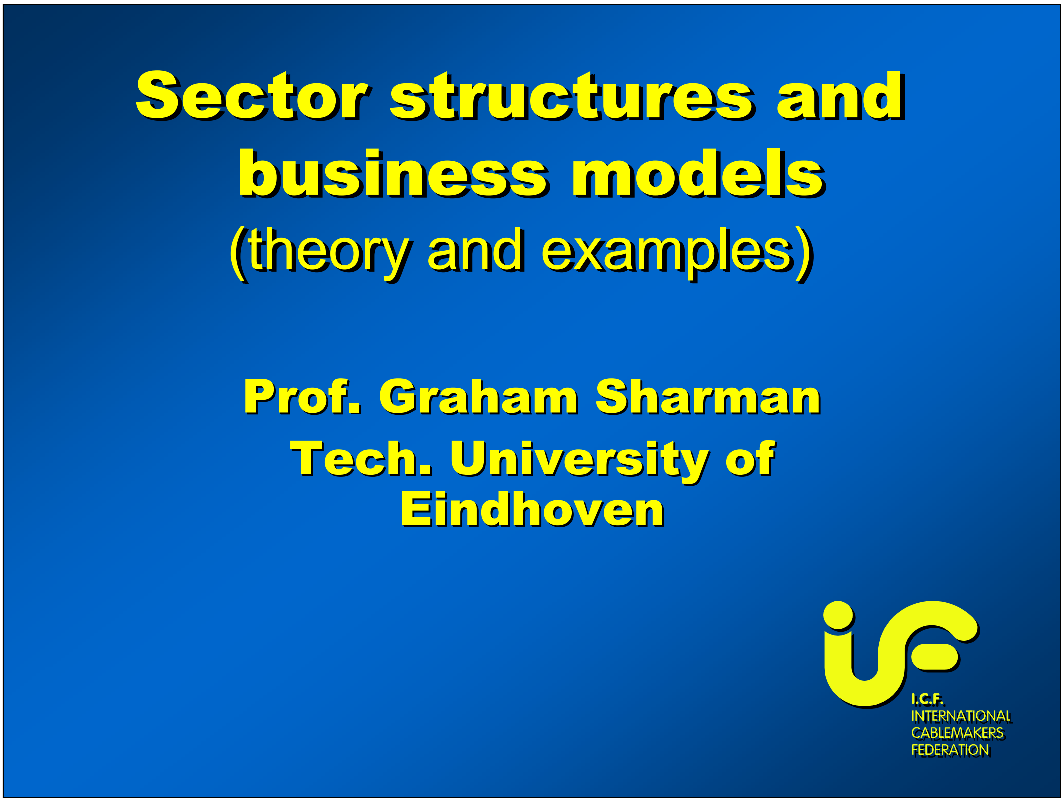


Good morning Ladies and Gentlemen!

It is a pleasure to be here this morning. This is my fifth opportunity to give a presentation at the annual ICF Congress and I greatly appreciate the invitation which has been extended to me.

John Segal has shown you an extensive fact base on the industry, of what has happened over the last few years and the trends and some of the events which have occurred.

I will try to build on that to some extent but I will also try to extrapolate in order to give some projections and correlations, which may be relevant for the wire & cable industry in the future.

Topics

- Diverse dynamic industry
- Emerging sector structures
- Winning business models
- Linkages and issues/opportunities
- Summary

I like to cover four topics.

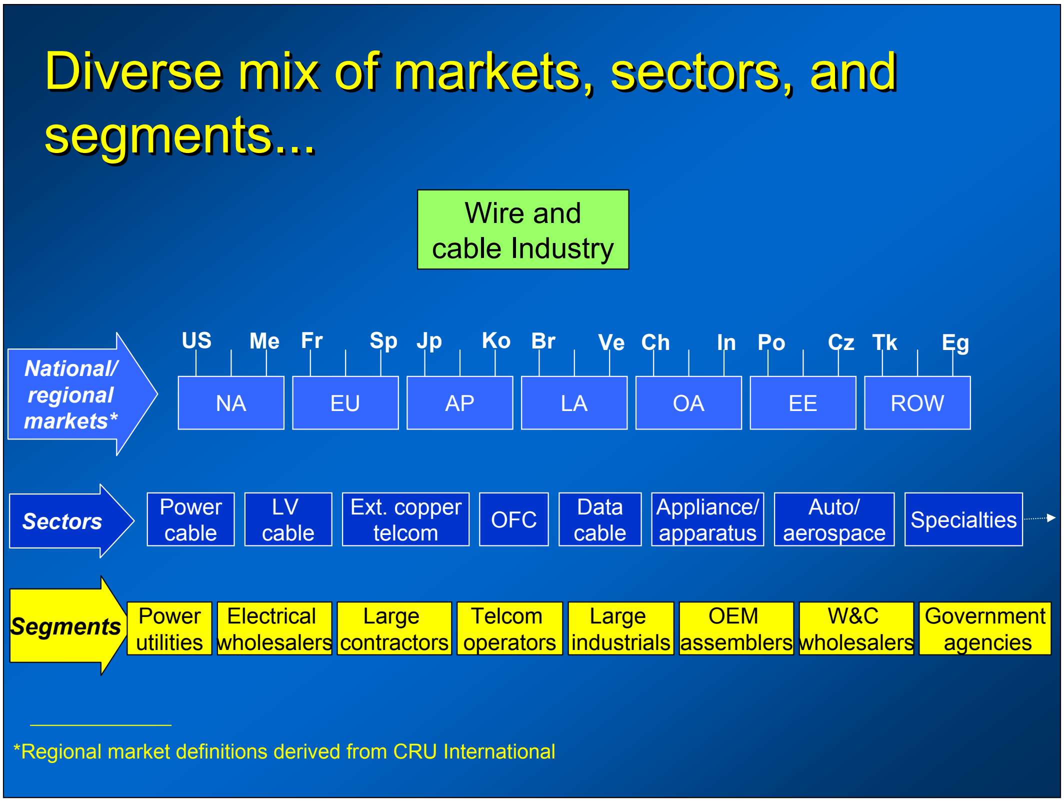
Firstly, I will spend a short time on an introduction of what is a very diverse and dynamic industry.

Then I want to talk about sectors and some emerging structures that are likely to occur or are already occurring.

Thirdly, I will talk about some business models from a more theoretical point of view. I will describe some research that has been done into the types of business models that in fact succeed and win against competition.

Next I will look for some linkage between the type of sector structure which you face externally and the business model that best fits it from a company point of view. At that point I will introduce a couple of issues and opportunities.

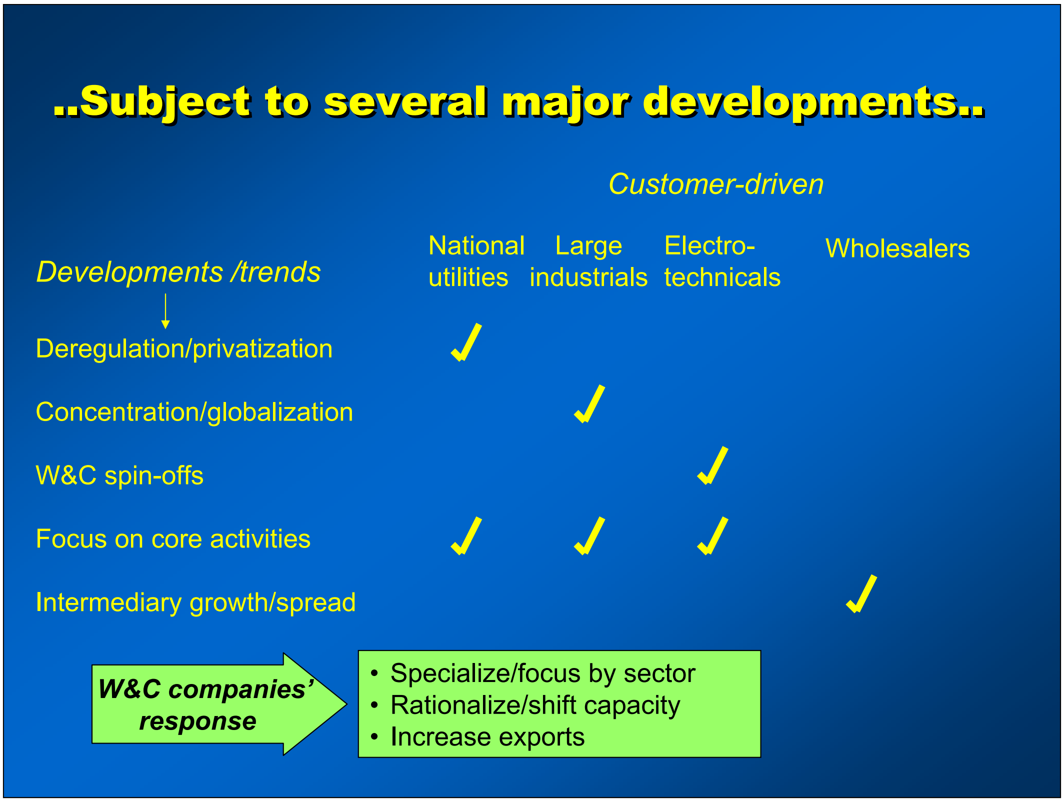
Finally I will finish up with a summary of questions the top managements can ask themselves based on what I have said previously.



Historically, the wire & cable industry has been and still is today primarily segmented on the basis of geography either in terms of regional markets, like North America (NA), the EU, Asia Pacific (AP) , Latin America (LA), Other Asia (OA), Eastern Europe (EE) and Rest of the World (ROW) or within those regions in terms of countries such as USA, Mexico, France, Spain, Japan and so forth.

Within those markets we have seen major sectors such as power cables, low voltage cables, external copper telecom cables, and within each of those sectors a multitude of product and customer segments, such as power utilities, electrical wholesalers, large contractors.

This set-up has obviously been affected by technology changes in the past. But recently it has been affected much more by the changes in the behavior of the major customers.



If we think about some of those customer driven developments and changes let us start with the national utilities (power and telecom). In many parts in the world they are deregulated and privatized .

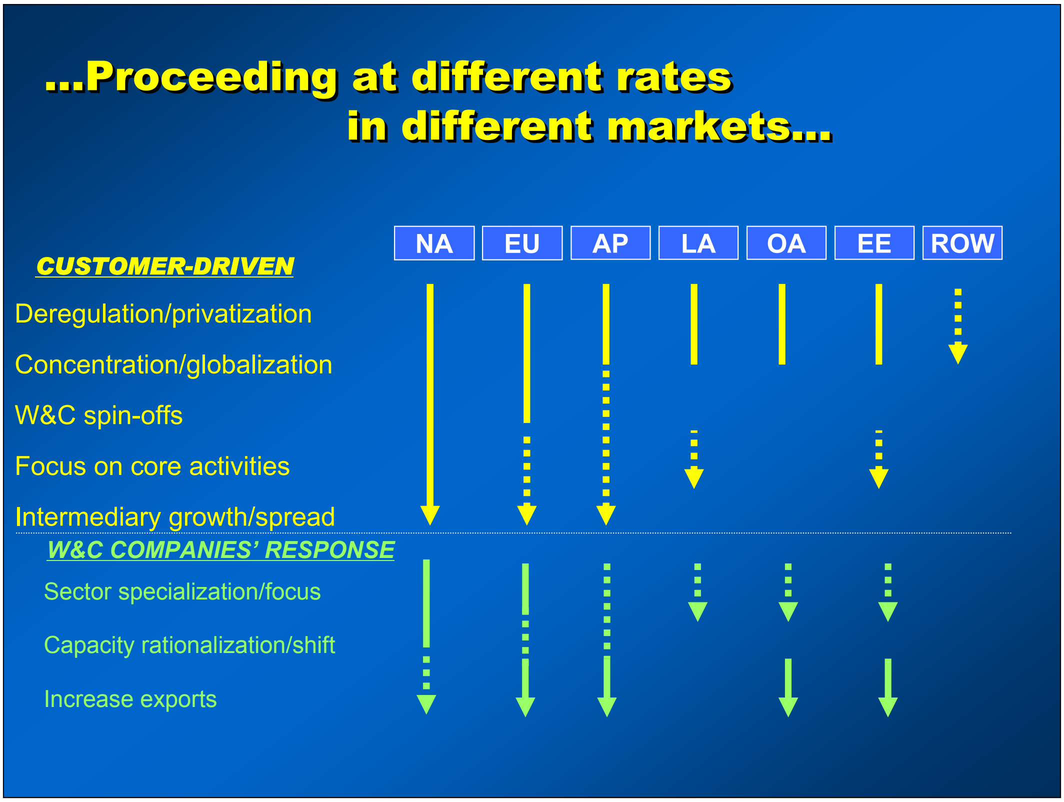
Moving on to the large industrials, the aerospace, defense, automotive companies. They are concentrating and globalizing and changing their requirements for wire & cable. They want to have w&c companies who are able to satisfy their needs on a regional or even global basis.

Going as far back as the 1970's some of the electrotechnical companies like GE and Philips, and more recently Siemens, Alcatel and Lucent have spun off their w&c business.

All of these three major groups have been increasingly focusing on their core activities. This gives some opportunities for w&c companies to add some value as the electrotechnicals withdraw from the w&c markets.

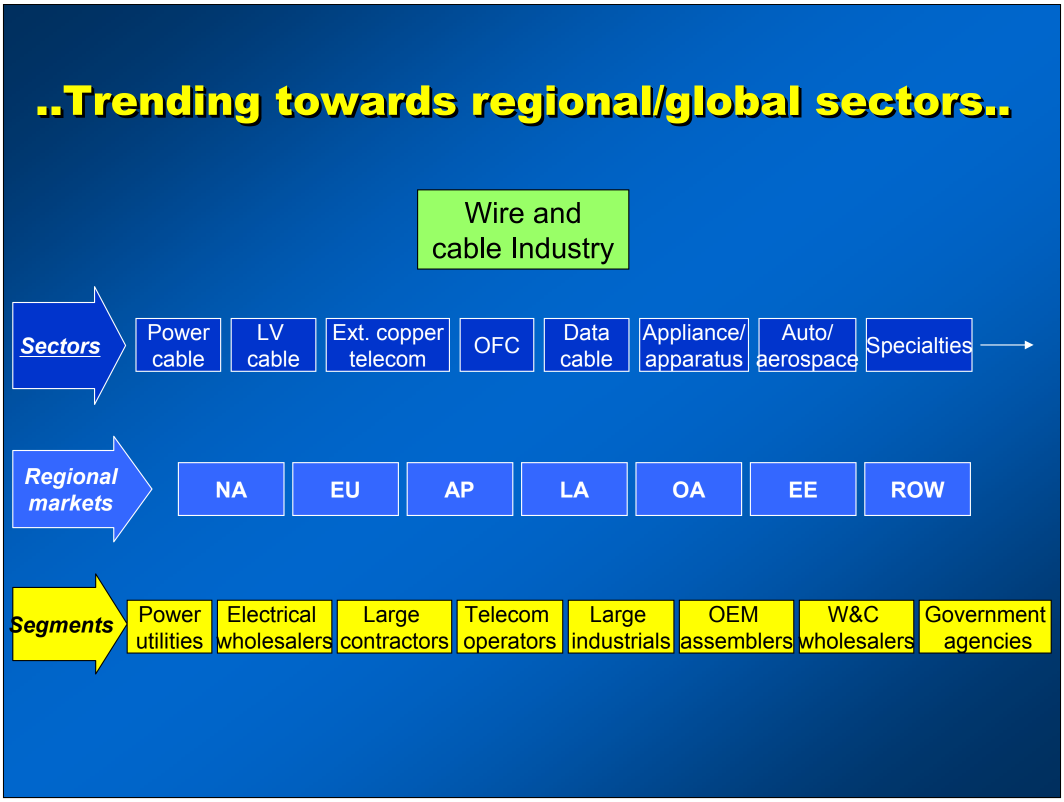
Finally, I mention wholesalers and middlemen. In the last few years they have increased their situation quite significantly. Companies like Rexel, Sonepar, Hagemeyer, being general electrical wholesalers, have 20% to 30% of their business in w&c, or the specialists like Anixter. They have increased their share around the world.

All of these customer driven changes have illicit w&c companies responses. The 3 main responses are listed on the slide. All of these changes take place at different rates and in different parts of the world.



If we look at the customer driven changes and the responses of the w&c industry around the world, we notice that these interactions proceed at different rates, some more quickly, some more slowly.

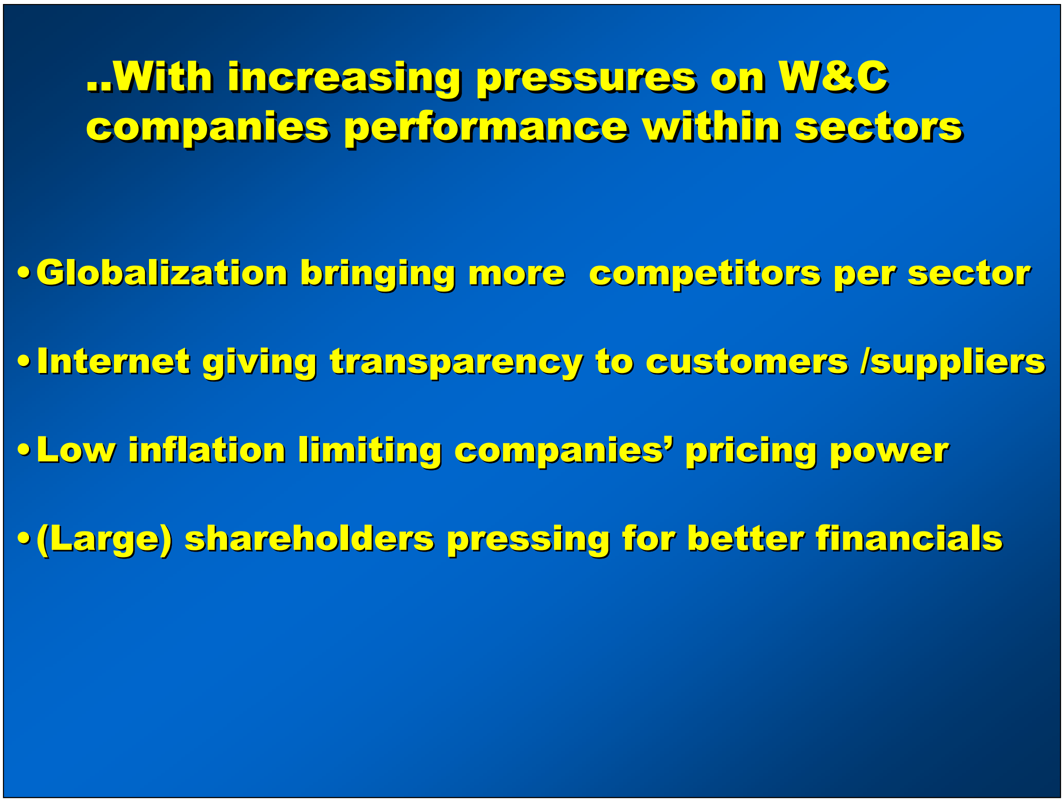
In North America, the most developed market, the changes are most extreme. I think this market is symptomatic of what will happen in the future in many other markets.



There will be a large shift in the industry in the future.

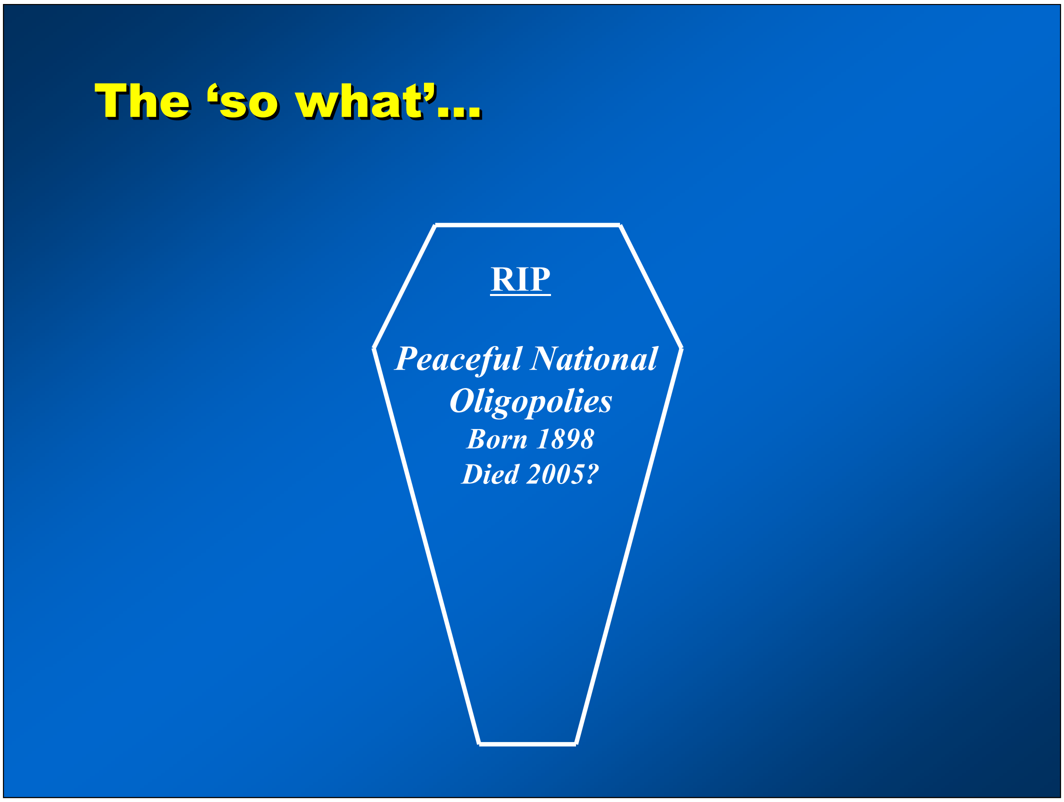
Whereas in the previous chart I showed that geographic markets were at the top level of segmentation, over the next 5 to 10 years sectors will become more important. Companies will be focusing their efforts by sectors rather than national markets.

Within those sectors companies will play a role in the various regional markets. National markets become less important. We will still have the complexity of the industry in terms of product and customer segments.



But I see an inversion in the future whereby sector specialization becomes more important than regional differences. There may be some acceleration in this situation due to the pressure some w&c companies are feeling nowadays. Some facts to this point can be seen on this slide.

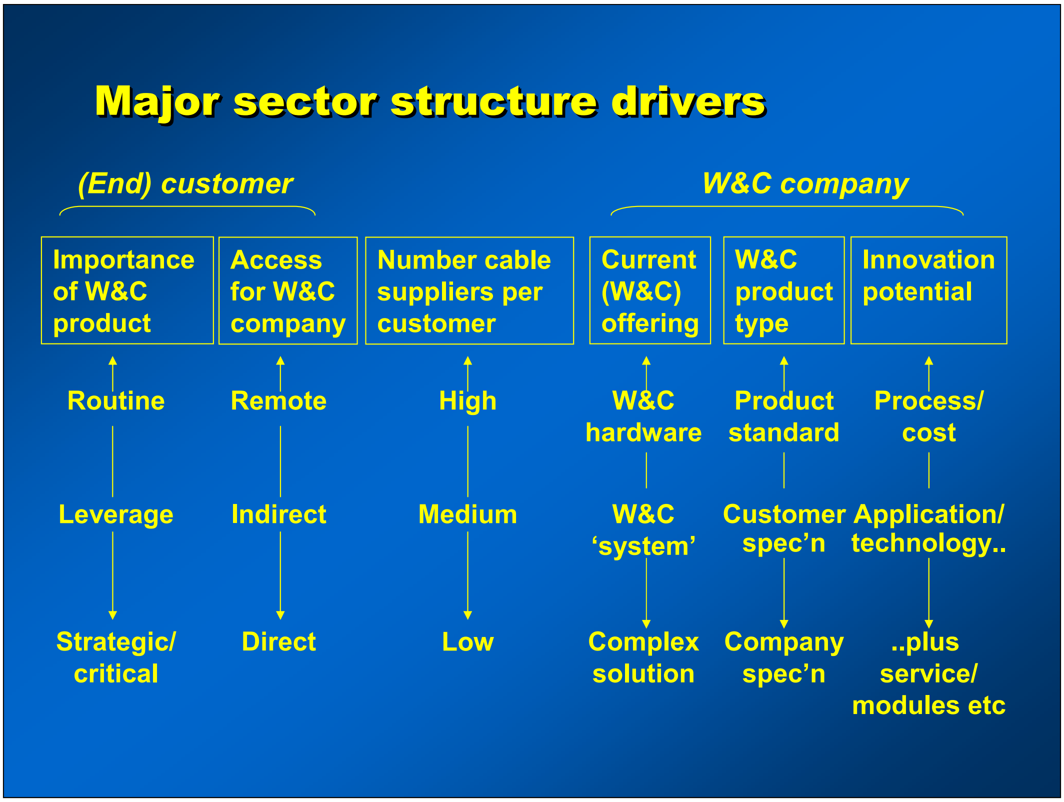
What is the relevance of all of this for the wire & cable industry?



The golden days of peaceful national oligopolies are dying. They already died in North America, they will also die in the other parts of the world.

Whether this will happen by 2005 or even 2015 I am not sure. But this structure of a national market with one or two competitors is probably something of the past.

So if this is the past, what might be the type of structure we will see in the future?

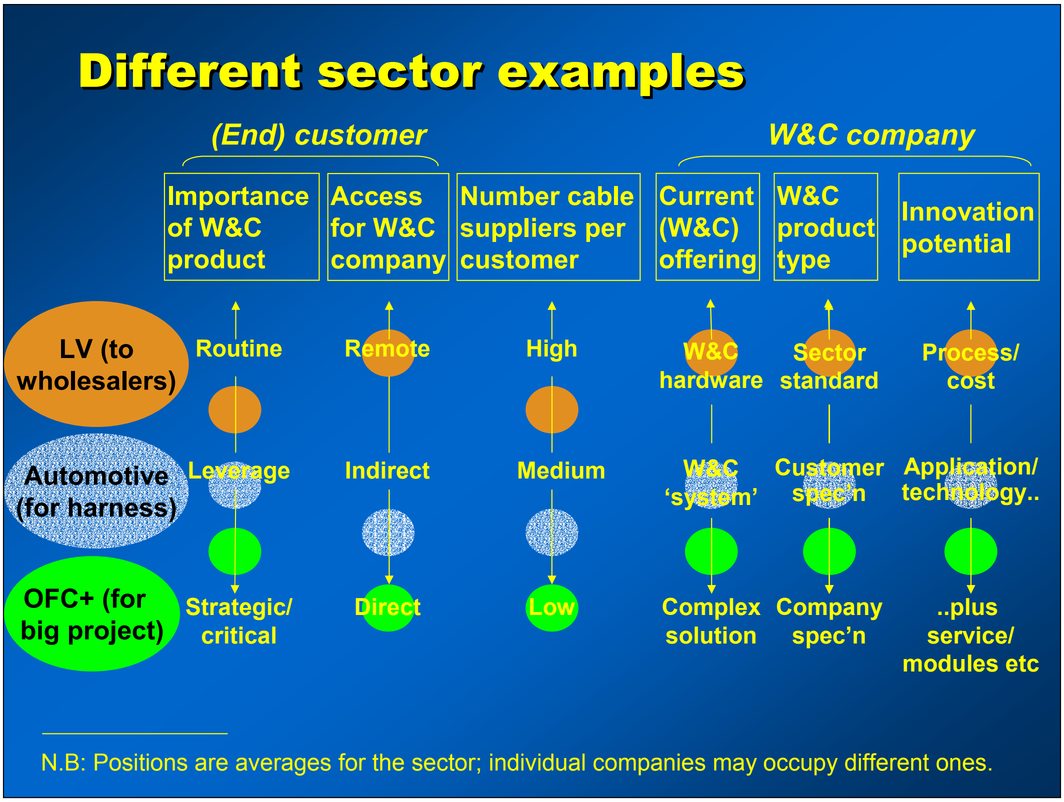


Let us focus on the level of sectors, which I think is going to be the most important type of differentiation.

In order to illustrate this more specifically I like to take 3 examples:

- •Low voltage cables (LV) or building wires to a wholesaler
- •Automotive cables sold to a harness maker
- •Optical fiber cables (OFC) for a large, complex project

With these 3 examples I will describe the factors that define which structure you will see.

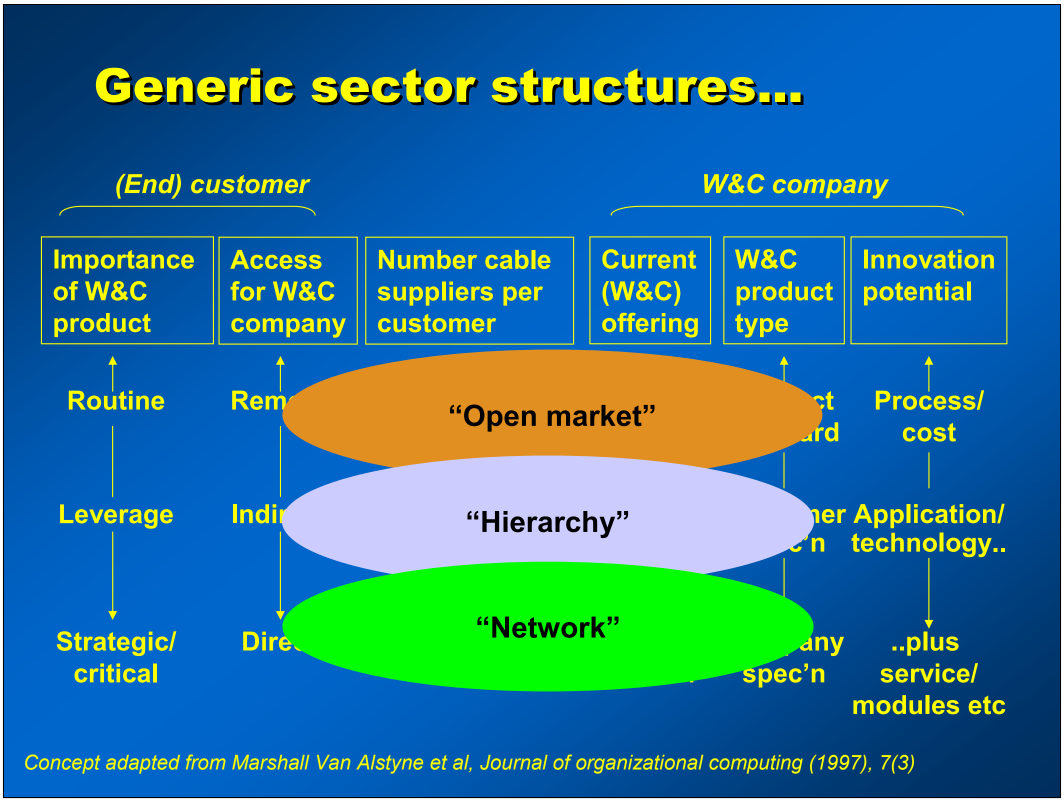


Let us start with 3 factors that are influenced by the customer or end customer.

The **importance of the w&c product** to that customer is one factor. For LV this is a relatively routine type of product. For automotive it is a product somewhat more important. Because the automotive companies are usually quite large they have a lot of leverage in terms of its definition. For an OFC for a large project the product becomes more strategic for the customer. Second factor is the **access for the w&c company** to that customer. LV cables or building wires are primarily sold via wholesalers, i.e. the access of the w&c company to the end user is remote. In case of automotive and OFC the linkages are closer. Another factor that effects the type of emerging structure is the **number of cable suppliers per customer**. There are plenty of LV suppliers, i.e. the ratio is high, just the opposite to the OFC suppliers.

Now let us look at 3 factors that are influenced by the w&c companies.

One factor is the **current product offering**. With LV it is primarily hardware, with automotive it is more a system and with OFC we have to solve complex problems. In terms of the **product type** for LV there will most likely be an industry standard, for automotive it is more a customer spec and for OFC a company spec. The **potential for innovation** is for LV in low cost and in process innovation. For automotive there are opportunities for application engineering and in case of OFC it may be interconnection or installation.



From the previous examples we can see 3 different sectors with a number of factors defining the structure that will emerge. I think there are basically 3 types of structure which can replace that comfortable oligopoly we all like to have in our national market.

•Open market

Lots of suppliers, a classical transparent market.

•Hierarchy

Relatively small number of very powerful players dominate industry, in most cases customers of the w&c manufacturers.

•Network

Multiple players, who combine to produce a solution for the end customer.

...With different characteristics

Customer relationship development:	"Open market"	"Hierarchy"	"Network"
Qualification:	Product spec.	Customer specs.	Capability/ references
Acceptance:	Mainly price	Price+Multi-level relationship	Price+Agreed scope/ responsibilities
Sole/dual sourcing?	Unlikely	Maybe	Possible (per project basis)
Communication:	Bipolar/ transactional	Multidimensional/ rule-oriented	Multiparty/ event driven

Let us look at some of the interactions between the w&c companies and their customers.

The first thing which happens in the relationship between a w&c company and its customer is to become qualified. In the open market it means to meet the product spec, whereas in the networking it means that through references the company demonstrates the capability to solve the problem.

The next step in the relationship is acceptance, followed by sole or dual sourcing and communication.

In an open market situation we will mostly see bipolar and transactional types of interactions. In case of hierarchy it will be multidimensional interaction, because you have to interact with all the different levels of that large customer which dominates the market and sets the rules.

For the network the communication will be with multiparties, that are participating in the solution process, and is in many cases event driven.

…With different characteristics (continued)

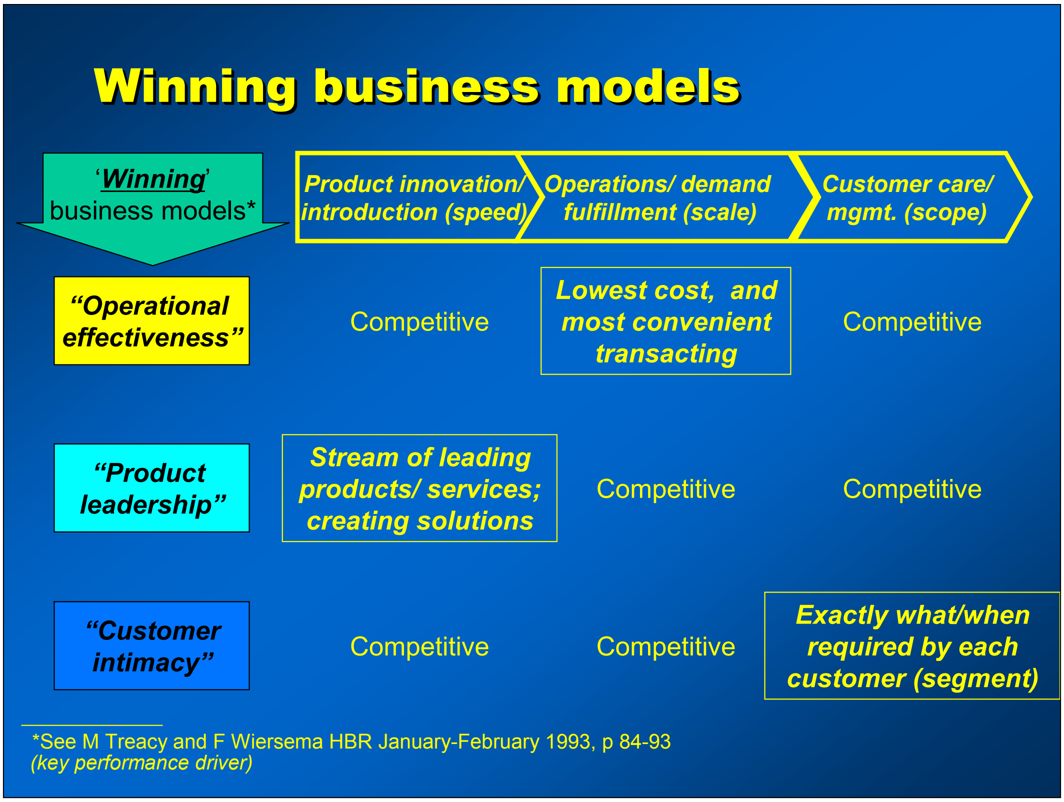
Customer relationship development:	"Open market"	"Hierarchy"	"Network"
Conflict resolution:	By contract	By contract/ 'judgement'	Negotiated
Continuity? (switching cost):	Unlikely	Possible	Likely
Information sharing:	Limited	'One sided'	Intensive/ multi-polar
Overall atmosphere:	'Arms length'/ adversarial	Coercively cooperative (with customer)	Collaborative (with customer & others)
Supplier objective:	Independent 'Street fighter'	Indispensable (but dependent)	Interdependent partner

Let us look at situations where conflicts with the customer occur.

In an open market it might simply be related to the contract, as it maybe the case for the hierarchy. But in general that powerful customer will influence whether or not and how that contract is fulfilled. In case of a network we probably have a negotiated type of solution, where it maybe rather complex to determine who is responsible.

Taking another factor, e.g. overall atmosphere. In an open market the overall situation which occurs is dealt with on arms length between you and your customer, somewhat adversarial. In the case of the hierarchy probably it will be cooperative on the terms the customer sets, so in that sense coercive. In a network the atmosphere will be much more collaborative both with the customer as well as other providers.

I described 3 types of sector structures that, when looking ahead, could dominate the various different sectors which could become important in the w&c industry.



Now I like to turn from the external environment, from the sector structure, to the business model companies can adopt in order to compete effectively.

Every business has basically 3 fundamental processes.

Innovation: Developing new products or services, commercializing them in the market. Nowadays in this process speed is important. Time to market is the key word here.

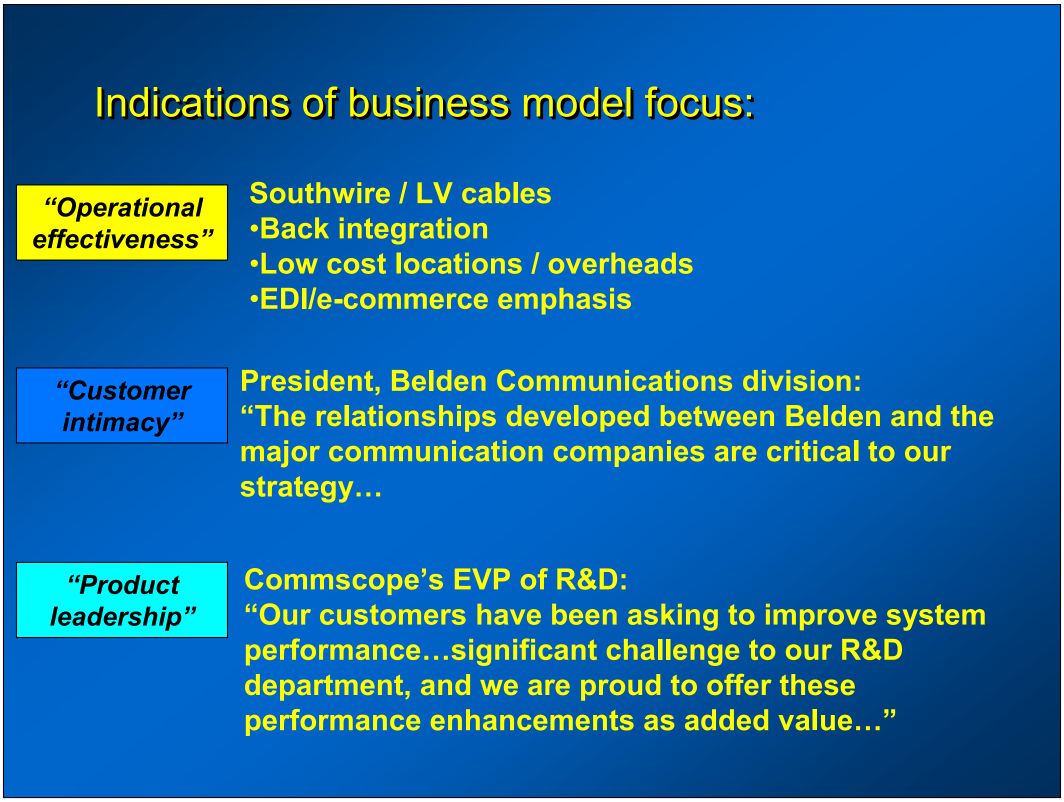
Operations: Fulfilling the demand. Here mainly scale is important.

Customer care: Serving the customer, both in terms of selling the product and of looking at after sales service. In many cases the driver here is scope. The more one looks after the customer the more satisfied he becomes.

During the 1990's some research was done by the gentlemen M. Treacy and F. Wiersema on a number of companies across a group of industries. They found that the winners in those industries performed **one** of those 3 activities exceptionally well and were competitive in the other two. They defined 3 types of winning business models:

Operational effectiveness, **product leadership** and **customer intimacy**.

The attributes of these winning business models with respect to the 3 fundamental processes, described above, can be seen on the slide.



Let me explore quickly some possible aspects of these models for the w&c industry. I looked for clues amongst some of the activities and some of the statements of w&c companies.

On operational effectiveness I was struck by Southwire and its performance in building wire and LV cables. They integrated backwards into a rod mill. They keep their cost absolutely as low as they possibly can by operating at low cost locations, where people and space is inexpensive. They are extremely lean and mean in their overhead. From the beginning they have put a great effort into their e-commerce activity, trying to simplify how their customers are dealing with them.

For customer intimacy and product leadership I found some statements you can see on the slide.

We notice in the wire & cable industry evidence of some of these strategies.

Each model with different characteristics

Elements → / Business models ↓	*Products*	*Pricing*	*'Natural' segment*	*Operations*
"Operational effectiveness"	Reliable	Very competitive	Price shoppers	Efficient
"Customer intimacy"	(Semi)customized	Geared to customer	Particular shoppers	Flexible
"Product leadership"	Key to customer's performance	Premium	Performance seekers	Streamlined

Each of these models produces different characteristics. I will give some examples.

Starting with **products**: For operational effectiveness you require reliable products. For customer intimacy you probably have to customize the products. For product leadership you need products that solve the problems customer have.

Another example **operations**: Efficiency is basically everything for operational effectiveness. For customer intimacy probably flexible operation is the key requirement, in order to satisfy the different needs of different customers. For product leadership it is streamlined operation, in order to be able to bring your product to the market quickly.

Each model with different characteristics (continued)

Business models ↓ / Elements →	***Development efforts***	***Discretionary overheads***	***Organizational structure***
Operational effectiveness	Cost cutting/ incremental	Minimal	Functional, centralized
Customer intimacy	New (customized) products/services	Customer linked e.g., CRM systems	De-centralized, especially around customer
Product leadership	New (competing) breakthroughs	Tech leverage e.g., academic links	De-centralized, cross-functional, outward looking

Other activities that one can think of in these business models are development efforts, discretionary overheads, organizational structure. Let us look at the last one.

For operational effectiveness one needs a functional structure, quite centralized.

For customer intimacy it should be much more de-centralized, giving power to the field.

For product leadership again it should be more de-centralized, more cross-functional and more outward looking, looking for ideas and possibilities from outside the organization.

Each model supported by other aspects of the business:

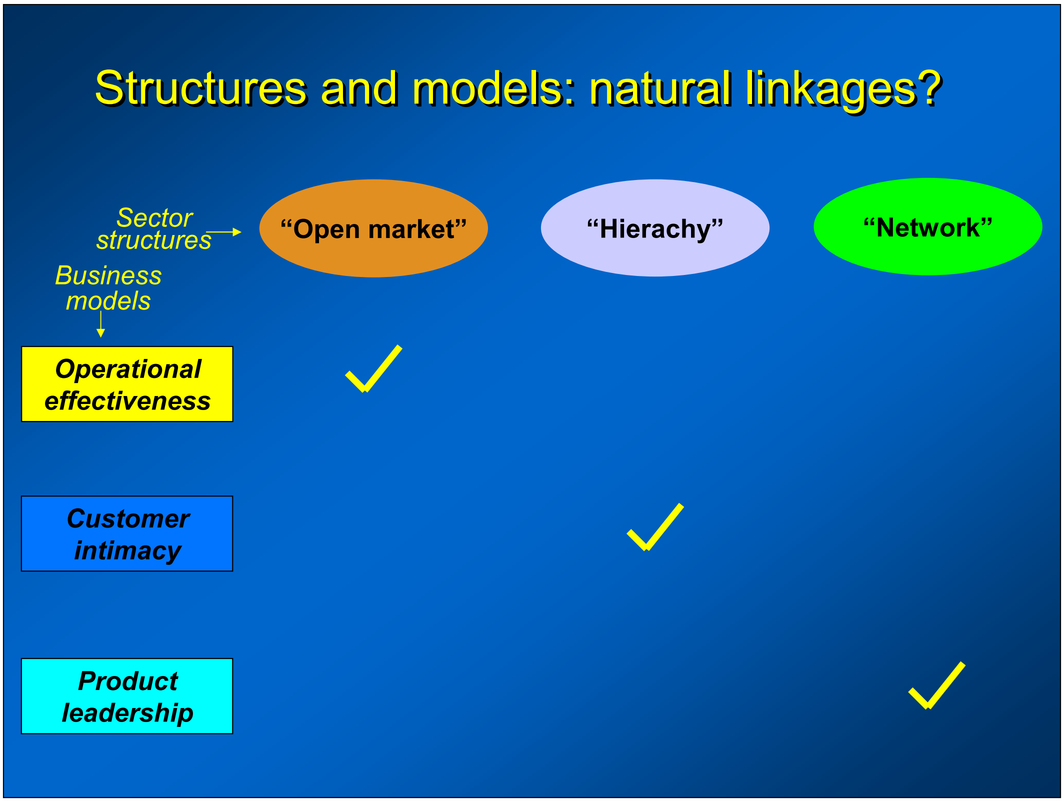
- Organizational processes
- Systems approaches
  - –IT architecture
  - –HR (e.g., recruiting/training)
  - –Management incentives
- Business ‘culture’

Each of these models will then be supported by other aspects of the business.

So that the organizational processes, e.g. the planning, the budgeting, the hiring and firing, will be different, depending on which model you are following.

The systems approaches such as the type of IT-architecture, the way HR is run and also the management incentives in terms of measurements are likely to be different, depending on which of those 3 winning business models you are following.

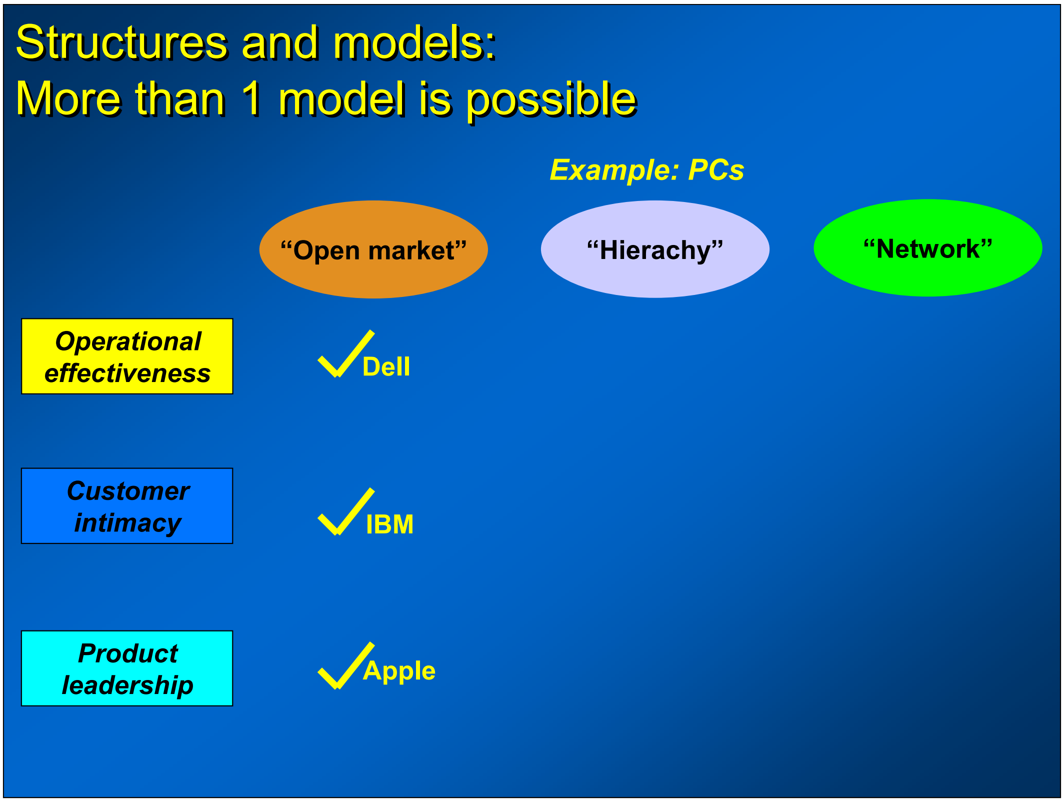
The whole culture of the business was found by M. Treacy and F. Wiersema to be different depending on those models.



Let me try now to find out if there is any linkage between the sector structures, i.e. the external environment, on the one hand and the winning business models on the other hand.

I think there is a sort of natural fit between the open market situation and operational effectiveness, between the hierarchy and customer intimacy, and the network and product leadership.

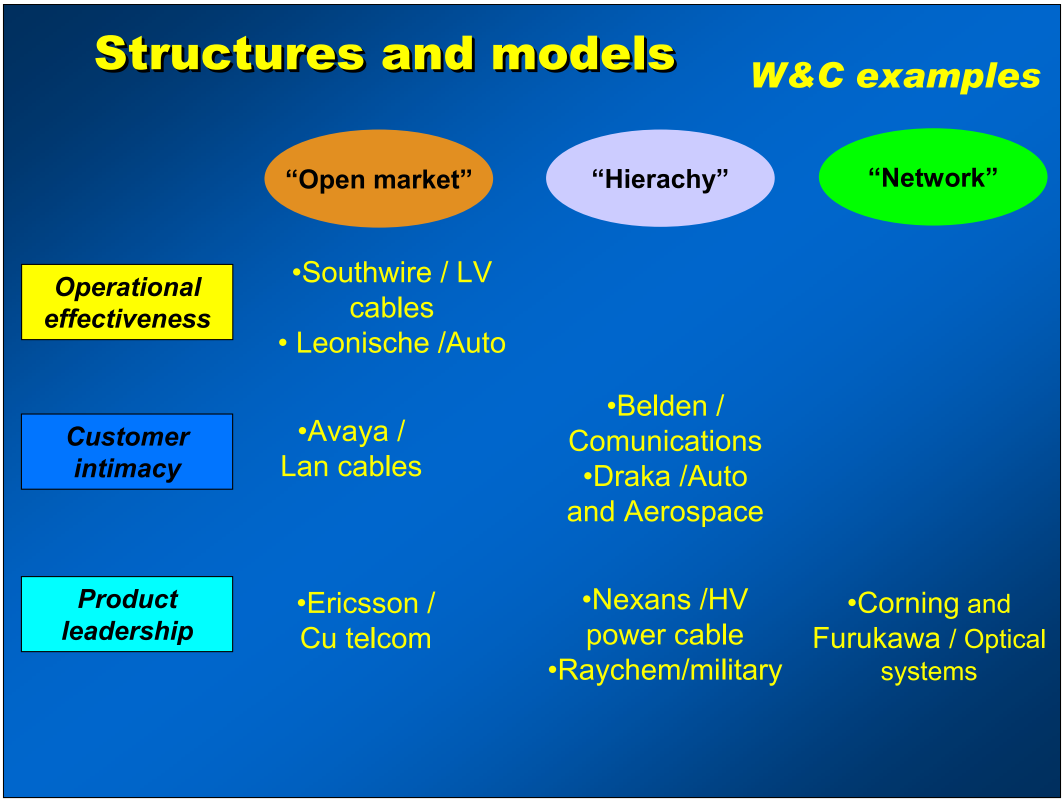
You see there is a question mark behind the words "natural linkages". Because I think one cannot be too dogmatic about this situation.



If we look at an industry we all know, the PC industry, we can see more than one approach to compete in this particular market.

We see Dell clearly effectively operating in this market at low cost. We see IBM focusing on the business market, linking the product to other hardware and software. We see Apple and also Sony always innovating in terms of new products, new features and new ideas. All 3 companies are competing in this PC market, which has the characteristics now at least of an open market.

It is worth pointing out that the company that is winning, that is gaining market share and that is more profitable in this industry is in fact Dell.

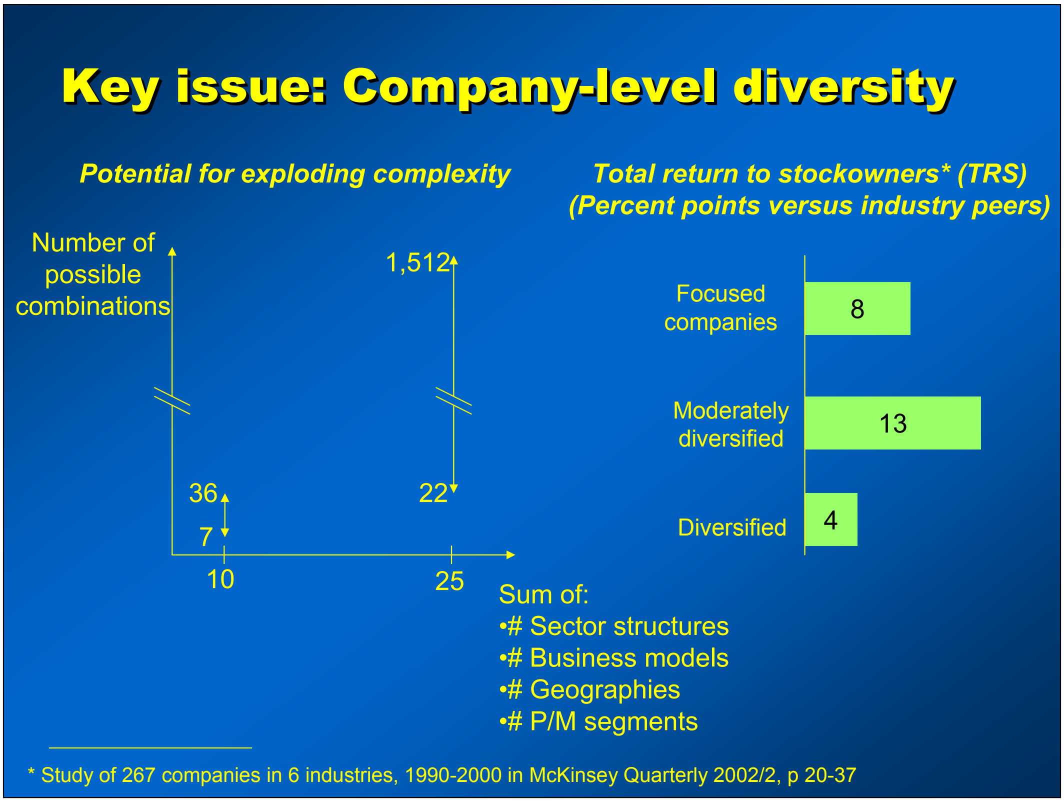


Let us now turn to the wire & cable industry. I do this with a certain degree of trepidation, because obviously I do not understand the strategies and the business models of the w&c companies intimately.

Nevertheless here are some thoughts on that. I already mentioned that Southwire with its LV cables and high degree of effectiveness is in the open market.

I pointed out that Belden Communications division is probably in the hierarchical type of market and emphasizing customer intimacy. There we also find Draka with their auto and aerospace offerings.

In the more network oriented situation I find Corning and Furukawa. But I also can find some other examples of companies which are in other parts of this particular matrix.

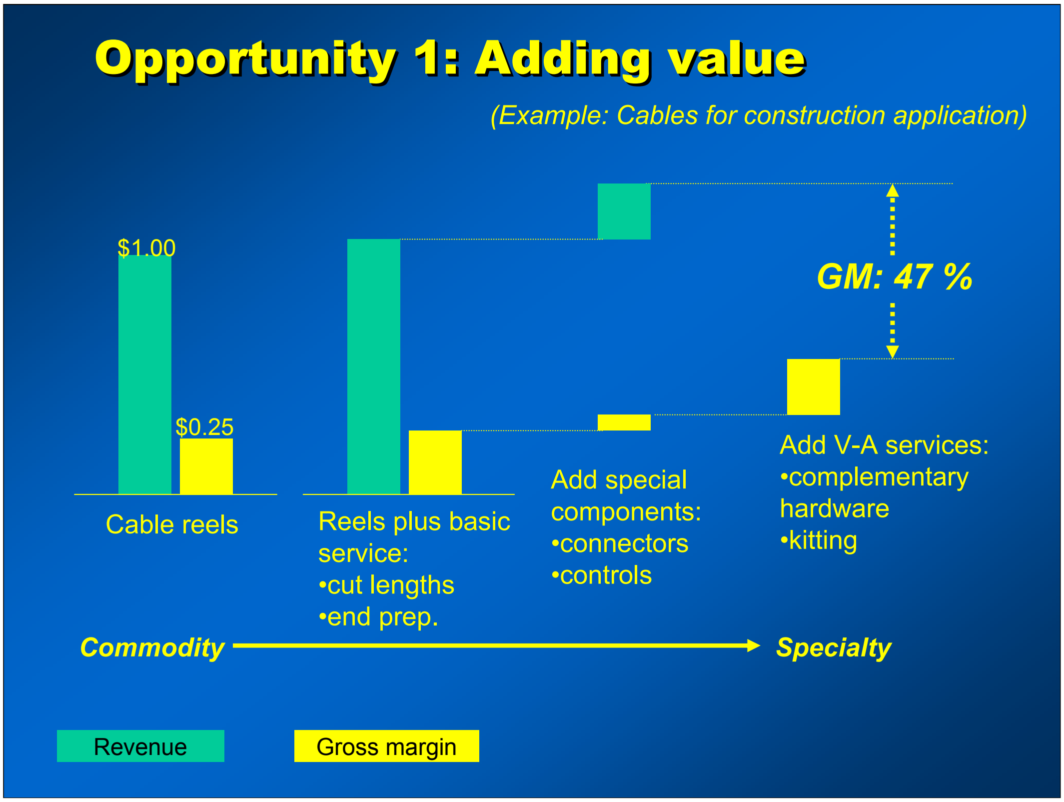


I like now to turn to a key issue in my view. I talked about this previously when you had your meeting in Boston.

It is the issue of diversity and complexity. If we talk about those sector structures and the business models and the geographies and the product / customer segments we have in our industry a very complex situation. Depending on how many of these dimensions a company tries to cover the number of possible combinations increases dramatically.

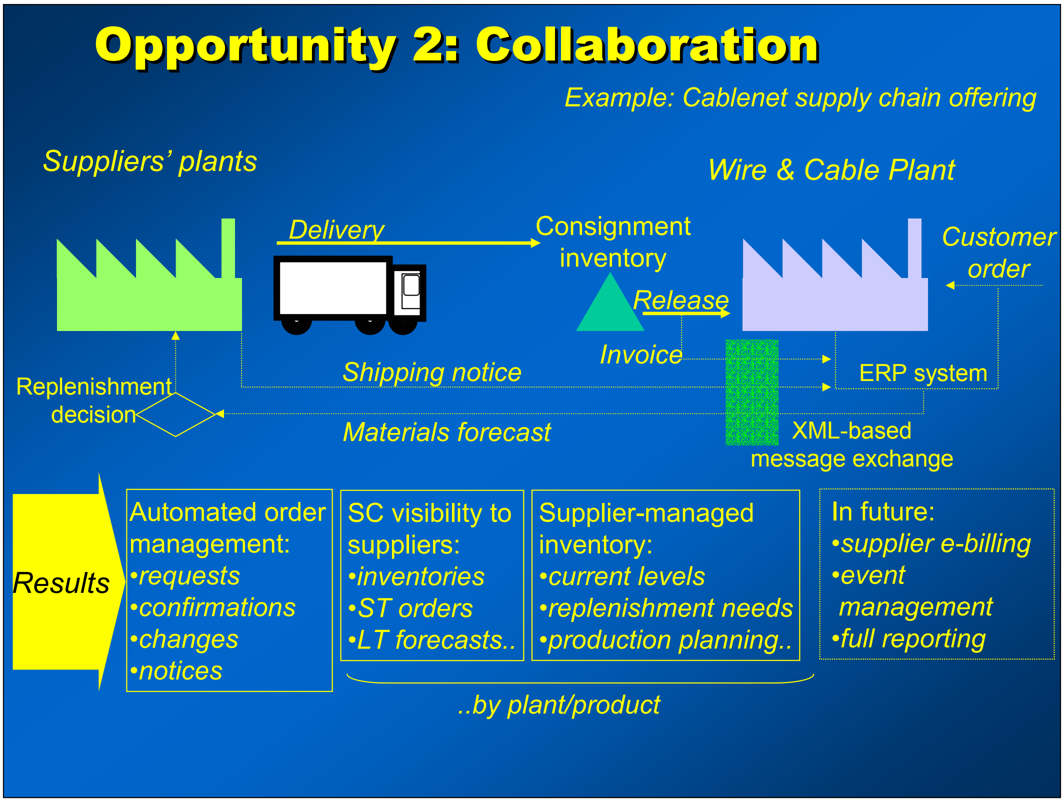
If for example the total of all structures, models, geographies and segments adds up to 10, then we have a minimum of 7 and a maximum of 36 combinations, that one can experience as a management challenge. If the sum is 25, then we get a minimum of 22 and a maximum of 1512 different combinations to manage. This is a major challenge for the industry.

There has been done some very interesting research by McKinsey on the performance of companies which tend to be very focused, fully diversified or moderately diversified in comparison with their competitors. They found that the focused companies were more profitable than the diversified companies, but the moderately diversified were doing even better. One of the reasons for this was the type of situation we have seen in the telecom market, where all of a sudden one of your legs starts to crumble. Then it is nice to be diversified.



Let us look at some opportunities. Whatever structure or business model you have, there are many opportunities to add value.

In this example I am taking cable from a construction application, e.g. cables which go into cranes on a building site. The basic product, cable sold on a reel, forever $1.00 of sales about $0.25 of gross margin. The company, I am looking at, also adds some basic services like cut lengths, adds some special components like connectors and adds some services like complementary hardware. With all of this added value the product moves to a gross margin of 47%. This example shows the potential of moving away from a commodity to a specialty.

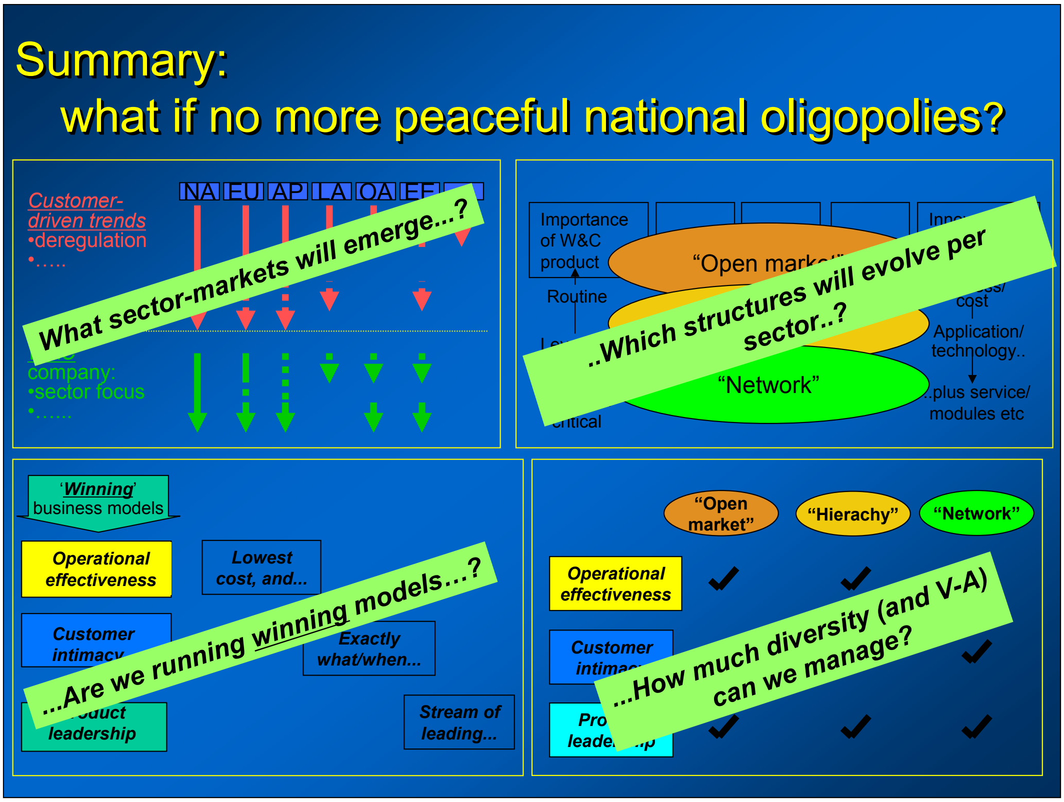


A second opportunity is the possibility to collaborate, in this case with one supplier. The example I am showing is the Cablenet solution. I am sure, Cablenet is a company many of you will know. Each week you can see them on the web, get their report what is happening in the cable industry.

Cablenet is working with its customers to improve the collaboration between the supplier and the w&c company. In a normal situation you have a delivery, if you are lucky, you have consignment inventory, you release from that inventory into the plant, the bill is then sent and is finally paid.

What Cablenet has added to this situation to promote collaboration is an XML-based message exchange and the provisions from that message exchange out of the ERP-system for a materials forecast. A replenishment decision module in the software has also been added.

The value of this in real time is seen by the results being achieved. One is automated order management. Currently on this system 175 000 messages take place every day. At the plant level increased visibility of the supply chain (SC) to suppliers is achieved. What short term (ST) orders they have, what long term (LT) forecasts they can expect. It also provides to the supplier the management of inventory and in the future automated e-billing, event management and fuller reporting. This opportunity of better collaboration exists whatever the structure of the sector or the business model is.



We need as management to think about the changes that are going on. I said they are going on in a different rate in different parts of the world. All those markets tend to be different. But what kind of sectors will emerge and when will they emerge for each company? For those sectors we have to ask, what structure will evolve? Will it be an open market, a hierarchy or a network type of structure? For the company itself we have to ask, are we running those winning business models? Operational effectiveness, customer intimacy or product leadership. When we put the two together, the sector structure and the business models, the question is, how much diversity can we manage? Are we looking at possibilities to collaborate and at value added (VA) opportunities? How can we maximize our situation whatever the structure or the business model is we chose as management to adopt?

Thank you!