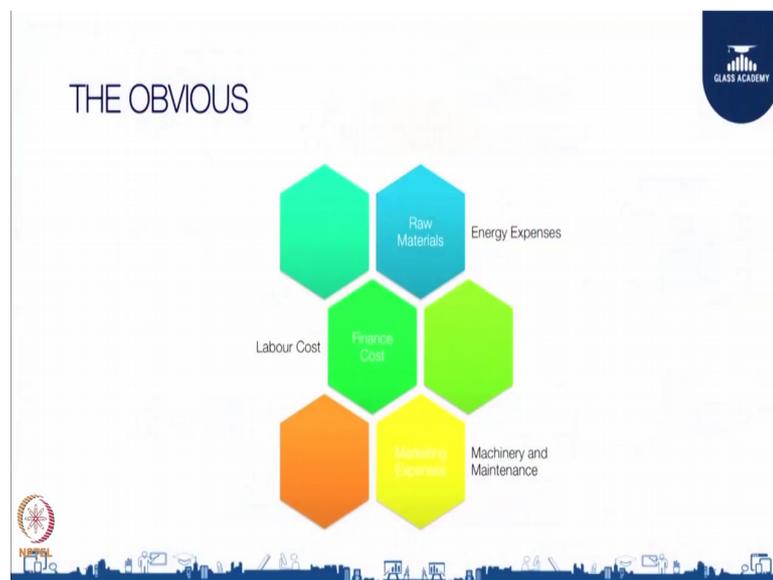


**Glass Processing Technology**  
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**Department of Civil Engineering**  
**Indian Institute of Technology, Madras**

**Lecture - 69**  
**Post Manufacturing Expenses**

Well friends. Today's topic is Post Manufacturing Expenses; that is called PME. The unseen superstars, there is beyond processing there are unseen superstars; which affects our bottom line. We all are aware that obvious cost is you know labour cost, raw material cost, energy cost, marketing expenses, machines maintenance, all these costs are obvious.

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But once you produce the material after producing the material there is a cost involved.

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THE OBVIOUS

But are we serious enough about other factors, beyond processing, that contribute towards profitability?

The slide features a blue header with the title 'THE OBVIOUS' and a question. A blue shield logo with 'GLASS ACADEMY' is in the top right. The bottom of the slide has a blue silhouette of a city skyline with various icons and a small circular logo on the left.

And there is a huge cost which affects profitability. Are we serious enough about other factors beyond processing? Let us understand.

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POST MANUFACTURING EXPENSES

Incurred post production and till goods are handed over to customers

Tends to be ignored and missed out

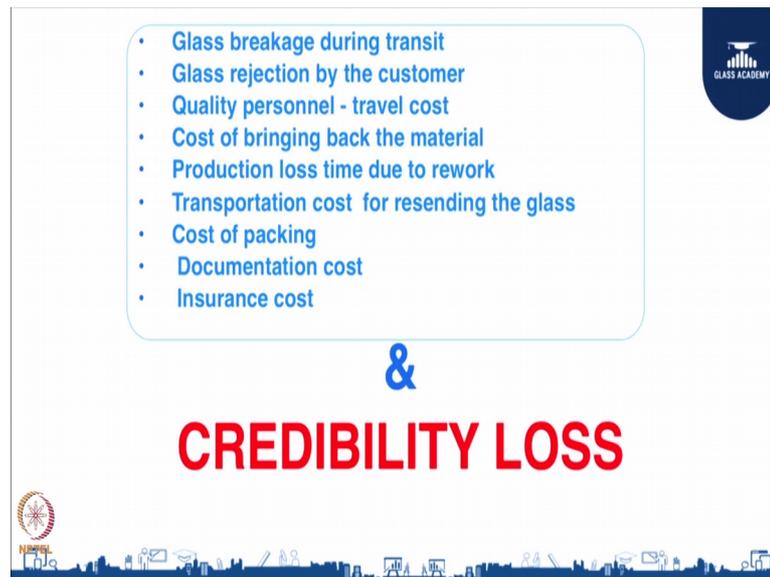
Contributes significantly to costs

Important to identify, track and control

The slide features a blue header with the title 'POST MANUFACTURING EXPENSES'. Below the title is a staircase diagram with four steps, each with a colored box containing text. The steps are blue, green, yellow-green, and orange. A blue shield logo with 'GLASS ACADEMY' is in the top right. The bottom of the slide has a blue silhouette of a city skyline with various icons and a small circular logo on the left.

That post manufacturing expenses, let us understand, cost incurred post production till goods are handed over to customers. Tends to be ignored and missed out. And it contributes significantly to cost. It is very important to identify track and control this expenses, because these are the expenses which directly affects bottom line.

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Let us understand it could be a glass breakage during transit glass rejection by the customer, travel cost, because of quality cost of bringing back the material for repair production loss time due to rework transportation cost for resending the glass, cost of packing documentation cost, insurance cost. And above all there is credibility, loss above all there is a above all there is a credibility loss well. We will have to review what are the areas of concern. How do we reduce the cost and recover the cost? Let us understand this.

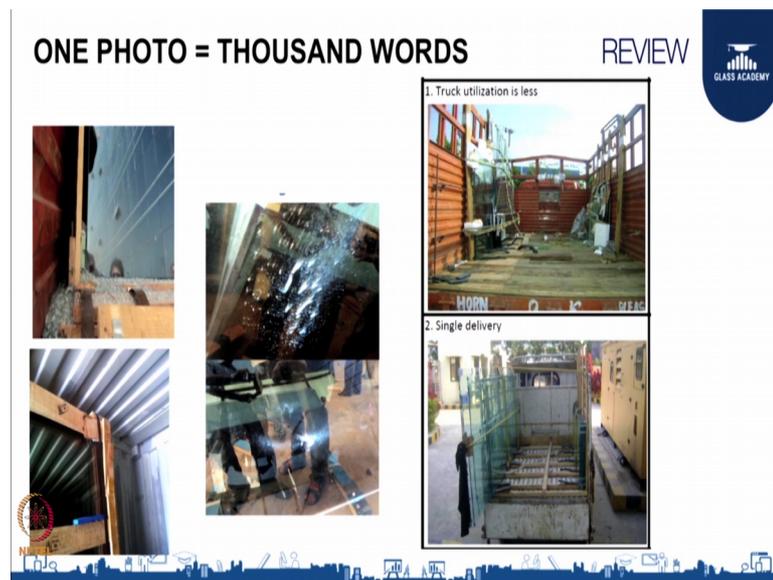
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First area is packaging. Packing cost, packing type loading procedure, we need to review then transport location specific type and size of truck optimization of loading pattern weight balancing, then comes insurance, documentation procedure and insurance loss; quality rejection, specification as per standards, project wise rejection loss.

Others could be vehicle halting charges, vehicle documentation screen development charges. All these areas we need to review where we can reduce the cost.

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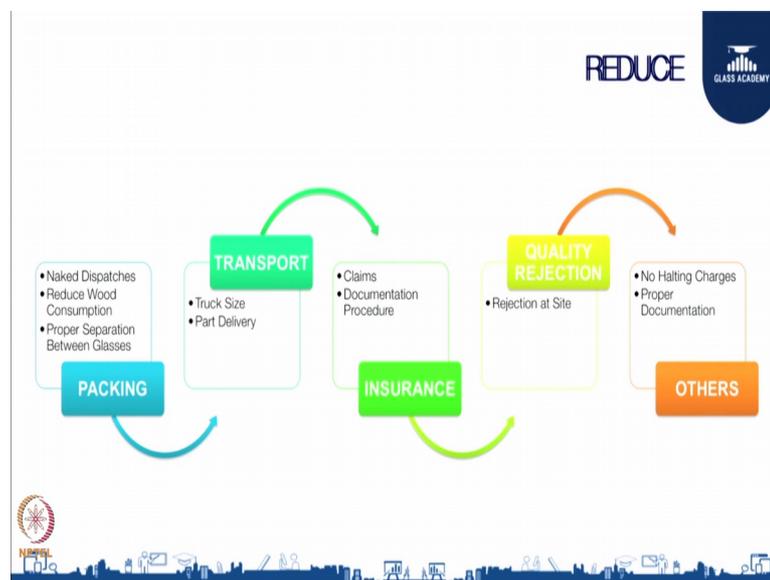
Just have a look on this photo, these photos speaks on the role. Look at the breakage pattern. Look at the truck utilization pattern truck utilization is a single delivery, how it has been loaded, how this breakage is happening?

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Let us have a look on this in general what are the material used in packing, we use polythene, use of rubber pads, use of packing thick board, use of nails use of wood and use of ply. These are the items which we use for packing.

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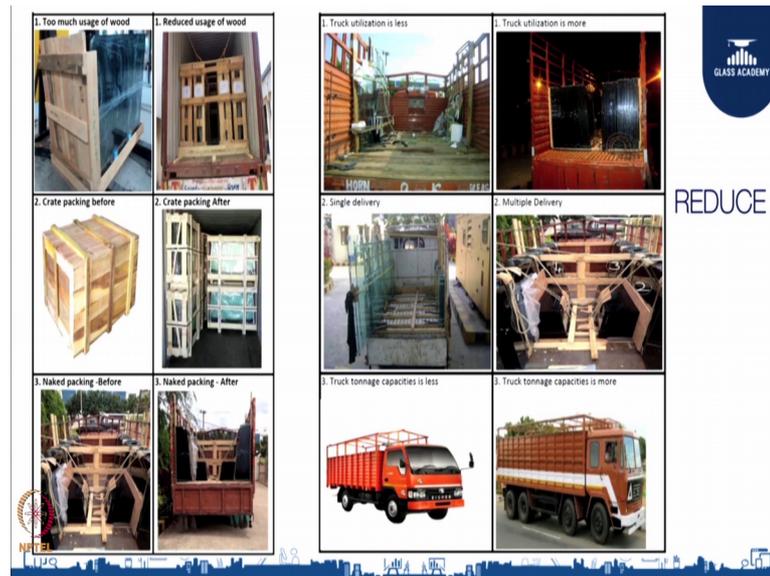


How do we reduce this in packing? Can we dispatch naked glass? Can we reduce the wood consumption? Can we segregate the glass properly and put separator in between glass? Can we identify the truck size required, whether it is the part delivery we can identify? Are we making proper claims? Do we have proper? Are we making proper

claims? Do we have documentation procedure, quality rejection, there is a rejection at site, others are halting charges, no proper documentation.

So, by focusing on this area, we can always reduce, the cost how do we reduce the cost or recover the cost we will proceed further.

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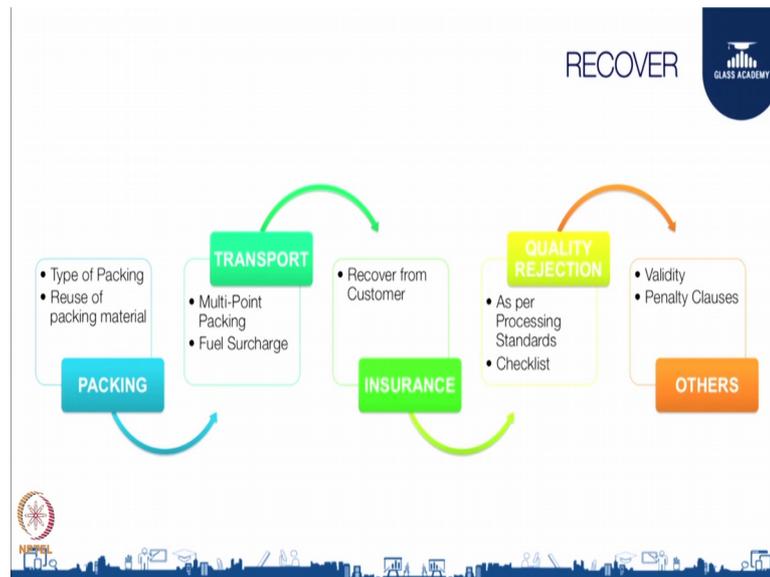


Now look at this first slide. The usage of wood is so high which can be reduced by adopting this kind of packing. Now look at this packing. It is fully covered with wood; whereas crate packing once you decide understand you can reduce packing to this level by using this method; naked packing, naked packing of glass.

Now, this is before and after in PME you can use naked glass packing in this method. Truck utilization, look at the truck utilized, some few glasses are live; where can where as you can define the truck size and accordingly you can have the truck and load the quantity. This is a single delivery, one customer on a daily basis if you look at you so few customers which are nearby to your processing unit. By making a multiple delivery, you can reduce the cost of transportation. Of course, the truck tonnage capacity versus what capacity you would like to hire and you can save money over there.

But the biggest challenge is how do we implement us, how do we really reduce the cost. It is the big challenge.

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Recover; in packing type of packing, reuse of packing material. Type of packing when I say one we have seen a packing with excessive use of wood, and another is using discretely multi point dispatch.

And you can adds fuel surcharge in your billing. Recover from customer, insurance charge you can charge to the customer and you can recover from the customer. Quality rejections, every glass process has to be as per the processing standards, and you should have checklist for the same. Other is validity part, penalty clauses you can add in your system so that you can require certain cost of material.

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Now, reuse of wood. We all know that we get lot of packing from our suppliers. If you look at the centre, this is the kind of wood we keep getting while we purchase the glass. So, you can reuse in this method. The same wood can be reused properly if stacked properly in the beginning when you receive the glass when you open the crate. You have to keep wood safely and properly.

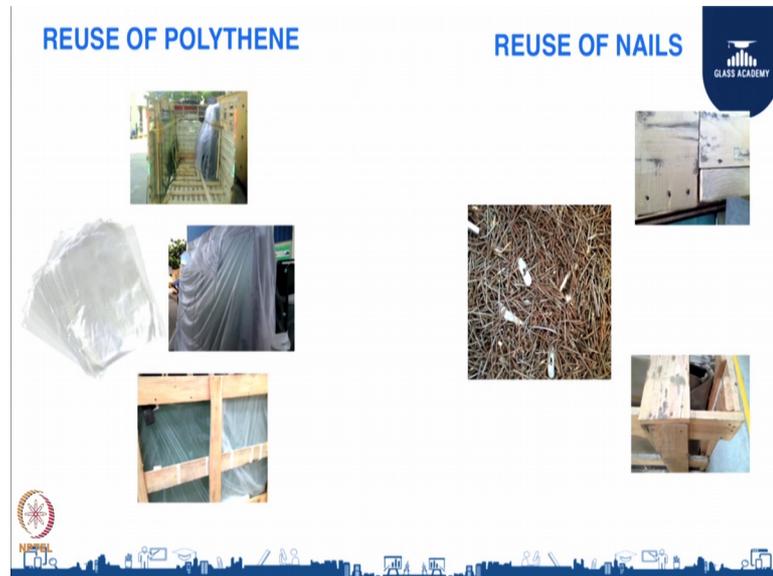
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Reuse of pad. Lot of pads we get from the supplier while we get raw material. Same pads can be used reused for all our packing purpose so that we can reduce the cost of rubber.

Only thing require is that you need to segregate the pads when you open the crates and keep it safely so that you can reuse it.

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Reuse of polythene. Now if you look at lot of polythene covered we get when we open the crate, we find that you know polythene cover is been used. Same polythene cover can be kept safely, and can be reused while dispatch. You can see from above photos, how it has been used.

So, you do not have to buy new polythene. Same way nails, when you open the box, store all the nails and same nails, good nails from that you can use it for repacking, and you can save lot of cost.

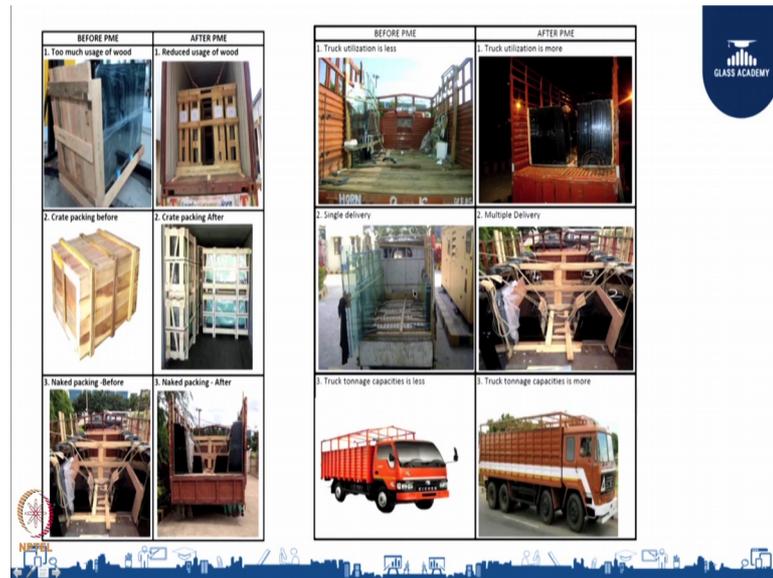
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Reuse of ply. Lot of ply we get from PVB suppliers and other suppliers. Same ply can be kept safe, and accordingly it can be used. Reuse of iron strips, every crate we get from the supplier, it is being tracked by iron strips.

So, we can reuse those strips and use in new crates while dispatching. Reuse of thick board, lot of thick board we get from mini suppliers like PVB and all, we can store that thick board and reuse while dispatching the material in this way. So, all this material we can save the cost instead of buying new material, we can reuse the same material and save the cost.

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Like I said, too much use of wood you save the cost before truck utilization.

And if optimise, you can use it in a better way. Single delivery you can plan for multi delivery. Truck tonnage capacity what exactly tonnage capacity of truck you need. You can define and accordingly you can arrange the truck so that your cost comes down.

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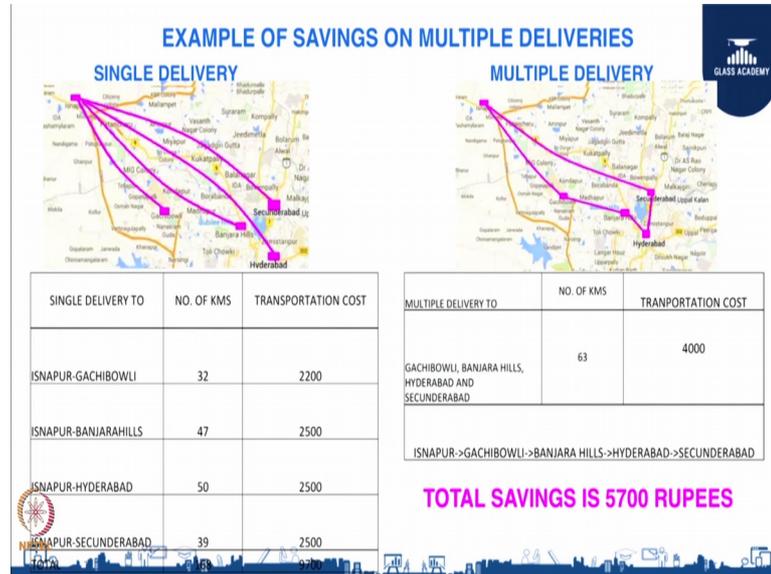
### Dispatch Inspection report

<b>FUSO</b>	<b>FINAL INSPECTION REPORT</b>					DOCU. NO.	FUSO H/E/QA/03	
DATE:	SL. NO.	LOCATION:			REV. NO.	4.0	DATE	01.01.2017
CUSTOMER DETAILS		PARTY NAME	DESTINATION	PROJECT	PO NO.	PO DATE	TIME	
ORDER DETAILS		W.O. NO.	ORDER QTY	DISPATCHED QTY	INVOICE NO.	DATE	TRANSPORTER	VEHICLE NO.
DESCRIPTION								
ANNEALED	SCRATCHES	CHIFFLES	EDGE DEFECTS	GRINDING	DRAWING	SIZE	QC TESTED	
TOUGHENED	SCRATCHES	CHIFFLES	COATING	FIN HOLE	DRAWING	SIZE	QC TESTED	
LAMINATED	SCRATCHES	CHIFFLES	BUBBLES	TRIMMING	DRAWING	SIZE	QC TESTED	
DOUBLE GLAZING	SCRATCHES	CHIFFLES	CLEANING	PRIMARY SEALANT	SECONDARY SEALANT	SIZE	QC TESTED	
OPEN PACKED DISPATCH	PAPER SEPARATOR	BUTTON	LOADING PATTERN (NO GLASS TO TOUCH)	BELT/ROPE	POLYTHENE COVERED	BACK SUPPORT	BREAK / CHOKING	WOOD
CRATE PACKED DISPATCH	PAPER SEPARATOR	BUTTON	RAILING	BELT/ROPE	POLYTHENE COVERED	WOOD STABILIZATION	BREAK / CHOKING	WOOD
TRUCK CONDITION	HALF BODY / TRAILER	WOOD/IRON FLOOR	CAPACITY (TONNE)	FLOOR CONDITION	TARPAULIN	PATNA / ANGLE	VERTICAL / HORIZONTAL	AL TRAPPING
LOADING CONDITION	VERY GOOD	GOOD	FAIR	BAD	PHOTO TAKEN	QTY VERIFIED	QC TESTED	
REMARKS & COMMENTS :						TEST CERTIFICATE ATTACHED	<input type="checkbox"/> YES	<input type="checkbox"/> NO
SECURITY NAME	INSPECTED BY :			SIGN				
SUPERVISED BY	APPROVED BY :			SIGN				

This is a small format which you can use it as a checkpoint before dispatch so that you can minimise all the areas of concern, it has got you know, order detail, is there any chip

is there any scratch. So, before dispatch you can recheck all the material and use this form as a checking list and accordingly you can dispatch.

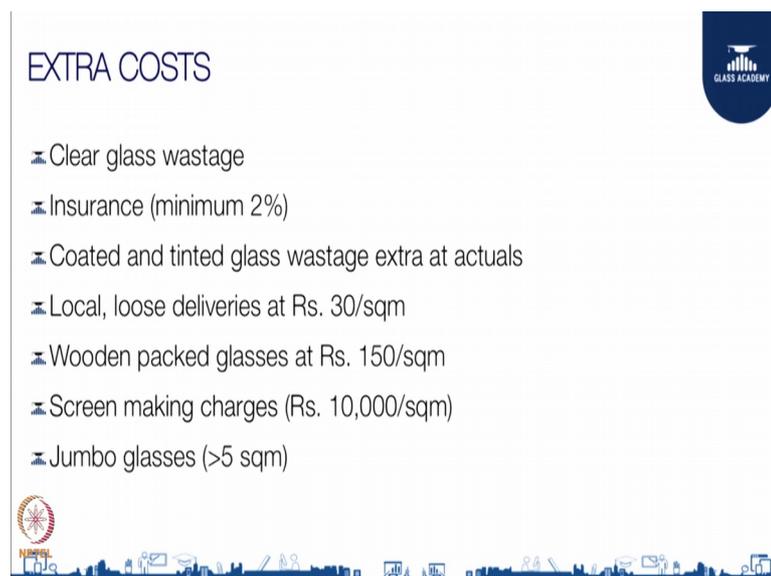
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Is a just in small example of saving multiple deliveries.

Now, from one point, you can despatch 1 2 3 4 depending upon the customers instead of sending 4 trucks, you can send it in one truck, and you can save huge money.

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Apart from this there is a clear glass wastage; which you can optimise. You can charge insurance minimum 2 percent. Coated and tinted glass wastage can be charged extra at actually. Local loose deliveries at rupees 30 per square meter you can charge, or depending upon your area you can charge accordingly.

Wooden packed glasses at 150 square meter, you can charged to the customer. Screen making charges 10,000 per square metre you can charged. Jumbo size glasses you can charged 50 percent extra.

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The slide is titled "EXTRA COSTS" and features a blue header with the "GLASS ACADEMY" logo. Below the title, a list of charges is presented with blue square bullet points. At the bottom of the slide, there is a decorative blue bar with a white city skyline silhouette and a small circular logo on the left.

- Minimum chargeable area (0.50 sqm)
- Anodized spacers at Rs. 50/sqm
- Extra silicone bite size at Rs. 30 for every 2 mm increase
- Edge-deletion costs for stepped glasses at Rs. 50 per 10 mm
- Warehouse charges for customer supplies
- Chargeable area (+20 mm, +25 mm, next 20 mm)
- Minimum chargeable area (0.25 sqm)

You can define minimum chargeable area, 0.50 square meter, anodized spacers that 50 rupees square meter. Extra silicone bite size at 30 for every 2 mm increase, edge deletion costs for stepped glasses and at rupees 50 for 10 mm. Warehouse charges for customer supplies. Chargeable area depending you can charge plus 20, plus 25 next 20 mm. You can define minimum chargeable area 0.25 square meter.

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## KEY PERFORMANCE INDICATORS



- ⚙ Packing cost and recovery per sqm
- ⚙ Transport cost and recovery per sqm
- ⚙ Transit breakage costs and Insurance
- ⚙ Screen cost and recovery per sqm
- ⚙ Other charges (like holes, cutouts, etc.) cost and recovery




Let us look at a key performance indicators, packing cost and recovery per square metre. Transport cost, sorry, transport cost and recovery per square metre, transit breakage cost and insurance. Screen cost and recovery per square meter. Other charges like holes cut outs etcetera cost and recovery.

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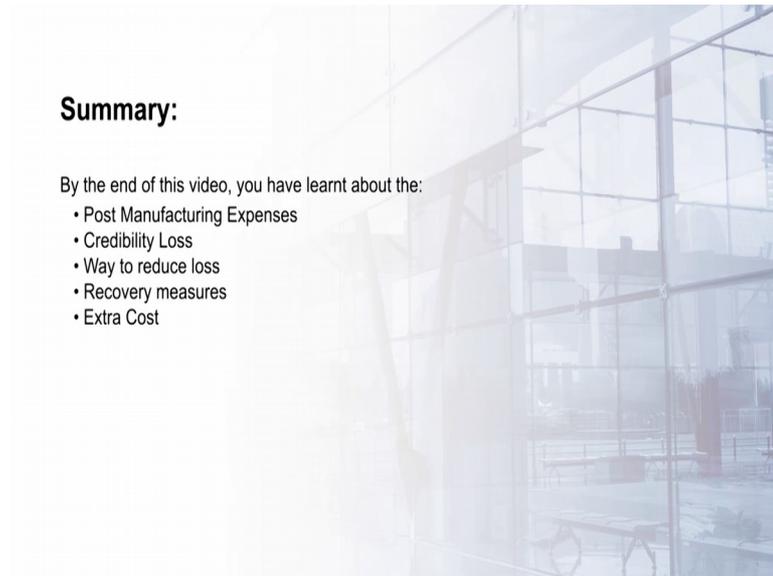
SNo	Department	Team Leaders	Team Member	Date	Values	Cost Saving				Remark	Strategy
						Status	Target	May	June		
1	Cutting	Wastage Reduction									
2	Pre-Processing	Rejections									
3	IGU	Scrap PVB Used									
4	Lamination	Silicone Wastage									
5	HR	PPE Cost Reduction									
6	Power	Tempering Power Reduction									
7	Logistics	Transit Breakage									
8	Stores	Non-Moving Stock									
9	Admin	Stationary Cost									
10	Purchase	Consumables Cost Reduction									




A small table where you can define what is the cost and what is the saving, and you can review every month.

Well, as the competition is growing, it is very important to save post manufacturing cost. We must make sure that packing has to be done as per the requirement. And all the areas of saving which we have just learned should be charged to the customer so that we can add profit to our organization. Let us have the new beginning.

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Thank you.