

Creating Shareholder and Stakeholder Value:
the new Corporate Management Model
to safeguard the Environment
and the Community in which the Company operates

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Rector, President, Professors, Students, Ladies and Gentlemen, good afternoon.

First of all I would like to express my most profound gratitude to the University of Palermo and the Faculty of Engineering for the great honor they have paid me in granting this degree, which is one that is particularly dear to my heart because it highlights the inherently managerial aspects of the profession of engineering and therefore emphasizes the activities on which my work has been concentrated for almost forty years.

But a manager does not work alone, in isolation. A manager, as the title suggests, *manages* financial and material resources and, above all, orchestrates the work of his colleagues, the men and women who make up the company's human patrimony, motivating them and guiding them in the sharing and realization of a dream. In my case, I had the great privilege to be able to realize some dreams together with my colleagues and I believe I can say that those dreams were important and precious not only for the company we work for. Allow me then to embrace all my colleagues – in Italy, in France and throughout the world – in the joy and the pride of this moment, sharing with them this prestigious accolade.

In the light of what I said, when I was picking the subject for my address, I chose to emphasize certain aspects of business management that – as we will see – aim to overcome the traditionally more restrictive aspects of the theory of shareholder value creation chain. I will also discuss the central role of the individual in the processes through which a company realizes its goals and the need to overcome the artificial barriers that have traditionally tended to separate the creation of wealth from the creation of social value.

First, however, I would like to analyze with you two other trends that, in my opinion, are exercising – and will in the future increasingly exercise – a powerful influence that will transform the business world and impact, directly or indirectly, all of us. I am referring to the phenomena of globalization on the one hand and, on the other, the development of the e-Society, the society of information technology or electronics, which of course is what the letter 'e' stands for.

Let's begin then with globalization and its consequences. There is no doubt that this is a tendency that has been underway for many years, but it has recently seen a very strong acceleration, creating fierce resistance in many sections of the world's population and not only amongst the young. Clearly, my observations on this phenomenon are derived from my experience in the microelectronics industry and are influenced by the perspectives of a high-tech company. However, I believe that my comments can be easily extrapolated to most other sectors and I hope, therefore, that they may be of more general interest.

The phenomenon of globalization has increased the level of international competition, opening up new opportunities and, at the same time, destabilizing historically entrenched positions. It has found, in my opinion, its full maturity in the abolition, in many business areas, of the customs barriers that were erected to protect the world's macroeconomic systems and the national systems within them. In the same sudden and wide-ranging way we have seen in sectors such as our own the disappearance of the strong technological barriers, at least for medium-low level technologies, that had been created between unequally developed areas of the world. At the same time, a progressive narrowing of the gap in cutting edge technologies is also underway.

I think this lowering of the technological barriers and the reasons at the origin of the phenomenon deserve a deeper analysis, because it is a widespread mechanism that could have considerably destabilizing effects on the western world. In fact, ever since the first industrial revolution, the exclusive possession of technologically advanced processes gave the western world - strong with its know-how and financial resources - the ability to build a spiral of accumulating knowledge and wealth, even where nature was not particularly generous in natural resources such as raw materials and energy supplies. A very wide swathe of the world population was therefore excluded from the mainstream of industrial development and was able to attempt a timid entrance into international markets only through its extremely reduced cost of labour, which corresponded to extremely deprived living standards. Even today, and we all know it well, the result of this marginalization is that half of the world's population, around three billion people, live on less than two dollars a day.

But while there still remain vast areas of underdevelopment, some countries, above all in East Asia, have been able to initiate a positive chain reaction based on technology that has allowed them to escape, at times tumultuously, from their conditions of poverty and exclusion. In all the cases known to me, from Singapore to Taiwan and South Korea, or even earlier, in the case of Japan, the national governments have played a primary role in encouraging or directly setting up important research programs in the field of microelectronics and electronics whose results were shared amongst many participants, working together in many different ways. At the same time, the need to limit the growing costs of new manufacturing plants led to the standardization of production systems, and this in turn led to the widespread availability of a common technological base. In addition, the return home of highly qualified personnel following work or courses of study in countries such as the United States spread knowledge that would previously have remained confined within the highly developed areas of the planet.

After all, not even the celestial Chinese empire managed to keep the technology of the silkworm to itself, in spite of the threats of a horrendous death for anyone who revealed the secret. One thing we can all be sure of in this era of globalization is that all the technological barriers are destined to fall, sooner or later. And allow me to add another tile to the mosaic: financial resources are not the exclusive privilege of an elite few; international capital now moves without barriers beyond national boundaries, seeking only the best combination between risk and remuneration.

In this somewhat destabilizing situation, what should we do? Which strategies can we adopt to avoid being overrun by the new trends in economic history?

Clearly the first reaction is to run away, to relocate to countries where the ratio between the cost of labour and productivity is optimal for the sector in which the company operates. And, in some cases, in sectors that are now far from state of the art of technologies and processes, I fear that there are no valid alternatives.

However, in many cases, it is possible not only to avoid the fall but also even to take advantage of the new configuration of world industry and commerce.

Nevertheless, it is not possible to ignore the new competitive relationships that have arisen between the different macroeconomic systems due to the processes that I have just described. It is not therefore conceivable that production processes with low technological content and low added value can be retained in the long term in countries with relatively high cost of labour, such as those of the European Union.

But, while we are forced to accept this inevitable necessity, we cannot stop here and passively accept the long-term consequences of this phenomenon, which would lead to a progressive industrial decline and, in the end, a dreadful impoverishment of the economies of the developed countries.

The answer exists, and it lies in a single word: *innovation*.

Innovation of technologies and products, of course, but also innovation in the processes and methodologies of the business enterprise, which must constantly regenerate itself, even when operating in relatively mature sectors.

Innovation is a driver that enables the continuous move towards higher-end products, which make it possible to maintain, through higher profit margins, the competitiveness of the company. It is obvious that this is a never-ending race to beat, through the enrichment of process and production values, on the one hand the enormous differential in the cost of labour and, on the other, the dynamic technological progress of rapidly developing countries.

And, as I have already emphasized, the combination of a judicious process of progressive de-localization of production processes with relatively lower technological content, and in parallel, the continuing shift towards more remunerative positions thanks to a widespread process of innovation, makes it possible to maximize employment and creation of wealth. This applies, obviously, not only in countries with lower labour costs but also in countries in which innovation is developed through the work of an ever-growing multitude of highly qualified researchers and designers.

To make the present analysis complete, it is essential to note that this process of innovation and movement towards higher categories of product, though possible, is, in turn, limited by the pace of innovation, the ability to maintain margins and the growth of

employment opportunities when the field of activity is approaching maturity and saturation. It is then essential to introduce discontinuity in the process of innovation, attacking new sectors that show promise for the future. This is what is happening in the United States and in the more advanced countries of the developed world, with the massive arrival on the scene of companies in leading edge sectors such as genetics, nanotechnology or bioelectronics.

Another point on which I think it is worth reflecting is the efficiency of the overall system-nation, rather than merely evaluating the cost of manpower in the equation of international productivity. We have seen how the entire mechanism that allows the parallel development of economic growth and employment for a company, both in countries with a high capacity for innovation and in areas with low cost manpower, is based on heavy investment in research and development. In this field, the efficiency and the capacity for innovation are significantly increased by the opportunities for active cooperation and important synergies with the universities and the most advanced research institutes, bringing out and empowering all the best resources available while also maximizing their productivity.

I believe that it is possible to draw a conclusion from what I have said. Naturally, I am assuming that Europe does not want to and indeed cannot reduce the costs and increase competitiveness by dismantling the welfare state that it has created and which, in spite of its defects and need for updating, represents the most important achievement of the old continent. If this assumption is, as I believe, true, the path for a Europe that wants to remain competitive is very narrow. In my opinion, this path must necessarily pass through an intensive strengthening of the educational system, from basic schooling to the universities, in order to raise the level of wide swathes of the population, allowing them to participate in increasingly compelling processes of innovation. The risk, if this is not carried out, is progressive social erosion, with intellectual elites who would remain linked to the global process of worldwide development and an ever-widening range of less educated and less competent social groups that would increasingly lose ground and be forced to accept progressively decreasing wages.

The presence in Catania of the company that I have the honor of managing – STMicroelectronics – has represented a veritable social workshop for, on the one hand, understanding the phenomena that I have just described and, on the other, for the organization of a strategy capable of successfully opposing the dangers of industrial decline in a highly developed country.

There has been an ST plant in Catania since 1962. It had been in difficulties for many years, but the decline started to accelerate during the '70s, when it increasingly became a lower technology subsidiary to the company's high-tech center near Milan. While all competitors were moving assembly operations to low cost countries, the Catania facility was overloaded with assembly lines. In 1980 the situation of the plant was desperate: its losses were equal to some 120% of the value of its production. The easiest solution out would have been simply to close all activities and to forget about Catania and its plant.

I believe that the thrill of accepting an almost impossible challenge, but above all the sense of responsibility towards the workers and their families was behind the decision not to take the easy way out. So, with the full support of our shareholders and the help of a group of enthusiastic and totally dedicated colleagues, we decided to adopt a new paradigm for our Catania site. No more low-level, labor intensive, partial and fragmented operations, but rather a high-tech, integrated center, fully responsible for all activities concerning an important group of products, from technology and product development, to leading edge manufacturing and world marketing.

The process, though carefully planned, developed in a way that has something of the magic of a fairy tale. It may seem that it was sufficient to offer Cinderella a ball gown, a carriage, lackeys and horses to transform her into a real princess. In our case there was no magic wand; it took blood, sweat and tears and, as I said, nothing would have happened had it not been for all the support of ST Catania colleagues. But the results have been so encouraging that the Catania unit has now moved well beyond the responsibilities entrusted to it twenty years ago. And not only are the profit levels equal to all the other company units, it is also probably the fastest growing of all our integrated units throughout the world.

Today, the ST center in Catania, for which the company invested around €1.5 billion between 1996 and the end of the year 2001, has one of the most advanced facilities in the world for the production of non-volatile memories. Employment has reached 4,200, of which 88% are graduates or hold a diploma. More than 3,000 new employees have been taken on since 1996. In the year 2001 alone, an exceptionally difficult year for our sector, the staff increased by just less than 300. Today, 1,050 people (70% graduates, 30% with diplomas) are involved in research activities, which generate world-class innovation in process and product technology. In the last five years their activities have given rise to 322 patent applications, while in the United States alone we have attained as many as 208 new patents, with significant industrial consequences for the territory.

A territory, furthermore, that benefits in every way from our presence and from our growth which has served as an example for other high-tech companies, to the point where the area is now referred to as “Etna Valley” in a bold comparison with the famous Silicon Valley in California. In fact, ST has ignited a process of development that creates wealth, work and know-how not only for the city of Catania in which it is based, but also for the entire region. Attracted by the possible synergies within an advance hub of development, other extremely advanced companies, leaders in their respective sectors, have joined ST in the area, companies such as Nokia, Accent, IBM Italia and CSC.

With the arrival of these new players on the Catania high-tech scene, the employment opportunities have multiplied. But even before the positive spiral was activated, the weight of ST could be felt in employment and economic development, apart from the actual presence of the company. In fact, according to a study recently conducted by the University of Catania – which confirms the results of similar studies at European level – ST supply companies in Catania employ a number of persons equal to those employed directly in ST.

What are the ingredients for the success of this modern industrial fairy tale? As we have already seen, they are de-localization of the processes that are no longer economically sustainable, focus on activities with a high intellectual content, and innovation, more innovation and yet again innovation, all in a context of extremely efficient system synergies. The phenomenon of the Etna Valley has been able to develop because of the interaction between three mutually reinforcing elements: a modern, dynamic company capable of growing at a very fast rate; a large University capable of blending research and teaching in perfect harmony with the needs of industry; and a local administration that, at the beginning of the nineties, abandoned the hidebound bureaucratic models of the past and showed itself to be aware and responsive to the needs of industrial development and capable of creating the basic conditions for new economic and social development.

Supported by these three strong pillars, the phenomenon continues and is extending. We are investing a further €1.5 billion in a new avant-garde industrial project and, while continuing to increase the number of researchers and designers in Catania, we are expanding and creating new research and development centers in Napoli, Lecce and now Palermo. In turn these centers are perfectly integrated within the wider network of the company, which has design and manufacturing facilities that span four continents and 17 time zones. This, too, is globalization.

However, I would now like to turn to the second of the two phenomena whose forceful impact on the modern world I mentioned earlier: the expansion of the e-Society.

My first comment on this trend is that globalization and the e-Society are closely interdependent. The two phenomena reciprocally amplify each other and the appearance of one accelerates the fulfillment of the other in an extremely dynamic growth spiral.

But let's proceed step by step. The e-Society – or, if you prefer, the knowledge and information society – offers elements of innovation that it would not be exaggerated to call 'revolutionary', since they are capable of radically changing the dynamics and the interaction between individuals and configuring new scenarios for economic and entrepreneurial activities. In my opinion, this revolution has been triggered by two distinct but correlated phenomena: first, the digitalization of any form of multimedia information -- be it voice, video, data or any other form of signal which can now be easily compressed and elaborated – and, second, the capability offered by the Internet of reaching any location in the world from any other location on the globe, in real-time.

The e-Society is therefore the result of our newly developed ability to almost infinitely compress both time and space. Today, this allows the transmission of practically unlimited amounts of data, in real time, anywhere in the world. The distances that separated cities, nations and continents have been reduced astonishingly. The potential for communication between individuals has grown unrestrainedly.

These technological changes have profoundly altered personal and entrepreneurial habits and dynamics, leading to the elimination – thanks to a beneficial process made possible

by the new technologies – of intermediate stages and time-cycles, reduced to a fraction of a second by a simple ‘click’; and completely redefining the interaction between companies and their people. Together with certain monopolistic barriers, national barriers to global movement of capital and products have also fallen and the most innovative companies already understand that effectiveness and efficiency derive from the extensive and creative use of the new opportunities unleashed by the evolution of communication and information technologies.

And as new companies are founded and develop headlong – and at times even die, as always happens in the stages of accentuated dynamism and innovation – new technologies exercise their effects, reforming and improving the traditional economic system. In fact, in my opinion, the New Economy -- which is undergoing only a temporary reversal within an inevitable and largely desirable period of long-term growth -- must not represent an alternative to the traditional economy, but rather an important opportunity for modernization and improvement, integrating new technologies within more traditional processes.

However, while the traditional economy was dominated by those who could control raw materials or steel and the modern economy is dominated by those who control the financial resources, what counts in the new economy is rather the innovative quality of the **idea** and the efficiency with which it is executed and, without doubt, implementation speed is the fundamental parameter of differentiation between a good and a mediocre execution.

Naturally, the new economic paradigm brings new rules to the game. It must not, therefore surprise us if, as Dick Anderson of IBM said, “*we are moving from a world in which the big eats the small towards one in which the fast eats the slow*”. So, to become big, without being eaten first, it will be essential to activate all those strategies that favour and optimize the speed factor.

This implies the adoption of extremely flat organizational structures, with a very limited number of levels between the top management and the workforce. Even better would be the creation of cellular structures in which the basic organizational nucleus is represented by the individual, for whom autonomy and the entrepreneurial dimension would be maximized.

In any case, it is essential to decentralize decision-making powers, which must be delegated to the lowest level possible in a necessarily increased number of operative units.

From this perspective, every major company must become increasingly lean and decentralized in order to transform itself into a group of potential micro-companies – which we could call virtual companies – in turn grouped and integrated within the “mother” company that has generated them.

With this ideal organizational structure it is possible to combine the effectiveness and dynamism of the smaller units with the economies of scale derived from belonging to larger complexes. These, in turn, must have centralized control capable of guaranteeing respect for shared objectives and business strategies, counteracting the inevitable centrifugal forces.

The essential glue for guaranteeing the cohesion of this complex structure is composed of four fundamental ingredients:

- a real time information system and a homogeneous measurement system for the evaluation of performance and economic results;
- a series of coherent objectives that cascade down from the mother company to all the virtual micro companies that compose it;
- a harmonious, though not necessarily identical, system of remuneration throughout the organization;
- a strong corporate culture that unites all the company's human resources in a common vision, inspiring them towards the attainment of shared objectives.

This organizational model obviously represents the antithesis of the traditional pyramidal, strongly hierarchical structure, whose essential nature makes it inherently slow to react and incapable of competing successfully in a globalized economy characterized by the speed of the e-Society. It is an organizational model that, by emphasizing decentralization of the decision-making process, is based on the intelligent combination of training, delegation and allocation of decision-making responsibility that is summed up in the term '*empowerment*'.

But, in order to be realized correctly, the empowerment of individuals in a company is based on a kind of Copernican revolution that brings the human being back to the center of the company, making the individual no longer a mere factor in the economic process of the company, but rather an actor and even a protagonist within the same. It is this exchange of positions, to which it is important not merely to pay lip-service, but which must permeate the company organization with all its innovative force, that creates one of those ideal situations of mutual gain known as "win-win".

In fact, while through shared participation in the decision-making process within the context of their individual capabilities employees find a mechanism for self-realization and development of their professional skills, it is also true that the company, in turn, benefits greatly from this, not only because of the essential increase in working efficiency but also because it is by this means that energies that would be repressed, potential capabilities that would not be expressed and contributions to innovation that would be stifled in a traditional hierarchical structure are liberated.

It is precisely this two-fold satisfaction of needs that have traditionally but wrongly been seen as contradictory that leads me to address the last of the three great phenomena that I wanted to mention today.

The concept of the centrality of the individual, which we have just discussed, is a fundamental conceptual principle. However, the growing social role of business enterprises – the third great innovative trend that is acting forcefully on the dynamics of the business world – is even more wide-ranging and influential.

In practice, the three phenomena that I am discussing today do not operate in the same time frames. While globalization has now spent most of its energy and has created a new world equilibrium and an international distribution of labour, the e-Society is still far from its full realization and the social role of companies is, in turn, in a stage at which the concept itself still faces strong ideological resistance. However, I am certain that, just as there can be no doubt of the revolutionary effects of the first two phenomena, the third tendency will soon be accepted and experienced with growing interest by increasingly significant swathes of economic operators throughout the world.

On the other hand, I am also aware of the fact that today, perhaps more strongly rooted in economic systems such as the American one than in Europe, there is a widespread belief that the sole responsibility of a company and its management is to create “shareholder value”. Now, while I certainly agree that the creation of shareholder value is indisputably the primary responsibility of any business, the difference of opinion lies in whether we accept as an axiom that this is the only responsibility. To be more precise, the ideological difference exists only if we want to confine responsibility in the creation of value to a limited period of time, one that is, in my opinion, *too* limited.

I am absolutely convinced that, especially in the current phase of economic, geopolitical and social development in both the western capitalist world and in other social environments, a company that limits its viewpoint to the short-term could find itself facing forces that might potentially harm its very profitability. I believe that such a limited and narrow viewpoint could activate, both within and outside the company, antagonistic forces that would tend to limit its capacity for creating value for its investors. In the light of these new conditions and to protect ourselves from these potential dangers, it will therefore be necessary, apart from the fundamental moral considerations, for businesses to learn to become more aware of and more sensitive towards social values.

For some years now, I have publically maintained that there is no intrinsic contradiction between the interests of shareholders and those of stakeholders, by which I mean all the individuals and organizations that interact with the Company and influence its ability to succeed, including its workforce, customers, suppliers, government and other administrative bodies, the communities in which it operates and, by extension, all civil society. On the contrary, I believe that those corporations that give special care to their social role and to their behavior as good corporate citizens in the communities where they operate not only fulfill their ethical obligations but also maximize the return to their shareholders.

I think that ST, with its unwavering commitment to sustainable development, provides an excellent proof of the validity of this assertion. Nine years ago, starting from our initial intuition that the adoption of processes that were less hungry in terms of energy and raw materials would automatically bring savings that would make our company intrinsically more competitive, we began our quest for environmental neutrality, a journey that we knew would be an endless one. Concrete results have proved that our reasoning was absolutely correct.

I do not have the scope in this address to repeat the technical details of the complex and demanding path we followed. Briefly, we adopted an environmental decalogue, which laid down the timelines and the quantitative milestones for implementing to the limits of our capability the “three R’s” that constitute the fundamental principles of environmental protection: *Reducing, Reusing, Recycling*. By adhering to that decalogue with determination and perseverance, we became probably the best in the industry for environmental protection, while also generating more profits, too. On average, after seven years of careful auditing, the payback on our environmental protection investments is as little as two and a half years and in the year 2000 alone we saved \$50 million just in our electricity and water bills. In doing this, we spared the world from another 100 MWatt power station and saved enough water for a population of 50 million people to drink in one year.

But, as I said, this is just one aspect of our social policy.

We recognize the importance of addressing the three interlinked goals of economic prosperity, environmental protection and social equity as we work to balance the positive aspects of wealth creation and economic growth needed to create a better quality of life for present and future generations.

We bring these same values to our workplace. We bring technology, know-how, training, motivation, belonging and what we defined earlier as empowerment to our employees, uniformly, for all our colleagues, throughout the world.

ST has more than 40,000 employees in 27 countries. Our philosophy consists of allowing them to participate in an organization where learning is an ongoing process, helping them to develop their capabilities and their self confidence, encouraging their innovative and creative ideas, recognizing their successes, making them, as I said before, the center of the enterprise –actors and not just factors of the business process. We believe that this is part of our responsibility towards the human resources of the company, and we strive to ensure the well being of our colleagues and their families.

However, we do not believe that trying to guarantee a better quality of life for our colleagues completely fulfills our duties. For example, as a leader in technology, ST strongly feels the duty to make its contribution to technological development throughout the world, not only in the more economically privileged countries and communities. This is the reason we are participating in the United Nations ICT Task Force which has been

created by bringing together UN organizations, government representatives from all the continents, non-governmental organizations and private companies, with the aim of bridging that part of the technological gap known as the 'digital divide'.

The difference between those who do and those who do not have high quality access to the world of information and modern digital technologies is becoming increasingly important for achieving personal success and a condition for a good quality of life. This difference is becoming even more important than that which separates those who have material resources from those who do not. If we stand back and do nothing, the privilege and potential of the existing elite will be increasingly reinforced, while the widening of the technological gap will inevitably create new areas of poverty.

To oppose this trend, we are working to create an extensive movement to stimulate the donation of not only hardware, software and communications links but also of financial and human resources. We are calling on all the medium and large companies in the world to donate, on a voluntary basis, up to one-thousandth of their annual turnover one-thousandth of the number of hours worked per year. The aim is to give rise to a vast literacy program in information technology and all the new digital technologies to be set up in the communities that are currently excluded from access to these tools.

Why involve the business world? First of all, let me say, once again, that I am profoundly convinced that socially responsible companies – which means companies that are committed to promoting well-being in the communities in which they operate – generate more value, not only for their stakeholders but also for their shareholders.

Secondly, in the long term, the more advanced economies will clearly benefit if, by initiating a process that limits the technological gap and contributes to the development of the poorer regions of the planet, new markets and new opportunities for trade and production of goods are created. Without doubt, this will bring benefits to all enterprises, who will be able to count on three billion potential consumers, rather than having to cope with three billion desperate people who live wretchedly in conditions of absolute poverty. Moreover, I do not believe that we can forget the payback in terms of security and peace for the entire world – for our families and for the communities we live in – if economic reasons for potential conflicts diminish in the future.

However, there is another, and even more pressing, reason why the business world should be involved in social programs such as the battle against the digital divide or the protection of the world environment. I believe that these initiatives help companies to recruit the best young talent and retain them for longer. I believe that they contribute to increase the motivation of employees and their acceptance of and identification with the company. In a world of global business, in which access to financial resources such as equipment and materials is no longer a discriminating competitive factor between companies, the quality of the people, their individual efforts and their acceptance of company values increasingly represent the most important competitive factor for the majority of the companies.

To conclude, I strongly believe that, in this case, too, the adoption of corporate programs of high social responsibility has an important contribution to make in the creation of widespread value for the company stakeholders and, even more so, for its shareholders.

*Speech given by
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In Palermo

*As “lectio” given in the occasion of his
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