



# ANALYST MEET

8<sup>TH</sup> JUNE, 2005

## SAFE HARBOUR

Investors are cautioned that this presentation contains forward looking statements that involve risks and uncertainties. The company undertakes no obligation to publicly update or revise any forward looking statements, whether because of new information, future events or otherwise. Actual results, performances or achievements could differ from those expressed or implied in such forward looking statements.

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- AIS – At a glance
- Performance highlights FY 2005
- Financial Highlights FY 2005
- Automotive operations
- Float operations
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## AIS – Background

Established as : Asahi India Safety Glass Ltd.

Commercial Production : 14<sup>th</sup> March, 1987

Equity Structure	: Labroo's	24%
	: Asahi Glass Co. Ltd.	24%
	: Maruti Udyog Ltd.	12%
	: Public	40%

Initial Equity : Rs. 1.85 crores

Products : Automotive Safety Glass

Initial equity increased to Rs. 7.40 crores through two successive bonus issues made by the Company.

## AIS – Past Perspective

### Brief snap shot of AIS – from inception till FY 2004-05

S. No.	Item	1987	2005	CAGR %
1	Sales Rs Lacs	1150	60414	26.24
2	Profitability			
	EBDTA Rs Lacs	203	12570	27.47
	EBDITA Rs Lacs	333	12885	23.99
3	Market Capitalisation *	185	135891	47.43
4	Market rate *(Rs.)	10	170	35.27

\* As at year end

These figures contain, in brief, the story of AIS's growth from a supplier of automotive tempered glass to Maruti Udyog (Suzuki) when we began, to the current situation of India's largest glass company, with profitable growth flowing from all the actions taken since the birth of the organization.

## AIS – Corporate Profile

- AIS today is the largest glass company in India, manufacturing a wide range of international quality automotive safety glass and float glass.  
AIS has the following two operating business units :
  - AIS (Automotive)
  - AIS (Float)
- AIS (Automotive), one of the two operating business units of AIS, is India's largest manufacturer of world class automotive safety glass and is, in fact, one of the largest in the field in Asia.
- AIS (Float), the other operating business unit, is a leading manufacturer of international quality float glass.

AIS is in the process of transforming itself from being a manufacturer of world-class products to a solutions provider. AIS is now moving up the exciting value chain of glass by providing design, products and services that make glass more versatile, more user friendly.

## AIS – Performance Highlights FY 05

- Completed scheduled expansion and commenced commercial production at the Automotive Plant at Chennai
- Enhanced capacity for tempered glass at Automotive Plant in Rewari
- Completed scheduled expansion and commenced commercial production at the Architectural Processing Unit at Taloja (Mumbai)
- Commenced setting up of Integrated Glass Plant ( IGP ) at Roorkee in Uttaranchal
- Set up AIS Glass Solutions Ltd. to capture the value chain in architectural glass

### Changes over FY 2004

- Net Income from operations up 20 % to Rs. 5,887 mn
- Operating Profits (PBDIT) up 5 % to 1,288 mn
- Operating Profit Margin at 21.3 % vs 23.9 % last year, impacted by one time factors explained later
- Profit After Tax up 9 % to Rs. 785 mn
- Total dividend of Rs. 2.50 per equity share declared for FY 05 against Rs. 2.25 last year, with payout working out to 29%
- Declared issue of bonus shares in the ratio of 1:1
- CEPS and EPS of Rs. 14.78 and Rs. 9.73

## AIS – Financial Highlights FY 05

AIS MERGED Financial (in Rs. Lacs)	Jan-Mar			Year ended		
	2005	2004	% Incr /Dec 05>04	2004 -05	2003 -04	% Incr /Dec 05>04
Gross Sales	18406	15684	17%	69153	58842	18%
Net sales before inter division sales	16235	13474	20%	60414	51271	18%
Profits before foreign exchange gain /loss						
PBDIT	3693	3155	17%	12886	12235	5%
PBDT	3507	3089	14%	12570	11992	5%
PBIT	2566	1847	39%	8842	7100	25%
PBT	2381	1780	34%	8526	6857	24%
To net sales before inter division sales						
PBDIT	22.7%	23.4%	-3%	21.3%	23.9%	-11%
PBDT	21.6%	22.9%	-6%	20.8%	23.4%	-11%
PBIT	15.8%	13.7%	15%	14.6%	13.8%	6%
PBT	14.7%	13.2%	11%	14.1%	13.4%	6%

The one time/abnormal factors that impacted profitability in FY 05 are briefly explained subsequently.

# AIS – Financial Highlights FY 05

## One time factors impacting FY 05 results

Items	04-05	03-04
Non regular freight	1150	123
Unbudgeted use of LDO for power generation	650	0
Total	1800	123
PBDIT without one time epxenses	14686	12358
PBDIT % age of Sales	24.31%	24.10%

Two significant factors impacted the Automotive Unit in 2004-05:

1. With demand rising suddenly and sharply, capacities came under severe strain. A strenuous effort was made to raise actual output even beyond rated capacities. For example, the laminated plant, with a capacity of 1.20 million windshields, actually produced about 1.40 million windshields. However, in ensuring zero disruption at customer (OEM) lines, abnormal means of freight were resorted to (including air freight). The most severe impact was felt in Q2 and Q3.

With additional capacities coming on stream, this issue has been taken care of, as is evident in a subsequent slide, which shows margins picking up in Q4.

2. Increased production also led to unbudgeted use of higher cost fuel (LDO) in generating power at the Rewari plant. This would normally have been generated using lower cost fuel (FO). This was exacerbated by a breakdown in one of our FO based DG Sets. This situation too was set right.

## Segment –wise Results FY 2004-05 Vs 2003-04

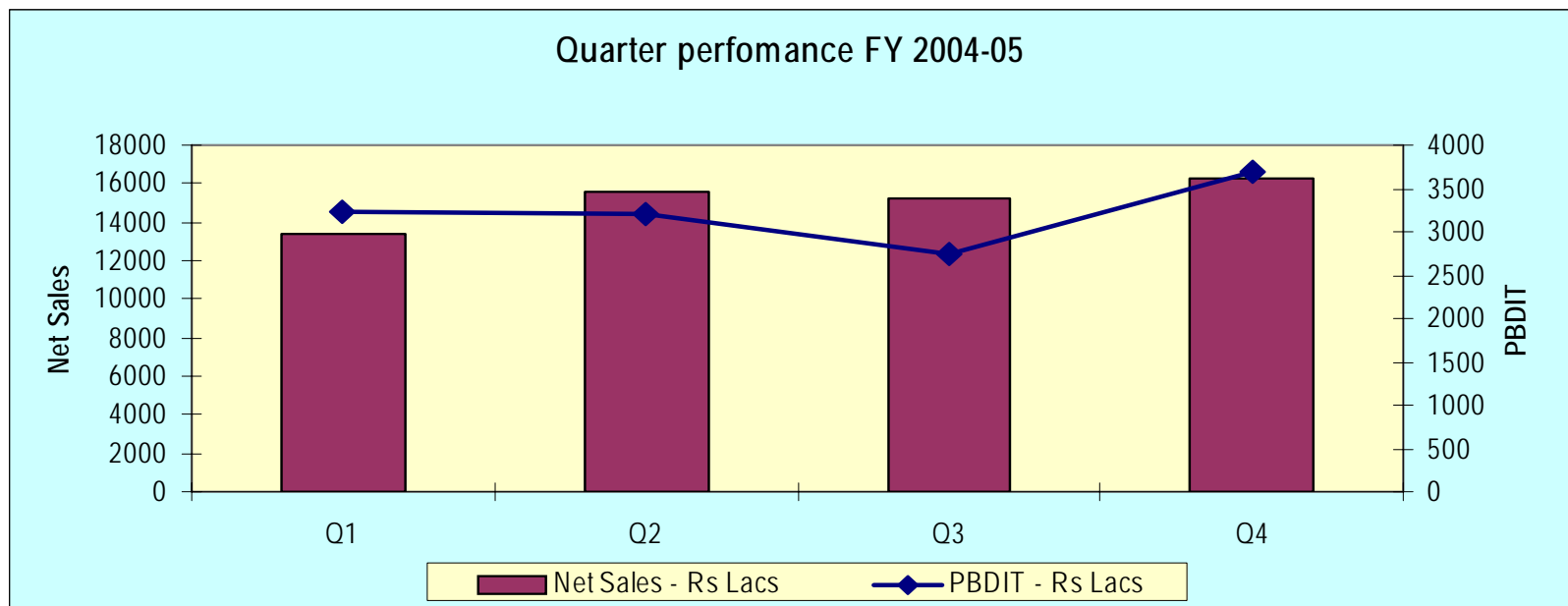
S.N.	Particulars	2004-05	2003-04	Change
I	Segment Revenue			
	Automotive Glass	32901.84	27961.46	18%
	Float Glass	27923.02	24364.86	15%
	Others	104.67	111.89	-6%
	Total	60929.53	52438.21	16%
	Less :			
	- Inter-segment revenue ( net of excise duty )	-1320.99	-1968.15	-33%
	Net Sales/Income from Operation	59608.54	50470.06	18%
II	Segment Result			
	Automotive Glass	5391.66	4881.85	10%
	Float Glass	3345.46	3008.02	11%
	Others	104.67	175.45	-40%
	Profit Before Tax & Interest	8841.79	8065.32	10%
	Less : Interest & Financial Charges	-315.58	-242.47	-30%
	Less : Other Un-allocable Expenditure	0.00	-0.11	100%
	Total	8526.21	7822.74	9%
III	Margin- Segment Results/Segement Revenue			
	-Automotive Glass	16.39%	17.46%	
	-Float Glass	11.98%	12.35%	
	-Total	14.51%	15.38%	

## AIS – Financial Highlights Q4 FY 05

- Net Income from operations up 18.6 % YoY at Rs. 1,568 mn
- Operating Profits (PBDIT) up 17 % YoY at Rs. 369 mn
- Operating Profit Margin at 22.7 % vs
  - 23.4 % Last Year
  - 18.1% Last Quarter (Q3) this year
- Profit After Tax up 2.5 % YoY at Rs. 213 mn.

## AIS – Financial Highlights : Q1 – Q4 : FY 05

Item	Q1	Q2	Q3	Q4	Total
Net Sales - Rs Lacs	13436	15553	15191	16235	60414
PBDIT - Rs Lacs	3233	3208	2752	3693	12886
PBDT - Rs Lacs	3195	3178	2690	3507	12570
PBT - Rs Lacs	2103	2107	2066	2566	8842
PBDIT Margin	24.1%	20.6%	18.1%	22.7%	21.3%



## AIS – Broad Outlook : 2005-06

1. Top line expected to grow in the region of 15 ~ 18%
2. Margins expected to stabilise considering the non recurrence of the abnormal factors of FY 05.
3. Projects due to start up in 2005-06
  - Phase 1 of Tempered : Automotive : Chennai
  - Phase 2 of Laminated : Automotive : Chennai
  - Architectural Processing Plants in Rewari & Chennai

AIS - Automotive

## Facilities - Plant 1 (Rewari)

Products : Tempered side and back glasses  
: Laminated windshields  
: Printing for direct bonding (BCP) and defogging (Ag)  
: Modular assembly for quarter glasses  
: Sub assemblies on glasses (holders, hinges, mirror buttons, etc.)

Site Area : 25.50 acres

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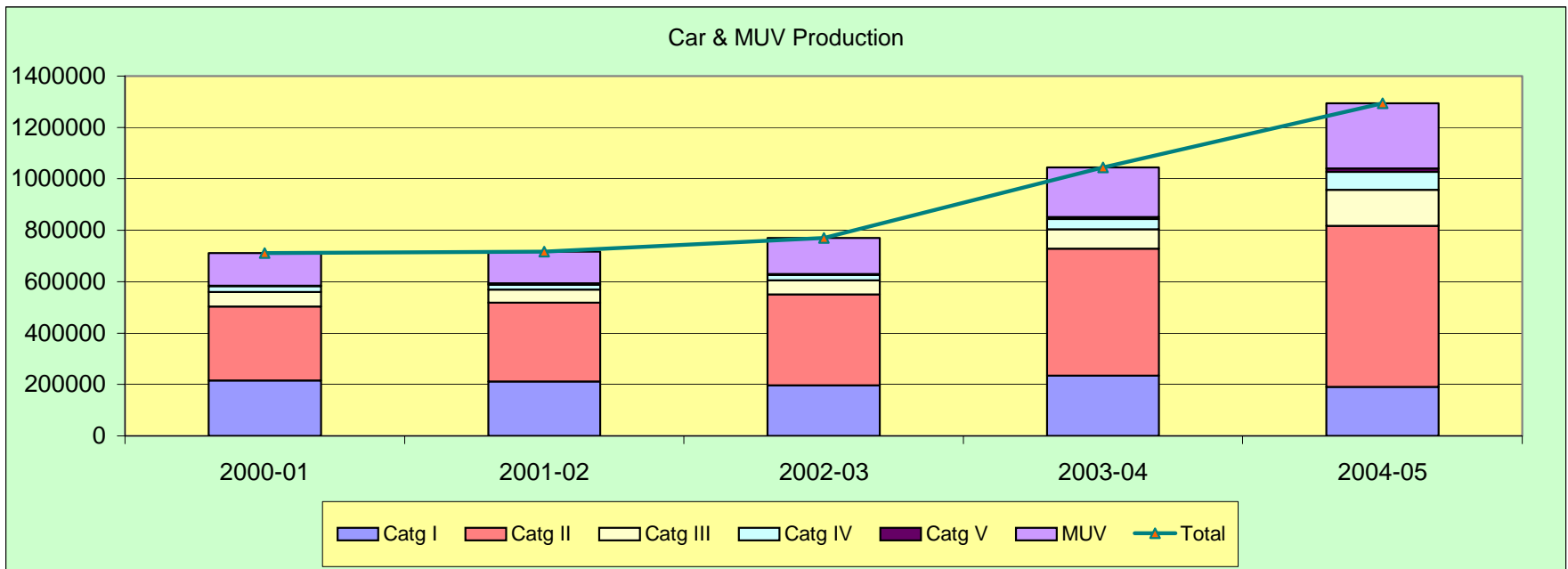
Market : Sales made directly to vehicle OEM's and through two nation wide distributors (with 27 depots) to the direct after market

Power : Own generation facilities for 10 MW on HSD/LDO/SKO and 7 MW on FO

**TOTAL PRODUCTION CAPACITY :  
GLASS FOR 1.20 MILLION CARS**

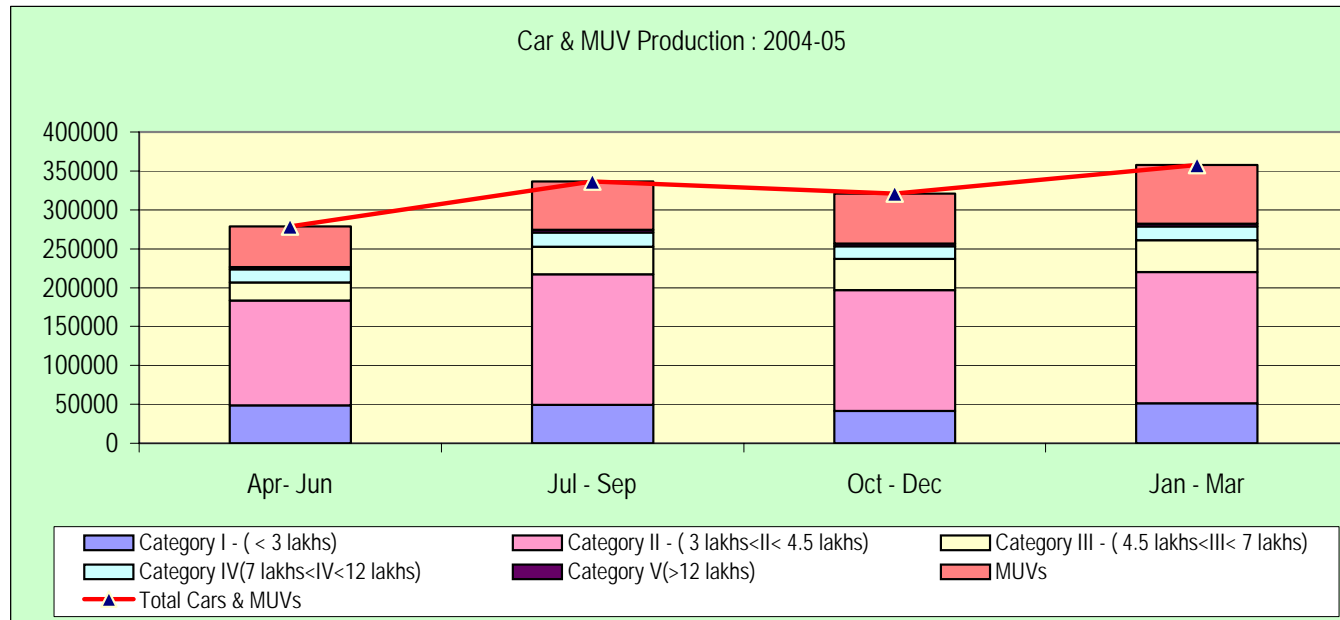
## Market : Annual Vehicle Production

Vehicle Production	April - Mar					Increase / Decrease			
	2000-01	2001-02	2002-03	2003-04	2004-05	01>00	02>01	03>02	04>03
Category I - (< 3 lakhs)	216474	211114	196692	234967	190392	-2%	-7%	19%	-19%
Category II - (3lakhs<II< 4.5 lakhs)	286223	306693	353977	493488	626774	7%	15%	39%	27%
Category III - (4.5 lakhs<III< 7 lakhs)	57128	52015	55663	75848	140387	-9%	7%	36%	85%
Category IV(7 lakhs<IV<12 lakhs)	23694	18313	20337	38911	69205	-23%	11%	91%	78%
Category V(>12 lakhs)	880	5112	3817	8444	13451	481%	-25%	121%	59%
Cars	584399	593247	630486	851658	1040209	2%	6%	35%	22%
MUVs	127599	124469	140240	192532	253675	-2%	13%	37%	32%
Total Cars & MUVs	711998	717716	770726	1044190	1293884	1%	7%	35%	24%



## Market : Vehicle Production in 2004-05 : By Quarter

Vehicle Production	Production (2004-05)				Increase / Decrease		
	Apr- Jun	Jul - Sep	Oct - Dec	Jan - Mar	Q2 - Q1	Q3 - Q2	Q4 - Q3
Category I - (< 3 lakhs)	48329	49117	41325	51621	2%	-16%	25%
Category II - ( 3 lakhs<II< 4.5 lakhs)	134859	167889	155361	168665	24%	-7%	9%
Category III - ( 4.5 lakhs<III< 7 lakhs)	23513	35900	40261	40713	53%	12%	1%
Category IV(7 lakhs<IV<12 lakhs)	16652	18147	16586	17820	9%	-9%	7%
Category V(>12 lakhs)	3239	3399	3126	3687	5%	-8%	18%
CARS	226592	274452	256659	282506	21%	-6%	10%
MUVs	51786	62288	64317	75284	20%	3%	17%
<b>Total Cars &amp; MUVs</b>	<b>278378</b>	<b>336740</b>	<b>320976</b>	<b>357790</b>	<b>21%</b>	<b>-5%</b>	<b>11%</b>
No. of cars exported included above	24848	37623	37472	24051	51%	0%	-36%



Exports dropped off in Q4, whereas domestic production grew by 17% in Q4 vs. Q3.



## Milestones & Progress

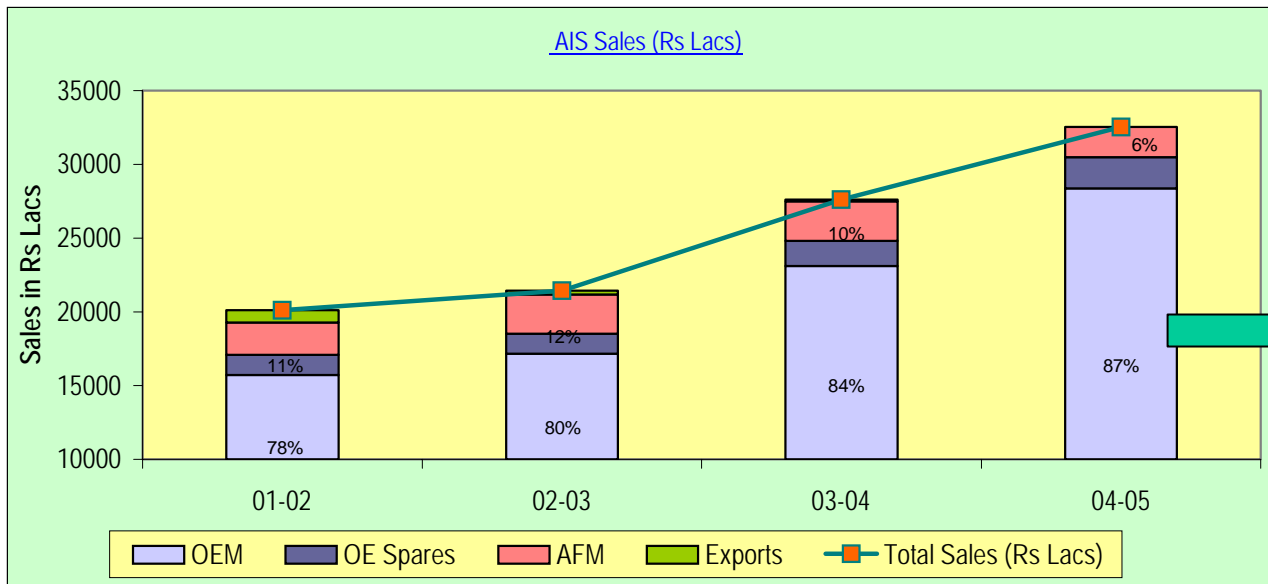
Customer	AIS Share
Fiat India	
: Palio	50%
: Uno	100%
Ford India	100%
General Motors India Ltd.	100%
Hindustan Motors - Lancer Project	100%
Honda Siel	100%
Hyundai Motors India	100%
Mahindra & Mahindra	
: Scorpio	100%
: Other MPV's	50%
Maruti Udyog Ltd.	100%
TELCO	
: Indica	70%
: Safari	100%
: Other MPV's	30%
Toyota Kirloskar	97%
<b>TOTAL</b>	<b>85%</b>

AIS remains the dominant Player in the country in the automotive glass business

# AIS's Sales : by value and mix

Net Sales (Rs Lacs)	01-02	02-03	03-04	04-05
OEM	15725	17141	23125	28381
OE Spares	1355	1385	1699	2100
AFM	2208	2633	2674	2051
Exports	824	288	107	0
<b>Total</b>	<b>20112</b>	<b>21446</b>	<b>27604</b>	<b>32532</b>

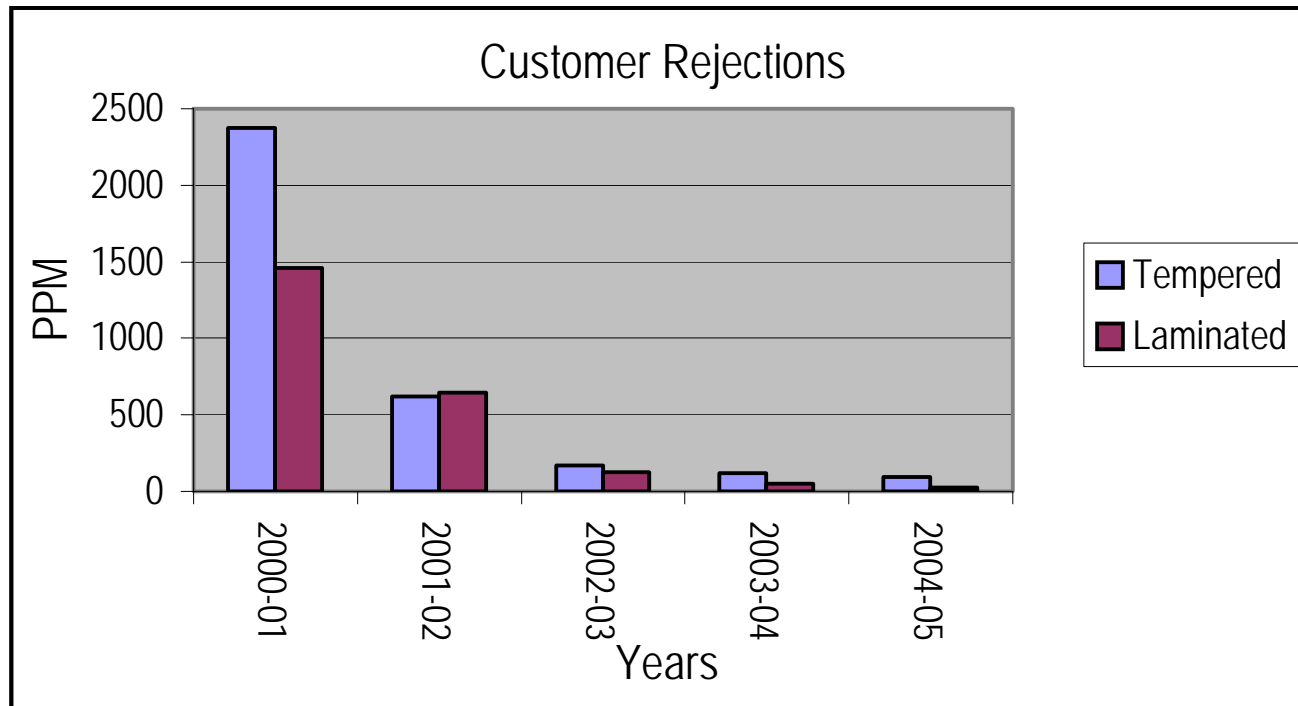
02-03> 01-02	03-04> 02-03	04-05> 03-04
9%	35%	23%
2%	23%	24%
19%	2%	-23%
-65%	-63%	-100%
<b>7%</b>	<b>29%</b>	<b>18%</b>



Increase in AFM has not kept pace  
With increase in OE sales – in 2004-05 largely on account of capacity shortfall, which impacted AFM sales directly.

## Operating Performance : Quality

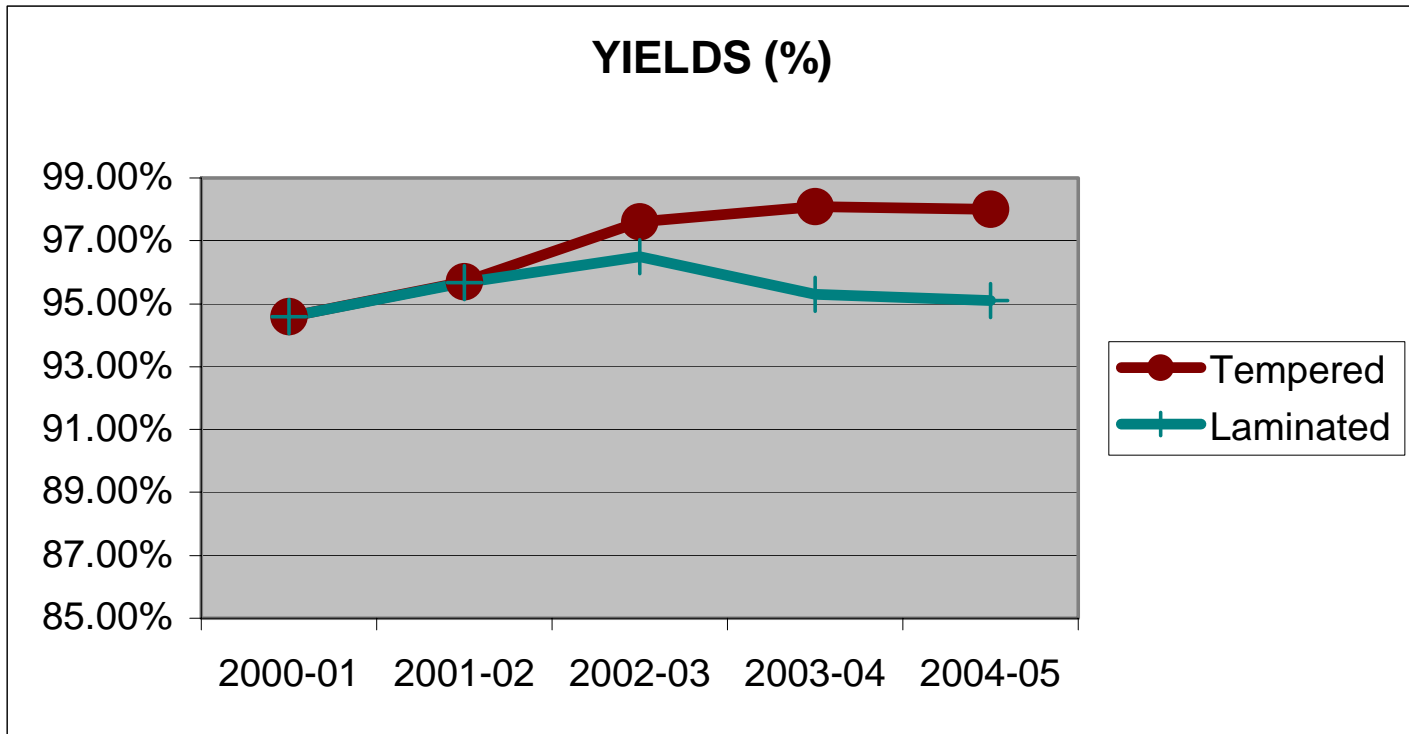
Sl. No.	ITEM	2000-01	2001-02	2002-03	2003-04	2004-05
1.	Tempered	2373	619	168	122	96
2.	Laminated	1461	648	123	53	22



Rejections at the customer end reduced. However, huge amount of material sent in non-standard, non-returnable packing, by non-standard transportation saw rejections on account of breakages and scratches at advanced warehouses rise to 1051 ppm against 450 ppm in the previous year.

## Operating Performance : Shop floor yields

Sl. No.	ITEM	2000-01	2001-02	2002-03	2003-04	2004-05
1.	Production Yields					
a)	Tempered	94.60%	95.70%	97.60%	98.10%	98.00%
b)	Laminated	94.60%	95.66%	96.50%	95.30%	95.10%



Laminated yields slipped. The shop floor was unable to keep pace with demand, resulting in emergency production runs, taken up in small batches, not allowing the process to stabilize. Building flexibility to cater to small runs in an efficient manner remains a significant focus area, going forward.

AIS (Automotive) : 2<sup>ND</sup> PLANT

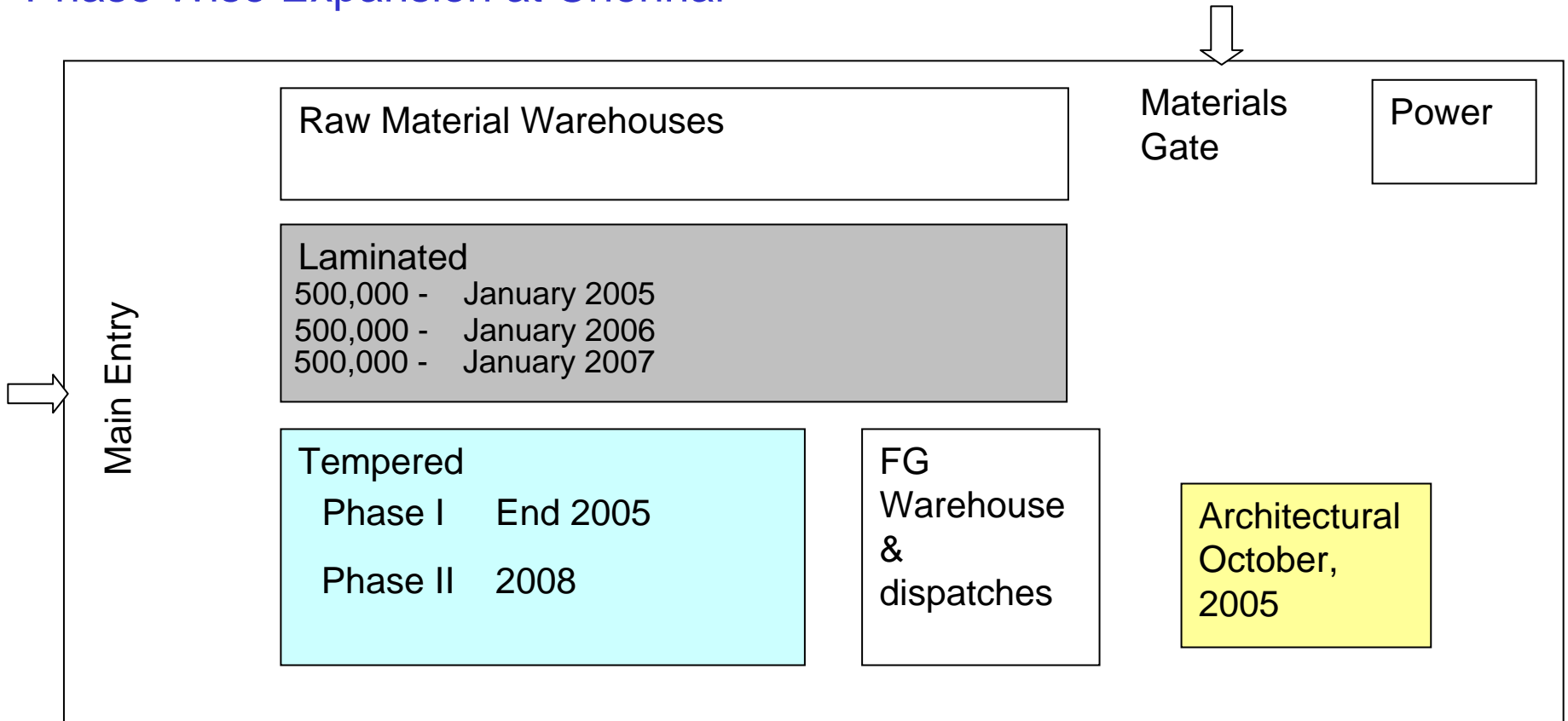
## AIS (Auto) 2<sup>ND</sup> Plant - Highlights

- AIS's laminated plant at Rewari, with a capacity to manufacture 1.2 million windshields, is currently operating at full capacity.
- With most of the new capacity having been established by majors like Hyundai, Toyota and Ford in South India, the second automotive glass plant is being set up in Chennai in South India. **Car production in this area is expected to rise from the current level of 220K to over 470K in next five years**
- **Besides proximity to key customers, Chennai is a Port city, thus allowing cost reduction in import of raw material (such as PVB) as well as in possible future exports.**
- Commercial production of laminated windshields at second plant (Phase I) commenced in January 2005.

## AIS (Auto) 2<sup>ND</sup> Plant - Highlights

- In Phase 1, only **laminated** plant to be established in Chennai – with capacity of 500,000 windshields. Plan for raising laminated capacity to 1.5 million windshields to be decided later, depending on overall demand situation.
- Plant to be set up in modular fashion – i.e. ability to take capacity up to 1.50 million windshields with some de-bottlenecking and additional investment.
- Plan to invest in Chennai for tempered capacity.
- Once fully set up, new facility in Chennai planned at capacity of 1.50 million laminated windshields and 1.0 million tempered car sets.
- Chennai facility to include Value Addition capability (Assemblies, Add-ons) as required.

# Phase Wise Expansion at Chennai



## Total Capacity by 2007-08

- a) 1.50 million laminated windshields
- b) 1.00~1.20 million tempered sets
- c) Architectural Processing

Total estimated cost – approx. US\$'s 40 million

Internationally, similar capacities would cost around US\$'s 65-80 million to set up. AIS's advantage comes on account of its thrust at in-house development of key processes

## AIS (Float) : HIGHLIGHTS

## Highlights

The float business has turned the corner, since the takeover and subsequent merger with AIS, as the figures below show :

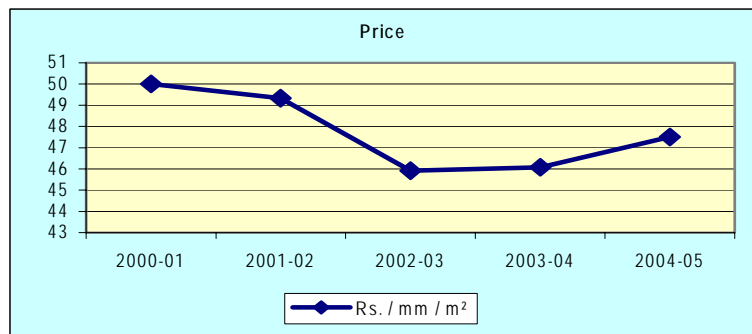
AIS ( Float ) : Since Takeover

Sl. No.	ITEM	2000-01	2004-05	2004-05 vs. 2000-01
1.	Sales ( Rs mn )	1695	2736	61 <sup>o</sup> %
2.	EBITDA ( Rs mn)	356	544	53 <sup>o</sup> %
3.	EBDT ( Rs mn)	125	540	333 <sup>o</sup> %
4.	Production ( million csqm)	22.87	31.3	37 <sup>o</sup> %
5.	Sales ( million csqm )	21.99	33.41	52 <sup>o</sup> %

The financial performance is in spite of the fact that in this period, domestic float glass prices have been fairly stagnant, to a little weaker, as can be seen from the graph below.

Domestic Float Glass prices since 2000-01

Year	Rs. / mm / m <sup>2</sup>
2000-01	50.00
2001-02	49.33
2002-03	45.92
2003-04	46.08
2004-05	47.50



These are representative prices of clear float glass (2.5 to 6.0 mm thickness).

## Actions at AIS (Float)

A programme titled “Resurgent” was initiated at the float SBU in 2001-02, with the theme of “Revenue Maximisation with Cost & Wastage Reduction”

The main activities initiated under this programme were:

1. Benchmarking – both domestically as well as internationally
2. Revenue enhancement through change in product mix
3. Material cost reduction

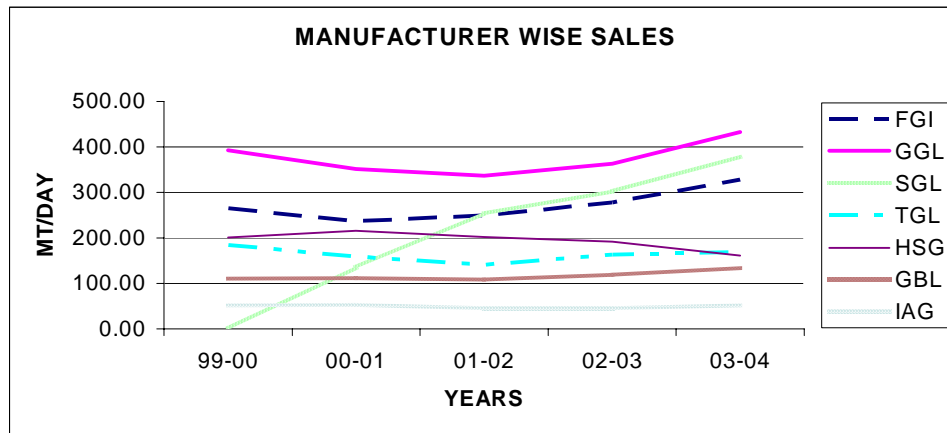
Of all the programmes initiated, the most significant was to raise productivity and total output from the float plant

All this has had a significant impact, as can be seen from the previous slide – with output having risen **over 37%**

# Background – Indian Float Glass Sales till 2003-04

## FLAT GLASS SALES IN INDIA - 1999-2000 ONWARDS : BY MANUFACTURER

	FGI	GGL	SGL	TGL	HSG	GBL	IAG	Total
99-00	265.03	393.05	0.00	184.38	200.74	110.83	51.56	1205.59
00-01	236.68	351.66	134.39	159.39	215.75	111.41	52.45	1261.73
01-02	249.16	336.40	253.91	141.40	202.53	108.12	45.69	1337.21
02-03	277.97	362.72	302.06	162.81	191.41	118.69	45.07	1460.73
03-04	328.73	432.40	379.09	169.66	161.33	134.10	51.85	1657.16



## GROWTH OF FLAT GLASS SALES IN INDIA

YEAR	MT/DAY	%AGE GROWTH
1997-98	988	
1998-99	1077	9.00%
1999-00	1206	11.92%
2000-01	1262	4.66%
2001-02	1337	5.98%
2002-03	1461	9.24%
2003-04	1657	13.45%
<b>CAGR GROWTH</b>		<b>9.00%</b>

Average for the year.

## GROWTH OF FLOAT GLASS SALES IN INDIA

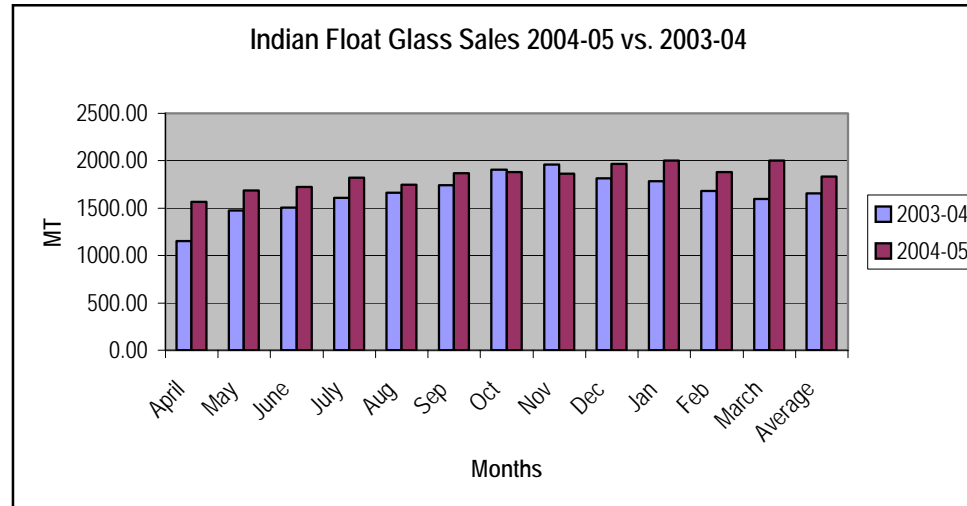
YEAR	MT/DAY	%AGE GROWTH
1999-00	842	
2000-01	882	4.71%
2001-02	981	11.19%
2002-03	1106	12.71%
2003-04	1310	18.48%
<b>CAGR GROWTH</b>		<b>11.67%</b>

Shows the increasing penetration of float.

# Background – Indian Float Glass Sales in 2004-05

04-05 Vs 03-04 - Total tonnage

	April	May	June	July	Aug	Sep	Oct	Nov	Dec	Jan	Feb	March	Average
2003-04	1151.66	1476.10	1505.78	1608.86	1662.47	1744.10	1905.45	1960.07	1813.86	1781.37	1680.43	1595.80	1657.16
2004-05	1562.85	1688.26	1723.74	1821.38	1747.02	1870.02	1880.02	1862.75	1967.82	2002.75	1878.71	2001.70	1833.92
%age difference	35.70%	14.37%	14.47%	13.21%	5.09%	7.22%	-1.33%	-4.97%	8.49%	12.43%	11.80%	25.44%	10.67%

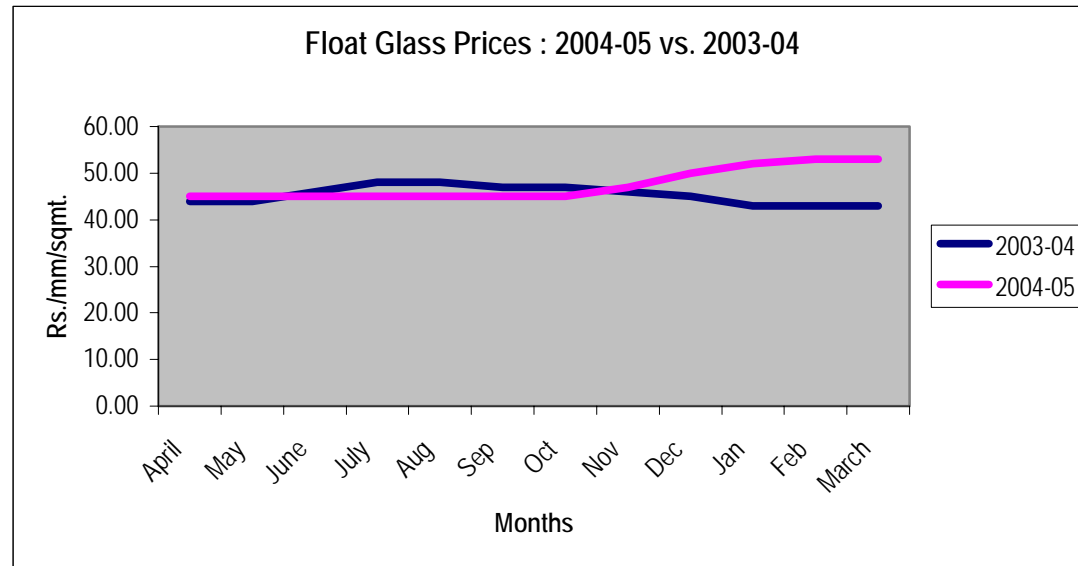


1. Other than for a brief period in October/November 2004, sales have grown consistently over the last year.
2. Sales have picked up steam in the last quarter of the FY, and are now constrained by the fact that domestic production capacities have almost peaked out.

# Background – Indian Float Glass Prices in 2004-05

Price Trend : 2004-05 vs. 2003-04 (Rs./mm/sqmt.)

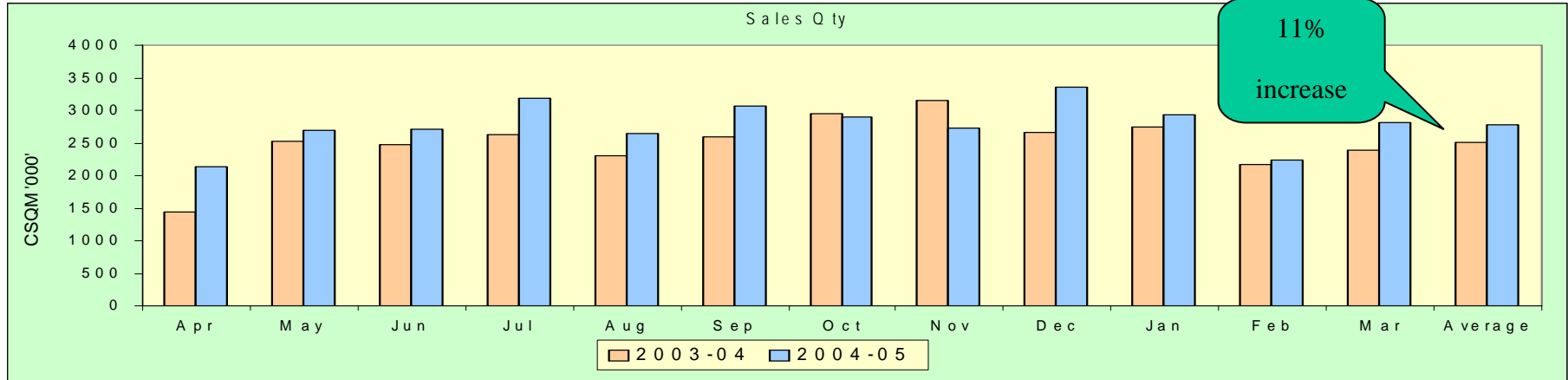
	April	May	June	July	Aug	Sep	Oct	Nov	Dec	Jan	Feb	March
2003-04	44.00	44.00	46.00	48.00	48.00	47.00	47.00	46.00	45.00	43.00	43.00	43.00
2004-05	45.00	45.00	45.00	45.00	45.00	45.00	45.00	47.00	50.00	52.00	53.00	53.00
%age difference	2.27%	2.27%	-2.17%	-6.25%	-6.25%	-4.26%	-4.26%	2.17%	11.11%	20.93%	23.26%	23.26%



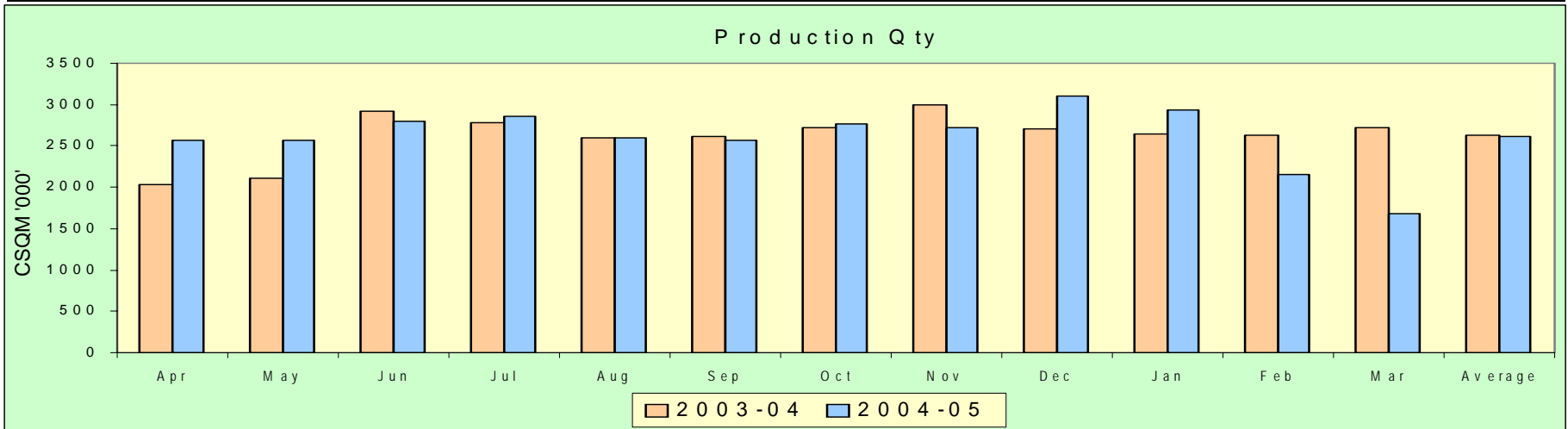
Prices have steadily picked up over the last quarter, to the current level of Rs. 53/mm/sqmt. and are expected to remain firm through the current FY.

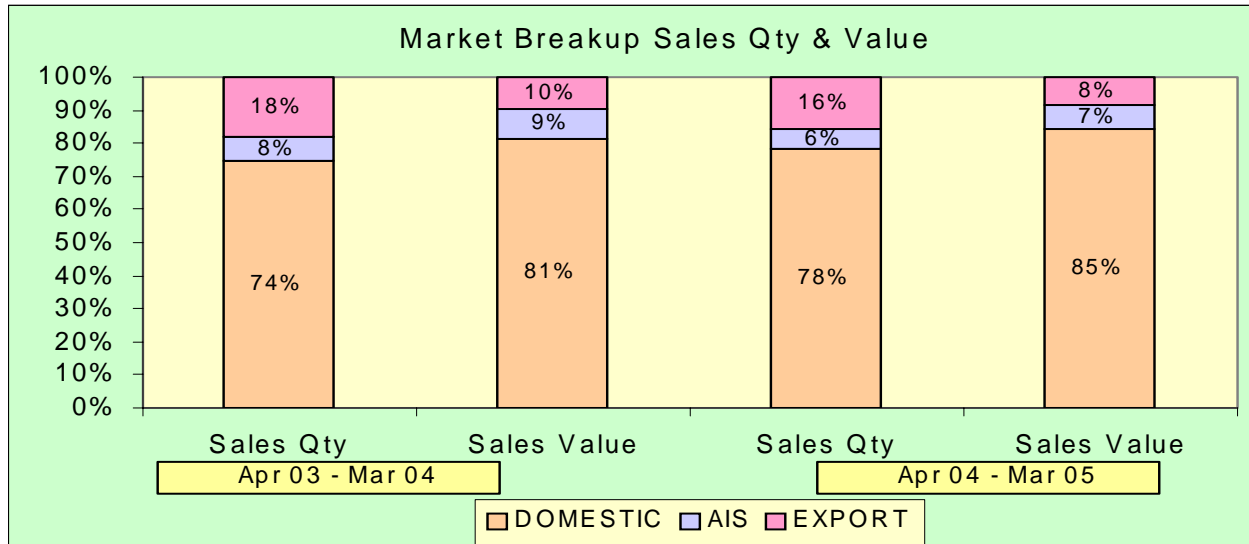
# AIS Float : Sales & Production Quantity

Sales Qty ( CSQM in 000")												
Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Average
1439	2529	2473	2621	2312	2590	2952	3160	2659	2742	2166	2391	2503
2141	2694	2705	3189	2648	3075	2896	2729	3360	2939	2234	2807	2785

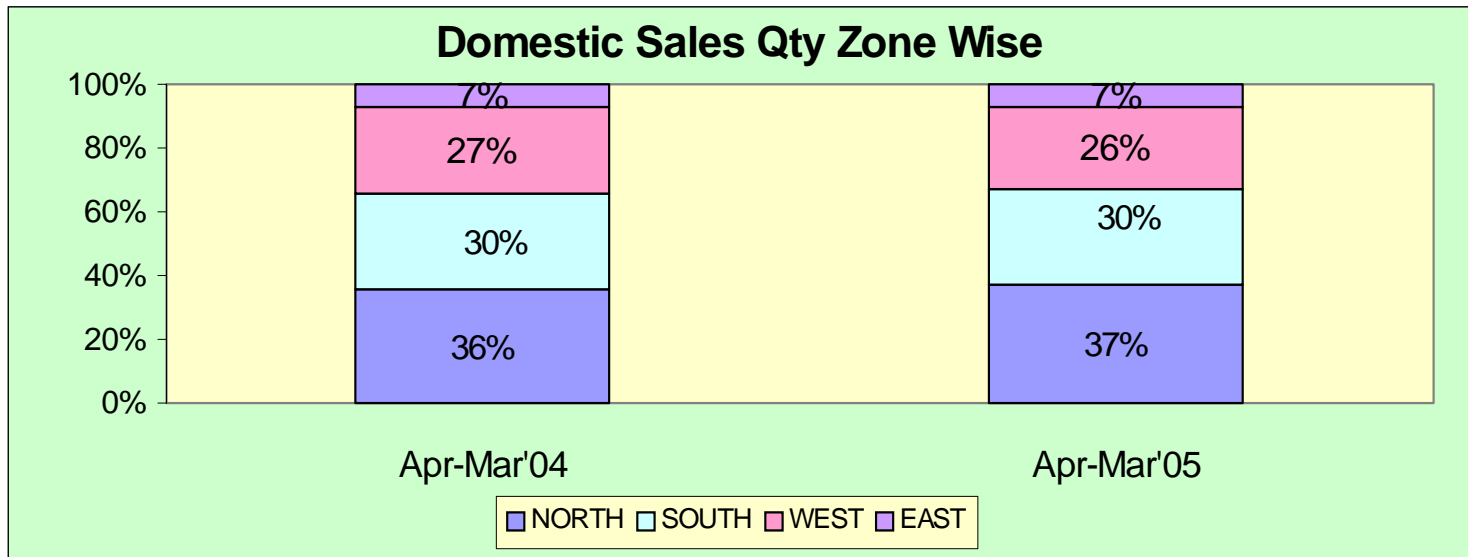


Year	Production Qty ( CSQM in 000")												
	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Average
2003-04	2031	2107	2915	2780	2602	2607	2722	3001	2701	2646	2629	2719	2622
2004-05	2563	2572	2804	2853	2596	2566	2762	2726	3102	2931	2150	1675	2608





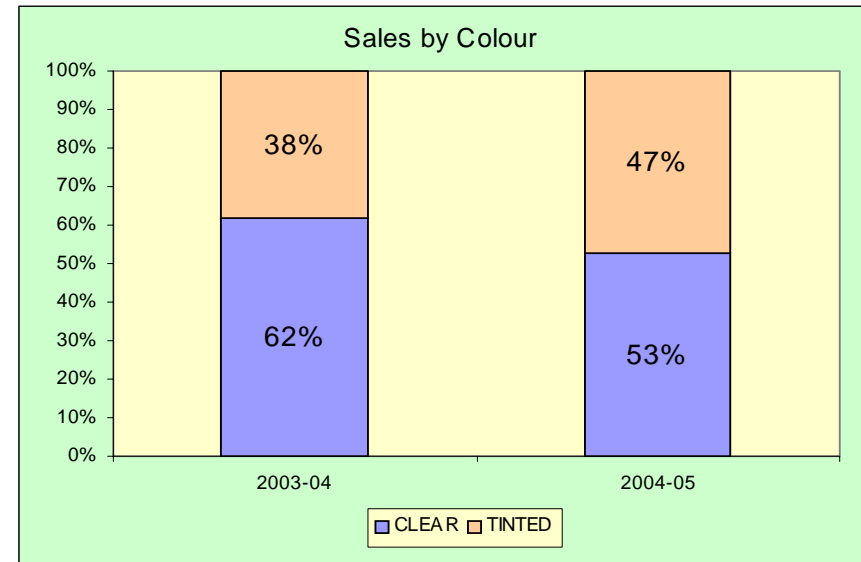
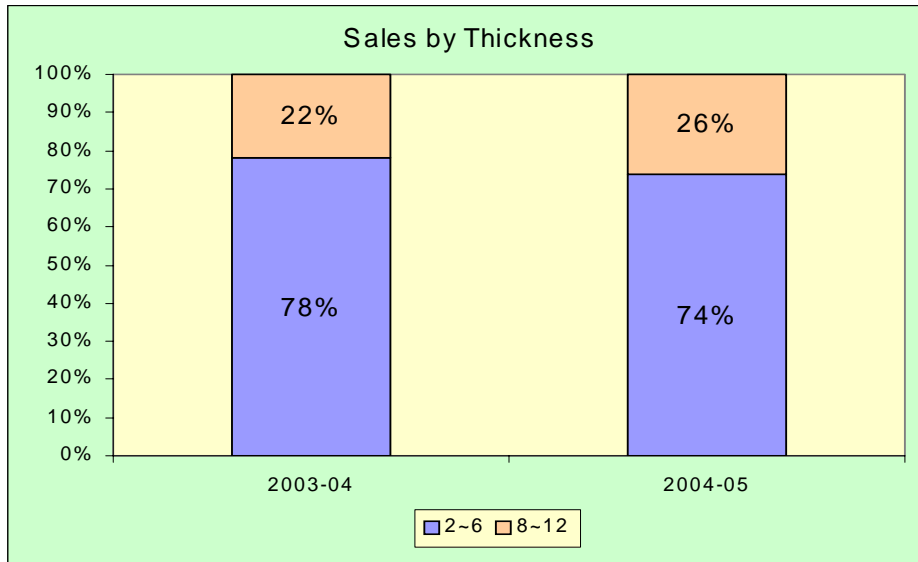
Zones	Apr-Mar'04	Apr-Mar'05
NORTH	36%	37%
SOUTH	30%	30%
WEST	27%	26%
EAST	7%	7%



# Sales by Thickness & Colour

Thickness	April -Mar	
	2003-04	2004-05
2~6	78%	74%
8~12	22%	26%

Colour	April -Mar	
	2003-04	2004-05
CLEAR	62%	53%
TINTED	38%	47%



AIS - Float

Integrated Glass Plant

## Indian Float Glass – Market Projections

### FLAT GLASS MARKET GROWTH : ASSUMPTIONS AND SCENARIOS

Sl. No.	ITEM	2004-05	2005-06	2006-07	2007-08	2008-09	2009-10
1.	Growth		12%	12%	12%	12%	12%
2.	Demand (MT/day)	1834	2054	2300	2577	2886	3232
3.	Current Capacity (MT/day)	2100	2100	2100	2100	2100	2100
4.	Excess/Short (MT/day)	266	46	-200	-477	-786	-1132
5.	Planned Capacity						
a.	Competitor			530			
b.	AIS				530		
6.	Total Capacity	2100	2100	2630	3160	3160	3160
7.	Net Excess/Short (MT/day)	266	46	330	583	274	-72
8.	Net Excess/Short (%age of capacity)	13%	2%	13%	18%	9%	-2%

1. Current trend suggests a growth rate of about 12%.
2. At this growth rate, and assuming fresh capacity addition (including AIS) as in the table above, there would be temporary over-capacity in 2007-08 and 2008-09.
3. 2009-10 would again see a net shortfall. From that period, the country would see the demand for a new float plant every year.

## AIS – Competitive Outlook

Even in the position of lower than anticipated demand growth, AIS's strategy at competitiveness is linked to :

### **1. Cost competitiveness**

### **2. Enhanced in-house consumption**

AIS (Float) to meet 100 % of raw glass requirements both for Automotive and Architectural Processing. Currently, AIS (Float) supplies about 10-15% of AIS (Auto's) requirement of float glass.

## AIS (Float ) - 2<sup>nd</sup> Float Plant Location

Various sites were considered, considering the following criteria

1. Closeness to market

*As per this criteria, it is obvious that the 2<sup>nd</sup> float plant needs to be set up in North India :*

- It is the biggest market in the country.
- AIS's own automotive glass facility – the single largest consumer of float glass in the country – is in the North.
- No float glass manufacturer currently has a plant in the North.

2. Closeness to raw material

3. Availability of tax incentives – explained in some more detail in the following slide.  
*Only one of the considered sites has this fairly substantial advantage.*

## 2<sup>nd</sup> Float Plant Location – Tax Incentives

1. Three States in India are offering substantial tax incentives, as described below:
  - a) No Excise Duty (Manufacturing Tax) for 10 years. Excise Duty is currently levied at an ad valorem rate of 16% of the ex factory selling price.
    - Excise is therefore not payable on the sales of finished goods.
    - The net benefit, is, however, lowered, because a VAT setoff on excise duty paid on inputs, as well as capital goods, is not available (there being no excise duty on the finished goods to set these input duties off against.)
  - b) 100% Income Tax exemption for 5 years followed by 30% Income Tax exemption for the subsequent five years.

Roorkee in Uttaranchal offers the tax incentives as described.

Being in the North, Roorkee also qualifies as being close to the largest regional market in the country.

Looking Forward. . .

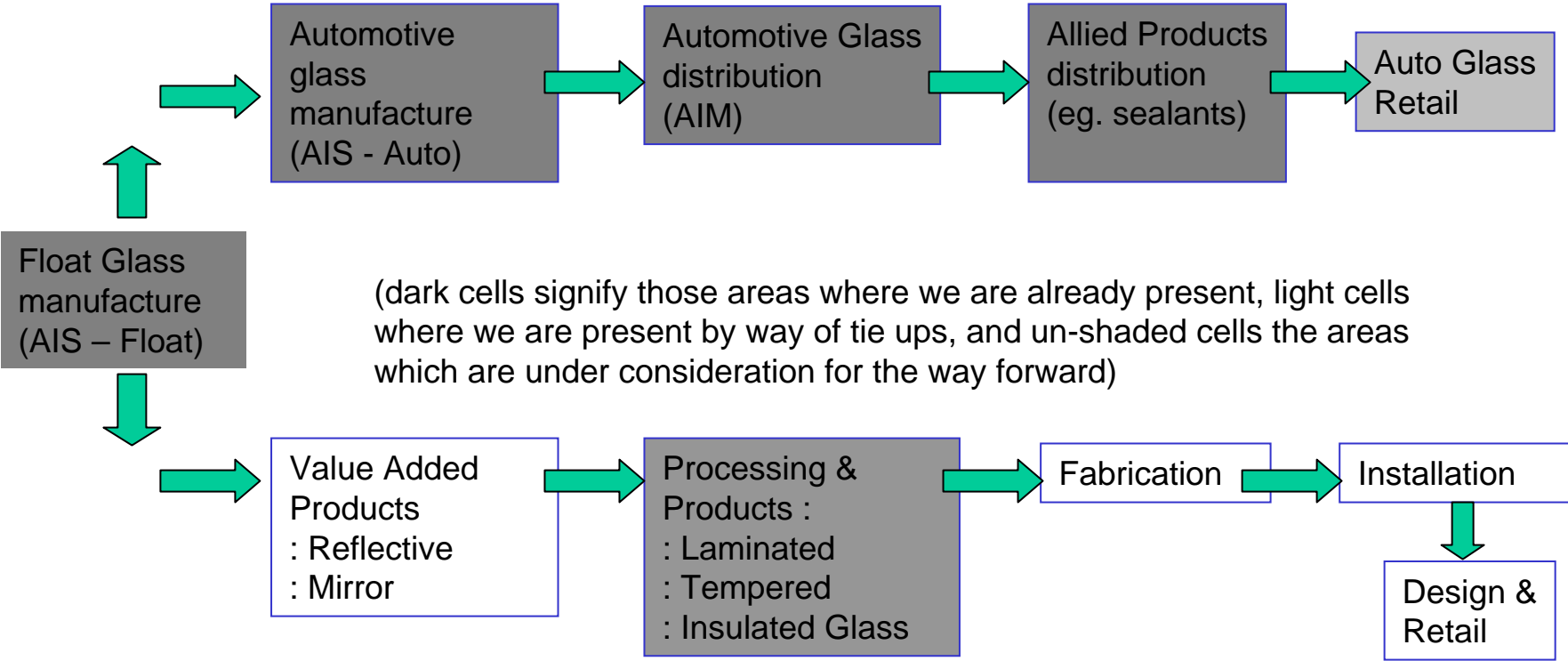
# VISION

To be India's leading integrated glass company.

# AIS Group Vision

**To be India's leading integrated glass company**

## AUTOMOTIVE GLASS VALUE CHAIN



## ARCHITECTURAL GLASS SOLUTIONS

## Value Chain Strategy

Going forward, AIS's strategy to encompass the front end of the glass value chain is a crucial element.

1. The main aim is, of course, from an offensive stand point – i.e. to capture profitable markets at the value added end of the glass value chain.
2. From a defensive stand point, this strategy is vital to ensuring enlarged in-house glass consumption, so that in the event of a slow down beyond anticipation, or prices at the commodity end of the business being lower than expected – AIS would have the most leverage to consume its own glass and provide value added products – both in the automotive as well as architectural markets – which tend to be less prone to demand and price fluctuations.
3. The next few slides show an example of the activity **being done by AIS.**

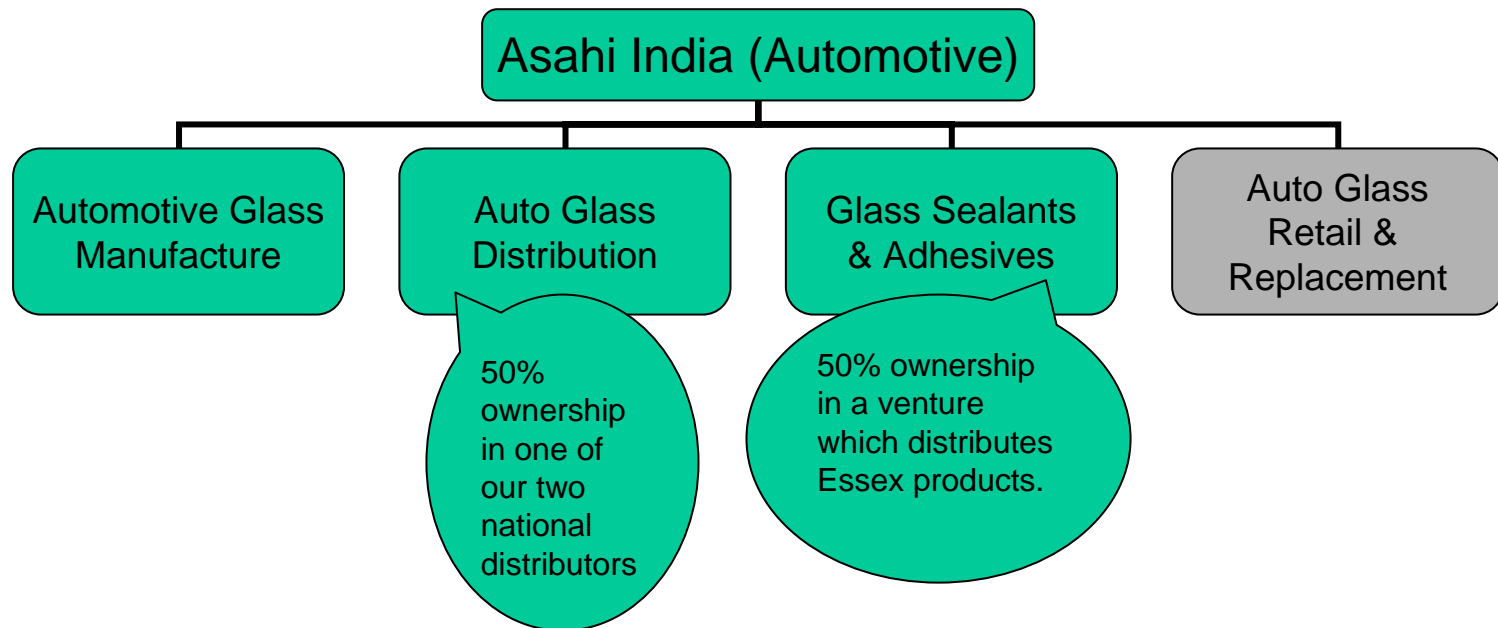
# Automotive Glass Value Chain

## AIS (Automotive) – Value Chain

A key area of strategic initiative has been AIS's focus on building direct sales in the after market, to de-risk sales.

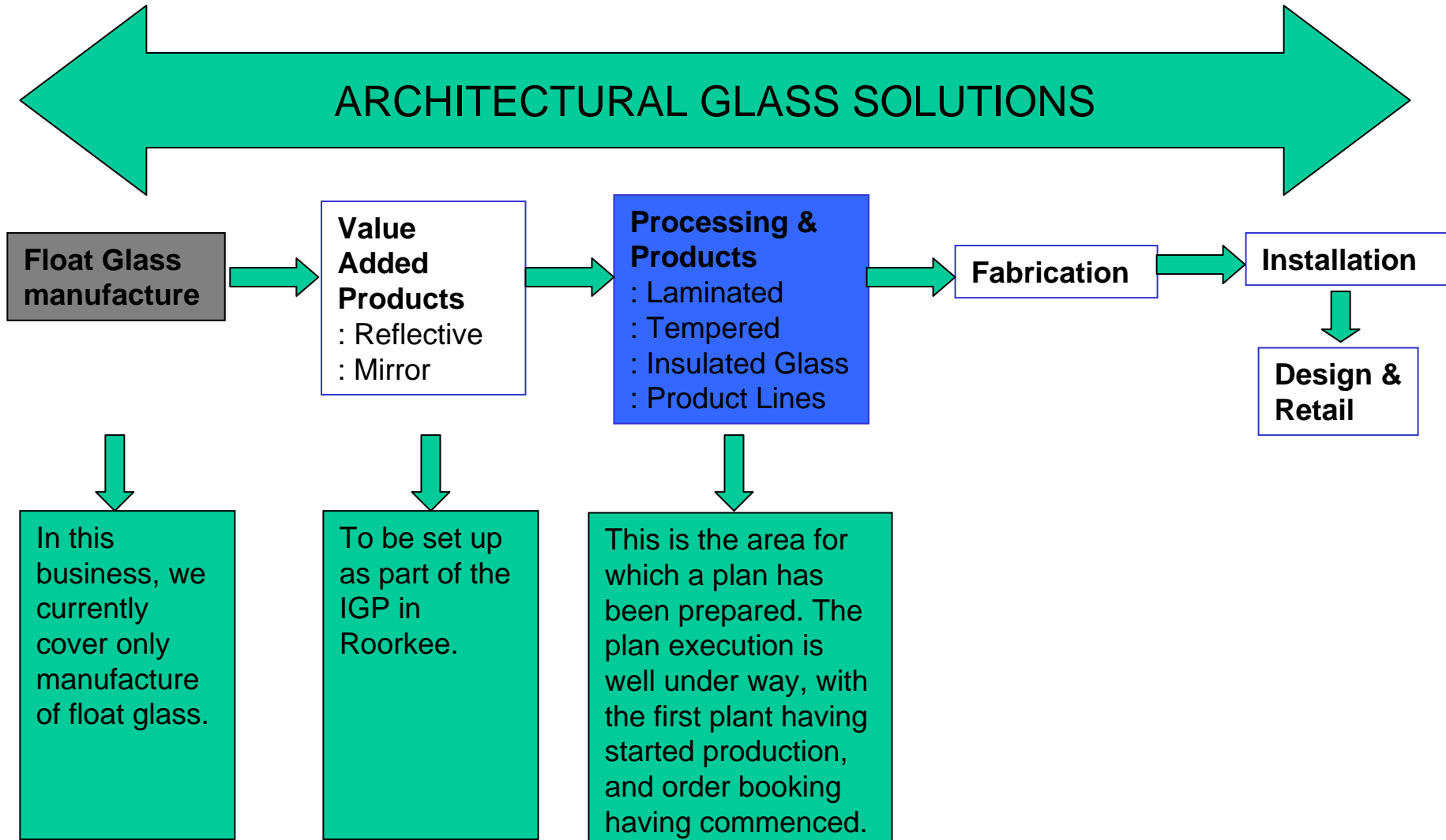
Because of the initiatives taken, after market sales have grown at over 20% per annum, over the last five years, to comprise 20% of our total sales.

Our automotive glass business now encompasses:

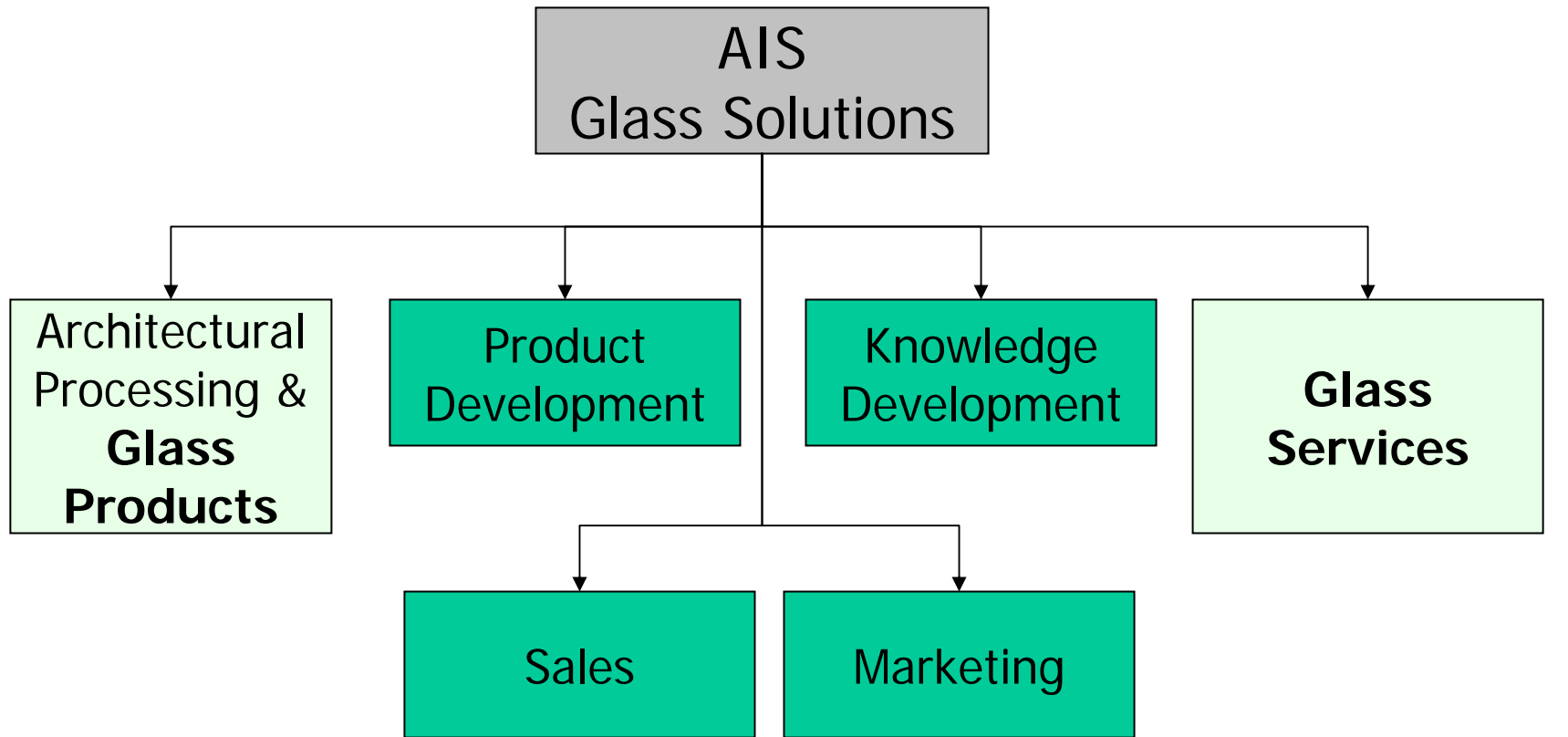


# Architectural Glass Value Chain

# Glass Solutions - Introduction



# Forms of AIS Glass Solutions



 Cost Centers  
 Profit Centers

## Glass Solutions - Concept

- An exercise in value addition
- 5 year objectives
  - Consume *6000 tons* of float glass per month
  - Raise glass consumption in the country from the current level of 0.55 kg per capita by introducing innovative product lines, including:
    - A line of *bath enclosures*.
    - Standard line of *glass shelving*.
    - Line of specialty laminated glass called “*Frontage*” for *burglar-resistance, energy saving and sound proofing applications*.
    - A line of *manufactured windows*.
  - Establish dominant presence through the value chain, including through *processed glass* as well as down stream through *Glass Services* to provide a one stop shop to consumers.
  - *Make AIS the No. 1 glass brand in India*

## Glass Solutions – Products and Services Planned

- Processed glass for architectural applications
  - Laminated glass
  - Tempered glass
  - Insulated glass units
- Product lines as discussed, starting with bath enclosure line
- Glass installation service for low volume, high-value jobs in top 8 urban centres.



Following slides discuss the architectural glass processing plan.

## Architectural Processing

- Market size estimated to be Rs. 140 crores in 2002-03.
- Total glass consumption in 2002-03 estimated to be 21,500 tons (1792 tons/month).
- Currently growing at **25.3%**.
- Our estimates show that this growth should ramp up to **34.1% CAGR** over 5 years.
- At these rates, architectural processing will still account for about 11% of total flat glass consumed in the country – up from 4% today. To put this in perspective, architectural processing consumed **45.3%** of the flat glass produced in USA in 2002.

# Architectural Processing

- Basic AIS plan
  - One integrated plant with tempered, laminated and insulated glass at Taloja, near current float plant – in 2004-05 – *commenced production in March 2005*.
  - Additional tempering lines in Chennai and North India (2005-06).
  - Lamination and IG demand can be serviced from planned Taloja facility in this five year period.
- Total planned capital expenditure – for integrated facility at Taloja:

# PLANT LOCATIONS

**Rewari:**  
*Current*  
 1. Auto Glass  
*Future*  
 1. Glass Solutions

**Taloja:**  
*Current*  
 1. Float  
 2. Glass Solutions

**Roorkee:**  
*Planned*  
 1. Float  
 2. Glass Solutions  
 3. Auto Glass

**Chennai:**  
*Current*  
 1. Auto  
*Future*  
 1. Glass Solutions



# GUIDING PRINCIPLES

All actions of Asahi India are driven by the following guiding principles :

1. Customer satisfaction
2. Creation of Value for Shareholders
3. Respect for the Environment
4. Use of facts
5. Continuous Improvement
6. Strengthening of Systems
7. Upgradation of human potential by education and training
8. Social Consciousness