

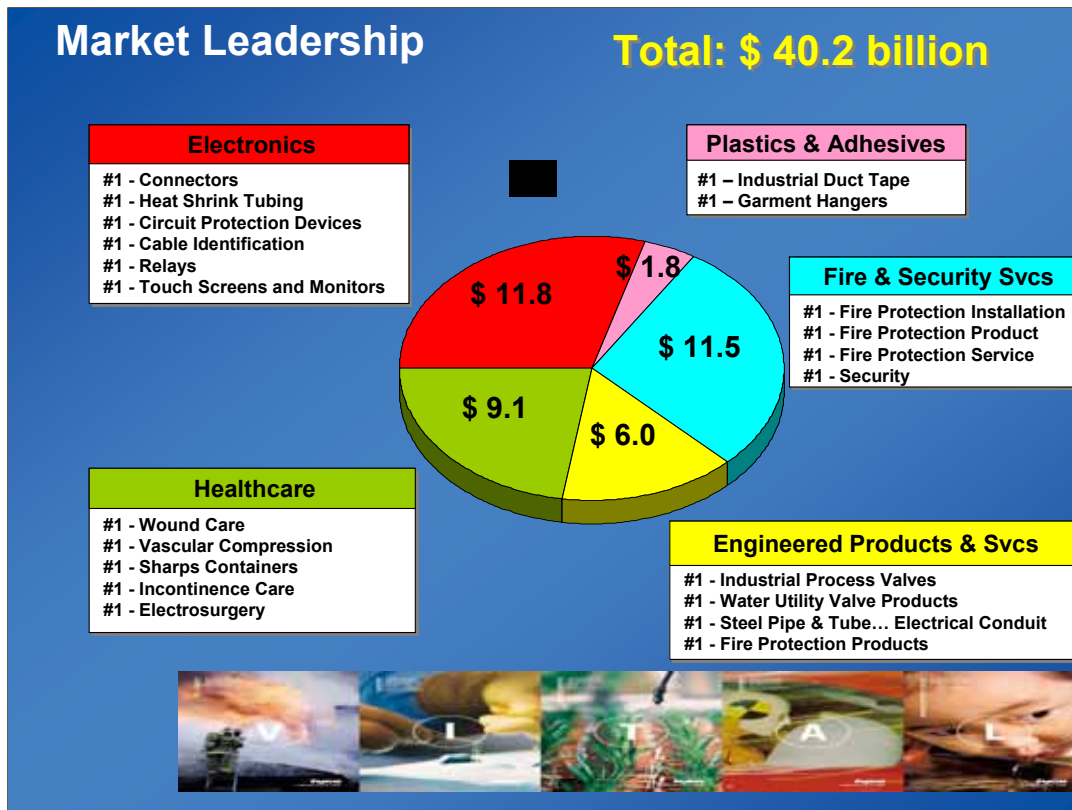
Challenges for Suppliers

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Good afternoon,

I would like to thank ICF for the invitation and for giving me the possibility to present Tyco's view on the changing relations between OEM's and their suppliers.



Tyco International is a US\$ 40 billion company with 5 business segments:

- Tyco Healthcare, making all kind of products for hospitals and surgery
- Tyco Plastics and Adhesives, producing tapes and the world largest manufacturer of garment hangers
- Tyco Fire and Security
- Tyco Engineered Products, producing valves, steel tubing and water treatment installations and
- Tyco Electronics, the biggest business unit of Tyco with \$12 billion turnover in 2004. This is also the business unit I belong to. We are the world largest producer of electrical mechanical components.

It is the strategy of Tyco to be the number one or two in businesses where we are active.

Key Figures 2004 Tyco Electronics

> Sales	\$ 11.80 Billion
> Headcount	88,000
• Marketing & Sales	5,200
• Engineering	7,000
> Countries	54



These are the key figures from 2004 of Tyco Electronics:

We had \$ 11.8 billion sales and we did this with 88.000 people globally. Of these 88,000 people 5,200 were active in Sales and Marketing and 7,000 in Engineering.

Tyco Electronics has offices and or factories in 54 countries around the world.

Manufacturing Locations

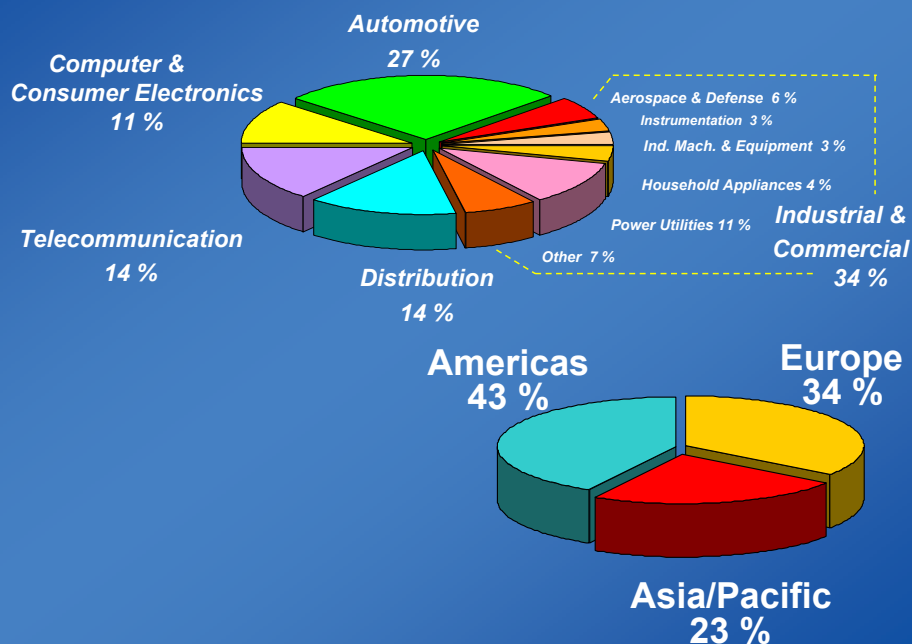
Headquarters: *Harrisburg, Pennsylvania*
 Countries of Operation: 29

Manufacturing Sites by Country:

Americas	<i>United States</i>	56	EMEA	<i>Germany</i>	8
	<i>Mexico</i>	9		<i>United Kingdom</i>	7
	<i>Brazil</i>	3		<i>Switzerland</i>	4
	<i>Argentina</i>	2		<i>Spain</i>	5
	<i>Canada</i>	1		<i>India</i>	4
Asia	<i>China</i>	16		<i>France</i>	3
	<i>Japan</i>	3		<i>Ireland</i>	3
	<i>Thailand</i>	1		<i>Belgium</i>	2
	<i>Korea</i>	1		<i>Italy</i>	2
	<i>Philippines</i>	1		<i>Czech Republic</i>	2
	<i>Singapore</i>	1		<i>Hungary</i>	1
	<i>Malaysia</i>	1		<i>Poland</i>	1
				<i>Austria</i>	1
ANZ	<i>Australia</i>	4		<i>Portugal</i>	1
	<i>New Zealand</i>	2	<i>Saudi Arabia</i>	1	

Our headquarter is in Harrisburg Pennsylvania in the US. We have factories in 29 countries.

FY 2004 Sales by Industry and Region



Tyco Electronics is divided into 5 business units:

- Computer Consumer Electronics
- Telecommunication
- Industrial and Commercial
- Distribution and
- Automotive. This is also the biggest business unit.

Our sales are divided as follows:

- 43% in the Americas
- 34% in Europe and
- 23% in Asia Pacific. This is the area with the strongest growth and we see a move from Europe and the Americas to Asia/Pacific.

Manufacturing Strategy

- Tyco Electronics will follow their customers
 - > For Telecom/Consumer Electronics almost all production moved to Asia. We now have 1/3 of our total workforce in China. (8K to 25K in 2 years)
 - > For Automotive we still produce a lot in Europe/USA. This because our customers are still producing here.
 - But we moved a lot to Eastern Europe: Cz/Ho
 - A new plant will be opened 2006 in Ukraine
 - In the Americas we moved a lot of the production to Mexico, Brazil and other South American countries. This not only for local customers but also for the US Automotive industry.

With our manufacturing Tyco Electronics will follow their customers.

For Telecom/Consumer Electronics almost all production has been moved to Asia.

1/3 of the total workforce of Tyco Electronics is now in China, there we have grown from 8 thousand people to 25 thousand people in the last 3 years.

For Automotive we still produce a lot in Europe/USA. This is because our customers are still making the cars there. But to reduce costs we moved a lot to Eastern Europe to countries like Czech Republic and Hungary.

In 2006, we will open a new plant in the Ukraine, where a lot of the harness makers are starting factories at the moment.

In the Americas, we moved a lot of the production from North America to Mexico, Brazil and other South American countries. Production there is not only for local customers, which has been growing a lot, but also for the US Automotive industry.

Manufacturing Strategy

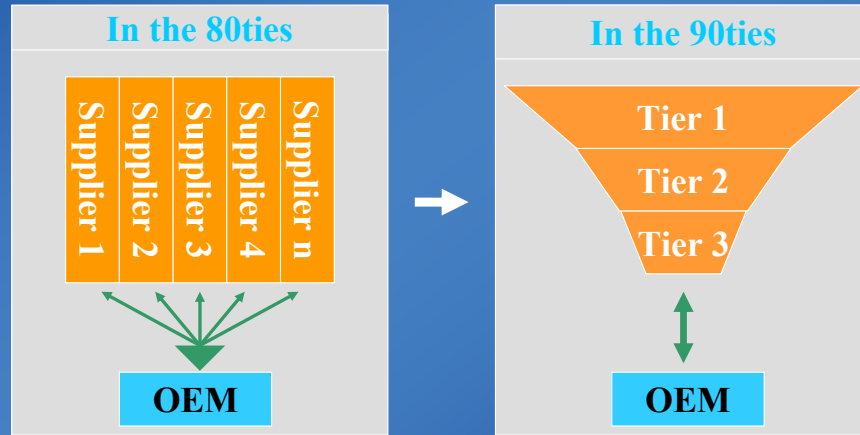
- Why do we still produce local for local within Automotive:
 - > Lot of fully automated production, moulding/stamping
 - > Transport cost play a key role in allocation decision
 - > Flexibility in quantities and products needed. No global standards, every market has his own demands

The reason we still produce a lot for automotive locally has to do with the fact that:

- A lot of our production is fully automated molding or stamping where the labor content is very low.
- Transport costs have a big influence on the total cost of the product so we must produce close to the customers
- The automotive industry is asking for a lot of flexibility in volume and products. Therefore, we cannot allow 6-12 weeks for product delivery.

Relation Supplier OEM's

Re-thinking leads to new ...

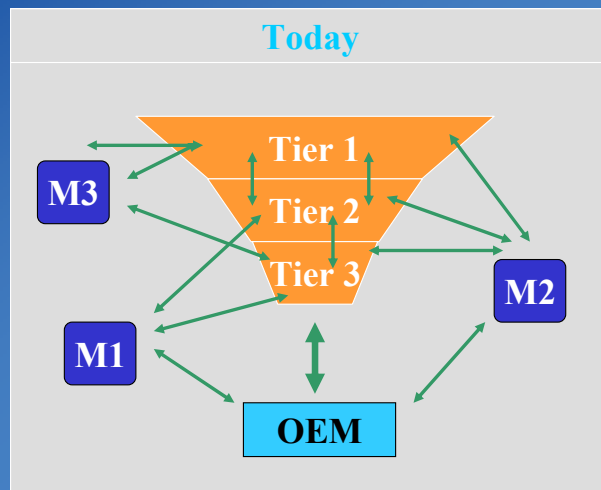


The relation between the OEM's and the suppliers changed a lot during the last decades.

In the 80s the OEM was talking with all the suppliers separately and everybody could get his own products designed in.

In the 90s the structure of 1st tier, 2nd tier and 3rd tier was created. Only the 1st tier supplier was talking with the OEM but still the OEM was doing the design control and telling the 1st tier where to buy his components.

... Structures

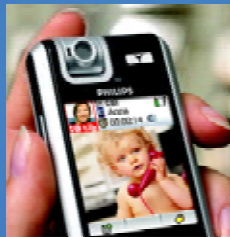


Complex communication structure

In today's structure, everybody wants to influence the OEM and tries to stay in contact with him. This has created a pretty complex communication structure.

Computer, Consumer Electronics, Telecom

- > Supplier still talks with OEM's
- > Supplier wants to be in the BOM so the EMS(Electronic Manufacturers Suppliers) must buy at Supplier
- > More and more OEM's go for dual sourcing, so EMS can make choice
- > Newest trend: total sourcing by OEM so EMS can do supplier selection.



The different industries followed different strategies for their sourcing policies. In the computer, consumer and telecom industry, the suppliers still try to talk with the OEM's. This is because they want to be in the bill of materials so the electronics manufacturers have to buy their products.

To get more pressure on the price, a lot of the OEM's went for dual sourcing. This would also assure the deliveries, if one of them had some production problems.

The current trend is that the OEM will buy a complete device, like a mobile phone or DVD player at the EMS and the EMS can choose his own suppliers.

Industrial and Commercial Industry



- > Supply chain more and more complex
- > OEM is buying a function so more influence Tier 1 and less for component supplier
- > Huge price pressure that goes before quality
- > Short term contract for components



In the industrial and commercial industry, the supply chain is more complex. The OEMs buy functions and put them together in their products. The supplier of the function can choose his own suppliers.

In the commercial industry, the price is the most important factor in choosing a supplier. Sometimes this even might influence the quality negatively.

To keep the pressure on the price, the OEMs are working with short contracts so they can move easily from supplier to supplier.

Automotive

Car industry:

- > More and more component mgt by Tier 1
- > Constant price pressure, annually 3-6%
- > After productivity follows component price reduction
- > This will influence quality and reliability
- > We have seen where this will end: number of recalls is increasing. Mainly electrical



In the automotive industry, we have a difference between the car and the truck industry.

In the car industry, more and more of the component management is done by the 1st or 2nd tier supplier. They keep a constant pressure on the price and want to see annual decreases of 3-6%.

In the first years, this price reduction can be done by increased productivity but after that it will influence the quality of the products. This can go so far, that it will even influence the reliability of the cars.

This is one of the reasons for the increasing number of recalls we have seen during the last years.

Automotive

Commercial Vehicles:

- > Still do their own component mgt
- > Reliability and quality are main buying argument
- > NO OEM want to take the risk
- > Component supplier responsible AND liable for his system



In the truck/commercial vehicle industry most OEMs still do their own component management. In this industry, reliability is the main buying argument for the customer. Therefore the OEMs want to stay in control of all the components used in the vehicle.

They make the component supplier responsible but also liable for all the products he is supplying.

And how does Tyco deal with these changes?

Global Account Management

- > Installed for OEM, 1st and 2nd Tier
- > Global network that communicates regular
- > Still pay a lot of attention to the OEM although they are NOT buying directly
- > Resident engineer at OEM and 1st and 2nd
- > For this Supplier will pay bonuses twice:
 - 1st to Sales team OEM for the design in
 - 2nd to Sales team 1st and 2nd for maintaining the business

One of the things we have done is to create a structure with global account management.

We have global account managers for OEMs, 1st tier and 2nd tier. They have a global network of sales engineers working for the global account. With this network, we make sure that the customer is getting the same support globally and we have one sales strategy for him.

We keep visiting the OEMs even if they are not making the buying decision anymore.

At major customers, we have a resident engineer who supports the customers in selecting the right components.

As we have sales engineers at both the OEM and the 1st tier customer, we have to pay our people the sales bonus twice :

1st to sales team OEM for the design in

2nd to sales team 1st and 2nd tier for maintaining the business.

Double / Triple Sales Network

- > Keep visiting OEM's although they don't generate direct business
- > Build up relation with 1st and 2nd Tier, they will order the components finally
- > Make three party meetings and agreements
- > Invest in marketing communication:
 - Technical newspaper
 - Catalog
 - Technology days

Due to this structure we have a double or sometime triple sales force working on the same product.

We build a relation with the 1st and 2nd tier supplier because they are buying the products nowadays.

If needed we organize meetings with the OEM and the 1st or 2nd tier to make sure the right products are developed for the customers.

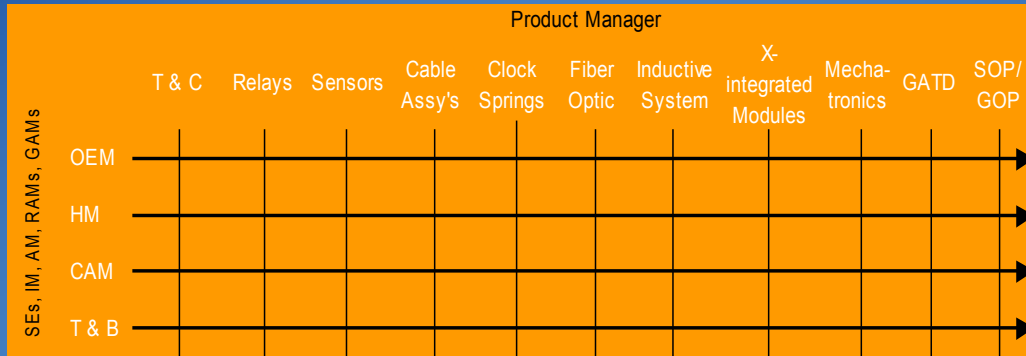
We invest a lot in marketing communications.

Marketing communication



Automotive Sales & Marketing Business Model

Work on the market out of different direction



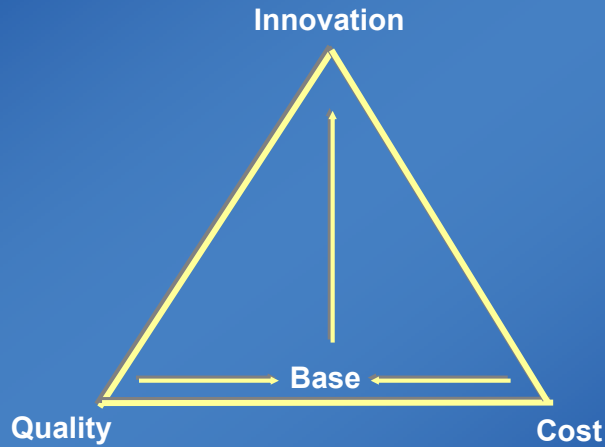
Within the automotive business unit we have a matrix sales organization.

We have split the market into 4 segments:

- Car OEM's
- Harness makers
- Component and aggregate manufactures
- Commercial vehicle industry

For the product lines, we have product managers with product specialists, who give support to the customer oriented salesmen.

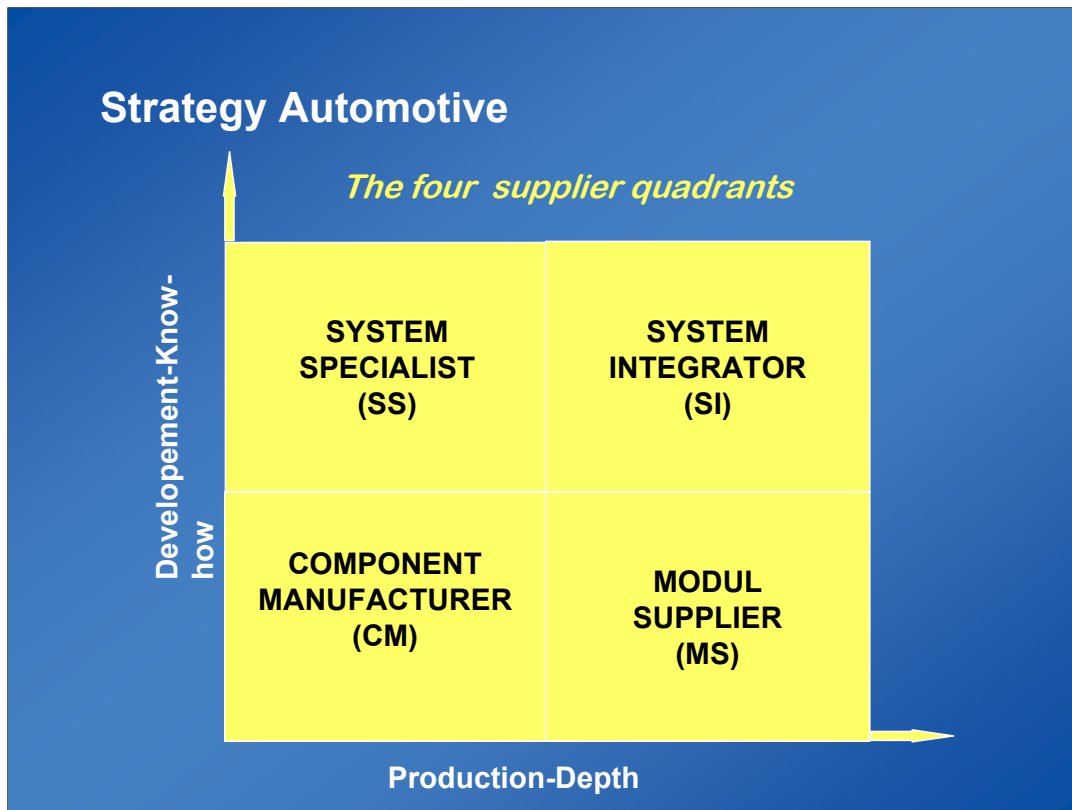
Success Triangle



Those companies which have not made their homework properly won't succeed in Innovation!

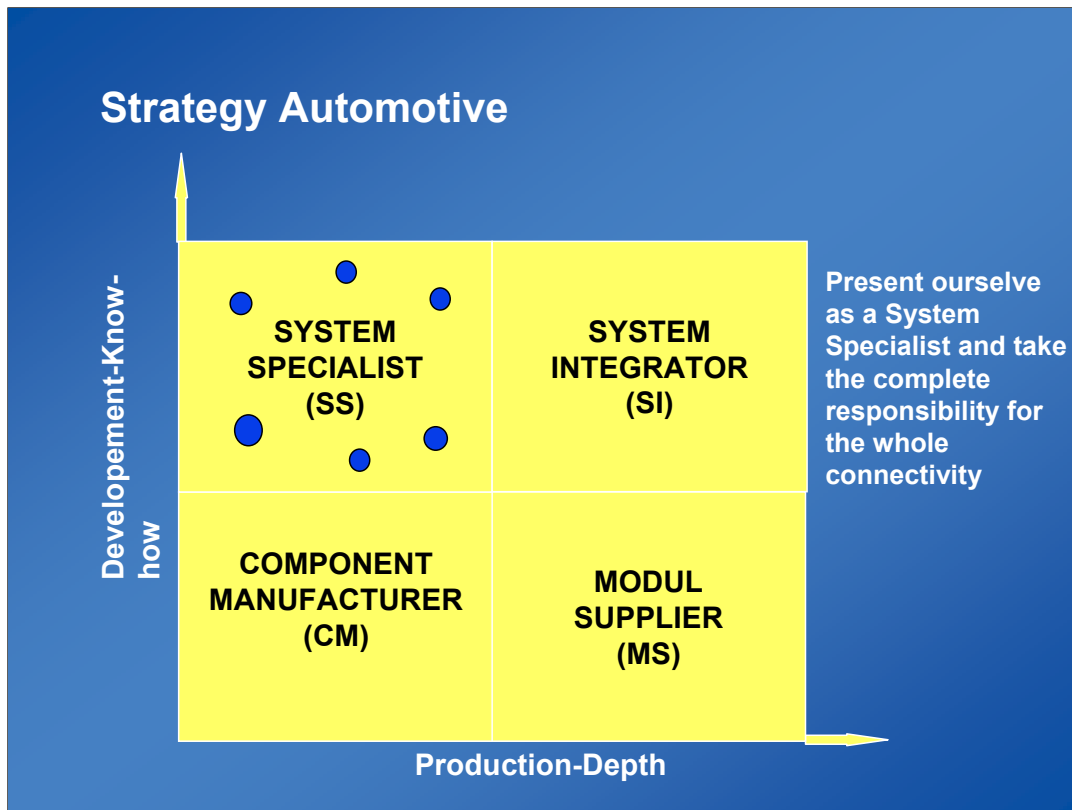
To be successful as a component supplier, we must find the right balance between quality, cost and innovation.

We must be able to develop the right products against a good market price with a quality that is good enough. The quality should not be too good because this will also increase the prices.



In the automotive industry we have four kinds of suppliers:

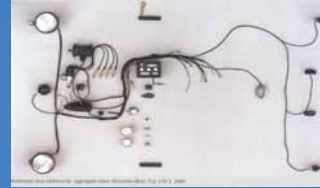
- The component manufacturer who is just supplying capacity.
- The module supplier who combines components but doesn't add anything or develop anything.
- The system specialist who develops and manufactures products but also wants to have the responsibility for the reliability.
- The system integrator who supplies big sub-components like dashboards, chairs, engines and so on.



Tyco Electronics wants to be the system specialist that takes responsibility for the whole process from development until production and delivery.

Expectation of the Automotive Industry for the Cable Industry

- Electronic content will still grow, vehicles will be more and more complex.
- > To reduce cost industry will go for more integration of the electronic control units. Example: Current Audi A8 has 63 ECU's next generation will have MAX. 35. Due to this:
 - > Less connectors will be needed
 - > Less cable will be needed
- >Space problems will demand thinner and higher quality cable
- >Shielding will become a more and more important issue
- >POF will also come down from high end (DC/BMW) to lower market segments. But this for infotainment only



Expectation of the automotive industry for the cable industry.

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Thank you for your attention.