "Red40"	Additives and perfumes should always be labeled on packaging food products according to their category (antioxidant, perfume, preservative, color, etc.) with their name or electronic number (example: E202, E321, etc.).
"Daily allowance" label	In US, required on the majority of food product packaging  	The nutritional label is not compulsory unless a daily allowance is shown on the label (e.g., "fat free", "high in fiber") or on the advertising material. In this case, the nutritional indications should conform to a standardized format (different from the American format). Nutritional ingredients should be listed on a precise label and values quoted in 100g/ml and the quantity by serving. The serving size should take into account the way in which the product will be consumed.
Specific exemptions	• Multilingual labels are accepted for products distributed in several countries. For the American market, label contents must also appear in English. For Europe, the text should be written in the national language in which the product is distributed (e.g., French in France). • A special note might be required for genetically modified (GMO) food, foodstuffs for specific nutritional purposes, etc. Note that the majority of retailers in Europe will refuse GMO products. The law dictates that GMO-based products be clearly indicated. • Irradiated products should also be labeled as such. • There are specific rules which govern label usage.	
Regulations	• The law on packaging and fair trade labeling • The law on nutritional labeling and education	• Regulation EC 2200/96 (from 28 October 1996) • Directive 2000/13/EC • European: General Food Law, 2002, regulation of EC 178/2002 http://www.europa.eu.int/comm/food/index_en.html
For more information	FDA Web site • FDA manual on nutritional labeling • http://www.cfsan.fda.gov	• Easily accessible notes, summarizing the EU legislation, are available on the Web site ScadPlus in at least four languages (English, French, German, and Spanish): http://europa.eu.int/scadplus http://useu.usmission.gov/agri/expguide.html

	FAO portal: http://www.ipfsaph.org/Fr/default.jsp

4.3 Packaging choices in West Africa: Practical advice

4.3.1 Priority objective of packaging: Selling the product

Packaging is a critical determinant of selling a product. To be effective, packaging should differentiate a product from the competition and highlight it so that customers are drawn to purchase it. Thus, good packaging should:

- § Attract the customer and respond to his or her expectations
- § Represent the company image (with the brand)
- § Accentuate the intrinsic qualities of the product

Packaging is much more than a “box” or “packet”. It can provide a competitive advantage by captivating the consumer, making the product easier to recognize at the point of sale, and informing the consumer of its function. In cases of “communication through packaging,” packaging effectively replaces advertising, a useful strategy for small and medium-sized businesses whose promotional budgets are often limited.

Packaging should no longer be considered as a *cost item* but as an *investment* which adds value to the finished product; 75% to 80% of the consumer’s decision to buy is made while looking at the packaged product, and consumers are captivated by unique products. Packaging is the main vehicle for persuading the customer.

It is interesting that packaging often constitutes a trivial amount of the cost price of the product. The case study on cashews described in Section 6 illustrates this point vividly: Packaging represents barely 1% of the cost price of the finished product.

4.3.2 Packaging: The fruit of marketing/business reflective thinking

Knowledgeable specialists in the field should be responsible for creation of a logo and structuring or developing a label. This is a creative specialty that should be performed by professionals. The party consigning the task should guide the process and specify the objectives of the packaging through a written document often referred to as a “packaging brief.” Creative thinking will flow from the objectives defined in this document. A packaging brief should contain:

- Information about the company:
  - o Background
  - o The company's product range
  - o Business development (sales)
- Information about the market in which the company operates (example: cashews, coffee, etc.). In this section, it is important to present the following elements:
  - o Market volume
  - o Market segmentation
  - o Competition
  - o Quality and price levels
  - o Distribution circuits
- History of the packaging used:
  - o A description of current packaging and its development over time
  - o Advantages/disadvantages
  - o Specify the product's market "positioning" (why should consumers choose your product over the alternatives?)
  - o Indicate new positioning if changed
  - o The impetus behind changes in packaging
- Objectives sought

- In visual terms
- In terms of consumer target
- In terms of sales development

· Preferred deadlines for visual packaging development

Ideally, conducting a modest market research study, even with a small number of interviews, can identify consumers' expectations. A market study will help identify purchasing levers and determine which consumer requirements are not met by products currently offered. The study can also evaluate the suitability of the objectives defined in the packaging brief.

4.3.3 The positioning of a product

Positioning is the cornerstone of the product development process. Often neglected, it is nonetheless vital for minimizing the risk that products placed on the market will fail or underperform. Positioning is key to the marketing mix. It will determine the product's price and quality level. By defining product positioning, a specific population group will be targeted. It is, quite simply, the justification for the product's existence.

How should the product be defined? The two main aspects of a product's positioning are:

- **Identification: What kind of product is it?**
- **Differentiation: What sets it apart from other products of the same kind?**

Positioning a product means making certain choices and discarding others. Ask yourself:

WHAT? What kind of product is it (formulation, definition)? What does it do? How is it unique?
WHO? Who is going to buy it? What is the target market?
WHY? Why should consumers buy this product? (Facts to convince consumers that it will meet their specific needs.)

When positioning the product, focus on four main qualities:

- **Simplicity**
  You will have more chance of success if your product's positioning is simple and clear. Avoid ideas that are too complex and don't try to attribute every possible quality to your product.
- **Relevance**
  It should match the expectations of the product's potential consumers.
- **Credibility**
  In order to succeed, positioning MUST be credible. In other words, it must be consistent with the characteristics and image of the product and its brand.
- **Originality**
  Originality will differentiate your product more easily from the competition. Ideally, you would position the product in a vacant market slot (targeting consumers whose demands have not yet been satisfied).

In summary, positioning a product is a rigorous and challenging task. However, the time spent making careful choices will enable you to make better decisions when formulating the product, determining price levels, and marketing the product.

4.3.4 Capitalize on change to boost profitability

Revamping packaging is an opportunity to improve the profitability of the finished product and adapt it to suit the current market conditions. Ask yourself these questions:

- What basis weight and prices are competitors currently practicing?
- What are the latest packaging innovations in your market segment? What are the future market trends?
- Calculate your current and future cost prices.

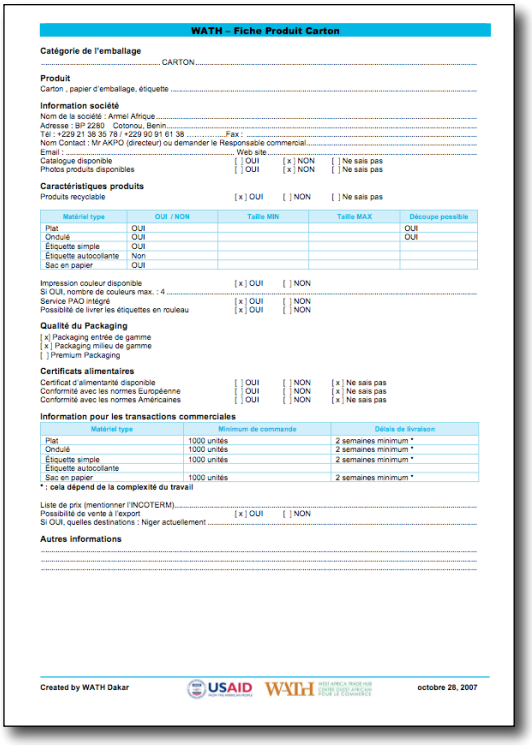
- Determine the volume and profitability gains you expect to make after changing the packaging and analyze whether the results meet your objectives.

In simple terms, there are four ways of improving the profitability of a finished product:

- Reducing procurement costs (raw materials, packaging)
- Increasing sale prices
- Reducing the basis weight per consumer unit (CU) at a constant sales price
- Reducing variable production costs

In the food industry, raw materials are often the single largest contributor to the cost price (see case study in Section 6). Consequently, we recommend that you take the time to negotiate the price and quality of your raw materials, as these are the two factors that will have the greatest impact on your sales and profitability.

5. Directory of Manufacturers in West Africa



WATH – Fiche Produit Carton

Catégorie de l'emballage
CARTON

Produit
Carton , papier d'emballage, étiquette

Information société
Nom de la société : Armel Afrique
Adresse : BP 2280 Cotonou, Benin
Tél : +229 21 38 35 78 / +229 90 91 61 38 Fax :
Nom Contact : Mr AKPO (directeur) ou demander le Responsable commercial
Email : Web site
Catalogue disponible [ ] OUI [x] NON [ ] Ne sais pas
Photos produits disponibles [ ] OUI [x] NON [ ] Ne sais pas

Caractéristiques produits
Produits recyclable [x] OUI [ ] NON [ ] Ne sais pas

Matériel type	OUI / NON	Taille MIN	Taille MAX	Découpe possible
Plat	OUI			OUI
Ondulé	OUI			OUI
Étiquette simple	OUI			
Étiquette autocollante	Non			
Sac en papier	OUI			

Impression couleur disponible [x] OUI [ ] NON
Si OUI, nombre de couleurs max. : 4
Service PAO intégré [x] OUI [ ] NON
Possibilité de livrer les étiquettes en rouleau [x] OUI [ ] NON

Qualité du Packaging
[x] Packaging entrée de gamme
[x] Packaging milieu de gamme
[ ] Premium Packaging

Certificats alimentaires
Certificat d'alimentarité disponible [ ] OUI [ ] NON [x] Ne sais pas
Conformité avec les normes Européenne [ ] OUI [ ] NON [x] Ne sais pas
Conformité avec les normes Américaines [ ] OUI [ ] NON [x] Ne sais pas

Information pour les transactions commerciales

Matériel type	Minimum de commande	Délais de livraison
Plat	1000 unités	2 semaines minimum *
Ondulé	1000 unités	2 semaines minimum *
Étiquette simple	1000 unités	2 semaines minimum *
Étiquette autocollante		
Sac en papier	1000 unités	2 semaines minimum *

* : cela dépend de la complexité du travail

Liste de prix (mentionner l'INCOTERM)
Possibilité de vente à l'export [x] OUI [ ] NON
Si OUI, quelles destinations : Niger actuellement

Autres informations

Created by WATH Dakar USAID WATH octobre 28, 2007

Document ANNEX 1

The purpose of this directory is to help food industry producers identify manufacturers in their country or subregion capable of offering the packaging they need. Its agenda has a sales/marketing goal as opposed to a technical one. The ANNEX 1 contains country information sheets with types of materials listed. We have focused on the most widely used packaging materials, namely plastic and cardboard. The information sheets are structured as follows:

- Section 1: Type of material
- Section 2: Company address
- Section 3: Options offered by the company for the material concerned
- Section 4: Basic information for commercial transactions

Manufacturer Contact Information by Country *(see ANNEX 1 for more detailed information)*

Company Name	Address	Contact	Phone /Fax	Email / Web site	Plastic	Card-board
BENIN						
Armel Afrique	BP 2280 Cotonou, Benin	Mr. Akpo (Directeur)	Tel: +229 21 38 35 78 Tel: +229 90 91 61 38			X
BURKINA FASO						
FASOPLAST	Z.I. de Gounghin, 01 BP 534, Ouagadougou Burkina Faso	Mr. Sanou Léon (Direction commerciale)	Tel: +226 50 34 31 51 Tel: +226 50 34 55 79 Fax: +226 50 34 20 67	fasoplast@fasoplast.bf	X	
CAMEROON						
Printpak	6834, Rue 4.014 Nationale no 3 Bonaberi BP 2380 Douala, Cameroon	Ernest Ke (Managing Director)	Tel: +237 333 907 47 Tel: +237 333 907 52 Tel: +237 333 907 53 Fax:+237 333 907 62	printpak@printpak-cameroun.com		X
GHANA						
Fantasy Foods Limited	23 Spintex Rd PO Box 30443 KIA Accra Accra, Ghana	Hayssam Halawi (Managing Director)	Tel: +233 21 81 05 14 Fax: +233 21 81 05 16	info@fantasyfoods.net fantasyfoods@finatradegroup.com www.fantasyfoods.net		X
Ghana Carton Boxes Manufacturing Company Ltd	North Industrial Area PO Box Private Mail Bag Accra-North Accra, Ghana	Kofi Awuitor (Marketing dept)	Tel: +233 21 25 21 15 Fax:+233 21 22 36 88	awuitoro@yahoo.fr		X
Ghana Printing & Packaging Industries	Valco Rd Heavy Industrial Area PO Box SC 376 Tema, Ghana	Geres Fares (Marketing Manager)	Tel: +233 22 21 25 87-8-9 Fax: +233 22 20 80 73			X

Company Name	Address	Contact	Phone /Fax	Email / Web site	Plastic	Card-board
Paper Containers Ltd	PO Box 7676 Accra-North Accra, Ghana	Ismael Tetteh (Marketing Manager)	Tel: +233 21 228408 Tel: +233 21 228492 Fax: +233 21 223093	ismael@papercontainers.org		X
PolyKraft Ghana Ltd	PBN 5334 North Industrial Drive Accra, Ghana	Mr. V Krishnamurthy (General Manager)	Tel: +233 22 300 487 Tel: +233 22 303 151 Fax: +233 22 307 930	krish@polygroupgh.com coo@polygroupgh.com Web site: www.rammohinani.com		X
Printpack Ghana Limited	Valco Road Heavy Industrial Area PO Box SC 376 Tema, Ghana	Marc Lens (Production Manager)	Tel: +233 22 21 25 87-8-9 Fax: +233 22 20 80 73	pgl_marc@yahoo.com		X
Blowplast Industries Ltd	Graphic Road South Industrial Area PO Box 6988 Accra Accra, Ghana	Manoj Lakhiani (CEO)	Tel: +233 21 22 33 91 Fax: +233 21 22 25 75	blowplast@gmail.com Web site: www.blowgroup.com	X	
Condorplastic Limited	Too Yitso, Ring Road Box 1858, Mamprobi Accra, Ghana	Uwe Zelmer (Managing Director)	Tel: +233 21 23 13 38 Fax: +233 21 24 80 95	condor@africaonline.com.gh	X	
Continental Plastics and Eng. Limited	PO Box 10160 Accra-North Accra, Ghana	Fred Asibu-Yertey	Tel: +233 21 23 13 4 Tel: +233 21 31 79 39 Fax:+233 21 23 13 47	copleng2@yahoo.com	X	
Danica Plastics Limited	Behind Weija Barrier PO Box 10112 Accra-North Accra, Ghana	Daniel Mensah (Managing Director)	Tel: +233 21 85 26 19 Fax: +233 21 85 26 18	danicaplastic@yahoo.com	X	
Fantasy Foods Limited	23 Spintex Road PO Box 30443 KIA Accra, Ghana	Hayssam Halawi (Managing Director)	Tel: +233 21 81 05 14 Fax: +233 21 81 05 16	info@fantasyfoods.net fantasyfoods@finatradegroup.com Web site: fantasyfoods.net	X	
Kane Em Industries Ltd	Accra, Ghana	Gobind Wadhwane (CEO)	Tel: +233 21 22 13 80 Fax: +233 21 23 34 44	kane-em@4u.com.gh kaneem57@hotmail.com Web site: www.kaneem.com	X	
Mabaplast Limited	Behind Toyota on Graphic Rd, PO Box 15537 Accra-North Accra, Ghana	Joseph Attah (Managing Director)	Tel: +233 21 22 79 15 Fax: +233 21 22 30 35	mabatta@africaonline.com.gh	X	
Massily Ghana Limited	Heavy Industrial Area Opposite Tema Oil Refinery Tema, Ghana	Isaac Addo Asare (Commercial Manager)	Tel: +233 22 20 40 73 Fax: +233 22 20 40 67	nfo@massileghana.com	X	
Ocean Spray Manufacturing Co. Limited	Spintex Road Behind Coca-Cola Box CT 1703 Cantonments Accra, Ghana	Emmanuel Kitcher (Managing Director)	Tel: +233 21 81 17 70 Tel: +233 21 81 15 95 Fax: +233 21 81 12 29	info@oslgh.com	X	
Polyprint Ghana Limited	9 Dadeban Street North Industrial Area Box AN 6667 Accra-North Accra, Ghana	Gurbaksh Karamchandani (Managing Director)	Tel: +233 21 25 32 00 Tel: +233 21 23 31 47 Fax: +233 21 25 51 23 Fax: +233 21 25 31 87	polyprint@myzipnet.com gurbakshmk@gmail.com.	X	
Polytanks Gh. Ltd	PO. Box No. 5334 North Industrial Area Accra, Ghana	Vikram Singh (Sales & Marketing Manager)	Tel: +233 21 22 39 87 Tel: +233 21 22 32 74 Tel: +233 21 23 35 81 Fax: +233 21 22 54 36	salespls@polygroupgh.com Vikram@polygroupgh.com www.rammohinani.com	X	
Polytex Industries Limited	9 Dadeban Road North Industrial Area PO Box 5268 Accra-North Accra, Ghana	Dayal R. Thawani (Managing Director)	Tel: +233 21 22 88 91 Tel: +233 21 23 31 49 Fax: +233 21 22 51 23	polytex9@hotmail.com	X	
Qualiplast	1 Abotia Street North Industrial Area PO Box AN 7136 Accra-North Accra, Ghana	Anthony Rouhana	Tel: +233 21 22 78 07 Fax: +233 21 22 29 38	plastics@ghana.com anthony@qualiplastghana.com www.qualiplastghana.com	X	
Scanbech Ghana Limited	Taifa Industrial Area PO Box 12885 Accra-North Accra, Ghana	P. Kumaraswamy (Managing Director)	Tel: +233 21 40 01 74 Fax: +233 21 40 02 34	info@scanbechghana.com www.scanbech.com	X	

Company Name	Address	Contact	Phone /Fax	Email / Web site	Plastic	Card-board
Sintex Containers Ghana Ltd	Mac-Cofie Bldg. Graphic Rd, PO Box 16990 Accra-North Accra, Ghana	Manoj Budhrani	Tel: +233 21 22 31 37 Tel: +233 21 25 84 11 Fax: +233 21 22 24 99	sintexgh@gmail.com	X	
NIGERIA						
Industrial Cartons Limited	Acme Crescent Agidingbi, Ikeja PO Box 283 Ikeja Lagos Lagos State, Nigeria	Roger S. Sherlow (Managing Director)	Tel: +234 1 793 0001-4 Tel: +234 1 774 0123 Fax: +234 1 345 0138	mail@industrial-cartons.com		X
International Glass Industries Limited	Churchage Royal Spinners Compound Isolo Expressway, Isolo PMB 7044 AGBOR HILL Aba Lagos, Nigeria	Kenneth Daniels (Manager)	Tel: +234 1 791 8815 Tel: +234 1 774 8231 Fax: +234 1 262 0551 Fax: +234 1 262 0420	igiadmin@churchgate.com www.churchgate.com	Glass manufacturer	
Nigerian Bag Manufacturing Co. Ltd	Plot 45, Eric Moore Rd. Iganmu Industrial Estate PO Box 589, Apapa, Lagos, Iganmu, Lagos State, Nigeria	Peter Low (Managing Director)	Tel: +234 1 580 1650 Tel: +234 1 583 1464 Fax: +234 1 583 1533 Fax: +234 1 583 1464	petelow@bagco-ng.com	X	
Shongai Packaging Industry Limited	Km 38, Lagos-Abeokuta Expressway, Sango-Otta, Ogun State, Nigeria PO Box 4610, Marina Apapa Lagos	F.S. Nikam (Managing Director)	Tel: +234 080 22910404 Tel: +234 01 776 5601 Fax: +234 1 261 7511	md@shongaipackaging.com www.shongaipackaging.com	X	
COTE d'IVOIRE						
ETIPAK	Zone Industrielle de Koumassi, Abidjan, Côte d'Ivoire	Mr. Jean Marie Stievenart (Sales Manager)	Tel: +225 21 56 25 31/33 Fax: +225 21 56 25 45	ETIPAK@AVISO.CI		X
Manufacture d'Emballage de Côte d'Ivoire	Zone Industrielle 4, Abidjan, Côte d'Ivoire	Mr. Hernandez (Sales Manager)	Tel: +225 21 24 73 21 Fax: +225 21 24 79 73	DIOP@EMBACI.NET		X
ROTOCI	Zone Industrielle de Koumassi, Abidjan, Côte d'Ivoire	Mr. Boustani (Genral Manager) or Mr. Rayess (Sales Manager)	Tel: +225 21 25 68 41 Fax: +225 21 21 28 07	rotoci@afnet.net		X
SONACO	Zone Industrielle Yopougon, Abidjan, Côte d'Ivoire	Mr. Christophe Pere (Sales Manager)	Tel: +225 23 51 52 00 Fax: +225 23 46 65 06	www.rossmann.com		X
ACIPAC	Zone Industrielle Yopougon, Abidjan, Côte d'Ivoire	Mr. François Radier (Director)	Tel: +225 23 46 62 33 Fax: +225 22 48 72 28	acipac@afnet.net	X	
INTERPACK	Z.I. de Yopougon, Abidjan, Côte d'Ivoire	Mr. Hachem Hussein (Sales Manager)	Tel: +225 23 46 69 58 Fax: +225 23 46 75 62	info@interpack.com interpack@aviso.ci	X	
OK PLAST	Zone Industrielle Yopougon, Abidjan, Côte d'Ivoire	Mr. Radwan Al Ali (Director)	Tel: +225 23 46 66 74 Fax: +225 23 46 64 13	okplast@aviso.ci	X	
PET EMBAL	Abidjan, Côte d'Ivoire	Mr. Diakta (Sales Manager)	Tel: +225 21 35 95 36 Fax: +225 21 25 73 86		X	
SENEGAL						
CARTONNAGE de DAKAR	Km 35, Route de Rufisque Dakar, Senegal	Mr. Fall Fily General Manager	Tel: +221 33 848 10 71 Fax: +221 33 832 01 00	cartdak@orange.sn		X
Emballage Moderne de l'Afrique de l'Ouest	Dakar, Senegal	Mr. Feydi Ibrahim (General Manager)	Tel: +221 33 860 44 70	ibrahimseydi@yahoo.com		X
LA ROCHETTE	Km 13, Route de Rufisque Dakar, Senegal	Mr. Adel Salhab (Directeur Général)	Tel: +221 33 839 82 82 Fax: +221 33 834 28 26	rochette@sentoo.sn		X
RUFSAC	Km 22, Route de Rufisque Dakar, Senegal	Mr. Delville (Sales Manager)	Tel: +221 33 836 22 57 Tel: +221 33 836 03 28 Fax: +221 33 836 88 14	rufinfo@orange.sn		X
FUMOA-COFISAC	Km 3.5, Bd du Centenaire de la Commune de Dakar, Dakar, Senegal	Mme. Touré (Sales Manager)	Tel: +221 33 831 05 05 Fax: +221 33 832 04 84	fumoa1@sentoo.sn www.fumoa.sn	X	

Company Name	Address	Contact	Phone /Fax	Email / Web site	Plastic	Card-board
POLYETHYLENE SENEGAL	Rue 6, Km 4, Bd du Centenaire, Dakar, Senegal	Mme Rima Hassan ou Mme Zeina Harb (Sales Division)	Tel: +221 33 832 34 03 Fax: +221 33 832 06 94		X	
SIMPA	Km 18, Route de Rufisque Dakar, Senegal	Mr. Farid Fraiche (Sales Manager)	Tel: +221 33 834 39 39 Fax: +221 33 834 41 90	simpa@simpa.sn	X	
SIPLAST (société industrielle des plastiques au Sénégal)	Km 7.5, Route de Rufisque Dakar, Senegal	Mr. Hussein Haj Ali (Directeur export) ou Mme. Wone (Sales Manager Senegal)	Tel: +221 33 859 20 00 Fax: +221 33 832 31 31	siplast@sentoo.sn	X	
SOFAC	Km 12, Route de Rufisque Dakar, Senegal	Mr. Siklaoui Hassan (Sales manager)	Tel: +221 33 834 07 66 Fax: +221 33 834 40 40	sofac@orange.sn	X	
TOGO						
INDUSTRIE TOGOLAISE des PLASTIQUES (ITG)	Zone Industrielle BP 9157 Lomé, Togo	Mr. Ange Maboudou	Tel: +228 227 49 83 Fax: +228 227 15 58	itp@itp.tg www.itp.tg	X	

6. Case Study

Cashew nut packaging
Company: CASHEW

Note: To preserve confidentiality, we have deliberately changed the name of the company and altered the figures; all other information is the same.

A) The challenge facing CASHEW

CASHEW wants to modernize and improve the packaging of its products (cashews, peanuts, popcorn), both aesthetically and technically. The company seeks the expertise and general knowledge to do this.

- Knowledge of packaging, especially plastics;
- Knowledge about local and regional manufacturers offering this kind of packaging;
- Knowledge of the various options and their implications for the company in technical, human resources, and financial terms.

These packaging changes are crucial to CASHEW's development and sustaining its current sales. The development of organized retail distribution (supermarkets) and the use of modern techniques for managing POS mean that packaging must be adapted to meet international standards. Furthermore, CASHEW needs to successfully roll out these changes in order to create possibilities for exports, both within the subregion and to Western markets.

CASHEW has already undertaken the steps to obtain E.A.N. (European Article Numbering) bar codes.

CASHEW is prioritizing cashew nuts; therefore the case study will focus on this product.

B) Objectives of CASHEW

The new packaging developed must meet the following objectives:

1) It must preserve the quality of the product better.
2) It must be suited to the needs of the local market and meet the standards of the Western export market.
3) It must produce a minimum 30% increase in sales.

C) Current context

CASHEW purchases its raw materials (shelled cashew nuts) from a competitor based in the region. The company roasts the cashew nuts and manually packages them in individual packets. The transparent packets are made from LDPE and printed in one color on both sides.

The cashews fall into three categories: whole, split, and broken. The tables below display the cost-price structure for cashew nuts of each type and the company's margin approach.

In CFA francs	Cashew type		
	Whole (200 g)	**Split (200 g)**	**Broken (500 g)**
Raw material cost	700	700	1750
Packaging cost	12	12	15
Fixed production costs*	104.55	104.55	198.65
Cost price	**816.55**	**816.55**	**1,963.65**
Current sale prices	1,300	1,150	1,650
Profit/loss per cu	**483.45**	**333.45**	**(313.65)**
Profit/loss as % of sales	37.19%	29.00%	(19.01%)

** The detailed breakdown of these costs is shown in the following table indicating the company's margins. For simplicity, and lacking precise information from CASHEW, "fixed" and "variable" costs are combined under the heading "fixed costs."*

CASHEW's margins:

Monthly Base		
	CFA Francs	**% of sales**
CASHEW's sales	2,046,711	100%
Raw material cost	*1,312,500*	*64.1%*
Packaging cost	*20,191*	*1.0%*
Fixed costs		
Labor Cost	114,000	5.6%
Landline telephone	12,000	0.6%
Cellular telephone	12,000	0.6%
Water	10,500	0.5%
Electricity	22,500	1.1%
Wood	20,160	1.0%
Gas	4,875	0.2%
TOTAL fixed costs	*196,035*	*9.6%*
Operating margin	517,985	**25.3%**

D) Actions

After conducting a profitability study of the business to identify the potential margin for changing their packaging, WATH helped CASHEW to draft the "packaging brief" (see Section 4.3), summarizing the issue at hand, setting the context, and defining the objectives. The study revealed that sales of cashews in 500-g units is not profitable and that either the price or the quantity need to be adjusted.

Thanks to the study and the identification of regional packaging resources, WATH identified a supplier in CASHEW's country that could meet the company's requirements. WATH helped CASHEW to define its needs, look for a supplier, define its specifications, and negotiate the price of the packaging.

CASHEW identified a form of packaging that met all of its requirements and constraints, at a purchase price well below that of the packaging it had used previously, and with a far superior and more professional appearance. See table below for comparisons between old and new packaging.

Old packaging	New packaging	Changes to packaging material
LDPE material	PP material	More robust, perforation-resistant material Less permeable to gases and odors More robust sealing Cleaner printing Increased permeability to moisture compensated for by thicker packaging
Monochrome printing	Six-color printing	More refined and attractive visual appearance Adds value to finished product New supplier offers a "free" service, mounting and flashing visuals for printing
Price: 200 g format: 12 CFA Francs/cu 500 g format: 15 CFA Francs/cu	Price: 200 g format: 8.9 CFA Francs/cu 500 g format: 14.8 CFA Francs/cu	Reduced packaging purchase cost for equivalent order volumes. Possibility of discount to 7.5 CFA Francs/cu (200 g) and 12 CFA Francs/cu (500 g) if purchase quantities are doubled.

Format dimensions: 200 g = 130 mm x 180 mm x 50 microns; 500 g = 170 mm x 220 mm x 50 microns.

Note: The company did not initially believe it would find a manufacturer in its own country that could offer such an attractive and viable solution. The process of analyzing the company's requirements and identifying the right supplier revealed that the necessary resources were, in fact, locally available. This instructive example underscores the usefulness of this guide as well as the underexploited potential of the packaging sector in West Africa.

7. Appendix

7.1 Web sites

West Africa Trade Hub Web site: www.watradehub.com

7.1.1 General information on packaging

www.abc-pack.net
www.bpf.co.uk
www.cat.inist.fr/?aModele=afficheN&cpsidt=6723120
www.emballagedigest.fr
www.lavoisier.fr
www.packaging-france.com
www.paper.org.uk
www.salons-online.com/approche/results.php4?sect=11
www.scrib.org/
www.univenture.com
www.wasteonline.org.uk/resources/InformationSheets/Packaging.htm

7.1.2 Assistance providers for packaging (consulting firms and public organizations)

www.envirowise.gov.uk
www.intracen.org
www.letsrecycle.com
www.packagingvalley.com
www.packplast.org

7.1.3 Information on trade

www.business.com
www.buyusa.gov
www.forumexpo.fr
www.graphiline.com
www.innovact.fr
www.dmoz.org/Business/Industrial_Goods_and_Services/Packaging/Supplies/
www.packagingprice.com
www.packaging.com
www.tradeforum.org
www.trametal.com

7.2 Press article (in French): Le Figaro – October 4, 2007

LE FIGARO.fr

Les prix des emballages n'en finissent plus de grimper

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Les produits alimentaires sont aussi touchés par la hausse des prix du plastique et de l'acier.

Dans une boîte de conserve, le fer-blanc représente 15 à 20% du prix payé par le consommateur.

À CHAQUE passage en caisse, la ménagère type dépense quelques euros uniquement pour payer les emballages des produits achetés. Sans le savoir, elle paie les conséquences de la hausse des prix des matières premières: l'aluminium, l'acier (le fer-blanc des boîtes de conserve) et les plastiques.

Par exemple, pour une boîte de maïs en conserve, 12 à 18 centimes servent à payer le fer-blanc. Autrement dit, la boîte représente 15 à 20% du prix payé par le consommateur. Sachant qu'une partie de la hausse de plus de 20% enregistrée par l'acier depuis deux ans a été directement répercutée sur le client final, le prix de la boîte a crû de 2 à 3 centimes à cause du fer-blanc.

Pratiquement tous les emballages sont logés à la même enseigne. Chez Tetra Pak, connu pour ses emballages en forme de brique, on explique que le prix du polyéthylène (plastique) a augmenté de 38% en trois ans, l'aluminium de 46% et le carton de 31% dont 25% sur la seule année 2007! *« Une hausse de 3 à 4% de notre tarif est à attendre pour 2008, compte tenu de la forte hausse du prix du carton »,* précise Yannick Richomme, PDG de Tetra Pak France. Or, les industriels de l'agroalimentaire et les distributeurs ne pourront pas supporter seuls les conséquences de cette hausse. Les consommateurs devront là encore mettre la main au portefeuille et consacrer quelques euros de plus aux emballages.

Réduire les quantités

Il est peu imaginable d'échapper à la hausse en espérant troquer une matière contre une autre. Le prix du PET (plastique compressible utilisé pour les bouteilles d'eau) a vu son prix moyen croître de 5% depuis le début de l'année. Certaines matières plastiques ont elles augmenté de plus de 12% en neuf mois. En revanche, les professionnels de la filière semblent s'être mis d'accord pour ne pas communiquer l'impact exact de cette hausse sur le prix de vente final.

Pour éviter que l'envolée des prix des matières premières ne pèse trop sur le client final, les producteurs font preuve d'ingéniosité. Impress, un des leaders mondiaux de l'emballage métallique, a ainsi développé un couvercle épais de 0,18 millimètre au lieu de 0,2. Cela n'a l'air de rien, mais au total ce sont pourtant quelque 1,500 tonnes d'acier qui sont économisées chaque année!