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EXPORT DEVELOPMENT - PHASE II

DG/PHI/87/007

PHILIPPINES

Technical report: Advisory Service in Furniture Export Product Development
to the Wood Processing Industry of the Philippines*

Prepared for the Government of the Philippines
by the United Nations Industrial Development Organization

Based on the work of W. St. G. Vernon,
Consultant in Export Product Development of Furniture.

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* This document has not been edited.

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1. INTRODUCTION.

The Government of the Philippines has requested the United Nations Development Programme (UNDP) to provide financial and technical assistance in the Export Development field. A project was agreed upon and implemented. This was followed by a second phase (project no PHI/87/007), which is a Government executed project, the executing agency being the Bureau of Export Trade Promotion (BETP).

A portion of the project's activities have been subcontracted to the International Trade Centre (ITC) and UNIDO through a standard Inter-Agency Letter of Agreement.

As part of the services of UNIDO, it has provided the services of a consultant in Export Product Development, William St. G. Vernon, for a total of one man month. His duties are given in Annex 1. Mr. Vernon is also working on behalf of ITC in this same area of expertise.

This report covers the activities of Mr. Vernon during the period 12 May to 7 June inclusive.

2. General

In common with all developing countries, when it comes to Product Development a consultant is invariably faced with a "fait accompli" with regard to premises, equipment and materials available. The methodology adopted by this consultant therefore is to examine exactly what are the advantages and disadvantages of each company in relation to the potential export markets and from that analysis define an Export Product Policy. Product development is then conducted within the confines of that policy. New machine purchases are avoided as far as possible until some cash flow is first achieved.

The common threads running through all woodworking enterprises in the Philippines are the timber (*Shorea spp.*), the dependence on handicrafts for decoration, the poor productivity and the poor engineering. It is appropriate to look at each of these in the context of developing new wood products for export.

Timber.

The timber most readily available for commercial use in the Philippines is Red Lauan (*Shorea spp.*). It is available in many varying grades of quality and from the point of view of density and colour. It costs approximately US\$ 1 per board foot (US\$ 420 per cubic metre) which is only on a par with similar timbers in other developing countries and does not confer any special advantages on the Philippine industry. The fact that it is a tropical redwood also confines the potential to products traditionally produced in redwoods and leaves it open to criticism from the Green movement.

Handicrafts.

The handicrafts of the Philippines are second to none in the world in their embrace of a bewildering variety of raw materials and skills. In the wood using trades these skills manifest themselves primarily in handcarving, bone inlay, marquetry, seat weaving, and hand-painting. There are however other areas of potential in their combination with wood as the principal

structural material. These are, brass work, stone work, rattan, ceramics, leather and wrought iron.

Poor Productivity.

The levels of productivity in the wood using enterprises of the Philippines are generally low, lower than many other countries in the Far East. This is of course offset to some degree by low wages but nonetheless is a most serious problem in the competitiveness of the industry and one which must be addressed as soon as possible. As things stand at present it would be unlikely that any of the furniture companies in this project would be able to export anything that did not have a handicraft element in it.

Poor Engineering.

The skills of the woodworking industries of the Philippines are handicraft skills not disciplined craftsmanship. This has led to a general acceptance of poor workmanship in jointing and assembly of structures and very poor quality of joinery construction generally. This poor jointing is also one of the primary reasons for the low levels of output per person experienced in the Philippines as every assembly is a major production often taking days to put together and using nails and filler to "aid" adhesion. The net result is complaints, dissatisfaction and poor quality.

3. ANALYSIS AND PRODUCT POLICY FOR EACH COMPANY VISITED

Each company that has been visited has had an assessment done and an Export Product Policy developed. The policy was then discussed with the principals of the enterprises concerned and what follows is the rationale for the policy and the policies themselves.

EXPORT PRODUCT POLICY OF J.B. WOODCRAFT LTD.

Introduction.

This document sets out to provide a framework for the PRODEX Product Development consultant to assist the management of J. B. Woodcraft to adopt an export product policy, and having done so, to examine all exports in the light of that policy and price them accordingly. It is a discussion document only. Management must make the decisions as to what does or does not become policy.

Summary.

In common with almost all Philippine woodwork enterprises J. B. Woodcraft has as its main strength its access to the "handicraft" skills of the area. However JB also has a number of assets not found in other enterprises. In particular its developing skill in the production of gilded products and the unique skill, energy and dedication of the owners to achieving excellence in all that they do.

This dedication has led to a growing reputation as one of the leading companies in the Philippines furniture industry both at home and abroad.

Being the leading participant in the Group of Eight gives the company an important added strength through which to achieve exports but should not

dictate the future product policy of the company itself. This policy must be shaped on the strengths and weaknesses of JB and not depend on the other constituents of the group though the overall role of JB as catchment for the group should of course be considered.

Strengths.

1. The drive, desire, and dedication to build a substantial business based on the production of quality products.
2. Access to good quality wood carving at a competitive cost.
3. Excellent premises for woodworking with most necessary basic wood machines already in position and ample room for future expansion.
4. Adequate supplies of kiln dried wood.
5. Finishing skills including hand-painting, gilding and traditional reproduction finishes.
6. Export experience as leader of the Group of Eight in the production of specialized products primarily for the United States market, many of which were extremely difficult to produce and could be described as high fashion accent pieces.
7. The association with the other members of the Group of Eight gives a useful extension of capacity to export. (Though it may unwittingly have hampered productivity development).
8. The company has a sound financial base and a good basic administrative structure.

Weaknesses.

1. Very low productivity in relation to the size of the company and the capital investment involved.
2. No "in-house" product range, leading to a steadily expanding variety of work in hand.
3. Little or no machine skills or understanding of the potential of the machines in hand.
4. Insufficient sanding equipment and inadequate knowledge of the potential of improved equipment to influence day to day output.
5. Insufficient use of the matched jointing equipment available.
6. No product production planning and no analysis of methods at any stage of production. This has led to a total confusion between "busy-ness" and business.

Analysis.

JB Woodcraft is in many ways unique in its access to such a wide range of handicraft skills and the ability to exploit them to make beautiful products at will.

There is, here in JB, the nucleus of a really major industry both in terms of profitability and in terms of being a leader to the wood products industry of the Philippines.

**Alas this will not be achieved
without very radically changing present direction.
The problem of productivity is a crisis.
All the necessary steps to solve it are urgent.
Delaying the remedies will not be immediately apparent
and so the temptation is there.
Please do not delay.**

TACKLE THE PROBLEMS NOW.

So what are the problems?

.....please do read on,

Let's look for a moment at the overall weakness listed No. 1 above, "poor productivity". This is the key at this point in the company's development.

To put it in context; if one assumes that of all in house workers in JB 150 are directly involved in production, then if one takes last year's turnover of US\$ 824,000 and divide it by 150, one gets an output per direct worker of

only US\$5493 per direct worker per year.

This is too low. This is unsustainable. It can only lead to disaster if not corrected. To be internationally competitive even at the low wages currently acceptable in the Philippines one has to do very much better than this. Many factories are doing better, some as much as 5 times better and improving. JB can do better than any of them if we do the right things now.

The reasons we are not doing better are as many as the products we make, and to some degree at least because of the many products we make. I hasten to say that does not mean we peremptorily drop anything, no, but what we do is analyze the products we do make for their contribution to the whole and then decide where best to put our efforts.

Taking a number of products at random lets see if they relate at all to one another by board foot content:

		USS	board foot	USS per board foot
1.	Dolphin table (dining) price is	759,--	242.0	3,13
2.	Dolphin occ. table	160,--	33.0	4,84
3.	Elephant cart table	251,--	78.0	3,21
4.	Pie crust table	130,--	5.5	23,63
5.	William & Mary torchere	120,--	7.5	16,00
6.	Chippendale S/chair	160,--	19.0	8,42
7.	Chippendale A/chair	170,--		
8.	Mirror frame/shell motif	230,--	32.0	7,18
9.	Tea caddy box	49.50	2.6	19,03
10.	Victorian chair	132,--	14.0	9,42

Now if we look at this lot we have a widely varying spread of prices per board foot achieved. Why? Why should a Dolphin table with an immense amount of skilled handicrafts achieve only US\$ 3,13/board foot when a William & Mary torchere achieves US\$ 16/board foot. Why does a pie crust table achieve US\$ 23,63/board foot when a Mirror frame with shell motif only achieves US\$ 7,18.

What is the reason? Is it the buyer? Is it the costing?

DO WE HAVE A REASON??

Look at the carving for the moment. Assuming a carver is paid P 160 per day. That would be P 20 per hour. Given as per costing that the Dolphin dining table costs P 2,400 for carving that would indicate 120 hours carving, or 2.5 man weeks. Thus if we are doing nothing but Dolphin tables (strictly hypothetical) our output would be limited by the carver giving me US\$ 303,6 per week or US\$ 14,544 per annum. (US\$ 759 + 2.5) x 48 weeks per working year.

Take the tea caddy box. This is costed at P 150 for carving indicating 7,5 hours or 0.156 weeks work. That means in 2.5 weeks I would get 16 tea caddies from a carver or US\$ 792. In value for carving terms little difference. In value of output per year (US\$ 15,206) little difference.

In value per board foot a big difference.

One dolphin uses 242 board foot. Sixteen tea caddies use 41.6 board foot.

What can we learn from this? Is there a lesson there at all?

It is believed that there is an important lesson there and that is "throughput versus value" in carving terms. In the case of the tea caddy

carving per board foot is 2.8 hours (7.5 hours ÷ 2.6 board foot). In the case of the dolphin it is 0.5 hours.

The lesson is that to achieve maximum value per board foot we must have a minimum number of hours per board foot of carving (or other handicraft not easily emulated on machine).

But there is another lesson too. How come in both these cases the output per person is almost three times the achieved average. The answer lies in efficiency, productivity and product policy.

The example of the Victorian chair which is currently the subject of quotation to Impro Europe is taken hereunder.

If the firm were to concentrate on that product, jig it up properly and produce it half ways efficiently we could expect a picture to look like this.

Lets make 200 per week. Times should be as follows;

Machining.	3 hours per chair	-	600 hours	or	12.5 man/weeks
Assembly	1 hour " "	-	200 " "	4.16 "	"
Sanding	1 hour " "	-	200 " "	4.16 "	"
Finishing	1 hour " "	-	200 " "	4.16 "	"
Packing	15 mins " "	-	50 " "	1.04 "	"

Total man weeks used therefore is 26. If we rate this at 50 percent efficiency we get 52 weeks or 2.496 hours ÷ 200 = 12.48 hours per chair. Or to look at it another way 200 x US\$92 = US\$ 18,400 per week (in the white) for 52 workers.

This is equivalent to US\$ 18,400 per worker per year.
3 times present output and that at 50 percent efficiency !!!

What does this indicate? Does it tell us anything? Here we are proposing a turnover of US\$ 956,000 with only 52 workers.

YES IT DOES TELL US SOMETHING. IT TELLS US THAT,

IF WE RATIONALISE OUR PRODUCTS,

WE CAN EXPECT TO GREATLY IMPROVE OUR OUTPUT PER MAN.

Now, obviously, if we are to try to make one product only for the year then we would be supreme optimists. We would be disappointed. However what we can do is:

To plan the production of a range of products acceptable in the market place and produce these on a rotated basis over the year to achieve the same effect.

These products are the products which conform to our ..PRODUCT POLICY.

They are designed to fit the mainstream of markets we are capable of producing to and are so targeted at that market place as to be able to achieve the desired volume of output.

IT IS VITAL TO EMPHASISE HERE THAT THIS DOES NOT IN ANY WAY PRECLUDE US FROM DOING MUCH IF NOT ALL OF WHAT WE ARE DOING NOW. WHAT IT DOES DO HOWEVER IS IT GIVES US A SOLID ORDER BOOK AGAINST WHICH WE CAN MEASURE THE DESIRABILITY OF DOING SPECIALS, AND IT PUTS US IN THE DRIVING SEAT WHEN IT COMES TO PRICING POLICY.

OUR BREAD AND BUTTER IS COVERED. IF WE ARE TO DO VERY SPECIAL THINGS FOR SELECTED CLIENTS WE ARE NOW ABLE TO PRICE THEM FOR THEIR REAL CONTRIBUTION TO OUR GOALS,

So what should our Product Policy be?

It should fall broadly within the following parameters:

- (a) A limited range of Chairs perhaps only 2 or 3 , with either a carving content or other handicraft content not readily copyable by machine. Perhaps the Victorian chair and a Chippendale chair and a Hepplewaite Shield back might fill the bill. These should fall within US\$6 - US\$7 per board foot in the white. What this means in effect is that we can allow approximately US\$4 per board foot for the machined article and up to a maximum of 16 hours carving (or other decoration) at a charged rate of US\$2.50 per hour.

(Dining tables will be developed as soon as the essential wide belt sander has been required complementary to both the chairs and the occasional furniture.)

- (b) A range of occasional pieces will be developed aimed at the upper middle market in both the United States and Europe. These pieces will be based primarily on solid wood frames with tops in either veneered MDF or other composite material. Care will be taken to ensure good selection of veneers where applicable and value added will be achieved by carving and possibly also by the addition of a small amount of gilding. This range should not exceed 10 pieces in all and should have at least some components common throughout the range, i.e. legs, rails etc.
- (c) A range of mirrors will be developed which are essentially machinable but which are so designed as to allow parts to be carved outside and brought together in the factory for finishing. These mirrors should go from upper middle market at US\$ 7 - US\$10 per board foot for Mahogany or white wash finish with possibly a little gilding to US\$16 plus for fully gilded items.
- (d) A range of accessories will be standardised to allow all the basic shaping to be machined and then for them to be sent to out workers for carving and returned to the factory ready to finish. Selection of both the decorative motifs and the finishes will be of paramount importance in this phase of development and these items will be sold primarily through gift shops rather than furniture outlets.
- (e) A separate department will be set up to produce special items for many of the good clients already established and these will be costed quite

differently from the standard products carrying a premium for the custom made nature of the products and having clearly defined terms of reference about doing samples and other "one-off" items.

Note motifs used for JB should have something in common with fellow members of the Group of Eight so as to present the buyers with an extended choice of product to select from.

EXPORT PRODUCT POLICY OF CABARLOS FURNITURE.

Introduction.

The purpose of this document is to provide a framework for the PRODEX Product Development consultant to assist the management of Cabarlos to adopt an export product policy, and having done so, to develop exportable products consistent with that policy.

Summary.

In common with many Philippine woodwork enterprises Cabarlos has as its main strength its access to the "handicraft" skills of the area. In addition it has a developed product line in Jardiniers, a small hand turning facility and experience in doing scroll saw work.

Participation in the Group of Eight gives the company an important vehicle through which to achieve exports but does not dictate the future product policy of the company. This policy must be shaped on the strengths and weaknesses of Cabarlos as it is now.

Strengths.

1. Access to good quality woodcarving at a competitive cost.
2. Strong entrepreneurial drive and a desire to build a substantial business.
3. Association with the Group of Eight gives access and credibility to its export intentions.
4. Adequate premises for woodworking with basic wood machines already in position.
5. Export experience with the Group of Eight in the production of specialised products for the US market. These products included jardinieres wall brackets and tables with fretwork detail in classic Chippendale style.
6. A sound financial base.
7. Adequate kiln dried wood supplies.

Weaknesses.

1. No matched jointing equipment, no sanding equipment.
2. Long distance from main markets.
3. The present product range is inadequately developed and really needs completion into a range
4. Lack of any finishing facility makes it essential that the company co-operate with others at least in the short term. (It should be noted here that it is not necessary for every factory to have every facility.) The development of co operation, as in the Group of Eight is a most positive development for the future health of the industry.

Analysis.

The size of the present premises, while small, is perfectly adequate for the present needs. The lack of good jointing equipment makes the construction of quality structures difficult to achieve economically and the lack of sanding equipment further limits the potential product range.

Anything produced will have to be limited in its size and complexity to avoid or hide matched jointing as far as possible and to avoid large flat surfaces requiring sanding.

The finishing skill which has been developed to service the Group of Eight's US business at Made Philippine should continue to be used but a different basis of costing must be sought to avoid excessive and uncompetitive premiums on the product.

The fact that the only woods commercially available are redwoods and that the principal skill asset is woodcarving further limits the scope for design style and to a great degree dictates that design style be in the reproduction idiom. In the US redwoods are for all practical purposes confined to repro styles while in Europe redwoods are not widely used for furniture except in reproduction style. Staining or bleaching the mahogany while overcoming the problem of colour does nothing to improve competitiveness as the paler woods are in the main cheaper to the Philippines' competitors than to them in the Philippines.

The presence of other materials such as brass, ceramics and leather extends the decorative potential as does the scroll saw, the router and the small lathe.

In addition to carving and the combining of materials the function of the articles produced give opportunity for adding value. This is an area as yet not greatly explored in the wood sector in the Philippines and is one that would allow considerable design scope even within a repro style.

Take for example the jardiniers or planter stands. They have much scope for development into different forms and into different products at different price points, they would however be enhanced in value by combining a suitable ceramic pot and offering the whole package. The present wall brackets also lend themselves to benefiting from combining materials. For example if () has two of them together and extend the shelf one can put a mirror underneath and

some nice hooks and one has a hall hanging hat and coat rack. If one puts two wall brackets upside down and put in a light fitting and possibly offer light shades as well one also has a finished functional product of higher value.

In the combining of bought in "materials" with good use of existing skills and facilities Cabarlos has its best prospect for successful product development. Trying to do things which are outside the scope of the present plant to assist is likely to be uncompetitive in price and poor in structural quality.

RECOMMENDED EXPORT PRODUCT POLICY.

Initially all products will be small in size and will require the minimum of jointing. Where joints are required they will be simple dowel joints, or halving and lapped joints hidden by applied decoration. New product development should definitely be based on existing product adaptation and not to any great degree vary from established techniques. All products will be fully finished to avail of maximum price in the market. (This activity should of course continue to take place at Made Philippine if at all possible as the proliferation of finishing workshops is unlikely to advantage anyone at this time.)

The addition of decoration such as brass, ceramic and leather/fabric will be explored to try to ensure that the products may use these materials if required and of course the use of pottery jars and light fittings should be followed up. Decoration however must be based primarily on hand carving.

Suggested products for design consideration are:

- (a) Development of the existing range of jardineirs to meet more criteria than at present by having less and more components in some articles and combining the ceramic pot to go with the unit.
- (b) Development of the existing wall brackets into light fittings and into other items of added value.
- (c) Functional wall hanging hat and coat racks, or wall hanging combinations of hat, coat and mirror etc., all the time keeping structures to a minimum and using in this range the fret work skills developed for Thornton White.
- (d) Sub-contract components where the carved detail can be combined with flat panel furniture to give an overall repro effect.

EXPORT PRODUCT POLICY OF SIMBULAN INDUSTRIES.

Introduction.

The purpose of this document is to provide a framework for the Prodex Product Development consultant to assist the management of Simbulan Industries to consider an export product policy, and having done so, to adopt a policy and develop exportable products consistent with that policy.

Summary.

Simbulan in common with many Philippine woodwork enterprises has as its main strength its access to the "handicraft" carving skills of the area. However it has also got a very special skill not as commonly found as wood carving, that is an ability to do fine handpainting on furniture. It is this skill and the developing ability to process wood repetitively together with substantial investment planned on a wood finishing work area and equipment that can set Simbulan apart from other enterprises in the area and create export opportunities.

This document will develop an export product policy to exploit those opportunities and hopefully spur on the necessary product development.

Strengths.

1. An in house capability to do fine handpainting is perhaps the single most exploitable asset of the company.
2. Entrepreneurial drive, with a husband and wife team aspiring to build a substantial business.
3. Access to the fine woodcarving of the area a competitive cost.
4. Adequate premises for woodworking with basic wood machines already in position. In addition the company is building a fine new finishing facility on a newly developed site adjacent to the present factory.
5. The company is adequately financed to develop.
6. Adequate kiln dried wood supplies and board materials such as plywood and MDF are available.

Weaknesses.

1. Jointing equipment is inaccurate and jigging is very rudimentary.
2. There is little or no sanding equipment.
3. The floors at present are very bad indeed and will need to be levelled, while an accumulation of rubbish is cluttering up the working areas and making movement more difficult.
4. Until the new finishing shop is built space will continue to be very tight for cabinet development.

Analysis.

The size of the existing premises is perfectly adequate for the present needs of the company, however the floors will have to be levelled to allow ease of movement of pallets and trollies necessary to material handling.

The development of the new finishing workshop on the new site will greatly improve the factory's suitability for finishing and create an opportunity to really finish efficiently.

The lack of good jointing equipment and square saws makes the construction of quality structures difficult to achieve and dictates that it stay with fairly small items at present. This need not be a disadvantage however and it may even prove advantageous to subcontract large cabinetry.

Anything produced should be limited in its size and complexity to avoid or hide fine jointing as far as possible and to avoid large flat surfaces requiring sanding to a fine surface finish without relief from detail. Veneered table tops for example are not ideal if the surface is to be highly polished.

The present range of urns could also be assisted by "sub-contracting", i.e. by buying the necessary mouldings in from a moulding manufacturer. They should definitely be further pursued in other markets and indeed the painting technique may well be applied here too. One should also consider what other areas that this product might be applied to. In particular the area of clocks, table lamps and tableware might be considered.

The finishing skill which has been developed and is continuing to be developed is probably the best area of concentration for product development. The styles adopted will be critical here. The first attempt which has led to the development of a "Venetian" style cabinet is satisfactory in itself but is probably not an ideal style as marketwise we would be jumping into the lions mouth to approach the Italian market. It is probably better to concentrate on the German and Dutch repro markets for the initial styles for the prototypes for the purpose of developing skills, demonstrating capabilities and gathering cost information.

These styles are also likely to find favour with the American market because of the diversity of ethnic tradition there.

The well-developed know-how in ceramics in the area is another advantage that we might exploit to use ceramic medallions in our designs as appropriate. The time available now should also be used to source people who can reproduce hinges and other hardware in brass and in cast or forged iron.

If bought in "materials" are combined with good use of existing skills and facilities then Simbulan has excellent prospects for developing a strong range of marketable product. It is proposed that entry to the market will first be attempted in two ways:

- A) as sub-contractors to existing manufacturers of these types of product
and,
- B) as suppliers of accessories done in the traditional way so as to develop the technique while keeping the wood product element within the capability of the factory to manufacture.

RECOMMENDED EXPORT PRODUCT POLICY.

- (a) The existing range of urns should be further developed both technically and for further market penetration in other finishes including the antique finish.

- (b) Products other than urns will initially be small in size and will require to be painted to achieve their added value. New product development in this line should definitely be based on existing product adaptation and not to any great degree vary from established techniques. All products will be fully finished including hardware to avail of maximum price in the market, and reduce the length of chain to the outlet.
- (c) A reproduction collection will be developed to be used initially to promote the range of occasional pieces and accessories but ultimately to be marketed as a collection in its own right as the manufacturing capability for large cabinetry improves or alternatively when a reliable source of cabinets is found.

Market Strategy.

Concurrent with these product developments, a "market partner" will be sought to assist in the primary development of both technique and style. This market partner will be a primary outlet for the company and also a source of know how for the painting techniques and styles. Ideally this marketing partner will be in the manufacturing business currently or will have their roots in the manufacture of this style of furniture. It is vital that it is done as true repro and not just another "style".

Alongside the above, business will also be sought and accepted for furniture and accessories which have a hand-painted element even if that means acting as a subcontractor in the short term to develop both skills and stamina at the Simbulan plant.

The urns which are of course a quite different market will continue to be marketed through the existing outlet in the United States but we will also actively seek other outlets in Europe and be prepared to do other styles.

The accessories will be shown at the next accessories exhibition after they have been further developed and the necessary desk research to find and select appropriate outlets will be requested from PRODEX.

EXPORT PRODUCT POLICY OF MADE PHILIPPINE.

Introduction.

The purpose of this document is to provide a framework for the Prodex Product Development consultant to assist the management of Made Philippine to adopt an export product policy, and having done so, to develop exportable products consistent with that policy.

Summary.

In common with many Philippine woodwork enterprises Made Philippine has as its main strength its access to the "handicraft" skills of the area. In

addition it has a developing expertise in finishing and developed industrial sewing skills.

The expertise in finishing has been developed at inflated prices and is unlikely to be sustainable in the long term.

Participation in the Group of Eight gives the company an important vehicle through which to achieve exports but does not dictate the future product policy of the company. This policy must be shaped on the strengths and weaknesses the company as it is now.

Strengths.

1. Access to good quality woodcarving at a competitive cost.
2. Quality finishing experience.
3. Strong entrepreneurial drive and a desire to build a substantial business.
4. Association with the G of 8 gives access and credibility to its export intentions.
5. A small but adequate premises for small product woodworking with basic woodworking machines already in position.
6. A sound financial base.
7. Adequate supplies of kiln dried wood.

Weaknesses.

1. No experience of quality wood products manufacture.
2. No matched jointing equipment, no sanding equipment.
3. Long distance from main markets.
4. No developed product range at present.

Analysis.

The size of the present premises which will have to suffice for the near future make anything but relatively small products impractical. The lack of good jointing equipment make the construction of quality structures difficult if not impossible and the lack of sanding equipment further limits the potential product range.

Anything produced will have to be limited in its size and complexity to avoid matched jointing as far as possible and to avoid large flat surfaces requiring sanding. The finishing skill which has been developed to service the Group of Eight's USA business is not currently required nor is likely to form the basis of a long term business as presently priced. However the experience gained does form the basis for achieving fully finished product status and thus a higher added value for the products.

The fact that the only woods commercially available are redwoods further limits the scope for design style and to a great degree dictates that design style be in the reproduction idiom. In the US redwoods are for all practical purposes confined to repro styles while in Europe redwoods are not widely used for furniture except in reproduction style. Staining or bleaching the mahogany while overcoming the problem of colour does nothing to improve competitiveness as the paler woods are in the main cheaper to competitors than to the Philippines.

The presence of other materials such as brass, ceramics and leather extend the decorative potential as do the scroll saw, the router and the small lathe.

In addition to carving and the combining of materials the function of the articles produced give opportunity for adding value. This is an area as yet not greatly explored in the wood sector in the Philippines.

If you have a flat piece of wood which is planed, band-sawn, carved and finished, you have in the main only got a component which can be added to another to form its decorative component or be in the class of "accent, knick knack or souvenir". If on the other hand you add a component which makes the product functional, such as a clock movement, a barometer movement, a mirror, hooks, (to form a coat rack) a bracket to form a shelf etc., you greatly increase the potential for increasing the intrinsic value of the article as well as its aesthetic appeal.

It is this combining of bought in "materials" with good use of existing skills and facilities which give Made Philippine its best prospect for successful product development.

RECOMMENDED EXPORT PRODUCT POLICY.

Initially all products will be small in size and will require the minimum of jointing. Where joints are required they will be simple dowel joints, or halving and lapped joints hidden by applied decoration. All products will be fully finished to avail of maximum price in the market.

Decoration such as brass, ceramic and leather/fabric will be explored to try to ensure that the products may use these materials if required. Decoration however must be based primarily on hand carving.

Suggested products for design consideration are:

- (a) Hanging mirrors with simple joints such as halving, butt or lapped joints, preferably built up from pieces of wood not exceeding 2" thick.
- (b) Clocks and barometers thermometers etc. having a largely flat face or "non-structural" base gaining all its decorative effects on the face only.
- (c) Sub-contract components where the carved detail can be combined with flat panel furniture to give an overall repro effect.
- (d) Functional wall hanging hat and coat racks, or wall hanging combinations of hat, coat and mirror etc. all the time keeping structures to a minimum.

EXPORT PRODUCT POLICY OF PETER'S CUSTOMBUILT.**Introduction.**

The purpose of this document is to provide a framework for the Prodex Product Development consultant to assist the management of Peter's Custombuilt to adopt an export product policy, and having done so, to develop exportable products consistent with that policy. In the case of Peter's the home market has been dominant and it is important that the benefits of getting "export ready" also improve home market efficiency.

Summary.

In common with many Philippine woodwork enterprises Peters Custombuilt has as its main strength its access to the "handicraft" skills of the area. Peter himself has built the business from a market background rather than a craft background and has an "apparently" very strong home market for cabinet furniture. This is based however on the assumption that the company is actually "busy" at present. The output per man however would indicate a major under utilisation of resources. This has to be tackled to improve overall performance and to get the company export ready while also ensuring it can go after a larger share of the home market.

Participation in the Group of Eight gives the company an important vehicle through which to achieve exports but does not dictate the future product policy of the company. This policy must be shaped on its own strengths and weaknesses.

Strengths.

1. Access to good quality wood carving at a competitive cost.
2. Adequate premises for woodworking with basic wood machines already in position.
3. Strong entrepreneurial drive, a flair for selling and a desire to build a substantial business.
4. Association with the Group of Eight gives access and credibility to its export intentions.
5. Export experience with the Group of Eight in the production of specialised products for the US market. These products included jardinières, wall brackets and tables with fretwork detail in classic Chippendale style.
6. A sound financial base with a little capital available to improve present equipment and space to greatly expand.
7. Adequate kiln dried wood supplies.

Weaknesses.

1. The approach to industrial furniture manufacture is quite under-developed.
2. No matched jointing equipment, and no real understanding of what constitutes a good furniture joint.
3. No sanding equipment.
4. The present export product range is inadequately developed and is therefore difficult to produce.
5. There is poor supervision on the factory floor.

Analysis.

The size of the present premises is perfectly adequate for home and export needs. The lack of good jointing equipment and perhaps even more importantly the lack of understanding as to what constitutes a good joint, makes the construction of quality structures difficult to achieve.

The non-existence of sanding equipment further limits productivity.

Anything produced will have to be limited in its size and complexity to avoid or hide matched jointing as far as possible until the problems of jointing are overcome. However, given the other aspects of the enterprise such as its space available its "strong" home market and the basic merits of existing designs if properly produced the jointing problem will have to be addressed.

(Note: An immediate short term solution is available in Akkawood who have the equipment necessary to do the jointing required.)

The speed of processing through the factory and the control of moisture in the large laminates also creates problems and would need to be remedied before current designs are continued.

The finishing skill which has been developed to service the G. of 8's US business at Made Philippine should continue to be used but a different basis of costing must be sought to avoid excessive and uncompetitive premiums on the product.

The fact that the only woods commercially available are redwoods and that the principal skill asset is woodcarving also limits the scope for design style and to a great degree dictates that design style be in the reproduction idiom.

In the US redwoods are for all practical purposes confined to repro styles while in Europe redwoods are not widely used for furniture except in repro style. Staining or bleaching the mahogany while overcoming the problem of colour does nothing to improve competitiveness as the paler woods are in the main cheaper to our competitors than to us here in the Philippines.

The presence of other materials such as brass, ceramics, and leather extends the decorative potential as does the router and the small lathe.

Export effort should probably be centred on the production of pods only at present avoiding tops , but if tops are to be made then they must be produced under controlled conditions to avoid damage in service and subsequent complaints.

The pods themselves should be turned from colour matched laminated timber and it would probably be best for this to be bought in from outside already laminated.

RECOMMENDED EXPORT PRODUCT POLICY.

Initially products will be similar to those already produced for Thornton White. Where joints are required they will be simple dowel joints, with the scribing of the joints subcontracted to Akkawood. (Assuming of course that they will be willing to do this.)

Carving detail may be changed to co ordinate with other members of the group and the fret details likewise.

All products will be offered in the white initially but they may be either stained sealed and sanded (SSS) or indeed fully finished to avail of maximum price in the market. (This activity should of course continue to take place at Made Philippine if at all possible as the proliferation of finishing workshops is unlikely to advantage anyone at this time.)

In addition decoration such as brass will be explored to see how it might be made applicable to the range. Decoration however must be based primarily on hand carving.

Suggested products for design consideration are:

- (a) Development of the existing range of pod bases and tops.
- (b) Development of the existing fretwork tables to coordinate with Cabarlos keeping structures to a minimum and using the fret work skills developed for Thornton White.
- (c) Sub contract components where the carved detail can be combined with flat panel furniture to give an overall repro effect.

DEVELOPMENT OF PRODUCT POLICY FOR VERAWOOD LTD.

Introduction.

Verawood is primarily a handicrafts company on the periphery of the furniture industry only, and with little current furniture products in its range.

The purpose of this assessment is two-fold (a) to develop an export product policy for Verawood and (b) to record the technical opportunities for cost saving and productivity increases observed by the consultant on his short visit to the factory and suggest how they might be availed of.

Developing an Export Product Policy.

To develop an export product policy it is necessary to first examine the strengths and weaknesses of Verawood as perceived by the consultant, then discuss them with Mr. & Mrs. de Vera and having teased them through chart a path towards maximising those strengths and avoiding the weaknesses.

Strengths.

Verawood has many unique strengths and enormous potential for development. It is, through its owners, a veritable powerhouse of creativity both in product and machine innovation and its greatly diversified skills offer many opportunities for development.

The strengths are:

1. Exceptional entrepreneurial drive in its ownership.
2. Exceptional creativity on all fronts.
3. Excellent sourcing capabilities of a wide range of very diverse materials, and well developed relationships with a number of sub contractors.
4. A skilled handicraft workforce both in house and as outworkers.
5. Adequate premises for the principle in house manufacturing operation. These are currently being upgraded in their use of the space available.
6. Solid export experience, primarily of handicrafts but also of some furniture.
7. A growing reputation as a reliable supplier.
8. A stable financial situation and an ability to finance sales from LCs.

Weaknesses.

The company's strengths far outweigh its weaknesses and the weaknesses that are there can be rapidly overcome. However it is worth recording the weaknesses here as seen through the eyes of the consultant.

1. The speed of development is making it very difficult to keep up with the necessary production development of new products. This is leading to adoption of work methods and practices that depress overall outputs.
2. Quality control is not nearly active enough. This leads to many products going right through the process before being rejected, incurring all manufacturing costs unnecessarily.
3. Productivity in the factory, while better by far than many similar operations, is still not high enough to carry it beyond its dependency on low-cost labour. The opportunity to address this is now, not when margins are under pressure from lower cost producers.

4. **Finishing**, being present in the plant is a strength, but. in its execution, it is wasteful of both time and material. Management is correcting this and must continue to do so. This is a key area.

In continuing this analysis it is worth looking at the key areas of opportunity for the company and at the threats or potential threats to the company from within and from without.

Opportunities.

The innovative approach of management to new materials is continuing to present many opportunities to the company, this together with the growing awareness of finishing as the key to the continued success of the company is probably the biggest opportunity.

This opportunity can only be availed of if productivity in all other areas is kept in pace.

The strong movements in Europe particularly, and in the US as well, towards use of natural non environmentally damaging materials in home decor should be analyzed and exploited in the marketing of the company's products.

The "resin" process and the "weaving" process both key opportunities to the company should be protected from plagiarism for as long as possible but nonetheless they do need additional creative inputs to maximise their effects on the company's performance.

A product development department within the organisation is essential. It should almost certainly be headed up by Mr. de Vera himself in the first instance until it finds its direction. It is vital that the talent to innovate is not lost to the company.

Threats.

At the moment the company is in a very strong position from both a creative and an innovative standpoint. This strength, of course, is due entirely to the husband and wife team that runs the operation. As the company grows, and it is likely to continue its very fast pace of growth, it is important that the innovativeness of the founders does not become stifled by the pressures of running a business.

The financial management of any company growing as fast as Verawood needs great care to avoid the classic problems of "over trading". It takes knowledge and prudence to do so. It is vital that the company take the right advice in this respect.

Great care, foresight, and planning, need to go into the future development of a management structure that allows those activities best delegated, to be delegated, and not carried as an excessive burden on the founders Mr. & Mrs. de Vera.

In this context it is strongly recommended that both husband and wife attend suitable management development courses (at separate times) to assist them to identify and implement the necessary strategies to see the safe on going development of their business into the next generation.

Threats from outside do exist also. Principal among these would be developing competition from other low cost producers and excessive dependence on a very small customer base due to the inability to meet total requirements for each client. Care must be taken not to allow any one client become dominant, nor indeed any one geographical area. Excessive pressure for more supplies from any one client should be resisted. Where such pressure does exist it is vital that the cost structure of the products be carefully examined to ensure adequate return.

There is no one like the good buyer to find a bargain.!

SUGGESTED PRODUCT POLICY.

Taking into account the analyses above,
a number of things are significant.

The company is essentially a handicrafts company.

The fastest developing activity is finishing.

Verawood is not a furniture manufacturer in any real sense
and it has to be
very seriously questioned whether or not it is to become one.

The strength of the company lies fair and square in the areas of handicrafts. Innovative product development and excellent sourcing are the key activities. It is suggested therefore that the Product Policy of the company be as follows:

Product policy.

1. Continue to market handicrafts along the lines of the present product range putting great emphasis on the uniqueness of the products and on the innovative use of materials and on developing unsurpassed quality.
2. Market furniture only. Do not manufacture it. Where the handicraft skills of the company can provide a significant added value and the finishing facility can further enhance that value sub-contract the structures and bring the whole together only at the fitting up stage.
3. Develop further the "resin" expertise and base a complete range on this bringing in wood and perhaps also functions to increase the value added. (Items such as vanity boxes with musical movements, clocks, novelty radios, light fittings etc. should be considered for these functions.)
4. Explore the possibility of producing components such as kitchen doors for sale as a finished product and if feasible then they too should form part of the product policy.

Conclusions

The above outlines the position of the company and suggests a future direction for it. It is only the consultants view. The decisions to be made can and should only be made by the owners of the company.

TECHNICAL OBSERVATIONS AND SUGGESTIONS OF THE PRODEX II CONSULTANT ARISING OUT OF HIS VISIT TO VERAWOOD on May 22/23 1991

Introduction.

The observations recorded here are in no set order of priority and are set down as an "aide-memoir" for Mr. de Vera and the consultant towards developing future manufacturing facilities and strategies.

Layout

The layout is currently undergoing major changes and improvements. It is suggested that in addition to the plans drawn up a further larger plan be drawn up on plywood (or similar sheet) to allow proposed layouts to be tried in theory before actually doing them. This is done by making cardboard templates for the main equipment and work areas and then moving them around in relation to one another till the optimum result is obtained. The broadest possible body of opinion from the factory floor itself should be used in this exercise.

Particular care must be taken when doing this exercise to ensure that levels are similar and floors are continuous at least to allow trolleys to be moved around easily. It is important also to consider width of aisles as size not weight is the limiting factor of the loads.

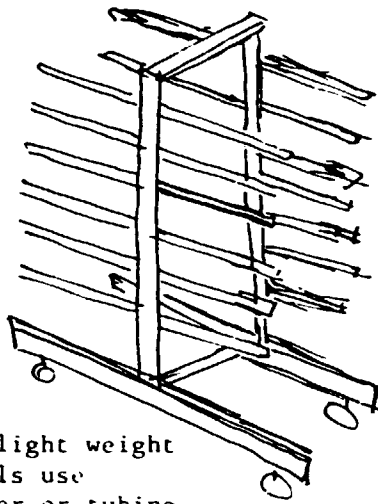
Denibbing.

The process of sanding after application of first coat of lacquer is at present much too costly of labour and of space. All items should be examined to see at what stage they become a finished structure in this regard. For example.

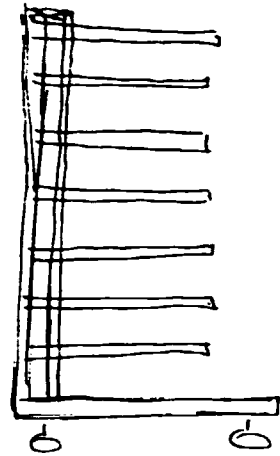
The present bedtrays are fully assembled before sealing (first coat). This makes the denibbing a much longer job than it need be due to a number of factors. (a) When assembled it makes mechanical assistance to sanding very difficult, (b) it is difficult to supervise how much time is spent per unit, (c) it is much more difficult to spray and handle it. In this case one should consider assembling either after de nibbing or indeed after finishing.

If the articles are not assembled too soon, considerable benefits accrue in handling in the finishing department. This also applies to things like lids on hampers.

The following sketches illustrate how handling and denibbing are better utilised by allowing trolley and machine assistance.

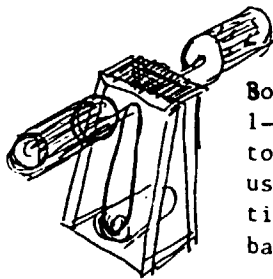


For light weight panels use timber or tubing to construct

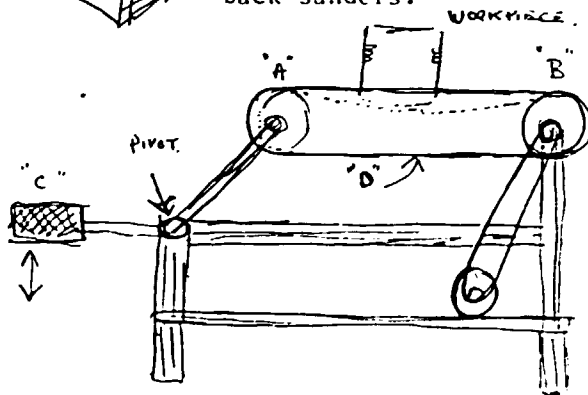


For heavy panels use angle-iron to construct

Fig. 1: Trolleys suitable for handling flat surfaces such as trays.



Bobbin Sander using 1-2 HP motor pulleyed to 900-1200 rpm and used to drive pneumatic drum, or brushed back sanders.



"B" is driven motor. "A" is floating pulley which is tensioned by weight "C". This allows belt "D" to be depressed by workpiece and thus follow contours.

Fig. 2: Home-made machines to assist in the sanding and the denibbing process

Weaving process.

The present weaving process is one of the main competitive advantages of Verawood. It should, as far as practical, be kept "secret" and also be the subject of further product development.

This department should be kept out of bounds and photography prohibited.

Resin Process.

The suggested developments for this department are the subject of a separate confidential note to Mr. de Vera.

Finishing.

As discussed earlier finishing is really a key area and one where really effective differentiation between Verawood and potential competitors can take place.

There are many areas to cover so an attempt will be done to cover them separately.

Equipment.

The move to air assist airless (airmix) spraying techniques is to be continued: it is an excellent direction. Care must be exercised in the selection of equipment however. The present Nordson system has in the consultant's opinion got some serious limitations. They are, (a) it is a solvent tolerant gun only, it will not allow use of waterborne materials. (b) the fluid chamber is very small giving increased wear on the fluid seals which are costly to replace, and (c) it appears to be excessively expensive relative to other systems on the market. This would need to be checked as the consultant's information may not be up to date.

It is vital that an air cooler is introduced to the airline as soon as possible.

As well as having implication for all the air tools currently in use it also has serious implications for the Nordson guns which are intolerant of water. With the rainy season approaching, this is a priority.

Drying room.

The necessity for the drying room arises out of the need to avoid chilling only and not to speed up drying times. In this regard it may well be best to construct a tunnel only leading from the spray booth area through which an overhead conveyor runs and a gravity feed conveyor to allow flexibility. Initially this can be a very simple single line affair and could conceivably be run from a heat source point of view from the exhaust of the after cooler (a device for drying the air) which should generate large volumes of dry air? It should be noted that the essential requirement of avoiding "chilling" (the white appearance) is that the air be dry not necessarily warmer.

Spraying Technique.

Present methods are a little haphazard. In particular two areas need attention. (a) There does not appear to be an "approved" procedure for coating a product. This leads to things observed like double coating of the bottoms of hampers, and excessive overlapping using more material than necessary. It is important that a skilled and instructed operator set an observed (observed either by the methods people or Mr. de Vera) norm for spraying each new item introduced and then that procedure is followed by each operator.

The practice of triggering the gun and the angle at which the gun is held is important. The triggering of the gun correctly will automatically save substantial amounts of lacquer up to 10% per annum. The angle of holding the gun also plays a major role. In conventional wisdom it is dictated that the gun be held at right angles to the face of the article being sprayed. In the case of spraying woven materials it is suggested that this procedure should be changed to that illustrated below.

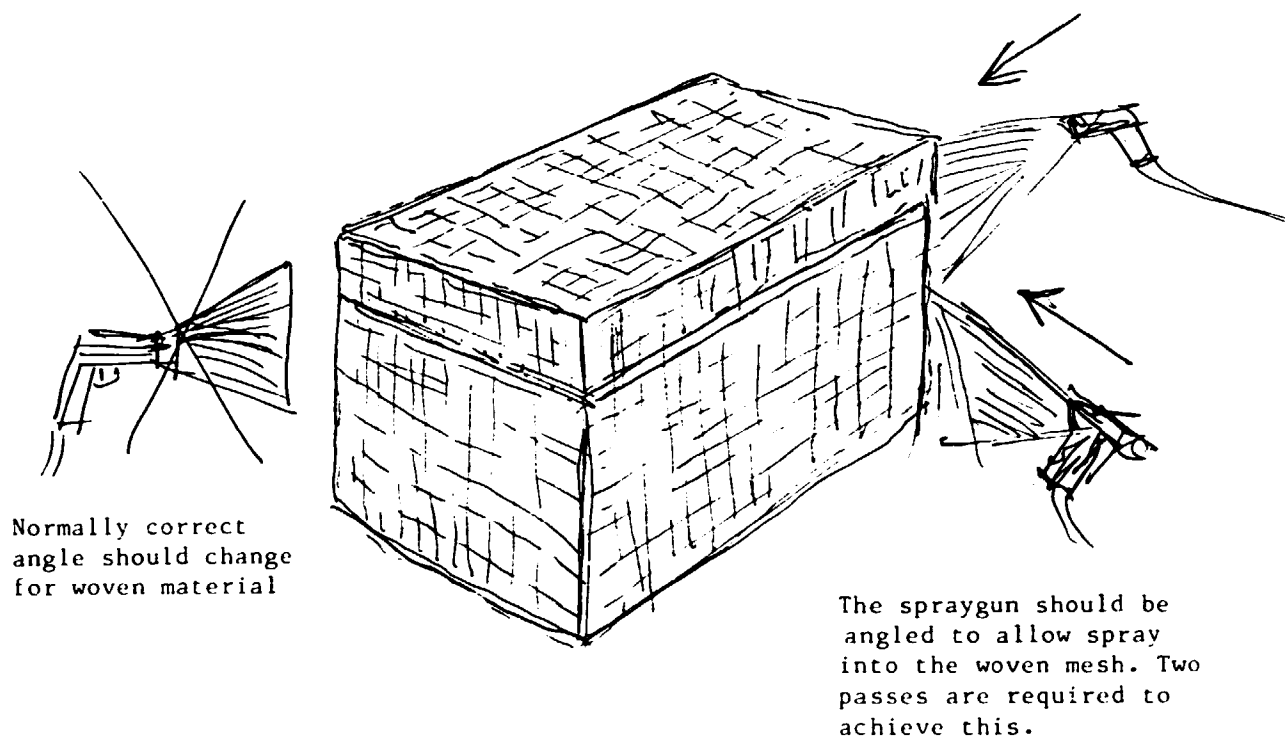


Fig. 3: Spraying techniques.

Normally correct angle should change for woven material.
The spray gun should be angled to allow spray into the woven mesh.
Two passes are required to achieve this.

Finishing material.

A number of items currently being sprayed would be better dipped. The area of "waterborne acrylics" should be explored to see if they would not be much more suitable for many of the operations now being done in the finishing area. Too many cans of finishing materials are left lying around uncovered. The resulting solvent loss has two bad results (a) it costs money to replace, and (b) the viscosity of the material creeps up reducing the coverage causing further loss.

Vertical hole boring.

Much of the present vertical hole boring would be better and more productive if both hands of the operator were free. It is suggested that the borers could easily be adapted to allow either foot pressure or use of an eccentric cam to assist the movement of the boring head.

"Upholstery" or mat assembly of the weave to the frames.

The present technique should be examined in the context of whether the assembly of the inner frame should be assembled to the outer frame before or after "upholstery". See sketches.

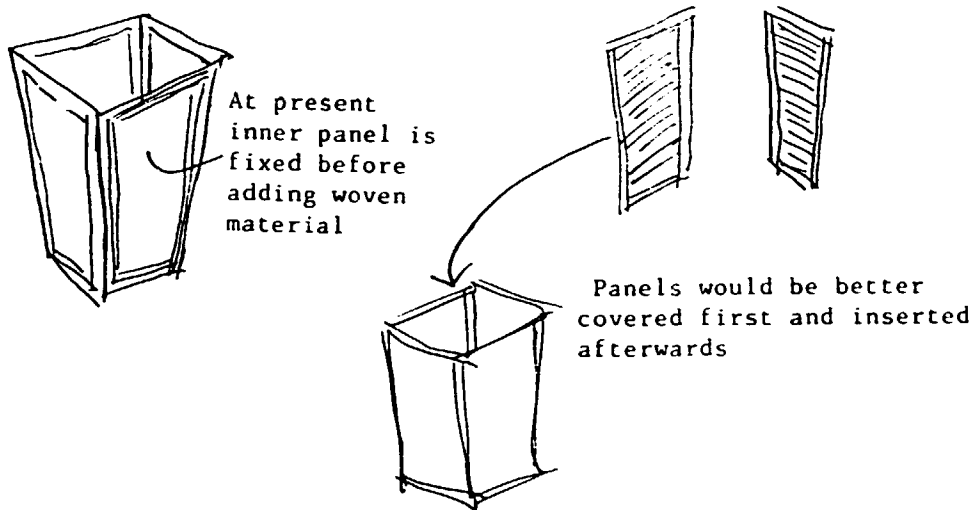


Fig. 4: Technique of assembly of inner frame.

Hinges.

The application of the hinges is a time consuming and inaccurate method. Again as so often a number of points need to be addressed here. (a) Are we using the right hinge at all or should we in fact be using staple-on plastic hinges. (b) When the hinge is applied should it be before or after lacquering. (c) When the lid is applied at this stage should you then put another unit inside that unit only to be taken out again later. (Double handling kills productivity!!)

Air pressure.

It was observed that operators using small nail guns were firing the nails then putting down their nail guns and picking up a hammer to bash in the nails one by one and then picking up their stapler/nail guns and repeating this process while of course what should have happened is that they should have advised their supervisor that the pressure on the guns was inadequate to drive the nails and so they were being forced to do the job twice.

What a horrible long winded sentence. It was used to illustrate the point. So is the process currently practised. The supervisors must watch for such.

Solid wood processing.

Careful consideration should be given as to whether Verawood should continue to process their own lumber. It does take up a large slice of space within the plant and it may well be possible to buy the lumber already rounded to the sizes required cheaper than can be done by the firm. Deltawood is proposed as a possible supplier as they have a recovery timber system and a suitable moulder.

Cutting of polypropylene fabric versus hot wiring it.

This was discussed with Mr. de Vera and is inserted here only as a memo to him.

Methods.

The methods used in all processes in the company need to be under constant review. Moving from purely handicrafts into "industrialized" production is not easy. It demands constant vigilance to ensure that the best work practices possible are adopted in the factory. This is a big job and an important one in a factory such as Verawood. It really needs trained people to be constantly examining each process till the most appropriate method is found and installed. It demands the constant asking of the question WHY ??

It is perhaps worth mentioning the classic acronym for the process that is method study here.

SREDIM

- SELECT .. THE JOB YOU WISH TO STUDY.. A BOTTLENECK.. EXCESSIVE TIME COST.
- RECORD.. OBSERVE HOW IT IS DONE NOW.. STAPLED .. NAILED .. TIED ... ETC.
- EXAMINE.. LOOK CAREFULLY AT THE PROCESS AND ASK ..WHY .. WHY DO IT LIKE THAT.
- DEVELOP.. DEVELOP ALTERNATIVE METHODS.. DEVICES ..MATERIALS..EQUIPMENT.
- INSTALL.. WHEN SATISFIED YOU HAVE DEVELOPED THE BEST METHOD..INSTALL IT.
- MAINTAIN.. ENSURE OLD PRACTICES DON'T CREEP IN AGAIN .. MAINTAIN THE PRACTICE.

Quality control.

Quality control is arriving too late in the process . It is vital that quality control be used throughout the process. There is no use doing all the processes right up to and including finishing and then reject for bad weaving or poor jointing or whatever. This was certainly observed but it is not known if this was an isolated case or a regular occurrence.

EXPORT PRODUCT POLICY OF AKKAWOOD

Introduction.

The purpose of this document is to provide a framework for the Prodex Product Development consultant to assist the management of Akkawood Ltd. to adopt an export product policy, and having done so, to develop exportable products consistent with that policy. In the case of Akkawood this really is more a product adaptation process of those products originally developed for Thornton White. This approach has been adopted as these products are quite suited to the skills and equipment of the enterprise.

Summary.

As with the previous Philippine woodwork enterprises Akkawood Ltd. has as its main strength its access to the "handicraft" skills of the area. The factory itself is very basic and quite small in floor area. There are a number of older employees who are unlikely to take well to the approach to manufacture necessary to make Akkawood a competitive enterprise in the export field and these will have to be accommodated by a combination of home and export sales. Emphasis for this exercise however is on exports.

The output per man at Akkawood Ltd. would indicate a major under-utilisation of resources. This has to be tackled to improve overall performance and to get the company export ready.

As for other seven, being in the Group of Eight gives the company an important vehicle through which to achieve exports but does not dictate the future product policy of the company. This policy must be shaped on its own strengths and weaknesses.

Strengths.

1. Access to good quality woodcarving at a competitive cost.
2. Adequate premises for woodworking with basic wood machines already in position.
3. Strong entrepreneurial drive, and a desire to build a substantial business to reinstate the family name as a leader in woodwork in the area.
4. Association with the Group of Eight gives access and credibility to its export intentions.
5. Export experience with the Group of Eight in the production of specialised products for the US market. These products include the wall hanging items which now form the basis of future product development.
6. A sound financial base.
7. Adequate kiln dried wood supplies and in house kilns capable of development.

Weaknesses.

1. The approach to industrial furniture manufacture is quite undeveloped leading to poor jointing and poor assembly.
2. Little or no sanding equipment.
3. The present export product range is inadequately developed from an engineering and methods standpoint and is therefore difficult to produce, leading to excessive costs.
4. Supervision on the factory floor is not very well informed.

Analysis.

The size of the present premises is perfectly adequate for home and export needs. The lack of good sanding equipment and perhaps even more important the lack of understanding as to what constitutes a good joint makes the construction of quality structures difficult to achieve. This is now being tackled however and very substantial improvements are expected.

Anything produced will have to be limited in its size and complexity to avoid or hide matched jointing as far as possible until the problems of jointing are overcome. In Akkwood this is not because there is no jointing equipment but rather because the equipment is more suited to joinery than furniture joints.

The speed of processing through the factory and the control of moisture in the wood are also issues which must be addressed to ensure acceptability in the market place.

The finishing skill which has been developed to service the Group of Eight's United States business at Made Philippine should continue to be used for the moment but a different basis of costing must be sought to avoid excessive and uncompetitive premiums on the product. In the longer term it will be necessary to develop "in-house" finishing skills.

The fact that the only woods commercially available are redwoods and that the principal skill asset is woodcarving also limits the scope for design style and to a great degree dictates that design style be in the reproduction idiom.

In the US redwoods are for all practical purposes confined to repro styles while in Europe redwoods are not widely used for furniture except in repro style. Staining or bleaching the mahogany while overcoming the problem of colour does nothing to improve competitiveness as the paler woods are in the main cheaper to the Philippines' competitors than to the Philippines.

The presence of other materials such as brass, ceramics and leather extends the decorative potential as does the router and the small lathe. Export effort should be centred on the production of the modified wall hanging units and the combining of both ceramic and brass will give these items unique appeal. The problem sourcing of ancillaries for ranges to be developed should be addressed (see below).

RECOMMENDED EXPORT PRODUCT POLICY.

Initially products will be similar to those already produced for Thornton White. Where joints are required they will be simple dowel joints. Products will be redesigned to reflect more accurately the limitations in machining and assembly while taking care not to damage the basic appeal of the products.

Brass "galleries" will be introduced and carving and fretwork will be more strategically placed to ensure perceived added value. Carving detail may be changed to co ordinate with other members of the group and the fret details likewise.

All products will be offered in the white initially but they may be either stained sealed and sanded (SSS) or indeed fully finished to avail of maximum price in the market. (This activity should of course continue to take place at Made Philippine if at all possible as the proliferation of finishing workshops is unlikely to advantage anyone at this time. Longer term however it is likely to be necessary to set up in-house finishing.)

Suggested products for design consideration are:

- (a) Development of the existing range of wall hanging shelf units into a coordinated range with components interchangeable and keeping structures to a minimum and using the fret work skills developed for Thornton White.
- (b) Development of an expanded range into corner hanging units and possibly whatnots using brass and marquetry decoration.
- (c) Sub-contract components where the carved detail can be combined with flat panel furniture to give an overall repro effect.

Things to do on sourcing.

1. Source as many places as possible for brass work. Look for people who are tooling brass, casting brass and machining in brass.
2. Look for people who are doing bone inlay.
3. Follow up leads on Marquetry and find out what kind of cost there is in producing things like a nice floral motif. How available is the craft? Can it be done reliably?
4. Find out who in this area is doing leather tooling and find out the likely cost of say a small panel 2" x 4".
5. Check the measurement of CD discs with a view to making a nice wall hanging repro cabinet.

PRODUCT POLICY FOR PHILMAR LTD.

Introduction.

The purpose of this document is to set out the logic by which Philmar might formulate an Export Product Policy and so define what market areas they might best approach.

Philmar, unlike almost all other companies in the PRODEX project, is not fully integrated into the project as it was a late entrant and much of the time available to the project had been allotted. It is further different in that it has been a strong exporting company over the past ten years gaining market share in the top end of the rattan market in the USA, Australia and Japan.

The recent shortages in rattan is causing the company to re assess its position and to move more determinedly towards rattan/wood combination cabinetry. The company has built a new factory and equipped it with a range of machinery suited to the production of simple panel furniture.

The challenge now facing them is the need to utilise this plant to achieve volume sales in the export markets of the world.

To achieve this it is proposed that a formula has to be found which will allow the company to combine its rattan weaving skills and its newly acquired veneering capacity in a manner which will meet the cost parameters of the upper middle market for furniture rather than the top end of the market that the company is currently targeting. This means substantially improving overall number of units processed per week.

Strengths.

The strengths of the company are many, principally:

1. Adequate financing to allow it to purchase raw materials as required.
2. Excellent factory premises and adequate machinery for basic panel work in series.
3. Excellent skills in processing rattan in a traditional manner.
4. Long experience in exporting.

Weaknesses.

1. Little or no wood processing technology in house at present.
2. No veneering or laminating experience.
3. A very conservative approach to structures in wood.
4. Shortage of design ideas in this medium.

Analysis.

The company's long standing commitment to the upper end of the market and its acceptance there is probably its biggest asset. For that reason the question has to be asked, can the company not achieve more sales from these outlets? If it can, and the limitation on it is its ability to produce for these companies fast enough, then the effort should go into increasing productivity of existing lines.

On the other hand, if the problem is one of no possible increase on existing lines to upper end markets, then a new strategy has to be devised and new products developed.

This has now been teased through sufficiently to make a decision.

The scenario offered by the consultant of fitting in to a market for furniture in the upper middle income has not been accepted. Rather it has been decided by the company to stay in the upper end of the market and to develop for this market.

This decision for product design and development involves designing a new range of furniture completely and producing it to meet the needs of the top end of the market. Further discussion has led to the mocking up of a series of door patterns which the consultant is to get reaction to in Europe before further development.

UNTIL THIS RESEARCH IS COMPLETED
IT IS PREFERRED NOT TO DEFINE THE PRODUCT DIRECTION OF PHILMAR.

EXPORT PRODUCT POLICY OF FURNITUREVILLE.

Introduction.

The purpose of this document is to provide a framework for the Prodex Product Development consultant to assist the management of Furnitureville to adopt an export product policy, and having done so, to develop exportable products consistent with that policy.

Summary.

In common with many Philippine woodwork enterprises Furnitureville has as its main strength its access to the "handicraft" skills of the Betis area. Furnitureville does have a small range of products which could be called repetitive these include Chippendale style chairs, tables and mirrors all of which were developed for the Thornton White connection. They also have a few other products developed for Maitland Smith and JSF which are worthy of development.

Participation in the Group of Eight gives the company an important vehicle through which to achieve exports but does not dictate the future product policy of the company. This policy must be shaped on the strengths and weaknesses of Furnitureville as it is now.

Strengths.

1. Adequate premises for woodworking with basic wood machines already in position, good jointing and a developing awareness of the value of jigs.
2. Access to good quality woodcarving at a competitive cost.
3. Association with the G of 8 gives access and credibility to its export intentions.
4. Export experience with the G of 8 in the production of Chippendale furniture, particularly chairs, for the US market.
5. A sound financial base.
6. Adequate kiln dried wood supplies.

Weaknesses.

1. Very low level of productivity .
2. Lack of an established market for repetitive product.
3. The present product range is inadequately developed and really needs completion into a range.
4. No sanding equipment is causing excessive and inadequate sanding by hand.
5. Very long cycle times make it difficult to meet realistic delivery dates.

Analysis.

The size of the premises is perfectly adequate for present needs. There is space for expansion and one can expect that the present layout will remain suitable for some time to come. The problem of low productivity is serious but can be tackled to give very rapid growth potential provided the right product policy is adopted. Undoubtedly one of the principal needs of the company now is a pressurising order book to give impetus to the changes already being implemented as a result of Mr. Brion's work at the company.

The fact that the only woods commercially available are redwoods and that the principal skill asset is woodcarving does limit the scope for design style and to a great degree dictates that design style be in the reproduction idiom. In the USA, redwoods are for all practical purposes confined to repro styles while in Europe redwoods are not widely used for furniture except in repro style. Staining or bleaching the mahogany while overcoming the problem of colour does nothing to improve competitiveness as the paler woods are in the main cheaper to our competitors than to us here in the Philippines.

Chairs and other products produced will have to be limited in range and complexity to avoid overstretching the resources of the machine shop.

Large flat surfaces requiring sanding need to be avoided until sanding equipment is purchased and solid table tops should be replaced by pre-veneered boards of MDF (Medium Density Fibreboard).

The finishing skill which is developing needs constant monitoring for the moment and is not really good enough for finished products as yet.

The products developed for JSF have possibly got scope for use in boardrooms of offices and as accent pieces in hotel foyers and need to be offered as such.

As well as developing a standard range of chairs and some mirror frames and occasional pieces, Furnitureville need to continue to do some special work to allow the skills of some of the older members to be used in carving and hand jointing.

In combining existing skills and facilities and greatly improving machining and product development Furnitureville has an excellent prospect for the future.

RECOMMENDED EXPORT PRODUCT POLICY.

Initially all products will be similar to those now produced for Thornton White. Where joints are required they will be simple dowel joints suited to the boring equipment available. All products will have an element of woodcarving in them. Where possible products will be sold either in the white or stained sealed and sanded. It is not really desirable to sell products finished at present unless it is done elsewhere, such as Made Philippine, as finishing at Furnitureville is not sufficiently developed.

Suggested products for design consideration are:

- (a) Development of the existing range of chairs to meet price points of approximately US\$80, US\$90 and US\$100 in the white.
- (b) Development of matching table frames and MDF tops and also side tables and console tables to suit.
- (c) Wall-hanging mirrors of ornate style with matching brackets and possibly overmantels.
- (d) Development of possible standard lamps with ornate carving and also torcheres.
- (e) Boardroom chairs and tables of repro style.
- (f) Sub contract components where the carved detail can be combined with flat panel furniture to give an overall repro effect.

EXPORT PRODUCT POLICY OF WOODBLOCK LTD.**Introduction.**

The purpose of this document is to provide a framework for the Prodex Product Development consultant to assist the management of Woodblock Ltd. to adopt an export product policy, and having done so, to develop exportable products consistent with that policy.

Summary.

As with all the previous Philippine woodwork enterprises Woodblock has as its main strength its access to the "handicraft" skills of the Philippines. Woodblock does not have any range of products suited to export at present though its "birdcages" may be viable as export products. The Gainsborough chairs made for Thornton White and the fireplaces previously produced are really quite unsuited to the facilities available at Woodblock.

Strengths.

1. Access to good quality woodcarving at a competitive cost.
2. Association with the G of 8 gives access and credibility to its export intentions. (Without this it is unlikely that Woodblock would be able to achieve exports.)
3. Kiln-dried wood supplies are readily available and a small kiln is available in house.

Weaknesses.

1. Very low level of productivity .
2. Premises barely adequate for the production of wood products.
3. Very basic equipment not at all ideal and certainly suited only to smaller items.
4. Lack of an established market for repetitive product.

Analysis.

The size of the premises is adequate for present needs only provided items manufactured are kept fairly small. There is little space for expansion. However with the right product range and under the marketing umbrella of the group there is no doubt that the company can become an exporter provided they stay within their capability.

The problem of low productivity is serious but can be tackled and overcome provided the right product policy is adopted.

The birdcages already prototyped do have some potential but it would have to be explored in depth before any great effort was applied to development. The small turning capacity also has merit and the little accessories now being made out of "Grecian" style pillars could with a little design input become the basis of accessories such as lamps, clocks etc.

Whatever is done in this area will also need to have some carving element or some other material added.

All the machinery available also dictates small woodware as an appropriate way to approach product development and indeed the small bandsaws, and the router are very useful in giving flexibility in design.

While the full fire surrounds presently done by the company are unsuited to the equipment it may well be possible to develop a range of fire associated accessories which would include fire screen, fender, fuel box and companion sets. Again each item needs a little carving.

All of the above suits the small equipment available and allows the company to purchase shorts from the bigger sawmills thus giving it a good advantage in material costs. The kiln that Woodblock have can then be brought into play to advantage also.

Large flat surfaces requiring sanding need to be avoided until sanding equipment is purchased but there is no immediate rush with this.

RECOMMENDED EXPORT PRODUCT POLICY.

All products will be similar to those now produced and will use where possible similar components to those now made for wall brackets etc. Where joints are required they will be simple dowel joints suited to the boring equipment available. All products will have an element of woodcarving in them.

Where possible products will be sold either in the white or stained sealed and sanded. It is desirable to sell products finished but difficult to see how that can be done at present unless this is done elsewhere such as at Made Philippine.

Suggested products for design consideration are:

- (a) Development of the existing range of wall brackets and pediments and turnings.
- (b) Development of a matching range of fire associated accessories as outlined above.
- (c) Using existing components development of a range of table lamps etc.
- (d) Sub contract components where the carved detail can be combined with flat panel furniture to give an overall repro effect.
Woodblock would do only the carved part.



8 October 1990

UNITED NATIONS INDUSTRIAL DEVELOPMENT ORGANIZATION

PROJECT OF THE GOVERNMENT OF THE PHILIPPINES

JOB DESCRIPTION

DG/PHI/87/007/11-09 (J-12209)

- Post title:** Consultant in export product development for builders' woodwork and wooden toys.
- Duration:** 1 month (split mission)
- Date required:** As soon as possible
- Duty station:** Manila, with travel in the Philippines.
- Purpose of project:** To develop and implement export strategies for four products (natural fibres, wooden furniture, builders' woodwork and wooden toys), to develop product adaptation, improve production and disseminate the experience to the industry and build-up an improved trade information and collection system and procedures.
- Duties:** Under the direction of the National Project Manager and in collaboration with an understudy (Filipino national), and project staff, he will be expected to share his knowledge of export market trends and tastes, export prices and profitability levels, as well as identify specific line(s) of products based on their export prospects, for manufacture by the participating companies considering their capabilities and potentials. He must assist companies to develop their product policies and the efficient production of such products, so that quality standards and other requirements are met. In particular, he will be expected to:
- Phase I**
- (1) Review the findings of ITC consultants prepared in earlier phases of the project, including other relevant information materials.

.... / ..

Applications and communications regarding this Job Description should be sent to:

Project Personnel Recruitment Branch, Department of Industrial Operations
UNIDO, Vienna International Centre, P.O. Box 300, A-1400, Vienna, Austria

- (2) Visit the firms participating in the programme (manufacturing wooden furniture, builders' woodwork and wooden toys) and review their product line(s) as well as their production capacity, strengths, weaknesses and export potential.
- (3) Help companies to develop their product policy. Identify product(s) with high export potential and/or introduce new products to specific companies which, according to his evaluation, will be capable of producing at profit. Companies may be required to produce samples or prototypes of specific products for introduction to potential buyers.
- (4) Introduce the companies to market trends and buyer/consumer preferences tastes, export prices and margins, and other relevant information to attain competitiveness in international markets.
- (5) Work with an under-study (Filipino technician) and train him on the rudiments of product development so that he may be able to act as professional consultant to Filipino woodbased companies.

Phase II

- (1) Visit again the participating companies to assess the development of selected products identified in the previous visit and advise on any problems that may have arisen.
- (2) Check on the efficiency of production of such product samples or prototypes including quality requirements and adherence to market preferences.
- (3) Update the companies on latest export trends prices and latest production technology for the production of the line(s) of products identified.
- (4) Develop other products based on updated market demands, banking on the inherent potential of each company and utilizing high value added techniques.
- (5) Encourage complementarity and cooperation among participant companies to attain higher profitability through specialization.

Phase III

- (1) Given that the selected products developed by the individual companies were introduced to identified buyers during the marketing mission in early 1991 and that initial orders were received, he must check the production of said products as to quality and production efficiency.

- (2) In case the product(s) did not gain much buyers' interest during the first marketing mission, necessary innovations and revisions should be done on said product(s) based on market requirements.
- (3) Other products may be developed in preparation for the marketing mission in 1992 in addition to existing line(s).
- (4) Conduct seminars in Manila and in Cebu for managers and supervisors on export product development, orienting them on the latest market trends and production techniques in international markets of wood products.
- (5) Prepare a technical report on the aspects of product development done for each company, outlining additional recommendations for existing and foreseen problems.

Qualifications: Wood processing expert with wide experience in product development and marketing, knowledge of market and product adaptation as well as adequate knowledge of wood production techniques. Experience in developing countries preferred.

Language requirements: English.

Background information: Although Filipino wood manufacturers have the capability for product development, they are not equipped with enough knowledge of the market requirements and production techniques in order to be competitive on the export markets. The companies need to adapt to changing realities of the market. Product development is crucial particularly for companies targeting the production of high-value, specialized items. Given the dwindling raw material reserves of the industry, product development and production efficiency are necessities of survival. The object of this consultancy is to assist individual companies to attain these goals.

Under its Expert Development Project, the authorities of the Philippines are taking all possible measures to improve the productivity levels of individual wood-processing firms and to strengthen the export possibilities of their products. The project staff, together with internationally recruited experts from ITC and national consultants, undertook a supply verification and a market research for each wood-based industry as a base for the export strategy formulation phase of the project. The project is taking a cohesive approach for the three wood-based industries, since the findings of the previous phases reveal inter-related problems for all industries (wooden furniture, builders' woodwork and wooden toys).

ANNEX II

COMMENTS OF SUBSTANTIVE OFFICER

The report reflects a correct diagnosis of the problems facing the ten plants receiving the assistance, and suggests a sound export product policy. The suggestions made are simple and can be implemented easily.

N.B. Mr. Vernon is also providing technical assistance to this project as an ITC recruited consultant. This report should be studied in conjunction with the ITC report, since it complements it.