

POLITECNICO DI TORINO

Master of Science Degree in Engineering & Management

Master's Degree Thesis

**Development strategies for a new product in the
automotive sector: The Jeep case**



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Abstract

Today's environment is characterized by a sharp increase in the number of competing companies in most sectors, which are forced to innovate and develop new products in order to be the best. This is because the design of new products or processes allows companies to survive longer, to grow at the corporate level and above all to be able to compete with others. This thesis aims to highlight the role of innovation within the automotive sector and what possible strategies are possible for companies to adopt to facilitate the process of developing a new model. In particular, the analysis will focus on the trend of a specific segment, namely that of Sport Utility Vehicles (*SUV*). In Europe this segment is growing not only in the number of registrations, but also in the number of models offered by the different manufacturers. In particular, the strategy of the Fiat group, which following the merger with Chrysler has been able through the Jeep brand to increase its sales in the European market, taking advantage of the knowledge already present in the SUV market.

The actual context is characterized by a strong increase of the competitor number in most sectors, which in order to be the best, are forced to innovate and develop new products. How the innovation affects the sale in term of increase or decrease and how the companies try to innovate in order to increase the sales

This need comes from the fact that the development of new products or processes, allows the companies to survive longer, to grow and to compete with the others. The present thesis aims to highlight the role of innovation in the automotive sector and what are the possible strategies for companies to be adopted to facilitate the process of developing a new model. In particular, the analysis will focus on the performance of a specific segment, that is Sport Utility Vehicles. In Europe this segment is not only growing in terms of quantity of registrations, but also in the number of models offered by different manufacturers. At the end there is the strategy of Fiat Group which after the merger with Chrysler, has been able to increase its sales in the European market, thanks to the Jeep brand taking advantage of the knowledge already present in the SUV market.



1 INTRODUCTION

This thesis aims to describe the strategies that companies can adopt if they want to develop and launch a new product on the market, with a specific analysis in the automotive sector. We will start by explaining the market and its main players and their shares, the segments of the automotive industry for the car manufacturers. Moving on to the *automotive* sector, as in addition to being a fan and having had the opportunity to carry out an internship at the Jeep *brand*, it is an industry where the numerous technological innovations have allowed to bring it back to a phase of growth, after a few years of strong crisis. The current global scenario will be described, defining the main geographical areas (EMEA, NAFTA, LATAM, APAC), and then proceeding to study the strategies that car manufacturers adopt or can pursue for the development of new models. The branding strategy will also be observed, as for car manufacturers, the brand is a key role. The following chapter will examine in detail the process of developing a new product in the reference sector, following the one introduced in the first chapter. We will then start from the realization of the *concept* and then proceed to the phase concerning the various tests and finally to the planning of the actual production. The work will end with the SUV chapter, which specifically covers the *Sport Utility Vehicle* (SUV) segment, as it has been demonstrated in recent years, and this has grown exponentially compared to other segments. The second part of the chapter will focus on the Fiat Chrysler Automobiles group, introducing the birth of the group following the merger between Fiat and Chrysler, and then proceed to the presentation of the Jeep brand, as it represents the flagship *brand* of the group as stated by the main executives and since all the models offered belong to the *SUV* segment; a paragraph will be entirely dedicated to the launch of the Renegade that allowed Jeep to increase sales volumes. Finally, we will review the jeep plan and the factors that effect the sales in term of increase and decrease and how the car manufacture industry can affect the economy of the country.



2 THE MARKET

The market of the Automobile industry is a saturated market which is extremely difficult to have any kind of rivals at the time being it consists of several part manufacturers and supplier, now a day's supplier gain more money than manufacturer with even less investments. The manufacturer now overcomes a huge competitive component which make them under pressure to innovate every year not to be taken out by competition investing a huge money every year on R& D which bring us to new designs ,new abilities and option every couple or even every year.

2.1 Market segments

The automobile has different segments and different market needs and requirement for each segment have brands focused on or have competitive advantage in. for example the most sold car in the world is Toyota corolla 1.02 billion car was sold which is a sedan car. Market segments are the following:

1. Microcar / Kei car
2. A-segment / City car / Mini compact
3. B-segment / Supermini / Subcompact
4. C-segment / Small family / Compact
5. D-segment / Large family / Mid-size Sedan
6. E-segment / Executive / Full-size
7. F-segment / Luxury saloon / Full-size luxury
8. I-SUVs / off-road vehicles
9. Minivans / MPVs
10. Luxury vehicles



2.2 Market players

The market consists of big players since it's a saturated industry and even groups. Top ten groups according to the market share:

- Toyota group: The group was founded in 1937 the group also founded Lexus to serve as luxury car for Toyota in 1989, the group also own Daihatsu 1907
- General Motors: the group was found in 1908 an American group, consist of Chevrolet, Buick, Cadillac, Holden, High Performance Sedans (HSV).
- VW group: This is a German group founded in 1937 consist of several brands like Volkswagen, Audi, Bentley, Porsche, Lamborghini, Bugatti, Skoda.
- FCA: Fiat Chrysler Automobiles was founded in 2014 has a huge number of brands, such as Fiat, Fiat professional, Jeep, Lancia, Alpha Romeo, Abarth, Chrysler, Dodge.
- Groupe PSA: Peugeot Société Anonyme was founded 1976, the French group has several brands on top Peugeot , Citroen , Opel, Vauxhall.
- Daimler AG: This group is a German group founded in 1926 consists of several brands on top is Mercedes-Benz, Smart, Maybach.
- BMW Group: Bavarian Motor Works is a German group which was founded in 1916, have several brands such as Mini, and Rolls Royce.
- Renault Nissan Alliance: the French group was founded in 1899, then later was alliance with Nissan & Mitsubishi in 2020 which strengthen the group greatly. The group consist of different brand such as Renault, Nissan, Mitsubishi, Infiniti
- Tata Motors group: Indian group was founded in 1945, consists of couple of brands such as: Land Rover, Jaguar.
- Hyundai Group: The Korean group was founded in 1967 Consists of brands like: Hyundai, Kia, Genesis
- Geely Group: Chinese brand founded in 1986 consists of couple of brands: Geely, Volvo, Lotus.
- Subaru Corporation, A Japanese brand with was founded in 1950 under the name Fuji Heavy Industries, then renamed Subaru Corporation.
- Ford Group: was founded in 1903 an American brand has several brands such as Ford , Suzuki, Honda, Mazda, Ferrari, Tesla.



2.3 Market shares

In 2020 first half year sales was ranked by the top sales where to Toyota group as the first in sales reached market share of 12.4%, while Hyundai comes in as the 4th with a market share of 8.6%

Over the last 10 years the market share for the automotive industry has changed dramatically due to the product innovation, new designs & new options to satisfy the customer needs.

The half years results of 2020 were Toyota Group was on top of the market share reaching the 12.4% with a 4.02 million sales which was decreases than last half year with almost 23%. The second position was taken by the Volkswagen Group after getting hit by the corona virus pandemic it reached 35% global in sales which was concentrated in China. Volkswagen the German group was declined in the market share to reach 11.3% in shares and 3.69 million in sales to be decreased a 23% than last half year even though the VW group was having a great coverage it started from 10.9% in 2010 the group start growing and recording a 11.9% shares in 2018 & in 2019 was raised to 12.2% share which made it the number one in the market share at this year.

Coming later in the third position was the Renault group which sold around 3.36 million units to become which increase by 32.2 % than last year, this happened because its mother country south Korea respond well to the coronavirus which in term of sales became 2.78 million just in Korea.

In the 5th place comes General motors losing at least 25.8 % from last year, selling 2.77 million cars. In 2010 General motors the American group was in the first place selling , later it start declining and almost bankruptcy, it even sold Opel to the PSA group , and losing market share 12.51% including Opel in 2010 to 9.1% in 2019

Moreover, Honda Motor reached the 6th spot, scoring one of the best top 10 holds – losing just 8.8% in June – with 1.91 million sales (-21.5%). Behind, Ford Group, down in 7th place with 1.80 million (-29.4%).

The announced merger between F.C.A. and P.S.A. currently taking respectively the 8th and 9th position – would potentially combine the current 8th and 9th larger manufacturers and should generate the fourth group at global level, with 8.6% market share.

At the edge of the top 10 ranking, we find BMW Group, with First Half 2020 sales to 1.01 (-21%).



3 PRODUCT INNOVATION IN THE AUTOMOTIVE SECTOR

3.1 Global Automotive Context Analysis

The automotive sector in recent years in Europe, despite the recent crisis, continues with its positive trend: in fact, in Italy alone registrations were about 2 million vehicles in 2017, placing Italy in fourth place in the European market after Germany, France and the United Kingdom. In 2018 Italy sales dropped by 3% and a huge rise for car sharing is rising in 2018 and expected in 2019 to even rise more. In 2019 is expected to have at least 38% of the entire market share for cars.

The numerous alliances between different car companies have also been crucial, in order to cope with the increased costs of research and development, as we have to deal with an increasingly technologically perceptive consumer with an eye for the environment and for its own safety.

From the beginning of the twentieth century to the present day, the automotive industry has gone through several stages, which have seen, not only the evolution of the product and production processes, but also the very concept of the automobile.

Initially owning a car was a possibility only of a few, in fact it was conceived as a luxury asset, but later production costs were significantly reduced thanks to the innovations of the production process developed by Henry Ford and Alfred Sloan. Process *innovations* refer to changes in the way the company operates, pursuing the objectives of improving the effectiveness and efficiency of production systems. They are aimed at gaining an internal competitive advantage. They are distinguished from *product innovations*, which are directly absorbed into the goods or services provided by the company. These allow, through an improvement of the service or a technologically superior product, to have a more similar response to the needs of the customer and to gain an external competitive advantage. Ford and Sloan have allowed the car to become a mass-produced asset, going on to constitute the first real durable *good*.

In the last decades of the twentieth century, it was possible to see the growth of Japanese producers, who are founders of other modes of production. It refers to Toyotism, *which* was based on a so-called "lean" production, lean *production*. The adaptation of this philosophy involved abandoning the characteristic standardization traits, thus increasing the rate of differentiation and therefore customization of the cars. The production methods introduced by Japanese factories were subsequently also adopted by *the Original Equipment Manufacturers* (OEMs), who are companies that produce and/or assemble the final product.

On the one hand, there has been an increase in the number of models launched on the market by each of the manufacturers, together with a better quality of them, but on the other hand, the average life cycle of cars has been reduced.

These different phases have facilitated the formation of the *Triad*, that is, the Europe – USA – Japan axis, where, in addition to be the largest automotive markets are also the countries that host the most important *players* in the world.

There is a strong correlation between economic development and vehicle demand. In fact, it can be observed that, by measuring GDP and other indicators, as economic development increases, so does the demand for cars, industrial vehicles, commercial vehicles and even motorcycles.

Management has a key role to play, as it must be able to spread within the company the right approach of understanding the globalization of the markets, since even in the presence of the same conditions some companies manage to survive and succeed, while others would risk disappearing.

Looking at the different trends in economic development, three different economies can be distinguished, resulting in differentiation of car demand trends:

- **Mature** economies: these are represented by industrial countries, where economic development has a slower growth rate than in previous



decades, and demand is characterized by the replacement rate of vehicles that are already in circulation. These countries are represented by the Triad (Europe – USA – Japan), and as mentioned above, it accounts for about three-quarters of the demand for cars.

- **Rapidly emerging** economies: In these countries, the rate of economic development can grow very fast, as many consumers can buy their first car. The countries that belong to this category are: China, one of the first markets by sales volumes, which together with Brazil, Russia and India belongs to the BRIC nations; so-called STIM nations (South Africa, Thailand, Indonesia and Mexico); Finally, the last group of countries in this category are countries such as Malaysia, Argentina, Turkey and Iran.
- **Low-growth** economies: In these states, the poverty rate is high, albeit decreasing, but as a result, the economic growth expectation is also critical. Countries, such as Africa, could become markets for motorized transport, only after 2020, thanks to the help of political leaders who aim to build the appropriate infrastructure. For this reason, companies belonging to the Triad should adopt different and new strategies, changing the traditional approach.

In 2019, it can be observed that the world economy grew by 3.9% compared to the previous year, maintaining the growth rate recorded in mid-2018. The recent fiscal stimulus has allowed the US economy to grow, but it should moderate in the medium term, keeping employment high, thanks in part to increase public spending. On the contrary, in emerging countries, development is more uneven due to the rise in the price of oil and currency forecasts; Tensions over international trade will also lead to a short-term deterioration. The GDP of advanced economies increased by 2.2% in 2019, with the expectation of further growth for the next two years; the third half showed excellent results for the following economies: German, Japanese and Korean.

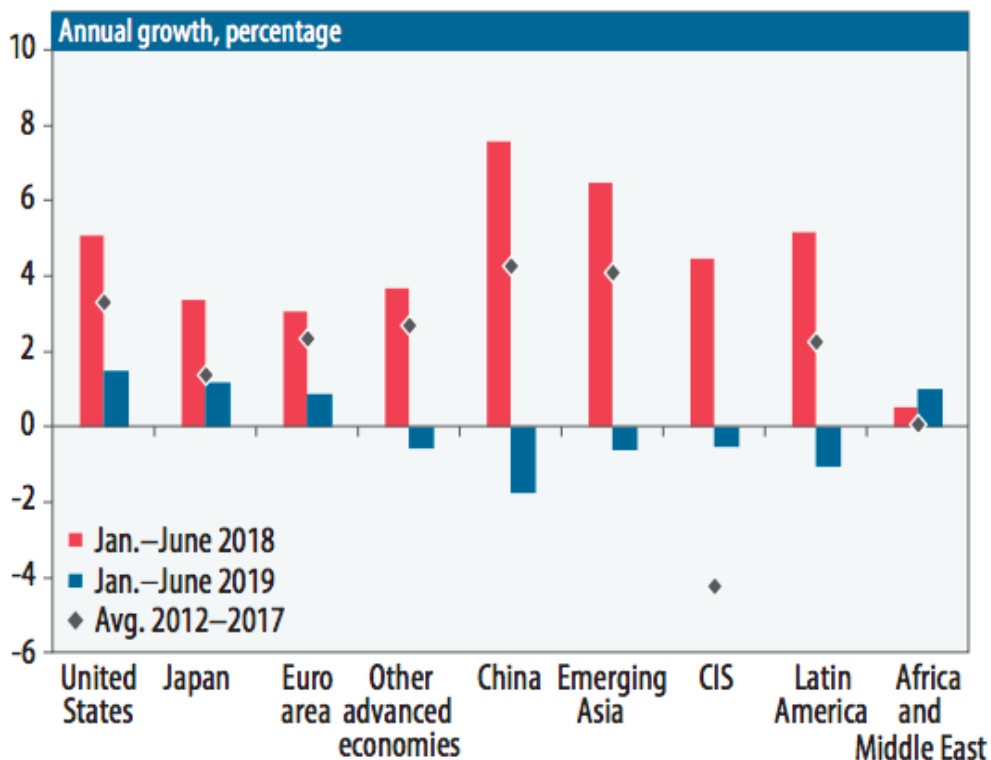


The following are the GDP figures for 2017 and for 2018 and 2019 for individual countries:

	2017	2018	2019
World GDP	3.7	3.9	3.9
Advanced Economic	2.4	2.4	2.2
Euro Area	2.4	2.2	1.9
EU	2.7	2.5	2.1
Germany	2.5	2.2	2.1
France	2.3	1.8	1.7
Italy	1.5	1.5	1.0
Spain	3.1	2.8	2.2
Japan	1.7	1	0.9
UK	1.7	1.4	1.5
USA	2.3	2.9	2.7
Canada	3	2.1	2
Other Advanced Countries	2.7	2.8	2.7
emerging and developing economies	4.7	4.9	5.1
The Commonwealth of Independent States w/o russia	3.6	3.6	3.7
Russia	1.5	1.7	1.5
Brazil	1	1.8	2.5
China	6.9	6.6	6.4
India	6.7	7.3	7.5
Mexico	2	2.3	2.7
The emerging countries in europe	5.9	4.3	3.6
ASEAN	5.3	5.3	5.3
MENA	2.2	3.5	3.9
Africa Sub Saharia	2.8	3.4	3.8
Nigeria	0.8	2.1	2.3
Sud Africa	1.3	1.5	1.7

3.2 The main regions

Vehicle demand results in 2019 were decreasing as we can see





It is customary, now for most of the strategies of the world's automotive companies, to divide the world by geographical markets, currently they are divided into four macro-areas.

EMEA

Using this acronym refers to the areas of Europe, the Middle East and Africa. The acronym is used for government, marketing and business purposes. In the case of Europe in addition to the European Free Trade Association - Iceland, Liechtenstein, Norway and Switzerland (EFTA) countries, there were as many records as in the pre-crisis period, accounting for 19% of global sales. This market will be analyzed in the following paragraphs; in particular, the area of Europe will be the main case study.

NAFTA

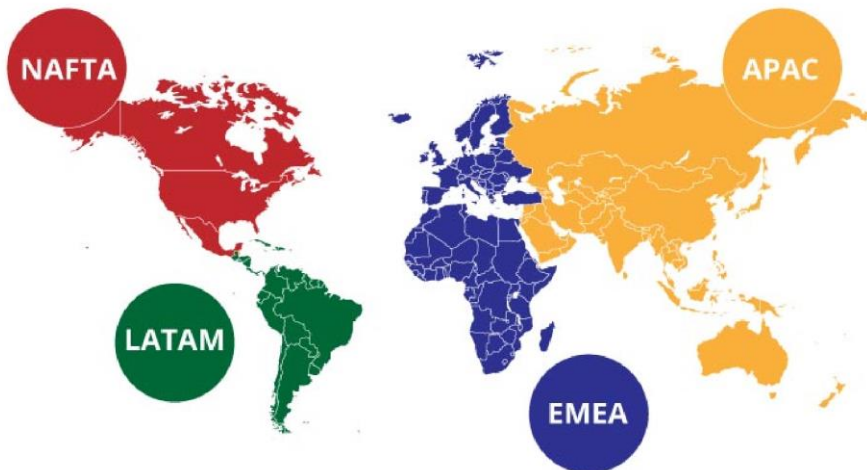
It comes from the *North American Free Trade Agreement*, the North American Free Trade Agreement signed on January 1, 1994 by the United States, Canada and Mexico, as well as the world's largest trade bloc. With regard to NAFTA, as opposed to the European case, in the last year there has been a decrease of about 1.4%, but still representing 22% of the world's registrations. It should be noted that despite the higher cost of gasoline, although lower than in the previous five years, and the improvement in the labor market situation, the *automotive* industry is growing.

LATAM

The acronym indicates the area that includes the states of Latin America such as Argentina, Brazil, Chile and Venezuela. About the South American countries, the results are positive, after the contractions of 19% in 2016 and 10% in 2017, mainly thanks to Brazil, where in 2018 there is a recovery of 12% that conquers 4.7% of the world market. The role played by the support plan for the Brazilian *automotive* industry, "*Rota 2030*", which will allow the heavy taxation on electric vehicles to be contracted. The other country that has allowed South America to improve its situation is Argentina, with a 27% increase in sales

APAC

The acronym is for the Asian, Pacific and even Japan. The environment in this area is encouraging, with sales growth of 4.3%, where among the most important markets in this territory, only South Korea shows a slight decrease in demand. The Eastern Bloc equates to more than half of global demand for motor vehicles, thanks to China's excellent growth rates (6.9%) India (6.7%). Another important factor contributing to this significant growth is the reduction in the car purchase tax, from 10% to 7.5%, for vehicles with engines of up to 1.6 lt. In particular, the Chinese market shows that the Sport Utility Vehicle SUV segment has pushed up to 42% of total sales, eroding the share of sedan and Multi-Purpose Vehicle (MPV) cars; the Republic of China always holds the first position in terms of sales volume of electric vehicles, so-called NEVs, "*New Energy Vehicles*", thanks to the support of the Government, which aims to become the largest manufacturer and market of this type of vehicles. The Indian market is also evolving with growth of 9.5%, despite the measures introduced by the political regime concerning the demonetization and standardization of the tax on goods and services throughout the country.



3.3 The situation of the European market: the main markets and players

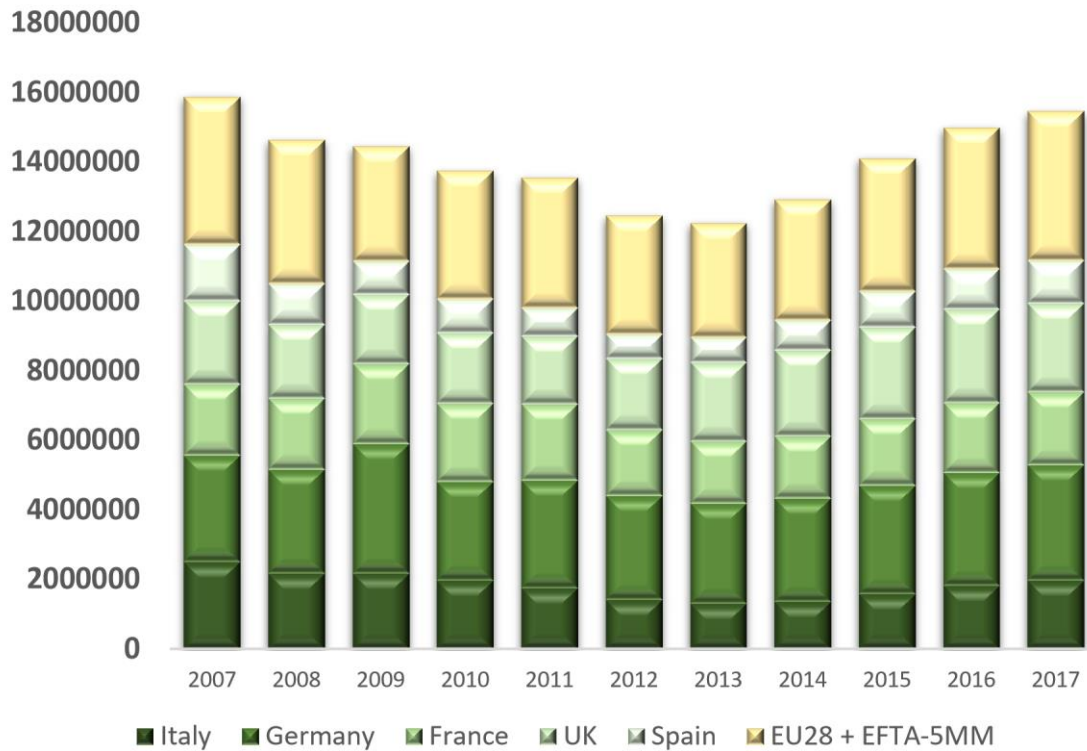
As mentioned in the previous paragraph, the following will go to a more detailed analysis of the situation in the European area. Thanks to the data provided by Association of European Automobile Manufacturers (ACEA) (used for the drafting of the paragraph) it can be observed that for the twenty-eight countries of Europe plus the European Free Trade Association – Iceland, Norway and Switzerland (EFTA) countries (hence EU28-EFTA), for the year 2018 about 22.2 million vehicles were registered,. Considering the period from 2007 to 2018 (in the chart below) we see a low point for the year 2009 of the crisis, where there were about 61.656 million cars, corresponding to the concomitant economic crisis.

.000 unità	2007 anno record pre- crisi	2009 picco negativo crisi	2017	2018	var% 18/09	var% 18/17	sh% 2009	sh% 2018
MONDO	73.084	61.656	97.902	96.838	57,1	-1,1	100,0	100,0
EUROPA	22.852	17.058	22.657	22.301	30,7	-1,6	27,7	23,0
UE	19.725	15.290	19.265	18.783	22,8	-2,5	24,8	19,4
UE15	16.691	12.243	15.147	14.471	18,2	-4,5	19,9	14,9
UE NUOVI MEMBRI	3.034	3.047	4.118	4.312	41,5	4,7	4,9	4,5
RUSSIA	1.660	725	1.552	1.768	143,9	13,9	1,2	1,8
TURCHIA	1.099	870	1.696	1.550	78,2	-8,6	1,4	1,6
ALTRI EUROPA	367	173	144	200	15,6	38,9	0,3	0,2
NAFTA	15.426	8.762	17.453	17.437	99,0	-0,1	14,2	18,0
<i>Canada</i>	2.579	1.491	2.194	2.021	35,5	-7,9	2,4	2,1
<i>Messico</i>	2.095	1.561	4.069	4.110	163,3	1,0	2,5	4,2
<i>USA</i>	10.752	5.710	11.190	11.306	98,0	1,0	9,3	11,7
SUD AMERICA	3.547	3.663	3.256	3.386	-7,6	4,0	5,9	3,5
<i>Argentina</i>	545	513	494	489	-4,7	-1,0	0,8	0,5
<i>Brasile</i>	2.825	3.076	2.737	2.880	-6,4	5,2	5,0	3,0
ASIA-OCEANIA	30.715	31.760	53.533	52.591	65,6	-1,8	51,5	54,3
<i>Cina</i>	8.882	13.791	29.015	27.809	101,6	-4,2	22,4	28,7
<i>Giappone</i>	11.596	7.934	9.691	9.728	22,6	0,4	12,9	10,0
<i>India</i>	2.254	2.642	4.793	5.174	95,8	7,9	4,3	5,3
<i>Sud Corea</i>	4.086	3.513	4.115	4.029	14,7	-2,1	5,7	4,2
<i>Thailandia</i>	1.287	999	1.989	2.168	117,0	9,0	1,6	2,2
<i>Iran</i>	997	1.394	1.515	1.126	-19,2	-25,7	2,3	1,2
AFRICA	545	413	1.003	1.123	171,9	12,0	0,7	1,2
BRIC	15.622	20.234	38.097	37.631	86,0	-1,2	32,8	38,9

It should be noted that most registrations are driven by the five main markets: Italy, Germany, France, the United Kingdom and Spain. For the period in consideration, they maintain an average weight of 73.1% on the EU28-EFTA market. In 2018,



these markets alone recorded a volume level of 12 million, 2.2% more than in 2019, but still representing 4.0% less than in 2017. The German market has shown the largest growth of 8.6% in the last year compared to 2007. The financial crisis, having been more severe in Spain and Italy, has had the most significant consequences in these markets, even with regard to vehicle registrations, in fact these are 23.5% and 20.9% lower, respectively, while maintaining the growing trend. About the UK market, registrations reached an all-time high of 3.6 million and then fell by 5.9% in the following year.



Over the last year of 2017 there has also been a significant decline in the number plates of diesel-powered cars: about 8% less than the volumes of 2016. Over the years there has been a tendency to abandon this type of engine so much that it has gone from 6.5 million cars to a share of 5.1, which corresponds to about 22.1% less. This change of attitude is obviously due to the problem of nitrogen oxide (NOX) emissions, which was at the heart of the *diesel gate* scandal and the emission of fine particulates, despite those related to CO₂ being lower than those related to petrol engines. In addition, regulation is becoming increasingly stringent, in fact by 2021 there will be major updates on CO₂-related restrictions, which will lead to an increase in the cost of adapting diesel engines, probably directing manufacturers to give up small diesel cars; the goal of these regulations will be to achieve some environmental issues as soon as possible. It is also showing an increase in the investment of engines travelling with an alternative power supply: for example, hybrid cars represent a middle ground between a car with a thermal engine and electric motor, where only the full *hybrid* type allows you to travel for short stretches in electric mode. However, the design, development and maintenance of these engines come at a significantly higher cost compared to diesel or petrol engines.



The main players

As will be illustrated in the following pages, it is rare for motoring companies to do business by serving the market with a single brand or *brand* and, above all, for these reasons they are often forced to join forces. This process has not so recent origins, in fact, since the beginning of the first century since the birth of the automobile; many companies have been forced to abandon the market, often even having contributed to the evolution of the four wheels. The last few decades have been influenced by an increasingly expansive globalization, and for the reason many manufacturers have had to merge to achieve economies of scale, or there have been cases where other companies were merged or bought by others. The only small companies in this sector are those that are involved in the construction of sports cars or at least plan to act in niche markets, where catchments are small.

The main automotive groups are made up of manufacturers from the United States, Western Europe (Germany, France, Italy, and Spain) or the Far East (Japan and South Korea), but in recent years competitors have also established themselves that fly the Russian, Chinese or Indian flag: in particular, the latter are mainly concerned with the assembly of licensed products or concerning the construction of models intended for the internal market.

Thanks to the support of the ACEA website, it is possible to observe and identify which are the first automotive groups, with their respective brands operating in the European market plus the EFTA countries; the figures refer to the year just passed. The position of leader in the sector is occupied by the German Volkswagen Group, which in 2018 far exceeds the share of 3.5 million registered cars, showing a growth of 2.3%, due to the Seat and Skoda brands. The FCA Group consolidates its growth by registering more than one million vehicles, representing 4.9% more than in 2016, where the only *brand* that shows a negative sign is that of Lancia. The group French Renault-Dacia also shows a positive sign, as in the case of the PSA Group, where there is strong growth of the Opel brand, which has a market share of about 12.2%. Among Asian groups, the first position is Toyota, which grew by 13%.

Another element that supports the growth of the *automotive* sector is the fact that there is a strong increase in technological innovation, which in the last decade has been a factor of attraction on the part of companies, which will not stop, as the emergence of autonomous driving will become increasingly important.



Table 1 Major car manufacturers: EU28 registrations - EFTA FY18

Group	BRAND	2018 FY
B.M.W.	B.M.W.	826.798
	MINI	214.617
	Others	705
	Total	1.042.120
Daimler	MERCEDES SMART	910.450
		100.157
	Total	1.010.607
FIAT CHRYSLER AUTOMOBILES	ALFA ROMEO	85.646
	CHRYSLER	88
	DODGE	271
	Fiat	779.342
	JEEP	108.085
	Launches	60.679
	Others	12.568
Total	1.046.679	
FORD	FORD	1.043.085
	Others	2
	Total	1.043.087
JAGUAR LAND ROVER	JAGUAR	68.458
	LAND ROVER	168.193
	Total	236.651
JAPANESE GROUPS	HONDA	138.396
	MAZDA	231.655
	MITSUBISHI NISSAN	113.798
		562.810
	SUBARU	36.777
SUZUKI	244.660	
HYUNDAI MOTOR COMPANY	HYUNDAI	518.104
	KIA	466.763
	Total	984.867
PSA	Citroen	572.381
	Ds	43.924
	Opel	942.366
	Peugeot	925.042
	Total	2.483.713
RENAULT-DACIA	Dacia	461.470
	Lada	4.992
	Renault	1.145.624
	Total	1.612.086
TOYOTA GROUP	TOYOTA	684.083
	Others	44.800
	Total	728.883
VOLVO CORPORATE	VOLVO	301.295
	Total	301.295
VAG	AUDI	824.962
	SEAT	400.329
	Skoda	704.293
	VOLKSWAGEN	1.703.100
	Others	4.882
	PORSCHE	73.151
Total	3.710.717	



The situation in the five major markets

Table below shows the trend of registrations from 2007 to 2018 in the five main European markets.

Table below: *Vehicle Registrations (millions of units)*

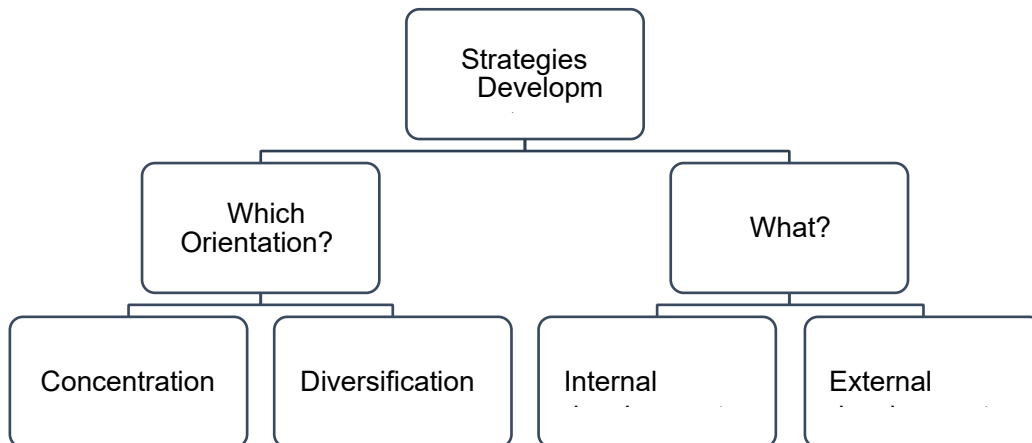
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Italy	2,5	2,2	2,2	2,0	1,7	1,4	1,3	1,4	1,6	1,8	2,0	1,9
Germany	3,1	3,0	3,7	2,8	3,1	3,0	2,9	3,0	3,1	3,2	3,3	3,3
France	2,1	2,0	2,3	2,2	2,2	1,9	1,8	1,8	1,9	2,0	2,1	2,2
UK	2,4	2,1	2,0	2,0	1,9	2,0	2,3	2,5	2,6	2,7	2,5	2,4
Spain	1,6	1,2	1,0	1,0	0,8	0,7	0,7	0,9	1	1,1	1,2	1,4
5MM	11,6	10,5	11,1	10,1	9,8	9	9	9,4	10,3	10,9	11,2	11,7
EU28 + EFTA-5MM	4,2	4,1	3,3	3,7	3,7	3,4	3,3	3,5	3,8	4,1	4,3	3,9

In the Italian market in 2018 registrations amounted to about 1.9 million, decreasing by 0.1 million units compared to 2017, but 600,000 fewer cars compared with 2007. The trend remains positive since 2014; in fact, it has almost reached 50% more vehicles. Italy is Europe's fourth largest market, due to the strong promotional campaigns of the car manufacturers and the strengthening of their sales networks. Half of the 2018 registrations relate to *diesel-powered* cars, with a decrease in volumes of 5% the previous year. In contrast to many European countries, despite the uproar of Volkswagen's *diesel gate* and the stop to smog in some Italian cities, diesel cars account for 56.4% of the market. Compared to the volumes of 2016, we saw a significant growth in alternative power engines, showing an increase of 24% in 2017. Germany is Europe's largest market, with 3.3 million cars registered in the last year. Unlike the Italian case, petrol cars make up 58% of the market, showing an increasing *trend*, as opposed to diesel engines that have suffered a drastic decline, which led them to hold a market share of 39%, which only a year earlier was 46%. With regard to alternative power, the German situation shows that the share is 3.4% consisting of: 2.5% of hybrid cars, 0.1% of LPG cars, 0.1% methane and 0.7% of fully electric cars. France is the third largest European market and in the period from 2007 to 2017 only in four years registrations were less than two million units. The characteristic of this market is that consumers and the government are very sensitive to environmental issues; this translates into stricter regulation than other markets. Emissions are 127g/km up to a 10,000-euro tax at a time when they are more than 191g/km. Because of this reason, the number of diesel vehicles fell by 5% and the share reached 47.3%, which in 2012 was even 73%. Of course, considering these data, gasoline-powered cars came out, with 47.6% of the market, gaining 3.8 percentage points compared to 2016; while cars with different power make up about 5% of the market. The second largest European market is the UK market with a volume of 2.5 million numbered vehicles, which is the second consecutive year of decline in 2015-2018. Diesel cars fall in 2017 to 42%, which means a 17% decrease, and the reasons according to the SMMT are related to the fact that consumers are concerned that in the future there may be a tax that will affect this type of engine, despite the fact that the British company claims that the consumption of diesel cars is well below gasoline cars. As a result, diesel cars are growing by 4.3 percentage points, while alternative-powered cars account for 4.7% of the market: the UK market is the largest for the traditional hybrid car segment in Europe, with 72,523 registered cars. The situation in Spain is clearly recovering from 2014 to 2018 according to the association ANFAC, where registrations have increased by almost 400,000 vehicles and reaching 1.2 million cars. The Spanish market shows that all other types of power supply occupy petrol and diesel cars are almost evenly divided, while a small percentage.

3.4 Possible development strategies in the sector

Motorists, after reaching and exceeding a certain type of growth, must choose whether to embark on a further development path or to maintain their current position. If the company decides on the growth orientation, the goal becomes to develop a correct strategy. There are two completely opposite and extreme development strategies in the literature: the first concerns concentration in the sector in which the company is already active, relying on vertical or horizontal integration; The second option is identified by the implementation of a policy of diversification with respect to the original sector, which in turn is divided into concentric or conglomerate. Whatever the defined path, development can be achieved through the use of internal resources, with the extension of activities within the current borders or the group of companies that are part of it; or move out of the current borders and look for external lines through mergers and acquisitions of other companies, or through strategic alliances, licensing and franchises. The auto industry plans to use both development strategies see previous chart.

Chart .5: Development strategies



Source: *Competitive Strategies of the Automotive Industry*, Pellicelli G.

Starting from the choice of orientation, whether to take the path of concentration or diversification comes from a number of factors. In the event that the sector is highly attractive and the company has a good competitive position, it is more convenient to choose a merger strategy, on the contrary it is preferable to follow the path of diversification. Both preferences can be implemented in whole or in part, through internal or external lines, which merger or acquisition strategies are faster towards development, but generating a high degree of risk.

Concentration: Vertical integration or horizontal integration?

By implementing the option of concentrating resources in activities already carried out by the company, there is another choice: vertical integration or horizontal integration:

- *Vertical* integration: its main purpose is to minimize the uncertainty that can arise from the retrieval of raw materials or semi-finished materials, in the event of an "upstream" integration, or to achieve a decent stability in sales flows, increasing the link with potential customers, and in this case it would be talk of an integration towards "valley". This type of integration



can take place through either the use of internal or external resources; for example Henry Ford chose vertical integration using mainly internal lines for its plant in Rouge, on the contrary between 1970 and 1980 most manufacturers bought companies of external components to implement this strategy.

- *Horizontal* integration: it occurs when products or services have the same characteristics and companies operate at the same stage of production or distribution. With the use of internal resources, but also external ones, it is possible thanks to horizontal integration to be able to develop their market share, expand their activities in other territories, extend the range of models offered, build production facilities, establish new distribution networks and devote themselves to the strategy of developing new technologies. Typical examples of the automotive industry are Peugeot, which bought Chrysler's European subsidiaries in 1978 and General Motors itself was born out of this type of integration.

A particular case is related to Fiat, which shows that vertical integration does not preclude the horizontal type, and vice versa, in fact it has entered the supply and distribution sector thanks to the purchase of Magneti Marelli, but also in the Time has also acquired car manufacturers such as Lancia, Alfa Romeo, Ferrari and Maserati.

Diversification: concentric or conglomerate?

The diversification plan is adopted in the event that the company grows in its size, deciding to enter a new sector compared to the original one. The strategy is gradually developed around a core: the same customers, the same markets, the same technologies, but you can also move away from these looking only at the goal of maximizing the value for shareholders, through the exploitation of synergies, which occur when two or more companies or two or more *business units* create a value higher than you would get if companies remained separate.

As in the case of integration, diversification can also be articulated in two models:

- *Concentric* diversification: A company adopts this strategy when it has an excellent competitive position, but operates in a low-attractive field; in fact, it can diversify into new sectors, using the resources and capabilities it has already developed in its original one. The type of diversification described advantages the strength of the core, characterized by a certain type of products, technologies, an efficient distribution network, the presence in customer segments and activities, to which new ones will be joined. Daimler-Benz adopted this strategy based on a core of the technologies, but which was abandoned due to demands for sacrifices in financial terms and management.

- *Conglomerate* diversification: it applies when the previous one cannot be undertaken;

and more, and the only thing in common will be to respond to the same *holding company*, such as the Hyundai Group.

The focus is on those who invest capital, who need to understand which of the two types of diversification will have the greatest profitability. The real literature and examples assume that the case of the conglomerate possesses a much higher degree of risk than the concentric, which develops and is based on the so-called *core competencies* of the company.

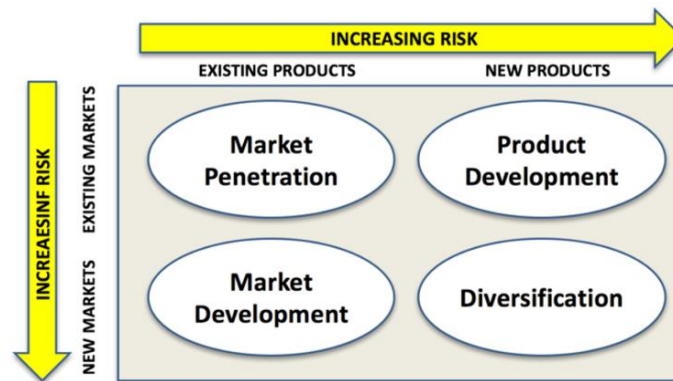
The assessments that a company has to make when adopting a diversification strategy are those relating to competitors in the various markets and which it is not familiar with:

it will therefore be a question of whether the best plan is to defend many positions or whether to concentrate resources only in certain segments or geographical markets. Over the past decade, automakers have concentrated their efforts on the *core business*, renouncing the policy of diversification; in fact, concentration presents itself as a mandatory path in the event that resources are limited and competition is increasingly fierce. Often allocating the few resources possessed, for the development of a single segment or market, allows to more easily reach visible or dominant positions, allowing potential customers to recognize the products offered by the company superior to those of competitors. In addition, the merger requires that there be a selection of customers that you want to go to serve and on which the entire strategy is articulated, allowing the company to know more effectively the *target* customers, and not least allows to respond more quickly to any changes in requests and expectations. The risks of the merger relate to the fact that if a company concentrates too much in a niche segment or market, when it enters a phase of decline, if the resources invested are considerable, it will be very difficult to "get back on its feet"; moreover a high risk is what manufacturers will be compared to other unexplored markets that could prove very profitable in the future.

Development using internal lines

By bringing back the Ansoff matrix (table below), the development for the internal lines for builders is divided into four different modes, which in reality are all adopted, due to an increasing globalization push and a strategy of proliferation of models that can attract as many customers as they can:

Table below: Ansoff's matrix



3.4.1.1 Focus resources in current markets/segments with current products

The aims of this strategic tactic are manifold and concern increasing market share, competition more effectively, increasing *loyalty* by improving the quality of the product, increasing promotions and improving after-sales services. The risks are reduced, as the carmaker already knows its product and current technologies well, and thanks to the concentration of production capacity, innovation and marketing they are applied on models and segments already well defined and this allows to create competitive advantages. It is applied by companies that aim to focus on certain market niches,



going against risks such as if other companies decide to enter the market with considerable commitment.

3.4.1.2 Entering new markets/segments with current products

The manufacturer, which intends to settle in a new market, aims to exploit the success in the markets in which it is already present, however, taking on the risks arising from the lack of knowledge of new customers, intermediaries and competitors, or problems related to the host state, which could change attitude towards foreign companies. Those who are not affected by this type of risk are the *premium* brands, the likes of Audi, BMW and Mercedes, since their products are considered "global". The way in which new segments with existing products can be entered is that of repositioning, which in a market such as the automobile could be a negative signal for the origin market. On the contrary, entering a new geographic market is different because a brand could be linked in a different position than the market from which it derives.

Introduce new products into markets/segments where you already have

This form of development is a strong signal as it can push current loyal customers to change cars, but it could attract many customers, as this strategy makes the decision to design new products for new uses and/or extend the current line. Extending its line has many advantages, besides those related to the strengthening of the image, it also concerns the intensification of relations with both dealers and customers "flotte" and greater efficiency regarding advertising. Having an extensive product line presents fewer risks than a *brand* that offers only one product, however there are also downsides, given by a possible cannibalization of the different products, which leads to an increase in marketing costs. In fact, the extension of the range of models is implemented only by those brands that can afford it from the point of view of their reputation, as there is a point in the sales curve from which marketing costs are declining, and for *brands* with a not particularly high reputation, they reach this stage more quickly than compared to houses that have a higher reputation.

Introducing new products into new markets/segments

It is the most complex mode of development for a company, where you have the entry into a new market or segment, generally related to the previous one, through the introduction of new products. The risks therefore arise both on the market side, competitors and customers who do not know each other, and on the product side, as launching a new model always presents abundant critical issues. As a result, a substantial change in the knowledge required by management, but also a change in production and distribution processes, could be useful.

Automotive Collaboration Strategies

By shifting the focus to development using external lines, there are three different procedures that can be used:

3.4.1.3 Merger & Acquisition

The term fusion refers to the integration between two companies, with very similar dimensions, in one, which can bear the name of both, as often happens in the car industry so as not to negatively affect the value that individual *brand* shave, or a different name. In Italy the acquisition is often referred to as incorporation, where one



company decides to acquire and incorporate another into its structure, and at the end of the same process, only the buyer will exist. In the case where the purchaser is a group, the brand can be incorporated as an autonomous entity together with the other companies, or it can be integrated into another company in the group. IN *automotive* it is common to observe that the buyer integrates the new entity into its strategies, keeping the brand separate with its own autonomy, and the only mutation concerns the ownership of it. Acquisitions unlike mergers often take place between entities of different sizes, and can be both "hostile", in case the ownership of those who will be purchased is contrary to the transaction, and "friendly", if on the contrary it meets the interests of all.

The objectives that lead to the adoption of M&A strategies are divided into four points:

- Gaining market share: Acquiring another company also means appropriating a customer portfolio, and therefore a market share. In this way, it will also be quicker to enter a market and at the same time exclude or replace a competing company. For example, Volkswagen used this tactic to establish itself in the Spanish market by acquiring Seat, which had a substantial share.
- The second aim is to overcome the barriers to the entry of a geographical market. disadvantage the entry of companies of different nationalities; a second risk, no less important, is related to the loyalty of customers to a brand already present in the market.
- Acquire *know-how*: management often does not have the right knowledge to operate in a segment or sector, and the only way to learn these skills is to turn to the outside, which will be less risky than forming internal lines on an unknown topic.
- Joining forces in the search for synergies: the ultimate goal is to seek a "companion" with whom you can join forces to gain advantages in marketing, research and development and in the ability to negotiate with suppliers and potential allies. The main reason for this search for synergies in the automotive sector is often due to the fact that niche manufacturers face very high R&D costs, and therefore with the help of other companies the costs can be not far lowered. One of the most famous examples concerns Fiat's purchase of Ferrari, which was in danger of ending up in the foreign hands of Ford, and Chrysler in order to establish itself in the American market, but also and above all to integrate the product ranges and create synergies.

3.4.1.4 Strategic Alliances

Large car manufacturers have always preferred to own the majority of the capital in other companies, whether they have been acquired or set up in their entirety in agreement with other entities, such as governments or companies. Holding a majority allows for tighter control in management, thereby implementing expansion plans, conforming to a comprehensive strategy, without a possible partner deciding to oppose and hinder the process.

Strategic alliances, which are more frequent than decades ago, identify an agreement between companies that allows them to carry out a business in common, but maintaining their independence. It is possible that these kinds of pacts may also be made between companies that are competitors, in fact they are defined as "competitive alliances". These strategic arrangements aim to share costs, but also share risks and benefits, and involve partners conferring complementary products, equipment,

management capabilities or technologies. An example that proves the existence of alliances between competing companies is related to the Fiat and Mazda brands that in 2012 made a pact for the production in Japan of a *roadster* with the Alfa Romeo brand, which had as a platform that of the Mazda MX5, called Miata in the Asian market; the *spider* model was designed to recall the legendary Alfa Duetto designed by Giorgio Giugiaro and later designed by Pininfarina, who became known for the film "The Graduate". However, the agreements were later changed by a decision by Sergio Marchionne, who, having the will to maintain the "made in Italy" for Alfa Romeo models, dusted off another model that was important in the 1970s for Lingotto's brand, the Spider 124.

Figure below: A sinister Fiat Spider 124 & to Destra Mazda MX-5



Source: https://www.infomotori.com/auto/fiat-124-spider-vs-mazda-mx-5_81079/

Compared to an acquisition, the cost of an alliance can be significantly lower, because financial and management resources can be drained, moreover, if the acquisition fails the burden of failure would fall only on one parties.

The main forms of strategic alliances are as follows:

- *Joint venture* : from this particular form of alliance comes to be the new entity separate from the partners, which can have any legal form, depending of course the legal headquarters of the country. The role of partners, in addition to all giving capital, relates to other awards in terms of production technologies, sales organization and R&D; The management of the agreement, therefore the reinvestment of profits and short and medium-term planning is also important. The benefits of a *joint venture* are: the integration of the partners' resources and distinctive capabilities (example of the agreement between BMW and Swatch for the Smart project); a company can use the agreement to enter new businesses or new markets quickly; the last advantage is that it is present in multiple segments or territories with a lower demand for capital requirements. However, there are also risks related in particular to the management of the relationship with the ally with regard to the distribution of economic aspects and the vision of the strategic plan, since at the moment of the conclusion of the agreement interests are common, but with the passage of time they can deviate from the initial ones.
- *Capital participation*: This mode requires a person to participate in a partner's capital and represents an evolution of the other forms of alliance, as it is characterized by greater integration between the parties.



For example, Ford bought 25% of Mazda's shares in 1979 and the Japanese company began producing vehicles for the American manufacturer, which was able to enter the Japanese market, while Mazda allowed it to survive in its own market where there were multiple competitors.

3.4.1.5 Licensing e franchising

Licensing is an alternative form to direct purchase, and generally allows an OEM assembler to be able to use a particular *know-how* from another company for the production of components or models, but also the ability to use a brand, all in exchange for a *royalty*. In other words, there is a *licensor*, who donates the transfer of his intellectual property rights to a *licensee*, which has the opportunity to spread its knowledge without having to invest capital, while maintaining direct control, but running the risk that the one who acquires the *know-how* can turn into a possible competitor. In this way the *licensor* can penetrate a sector or segment by making limited threats with less investment than it should commit if it were to proceed autonomously. The franchise is instead when a company receives the privilege of being able to distribute the goods produced by another company, and in the reference market of the elaborate, it is verified that the manufacturer (*franchisor*) can observe the distribution of its products, through the exploitation of capital of others, identified by the term *franchisee*.

In the coming years there will still be mergers and acquisitions, but with a decreasing trend, giving more and more preference to strategic alliances. In fact, shareholders have been able to understand that the purpose of M&A is to satisfy management's desire for greater power, but also to hide any strategy errors by expanding the company's boundaries, rather than in truth to generate "*shareholder value*". What has allowed a complete change in vision is the change in competition in the sector, more precisely a car manufacturer cannot continue to exist by doing its business only in a country or regional area. The critical point is *cash flow*, which is a much more important element than market shares and sales volumes, as it depends mainly on being able to compete in international markets, rather than in the origin markets. In the car landscape, strategies, to deal with an increasingly pervasive globalization, follow two separate paths: the first is based on the exploitation of economies of scale, where "*bigger is better*", while the second pursues the goal of a more markedly flexible production in order to be able to respond more and more quickly to any changes in demand. So much so that several manufacturers regularly share the same platforms for their models, an extensive use of modules that reduce the number of suppliers and faster marketing of new products.

The problem, which arises with regard to the increasing use of common platforms, is a less ability to develop product quality and the slowdown in response to market fragmentation. Exaggerating even modularity could lead to excessive standardization of models, resulting in a reduction in consumer appeal for cars, who tend to have a variable demand for needs and waited.



3.5 Branding and brand positioning for automakers

Automotive Branding Concept

Among the different functions that need to be filled by management, there is also the one concerning the decisions to be made for the construction and consolidation of the *brand*, where the whole process related to this activity is called *branding*. "*Brand is a distinctive name and/or symbol (such as a logo, brand or package design) with the purpose of identifying the products or services of a seller or group of sellers and differentiating these products and services from those of competitors.*"

First, the *brand* is defined as a name, a design, a symbol and every feature that allows identifying the product or service of a particular manufacturer, in the case of cars, and distinguishing it from other; it allows companies to communicate their image and reputation to potential consumers. From a consumer perspective, this activity allows them to recall their experiences with a product, while from a business point of view it is identified as a fundamental marketing activity to create, protect and strengthen their brand portfolio. In *automotive* typical examples that positively affect the emotional and experiential value with a given brand is identified by the real purchase process or by a test *drive*.

The use of advertising and multiple promotions is tasked with strengthening the manufacturer's or product brand, due to a significant increase in the number of models on the market in the various segments, where there is also a decrease for certain price ranges regarding the safety and efficiency *performance* of the engines; the only differences that can be perceived are related to quality, but on the other hand there is the possibility of leveraging differentiation to pursue the benefits of the engines; the only differences that can be perceived are related to quality, but on the other hand there is the possibility of leveraging differentiation to pursue the benefits of the safety and efficiency of the engines; the only differences that can be perceived are related to quality, but on the other hand there is the possibility of leveraging differentiation to pursue the benefits of the safety and efficiency of the engines; the only differences that can be perceived are related to quality, but on the other hand there is the possibility of leveraging differentiation to pursue the benefits of the safety and efficiency of the engines; the only differences that can be perceived are related to quality, but on the other hand there is the possibility of leveraging differentiation to pursue the benefits of the safety and efficiency of the engines; the only differences that can be perceived are related to quality, but on the style and other intangibles, which is why the *brand* becomes a core *asset* for the company to exploit. To express the usefulness of investments in the image of the brand, it is difficult to think that it is often difficult to distinguish models of light vehicles and cars, of different companies, sold in the same market if not only for the name, as they frequently come out of the same design studios and also from the same assembly lines. So one of the main ways to differentiate and distinguish products is to focus on the emotional relationship that customers establish with a product, with a manufacturer, or even with a particular dealer, because it has been analyzed that consumers assign greater relevance to relational ties and emotional benefits, as opposed to what is common to think about the functional characteristics of the car, provided that minimum standards are respected.

In the past, marketing in the automotive industry has always been routinely *product based*, where the product represented the *brand*, such as the examples of the Model T for Ford or Beetle for Volkswagen, now the context has changed and there has been a shift towards *brand-based* marketing, where the challenge for car manufacturers is to



position and give relevance to their model within a very "crowded" market. It is significant, therefore, to understand what consumers appreciate, and what is not to their liking, since consumer expectations affect from the design of the vehicle, moving to advertising and finally on the services related to after-sales services.

Among car manufacturers, having a recognizable *brand name* is a huge advantage, especially if it becomes a generic term. For example, Jeep for the car world is like Coca Cola in the soft *drink* category, where the FCA group *brand* is a perfect proof of stringent and emotional brand. Many brands in the circulating park are easily distinguishable and recognizable, although due to the consolidation of the sector some distinguishing characters have become much less clear. Of course, there must be consistency between what is communicated by the brand and the actual attributes inherent in the product, and this must be kept stable over time; in the event that the link between the two elements is quite weak, due to excessive promises or because the brand *positioning* is not easily identifiable in the product, this would risk to fade the positive effect generated by the *brand*.

If there were no existence of the brand, the choice of products would happen randomly, while thanks to the brands there is the possibility to understand those for which you have or do not have preference, as it "rescues" the consumer with regard to the evaluation of the quality of a product of which it does not know its characteristics. On the side of those who offer the product, *branding* facilitates the customer's conviction process to repeat the purchase in case the previous experience has been positive, and also the introduction of a new model that shows the brand of an existing one, as potential customers are already familiar with the same.

The *branding* activity is therefore immediately associated with the search for differentiation from competitors, and for a product such as the automotive, characterized by high complexity, a difficult comparison in terms of performance, it is a process on which you have to invest time and resources in order to be perceived as superior and chosen by consumers. The benefits of a well-structured *branding* business, both on the seller's side and on the consumer side, will be analyzed below.

As far as the producer is concerned, there are four advantages:

- *It differentiates the product* : as already mentioned in the previous lines, as there are many OEMs, the brand allows to identify one among many, and through it the company tries to build a kind of privilege in relations with the customer.
- *More effective promotion*: since it is extremely difficult to promote an asset that is not easily detectable and distinguishable from competition, the *brand* facilitates the association between product and user experience, which, if it has been positive, could act as a facilitator in the case of a buyback.
- *Control of distribution channels* : when deciding to buy an asset of a particular brand, potential customers look for the stores that bear the sign of the same (*dealer* in the case of the car); for this reason a manufacturer, which is able to consolidate its image, also manages to increase its power towards intermediaries.
- *Range extension*: If a manufacturer succeeds with a particular brand, it can also extend it to other products. This is what is called the *halo-effect*, that is, when buyers positively consider a particular product of a company, they also tend to appreciate other goods of the same.

By shifting the focus to the customer, the *benefits* that come from a good *branding* strategy are essentially two:



- *Identify the product*: as already repeated several times, the main advantage comes from the ability to easily identify a certain asset. Regularly the subject, who is preparing to make the first purchase, proceeds to search for information on the website, in advertising and also from other buyers, and therefore the *brand* has the function of preventing that at every purchase process, the customer must again go in search of new comparisons, checks and others.
- *Promise of uniform quality*: since the brand is also a guarantee of uniform quality, given that manufacturers, as product managers, invest in communication and advertising for a *brand* to defend and strengthen the quality of the product itself, because otherwise the sacrifices would be lost. Another important factor is when the *brand* gives prestige to those who use the product, he also benefits psychologically.

3.5.1.1 La Brand equity

Aaker, in his 1991 work "*Managing brand equity*", explains in detail the concept of *brand equity*, that is, "asset of positive and negative elements, linked to a brand, its name and its symbol, which add or subtract something to the value provided by a product or service to that of a company and/or the customers of that company".

These negative and positive components, on which this set is based, can be grouped into five categories, and are different from context to context:

- Loyalty to the *brand*
- Degree of *brand* knowledge
- Perceived quality
- Perceptions associated with the *brand* beyond quality
- Other positive elements of the *brand*: patents, trademarks, privileged relationships with distribution channels



A good measure of an enterprise's *brand equity* is the willingness of consumers to pay for one brand rather than another for equal characteristics. A good level of this measure means a positive situation of the company's assets. A significantly strong



brand can also have a high loyalty from consumers and a considerable knowledge of its name, and all this allows reducing marketing costs, boasting a good credibility that allows extending its brand to other products, making buyers less sensitive to the price. The product and its characteristics occupy the central role because in order for the brand to be truly appreciated, the company must also own and above all a great offer. In fact, one of the prerequisites of marketing is that success can only be achieved if the company is able to design and produce a product that fully meets the needs of consumers, even taken separately from all intangible elements.

Brand positioning

By analyzing the concept of *brand positioning*, it should represent the meaning of a brand in the mind of a consumer, according to what it wants to be communicated by management. The objectives that a customer should be able to achieve if they buy a product of that particular brand are expressed and the reasons why it should be preferred over that of competitors.

The determination of the position, which a company wants to fill for its own brand, is defined in the product launch phase or when there was a desire to change the previous positioning following a change in the product strategy, and in the latter case, it would be more precisely a repositioning strategy.

There are two different but complementary perspectives for developing your own positioning.

The first is that the positioning is competition-based and used when a company decides to put a *brand* in the market, where consumers will have to place it among those that are already present in their mind. It is divided into two steps: first you will have to define what will be the category of product or reference service (*frame of reference*) and second *steps* what will be the points that allow you to stand out from the competitors (*point of difference*). According to the studies of Tybout and Sternthal (2010), people structure their knowledge of the outside world by placing, in the same set, the same things that possess characteristics in common, from what possesses different peculiarities. Reporting what is written in the previous lines, if a person thinks of a vehicle, the process will probably start from separating the car from a series of products, and then arrive at an increasingly detailed distinction based on characteristics: high or low price, long or short and so on. In order to be able to describe precisely to the customer what is the framework that identifies what the different brands could achieve the same goal, first you need to assign a brand to a well-defined product category. An example related to the world of the car can be represented by an OEM who has the will to fit into the segment of electric-powered cars, with the offer options related to the hybrid car (electric motor plus internal combustion engine, no electric power charging) or *plug-in* hybrid (compared to the normal hybrid has the possibility of charging to the current); in case a consumer knows the category well, the manufacturer must go to communicate that its own brand belongs to a certain category, so that the consumer can identify what the objectives can achieve with that particular product. The second step is to express the points of difference between the brand offered and those proposed by the competition. This allows you to understand why one brand is superior to others within the chosen reference boundaries of the previous step. First, we need to start from a careful analysis of the product's ability to compete with those offered by competition and that, the consumer is very clear in their mind, but also to understand what are the reasons that lead the potential consumer to think of a given category of products as a reference. It must be considered that the consumer, in his purchasing process, also aims to identify one or more particular or benefits that allow distinguishing a given brand



compared to the opponents. If the example of the first, in the market of *plug-in* electric vehicles the inherent benefit could be greater or less autonomy with a recharge, or the time related to refueling. There is also a distinction between the benefits: emotional in nature, difficult for a manufacturer to build, but nevertheless if they are established and consolidated, as well as having long duration, they are very difficult to imitate; functional nature, linked to the objective use of good.

The second perspective, complementary to the positioning based on competition, is that based on the profile of the potential customer, which is the tool that allows placing the brand in relation to the motivations to buy and the lifestyle of the customer. To take this point of view, it is necessary to specify the abstract meaning associated with the use and possession of a brand in a specific category. The scholars Tybout and Steinthal (2010) always establish this meaning on the basis of two elements: the essence of the *brand* (essence brand), which to be clarified it is necessary to analyze its intrinsic nature and its "character", which consists in carrying out a deepening about its characteristics and implications, going gradually deeper and deeper into the detail along four levels, such as an attribute of the product, then the functional benefit, the emotional benefit and finally the emotional benefit and finally the essence of the *brand*; the essence of the product category (*category essence*) on the other hand, according to which the objectives, or more precisely the needs and expectations, that the potential customer intends to achieve through the use of the new product can be used and studied. With this in mind, the consumer will consider the brand as the solution to its need, but since more of these can satisfy the same need this form of positioning is quite vulnerable, so it is usually used in the event that the brand cannot yet boast a sufficient reputation, prestige and value to support a solid positioning.

3.6 Brand portfolio strategies: house of brands and branded house

First, it is useful to remember that companies can have the possibility or to manage only one *brand* or there is also the opportunity to manage several, but obviously facing different difficulties. and in this second case we would talk about brand *portfolio*. It is defined as a group of brands for which companies demonstrate that they can manage their business activities. In addition, these can derive internally, then realized and generated by the company itself, or through *co-branding* activities they can be hired from outside.

With regard to the management of multiple brands, the company is faced with the challenge of being able to exploit the forces of individuals, trying to limit their weaknesses as much as possible. Strategically, this task is very complex to make, as some decisions can often be good for some *brands*, but at the same time be harmful to others, and therefore management needs to make the most appropriate assessments. In the automotive sector, this type of strategy has been thoroughly analyzed, due to a growing proliferation of *brands* and the huge costs that came to rise; in fact almost all the large groups of manufacturers have had to deal with the problems of the portfolio of brand. A well-known example of the problems that can arise from a portfolio strategy is that of the alliance between Chrysler and Fiat Group Automobiles, where the former created major problems in the choice of brands, especially from the first months, in particular the subject of discussion was the future of the Lancia brand.

Therefore, the fundamental concept will be that the company must identify different strategies for the different brands, so that the whole group is developed. Calkins (2005) argues that a company with the intention of adopting this strategy must ask the following questions:

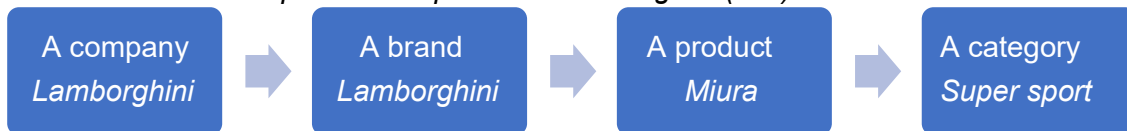
- *Should we, or can we, add a brand to the current portfolio?*
- *What priorities should we give to our current brands (how to distribute resources)?*



- Do we have too many brands? Should we abandon or give up some brands?

For a company, the simplest situation is to have only one brand that identifies only one product to manage. The following graph shows an example from the 1970s of the Lamborghini company, before it was incorporated by Volkswagen, which was simply structured in this way:

Chart below: The simplest brand portfolio. Lamborghini (70s)



Calkins himself argues that the challenge facing management, as a portfolio strategy, is that it has to push sales in the short term of each new brand, but at the same time it must lay the foundations to build its structure in the long term. In fact, the company that is able to optimize the results of the individual brands, it will be easier for you to maximize those of the entire group. Nowadays it is very rare that in the car market there are companies that have only one brand and offer only one product, in fact most OEMs look at the different segments with different *brands*; moreover, each of these brands has different models and sometimes different categories.

The choices that a company finds itself making in relation to the portfolio have strong relevance and impact to the financial outcomes in terms of revenue and profitability, since the profits of a group are the result of the sum of those of individual *brands*. However, there is no single defined guideline to develop the portfolio strategy, however, two basic paths are validated that can be considered:

House of brands

It is a classic model where a certain company owns a certain number of different brands, which often operate within the same category of products. The best known examples are the Fiat Chrysler Automobiles Group and the Volkswagen Group, which own a number of *brands*. In this case, the purpose of management is to avoid overlaps and cannibalizations by creating as much as possible individual distinct positions. The tactics can be to target different customer targets with different *brands*. Except for a few cases, "*corporate name*" is used other than trademarks, and in fact consumers frequently do not know that often the same *brands* belong to the same group, or parent *company*.

The advantages of using this model are:

- Offer different products to different types of customers.
- To be present more simply in different markets, and in the event that none of the "family" brands has a significant advantage in a given country, the *corporate* may decide to acquire a local *brand* or launch a new brand that is more relevant.
- The ability to build a separate *corporate brand* that allows you to manage your entire portfolio more hand screen.
- Minimizing the risk to the company that relies on a number of brands and that in the event that one of them begins to lose its attractiveness, you can shift the focus to others.

However, there are some risks:

- The management of the entire range of brands is very complex compared to the situation in which there is only one, because each *brand* necessarily needs specific decisions related to promotions, products to be launched, *pricing* activities and advertising.
- Synergies are often limited due to the fact that individual brands are produced independently of others.
- It is necessary to be extremely careful to properly balance the placements of individual *brands* in the minds of the various consumers.
- The model requires marketing resources to be allocated to the *corporate brand*, as it needs specific support to maintain its meaning. It has an important role to play in relation to investors, *partners* and employees.

Figure below: The twelve brands of the Volkswagen Group



Branded house

Unlike the previous model, in this case, the company uses a *primary brand* for a variety of products and categories. All goods are sold through the use of a single brand *name*, and regularly the company and the main brand have the same name. The benefits of this second mode are: strong *focus* of energy and resources on a single brand, which is an almost obligatory choice with the goal of achieving success; it creates the possibility of being able to take advantage of economies of scale since all investments in marketing support the main brand. On the contrary, if you do not have a proper organization, you risk facing three main disadvantages: the *brand* risks losing focus, thus losing power in differentiation when, for example, a new product is launched, this will have the name of the primary *brand*, there will be a limitation in terms of innovation and development, since not all good ideas could be good for the *Primary brand*; finally, the ultimate disadvantage is that it is over-reliance on a single brand, which, if it goes wrong, cannot be exploited by the risk-sharing theory.



4 CAR PRODUCT DEVELOPMENT PROCESS

In the first chapter we have seen the process leading to the development of a new product at a general level, in the next few pages we will analyze in case the product is a car.

When we talk about the design of a new car model, one has to understand the fact that it is the product of a complex work in which different skills and functions are involved, such as designers, technicians, modelers, researchers, managers and engineers. It is a path in which you have the integration of different inputs and skills, and where digital simulation technologies are applied, while maintaining some traditional manual elements for refining every detail.

A key element, in the process of developing a new vehicle, is what concerns the level of design, that is, the estimation of how much commitment of both financial and creative resources must be committed. Starting with a high level of the latter and then proceeding in descending order you can identify five different production levels:

- Complete redesign: The various projects are the one that requires the greatest efforts in terms of design, planning and testing, as the concept of the product and components must be realized from scratch. They can be used, standard components already implemented in other models, but that in the new model will not be visible to the customer's eye. The complete redesign can be achieved at the end of the model's life cycle, which lasts about five to seven years, but is being reduced.
- Derivative design: Parts and components from a previous model are used to reduce development and production costs.
- Variant design: It is possible that for the same model you decide to create different variants to meet different types of needs, while maintaining roughly the same line. For example, in the case of the Alfa Romeo 159, both the sedan and the station wagon version were built:

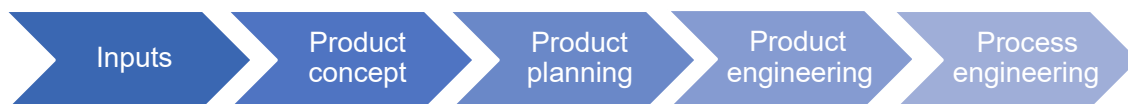




- Model updates: It contains some modest changes that generally affect the external aspect of the vehicle, referred to as "face lift", and are usually carried out mid-life. The main purpose of these updates is to be able to revive demand at a low cost.
- Model Year: changes are made regarding the insertion of new colors or accessories. The term means the year in which these changes are made and usually occur once a year because they are light interventions that do not require high costs but allow to respond to consumer trends.

As in most industries, companies are forced to respond more and more quickly to market demands, due to technological advances and a reduction in development timelines with an associated fragmentation of demand. In the case of car manufacturers, some steps are identified, which are common to all OEMs, which are:

Chart below: The stages of car development



4.1 Gathering Inputs

The company has at its disposal different sources from which it can research ideas especially those coming from the market, from the company's strategies and technological advances.

Starting from the source of the market, it is divided into the ideas that come from the competition and those coming from the customers themselves. The importance of this source is given by the complexity of the car product and the continuous evolution in the tastes of consumers. The information is collected thanks to market research, product clinics and detailed statistical analysis, in which you also collect any feedback provided by the same dealers. In the past, car companies have funded a consortium of manufacturers (NCBS) where all the results are shared. Since the data is readily available, the figure that in the Company must "make a difference" is management, which has the task of anticipating trends, not only observing what happened in the past, and reading in the right way all the data and variables considered. It is important to consider that, most likely, any idea, which will be transformed into a product, can affect companies for a period of about seven or ten years, so the task of product planners will be above all to pay considerable attention to the information that may come from the market. It is essential to give relevance to elements such as the introduction of new regulations, emissions, to consider the fact that there can change preferences for some performance and other elements related to the choices arising from competition.

With regard to the company's strategies, the life cycle of a car and its already anticipated complexity, limited resources, technological evolution and market trends must be taken into account. Especially for these reasons, manufacturers are forced to



make long-term planning, as it could weigh on their profitability, as the investment in the development of a new product is quite significant. The choices, which relate to the individual product concept, are articulated in the positioning that will have to occupy, in what price ranges will be sold, what engines, which customers to serve, launch timing and placement in the product portfolio.

The third element is the renewal of technologies, which in the generation of product concepts, has a great weight. Technology can travel in two different directions:

- The first road is that of "available technologies": all those that go to perfect the infotainment, that is, the set of all the multimedia functions available, on board cars, or in weight reduction by exerting a decisive action on the generation of the product concept.
- Contrary, it is directly the same product concept that can push towards the creation of a new technology.

However, it should not be forgotten that technology, for a concept, is necessary but not enough, as there must be a good component in the field of R&D. However, the three sources should never be analyzed separately in isolation, but an integration activity must be developed between them. In addition, there are some product-oriented manufacturers, who will start with engineering and production by proposing the development of a cost-effective model. Otherwise, other companies are considered technology oriented as they will focus on applying the latest technologies to both the product and the production process.

These two strategies are a good basis for achieving positive results, even if the change in the environment pushes companies to be more and more market based, that is, focused on deepening the needs of consumers, regarding the characteristics of cars and prices, to ensure that there is the achievement of excellent results; a house that will adopt the latter approach will start from the "voice of the customer" (voice of the customer), that is, it will take into account above all the results of excellent results; a house that will adopt the latter approach will start from the "voice of the customer" (voice of the customer), that is, it will take into account above all the results of excellent results; a house that will adopt the latter approach will start from the "voice of the customer" (voice of the customer), that is, it will take into account the best results of the results; a house that will adopt the latter approach will start from the "voice of the customer" (voice of the customer), that is, it will take into account the best possible results; a house that will adopt the latter approach will start from the "voice of the customer" (voice of the customer), that is, it will take into account the "voice of the customer". need for consumers to expect and will observe what competing companies do to meet their needs.

4.2 Product concept development

The second phase is that there is the origin of the product concept, that is, as already mentioned, it concerns the description of a product idea, starting with a general draft and then proceeding to detail it. The project is studied by integrating information on market expectations, the behavior of competitors and the strategic direction of the company. Only later are the previous steps translated into a model description, including inputs from the previous stage. In the event that the idea of the product is defined on the basis of a few, but well-defined objective criteria, the product *concept* could be expressed by a product category (*SUV, sports car, coupe* for example) or by belonging to a segment and with some specifications: for example, the Product Concept X will be a *two-cylinder car of the A segment, with half the fuel consumption*



compared to the competing models". The main venue where possible *concepts* are often shown to the public are the Auto Salons, among the most famous in Geneva and Detroit. These events are one of the main tools for *testing* sensations coming from the market, but also to give a signal of continuous innovation.



According to the German company BMW, the product profile must be developed by several objectives from which the technical and economic feasibility of the car project can be articulated. These objectives are divided into product positioning against competitors, vehicle characteristics, variants, technical functions, quality, after-sales services and production techniques. Of course, the objectives have an "obligation" to meet the requirements inherent in existing legislation and the "brand profile" of the company or product range in which the new product will be included.

The technical feasibility concerns the explicitness of the general characteristics of the car, more precisely geometric checks (in the jargon vehicle package), then the primary choices that relate to the inner and outer style of the cabin are indicated. This process also establishes how it will be produced, where preliminary packaging decisions are normally made in 2D. In this regard, there is a 1991 study by Clark and Fujimoto on the methods of developing a new model by leading automotive players. The Authors concluded that in the technical feasibility verification phase, the most important factors were related to:

- Styling: It is almost always the first choice that the company evaluates. It represents the link between the product concept and the details of the mechanical construction; the car's style is defined by the integration of marketing and design functions.
- Layout: This element also contributes strongly to the overall perception of the model. It provides for the definition of the spaces pertinent to the allocation of mechanical parts, passengers, luggage that allow to arrive at the collective structuring of the car model. It starts with the choice between front-wheel drive and the size of the "hip points", i.e. weight and angle of the windshield.



- Component choice: the last requirement is to determine the choice of the main components, modules and technologies to be included in the car. The decision may relate to the composition of the car regarding or components already in use in other models or the previous version in order to reduce costs and design risks, but towards a limitation in the degree of innovation; while turning to the outside could cause a decrease in vehicle distinction and purchasing power with suppliers.

By shifting the focus to economic feasibility, the purpose of product planning will be to develop a business plan related to only the new model or new product line, indicating the possible revenues and costs to be incurred. In fact, only if the realistic estimate of return on investment (ROI) has been successful can the next step be made. For this analysis, a working group is set up with members of various functions, usually the main ones. It is claimed that the development phase of a product lasted about three years, producing only costs from prototype design, equipment uses, plant and sales force training.

claimed that the development phase of a product lasted about three years, producing only costs from prototype design, equipment uses, plant and sales force training.

4.3 Product planning

After validating the technical and economic feasibility, the aim of this third phase is to proceed to a greater detail of the project and in order to proceed it is necessary that certain requirements are met. The tools that facilitate this process are the use of 3D models, which can be both virtual (CAD) and real (plastic). Initially, in addition to the physical characteristics, other functions such as drivability through virtual tests can also be tested and controlled, and then proceed to the real ones. Secondly, product planning aims to achieve a project that is in absolute coherence between the different technical and financial objectives; further it is necessary that beyond the main concept of the model are attachments of sub-concepts concerning the mode of production, sourcing, marketing and sales.

The timing of the decision on the details ends once the various functions concerned have reached an agreement on technical and financial targets; from that state it is very difficult to go back, called precisely "point of no return ". Once this degree of progress has been reached, the management is faced with some questions corresponding to the economic and technical possibility of the realization of the model, the possible applicability of the sales prices and the real concreteness of the sales and production volumes hypothesized. Only if the response to these is positive, it is possible to proceed to the production of the first car of the " model line", which implies the beginning of all contracts with suppliers and the initialization of investments.

4.4 Product engineering

In this fourth step there may still be some conflicts concerning the various objectives, in fact, since the car is a complex product it is very difficult to believe that all the problems have been solved.



In case you are faced with a design from scratch, complete redesign, product engineering involves three different activities: negotiations with suppliers, realization of the complete product and construction of prototypes.

Once all the details have been defined, the choice of technologies and components, we move on to the time when there must be a formal approval, which allows negotiation with suppliers, and then move on to the production phase.

The formal release is very relevant because you assign responsibility to the team that has overseen the entire project. Through special competitions, appropriate suppliers are identified that are characterized by quality, reliability and guarantee, and that are therefore "certified". Often there is close collaboration between manufacturers and suppliers, so much so that partnerships are frequently established. This cooperation is useful for the definition and design of the equipment or processes necessary for the construction of the different parts.

The main purpose of product engineering is to integrate all components, systems and modules into the construction of the entire vehicle that meets all the requirements related to the current legislation and those decided by OEMs, defined in the previous phases. In order to test the consistency of the entire project and the final approval of the concept are built and tested the so-called "pre-series cars" and the first "series cars".

One of the biggest cost items is the development of prototypes, with charges that can sometimes be around one million euros. Also in the case of the complete redesign, car manufacturers test two different sets of prototypes sequentially: the first follows the lines of the first concept, which allows to identify improvements to be applied; the second group is related to tests on prototypes on which improvements have been made. This path needs to be evaluated very carefully because, since the large components that need to be assembled are produced before the development of the second group, as approved, any changes in design could be significantly costly.

Finally, before proceeding to the preparation of the launch, the first cars are disguised and tested on tracks owned by the builders, or on roads with different surface and sometimes simulating even adverse weather situations.





The launch organization is also called ramp-up phase. It begins with the phase of the first pre-series cars to be assembled, and then ends when the target volume of the production of daily series cars is reached as planned. It is called "Start of Production" the time when the first car intended to sell an end customer produced.

Behind the launch process is marketing support for production, which deals with the planning of press presentation, dissemination of photographs, advertising campaigns and the presentation of cars in various salons around the world, in order to attract the attention of potential consumers. OEMs spread the first cars produced around the various dealerships in order to support the sales campaign. Between dealer and company there must be an agreement on what the former should do in terms of sales volume on the specified terms, and this choice is called "go-ahead", but the management takes a commitment to deliver the ordered cars, in order for the sellers to succeed in the objectives.

4.5 Process engineering

In the fifth phase of process engineering, you will find the phases of control of equipment, control software, staff training and description of the modalities of production. This phase is programmed by type of process: mergers, molds, welding, painting and final assembly. The effectiveness of the processes is made by a balanced interaction with product engineering, where some problems can occur. There are two solutions to the need for the two phases to be performed at the same time: a first response can be the "sequential" one where the process engineering starts with the conclusion of the other process, to avoid possible confusion, even if it lengthens the time; the second, is to carry out the two tasks "in parallel", thus shortening the time, but generating more confusion, given that in product engineering you can modify different specifications. However, regardless of the approach chosen, there must be coordination between the two functions. The need for communication between them is of great importance because there are many choices that must be taken by both, since one has the objective of perfecting the car with a corresponding adaptation by the production, while the second travels in the opposite direction. The end of the development phase coincides when the production capacity has been used for about two weeks without any disturbance occurring. The end of the process is not real because these development activities continue in the short term in order to improve the quality of the model, reduce production costs or to comply with some regulations revenue "at stake"; these searches are carried out according to well-defined programmers and in periods when the plants are blocked.



5 THE GROWTH OF THE SUV SEGMENT: THE JEEP CASE

5.1 Segmentation in the automotive sector

There are two ways in which automotive companies approach the market:

1. in the first way, it is the same companies that offer the same cars to the market, even though they are aware that consumers have different needs and preferences, thus applying the so-called mass marketing, thus identifying what the majority of consumers have in common, rather than what sets them apart. The pioneer of this strategy was Ford, through the Model T, which allowed, thanks to continuous process innovations, to produce a large amount of the same product by drastically reducing costs, taking advantage of economies of scale and learning.
2. On the contrary, the second method requires car manufacturers to divide customers with different tastes and needs into segments. The purpose of this mode of action allows us to develop a product more suitable to meet the different needs, being more effective than the previous method; of course, this mode must be defined assuming that each segment must have a basin to be satisfied that is profitable for the company. However, the issue is far from simple, indeed only a few companies manage to win the scene as protagonists, as it is necessary to invest considerable resources to analyze the market, to then break it down into customer groups and finally design a car suitable for the target. One of the first houses that adopted this mode of market sectioning was General Motors, whose marketing policy was summarized in "a car for every purse and every purpose".

Segmentation in the automotive world, although very useful, presents many complexities in its application due to the articulation of the product. In fact, most car companies base their segmentation on the "industrial" segmentation, which has as its main criterion of differentiation that of the size of the car.

In Europe, unlike in the US area, there is no precise and official classification of cars, and for this reason it is assumed to segment the market by the following criterion:

- Segment A: identifies very small vehicles, which are characterized by a maximum length of 4 meters, with a transport capacity of four people and ideal for urban mobility. The main super-utilitarian's in the market are Fiat 500 and Panda, Volkswagen Up, Toyota Aygo and Renault Twingo.
- Segment B: Identifies cars slightly longer than the previous one, but still considered small cars; they can carry as many as five passengers depending on the model. Also, better suited to extra-urban use than mini cars. The main



small cars in the segment are Renault Clio, Volkswagen Polo, Ford Fiesta, Alfa Romeo Mito and Toyota Yaris.

- Segment C: Identifies the most populous segment in the sector, represented by medium-sized sedan cars. It can be divided into several clusters, such as that of sports sedans, comfortable or luxury. Among the main vehicles that are identified in this segment are: the Volkswagen Golf, Ford Focus, Opel Astra, Renault Megane, Peugeot 308, Fiat Tipo and Toyota Auris.
- Segmented D: Locates medium-to-large sedans of about 5 meters, which allow you to comfortably carry five people, even for long journeys, for this reason in the urban context lose slightly of maneuverability. The main "large cars" players in this segment are: Volkswagen Passat, Audi A4, Mercedes C-Class, BMW Series 3, Alfa Romeo Giulia and Volvo V60.
- Segment E: identifies large sedans, so-called "executive cars". They are also referred to as "admirals" and have prices well above average. In most cases these cars are used for institutional or government representation. This niche segment is governed by machines such as: Mercedes E-Class, BMW Series 5, Audi A6, Volvo V90 and Maserati Ghibli.
- Segment F: The main feature of this segment is the fact of being luxury cars, which comes from the superior quality of the interior and body materials. The cars we can find within this section are Maserati Quattroporte, Porsche Panamera, BMW 7 Series.
- Segment H: in which sports cars or coupes are placed, where the most striking examples are Porsche 911, Mazda Mx-5, Fiat 124 Spider and Audi TT.

Due to new customer expectations and needs in recent years, the Companies have had the need to identify two additional segments, namely the Sport Utility Vehicle (from here SUV) and the Multi-Purpose Vehicle (hence MPV). The SUV segment is referred to by the letter "I", represented by vehicles that normally possess all-wheel drive and a raised trim, which will be the subject of analysis in the next chapter, while the MPVs, identified by the letter "L", are a middle ground between a minivan and a family type, and have been developed with the aim of developing vehicles of good internal habitability and excellent load capacity.

5.2 Growth in the SUV segment

The following is designed to focus and analyze the role of SUVs, as the market for this segment has increased exponentially in recent years, as shown by the increase in registrations. In addition, a case study will be reported in one of the most important brands on the market.

When we talk about this type of car we refer to vehicles suitable for off-road driving, which although having elements in common with the minivan and station wagons, are



distinguished by the high height from the ground and the use of four-wheel drive, but the angles of attack and exit are underdogs due to the presence of any spoilers. In Italy it is confusing to understand whether a vehicle is an SUV or an authentic off-road vehicle, unlike the English language where the acronym SUV identifies off-road vehicles in general. With regard to the Italian case, as a rule off-road vehicle boast of having the gearbox, favorable angles and differential locking systems, which are not brought back to you in SUVs. But the real difference between the two categories is in relation to the chassis: on THE SUVs is reported a carrier body, different from the off-road vehicles where spar structures are used, which allow for use on non-homogeneous routes; however, some points of difference are observed, often certain SUVs have the system of reduced gears without being considered to be off-road, on the contrary some vehicles with carrying body are considered to be off-road vehicles, such as the examples of the Fiat Campanula and Lada Nivea. Contrary to what you might think, SUVs also have excellent performance on the road and some models, with large sizes, are characterized by the finishes and performance typical of luxury cars. As you will see in the next paragraph, this category of vehicles will initially become popular in the US market, where, however, being not considered a tax-free car, and then extending to the European market.

Chart below: SUV and Industry registrations from 2007 to 2017 in the top 10 European markets



Source: ACEA



Over the past decade, as can be seen in the graph above, in the ten main markets (10MM), the share of the SUV segment has grown considerably more than the total automotive segments, more precisely from the 2010 ahead of the delta between the growth of SUVs compared to the growth of the sector was not less than 12% and in 2017 there was the highest number of registrations in this category with a share equal to almost four million cars weighing 30% of the total automotive industry.

The main issue for car enthusiasts is why more and more people tend to move their choice to SUVs. Scholars attribute the reasons for the evolution in customer needs and as Lilius Puerto, technical manager of the RACC Fundectomy's, "cars have always been the mirror of society". Puerto is not the only scholar to support this statement, but Jordi Brunet himself, ESADE Professor of Strategy and Planning and automotive expert, argues that cars for subjects are an extension of their personality, lifestyle, habits, economic situation and finally their social relationships. For these reasons, it is considered that the evolution of car models follows the development of society.

At the beginning of commercialization, cars were the means of transport and the status symbol for the higher social classes (Puerto). Subsequently, the issue of safety came into play, as an essential element to be found in the car; the last decade is characterized by a growing trend of an obsessive search for connectivity: this topic is now an essential element for people and for the cars themselves, which are increasingly integrated with mobile devices, which can no longer be dispensed with. As for the trend related to the SUV world, this growth of interest stems from the research by the subjects of a good versatility and capacity to meet the needs of an entire family and to be able to travel urban roads or long stretches in total comfort. The "SUV Customer" also considers the safety and robustness of the vehicle to be fundamental, but without neglecting its modern design. An interesting factor is the fact, which is of use to attribute these needs to male consumers with an age of about fifty years, but studies show that more and more often it is the female clientele who pursue this interest in a higher driving position and safety in urban driving (Araneta Alonso, department of Product Marketing of SEAT).

5.3 From the willys myth to the 2000s

As mentioned in the previous lines, the U.S. market is of fundamental importance regarding the history of this segment, where the introduction of the first SUV in 1946, the "Jeep Wagon", better known as "Willis Wagon".

The Willis resembled the station wagons of the time, built on a long-wheel structure, peculiar to off-road vehicles, but it had a more up-upscale trim and all-wheel drive, typical of SUVs. The origin of this model dates to the outbreak of the First World War, after the US declared its neutrality, although there were many trade sprees with Europe, intensifying its relationship. On the one hand, American banks were being used to finance European states to import US products, particularly materials, food and weapons. With the Entry into the conflict by the American state in April 1917, the U.S. Army began several design studies on a vehicle that had the characteristics of lightness and practicality for ground displacement, but they remained stuck until the end of the 1930s, as as Axis forces began to advance in Europe and North Africa; all this prompted the Allies to demand a vehicle that possessed capabilities to deal with capabilities. as many conditions as possible and that it was light to move by hand in critical situations. In fact, in 1940 a tender was promoted to all the major companies of



the U.S. automotive industry by the U.S. government, in order to obtain as soon as possible an off-road 4x4, with a number of other features imposed by the call that related to weight, shape, speed, loading capacity, traction and light system. Only three houses participated in this type of proposal: The American-Bantam presenting the Model 40 BRC, the Willis Overland Motor Company that designed the Willis Quad and finally Ford, which developed the Model GP. The government asked them to reproduce about a dozen specimens as prototypes used to carry out the first test tests at Camp Holabird, Maryland. The results of the tests showed that it was impossible to fully comply with the government's demands, the one concerning the weight of the car less than 1,300 pounds, but that later it was impossible to meet. In March 1941, the government chose the project that most suited the demands and modifications made by the houses, and it concluded that the tender was won by the Willis-Overland Motor Company with its Own Willis Quad. The vehicle had a small and simple structure of an off-road vehicle, where the "box-shaped" frame contained the engine, equipped with a four-cylinder engine, 2.2 liters of just over 50 horsepower, had the four permanent drive wheels and the transmission consisted of a four-speed gearbox. Later the name of the Willis MB was soon changed to the nickname Jeep, although despite the uncertainty of the origins of the name, it is thought to derive either from the acronym "GP", which in military slang means "General Purpose", and that the two letters were phonically crippled in the word "Jeep", while the second hypothetical origin concerns the character "Eugene the Jeep" Popeye." By the end of World War II, about 630,000 Jeeps were built, split between ford and Willis-Overland. Highlighting the success of the first real SUV was Us President Dwight D. Eisenhower, who argued that without the Jeep the Allies would not be able to win the war. Despite the end of world war, the Willis was reproduced on a large scale also for civilian use, through the trade of the Willis-Overland CJ-1, where the acronym "C Civilian J", means "C Civilian Jeep".

1: Militants digging the ground to free the Jeep Willys from the mud at Anzio in January 1944





However, several versions of the Willis were built until 1965, after which the Jeep Wagoneer was introduced to the market, which although more like a *station wagon*, featured all-wheel drive. Following upgrades, the Wagoneer evolved in 1974 into the Jeep Cherokee, produced in several variants, including one that was characterized by the presence of the carrier body, of the "*unframe*" type, or reinforced by some small auxiliary frames.

Moving the focus to the other side of the world, more precisely in the territory of the Soviet Union, in 1977 the car company Lada-Viz launched *the Nivea* also presenting a *single-frame* body. The idea of integrating *station wagon* models with off-road skills also influenced other countries, such as Great Britain, where the Range Rover was born, which had remarkably refined interiors and exteriors, but the Marta industrial group marketed its SUV, the *Rancho*, which presented, although still embryonic, the concept of Crossover-SUV, or off-road that was equipped with front-wheel drive. In these years the division between off-road vehicles and SUVs began to grow, where in the latter the body was very high, and the equipment was that of the high-end sedans. In addition, Asian industries such as Toyota also fit into the segment, with the Toyota Land Cruiser. In Europe where only the presence of Range Rover was observed, Renault entered into an agreement with American Chrysler, which owned the Jeep brand, which included the import of the Cherokee, which in contrast to the American version had a Renault 2.1 turbodiesel engine; The agreement with the American company disbanded, and the latter imported the Jeep Grand Cherokee into the European market on its own.

Over time, the bodywork became more and more detailed and refined, to dissociate itself from that image of "raw", typical of off-road vehicles. Asian manufacturers were among the most active, in fact Toyota designed a new model of the *Land Cruiser*, the smaller RAV4 and the *4runner* in 1994, while Kia initiated the sale of the Sportage, which was a mid-range SUV. In the late 1990s, other companies arrived in this competitive arena, such as Mercedes-Benz with the *ML*, *Lexus RX* and the German BMW with the *X5*. In order to improve financial performance, lower displacement engines, frequently powered by LPG, were introduced. The 2000s saw a significant increase in the market share belonging to SUVs, of medium to large size, and the segment was becoming less and less homogeneous, and for this reason several categories began to form:



1- B-SUV (segment I0)

There are the smaller *sports utilities*, as they are about four metres or so in size, representing the cheapest cars in the category and also, even if they come from the B segment, allow to have a higher driving than a sedan, having a good cargo compartment and good efficiency from the point of view of fuel consumption. In recent years, this sub-segment has seen strong growth both in terms of volumes and new models introduced.

The situation in terms of registrations in the ten main markets between 2016 and 2017 was as follows:

1: Registrations 10MM Segment I0 - 2017 vs 2016

Model	Regs. 2016	Regs. 2017	Δ Regs.	Rank
Captur	193.964	190.852	-3.112	1
2008	160.149	162.267	2.118	2
Mocha	153.804	159.229	5.425	3
500x	100.977	85.587	-15.390	4
Juke	88.803	83.393	-5.410	5
Q2	6.858	74.871	68.013	6
Renegade	73.246	70.058	-3.188	7
Ecosport, New Sport	55.575	60.655	5.080	8
C4 Cactus	64.968	51.220	-13.748	9
Vitara	53.639	49.753	-3.886	10
Cx-3	42.233	44.331	2.098	11
Countryman	32.753	39.886	7.133	12
Yeti	48.334	37.489	-10.845	13
Hr-V	27.687	24.840	-2.847	14
Sx4 S-Cross	16.807	22.268	5.461	15
Jimny	13.388	14.757	1.369	16
Stonic	2	8.740	8.738	17
Kona	0	6.876	6.876	18
Tivoli	8.956	6.700	-2.256	19
Arona	6	5.720	5.714	20
T-Roc	0	4.496	4.496	21
Niva	1.315	1.922	607	22
Paceman	2.379	223	-2.156	23
How much	53	33	-20	24
Trax	66	22	-44	25
Sixteen	4	5	1	26
Samurai	1	1	0	27
2171	1	1	0	28
Goa	1	1	0	29
Sx -4	825	0	-825	30
TOTAL	1.146.794	1.206.196	59.402	

Source: ACEA Data



2- C-SUV (segment I1):

They differ, from the previous sub-category, by slightly larger size and price size. They often share much of the structure with C-segment vehicles such as the BMW X1 with the 1 Series. Also referred to as "*compact SUVs*", they represent the four *clusters* that are definitely the most widespread, as the size is not limited and the prices are not excessively high.

The models that perform best in 2017 in terms of registrations in this category are represented by

2: Registrations 10MM Segment I1 - 2017 vs 2016

Model	Regs. 2016	Regs. 2017	Δ Regs.	Rank
Tiguan	162.316	207.367	45.051	1
Qashqai	195.316	205.570	10.254	2
3008 New	40.847	152.675	111.828	3
Kuga	109.763	137.530	27.767	4
Tucson	135.614	134.036	-1.578	5
Duster	118.038	119.620	1.582	6
Sportage	118.356	113.037	-5.319	7
X1	86.604	108.013	21.409	8
Kadjar	116.907	102.829	-14.078	9
C-Hr	6.180	90.318	84.138	10
Gla	67.284	71.909	4.625	11
Q3	85.770	71.581	-14.189	12
Ateca	21.529	69.439	47.910	13
Evoque	60.411	55.130	-5.281	14
Cx-5	47.871	52.233	4.362	15
Asx	30.299	32.432	2.133	16
Niro	7.132	26.180	19.048	17
New Compass	0	15.046	15.046	18
Grandland X	0	7.708	7.708	19
C4 Aircross	9.228	4.944	-4.284	20
Karoq	0	3.610	3.610	21
Korando	3.753	3.160	-593	22
Qx30	648	1.614	966	23
Xlv	957	1.578	621	24
4008	1.897	759	-1.138	25
Eclipse Cross	0	531	531	26
E-Pace	0	415	415	27
X2	0	244	244	28
Xc40	0	115	115	29
Ix 35	1.485	109	-1.376	30
Dr5	199	74	-125	31
Actyon, New New 901	5	39	34	32
Maverick	1	6	5	33
Gran Vitara	12	5	-7	34
Dr-6	0	5	5	35
Patriot	1	1	0	36
Hover Cuv	0	1	1	37
Compass	455	0	-455	38
Scorpio	5	0	-5	39
TOTAL	1.428.883	1.789.863	360.980	

Source: ACEA Data



3- D-SUV (segment I2):

In this group we find machines ranging in size from 4.60 m to 4.80 m, often equipped with more powerful engines and with a greater presence of 4x4 transmissions. Even about price ranges, in it we find considerably higher figures approaching that of luxury cars. However, to be noted is the fact that the demand for this type of SUV in European markets has decreased with the introduction of the previous sub-segment, but continues to maintain a number of volumes in the American one.

Registrations for this segment from 2016 to 2017 increased by 145,646:

3: Registrations 10MM Segment I2 - 2017 vs 2016

Model	Regs. 2016	Regs. 2017	Δ Regs.	Rank
Glc	66.604	100.003	33.399	1
Xc60	59.163	66.603	7.440	2
Q5	64.510	64.495	-15	3
X-Trail	52.509	62.869	10.360	4
Rav4	54.397	53.825	-572	5
5008 New	11.941	43.370	31.429	6
Discovery Sport	42.992	40.739	-2.253	7
X3	42.462	38.763	-3.699	8
Kodiatq	7	37.855	37.848	9
F-Pace	18.940	28.565	9.625	10
Cr-V	35.156	27.787	-7.369	11
Outlander	29.662	27.142	-2.520	12
Macan	23.685	25.463	1.778	13
X4	22.532	19.523	-3.009	14
Stelvio	12	16.191	16.179	15
Nx	13.526	15.224	1.698	16
Edge	8.329	14.637	6.308	17
Koleos	122	12.334	12.212	18
Sorento	12.263	10.030	-2.233	19
Santa Fe	13.789	9.996	-3.793	20
Watch	0	9.677	9.677	21
Forester	8.860	9.226	366	22
G-Class	4.920	6.167	1.247	23
New Cherokee	9.359	5.243	-4.116	24
Wrangler	4.595	4.264	-331	25
Rexton	2.208	2.613	405	26
Tiguan Allspace	0	1.245	1.245	27
Between	1.940	928	-1.012	28
Ds7 Crossback	0	499	499	29
Glk-Class	185	422	237	30
Musso	89	344	255	31
Xuv500	193	217	24	32
Defender	5.754	91	-5.663	33

TOTAL	610.704	756.350	145.646
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Source: ACEA Data



4- Full size SUV – E-SUV (segment I3):

The last category contains SUVs that are distinguished by being luxurious, for the size of more than 4.80 m and for the prices that begin to have a remarkable consistency. The category originated in the United States as consumers prefer large cars that allow for large cargo capacity and space for high-performance engines. The offers in this segment are: Jeep Grand Cherokee, Maserati Levante, Audi Q7, BMW X5, Porsche Cayenne, Range Rover Sport and Volkswagen Touareg.

Finally, for the latter sub-category, the largest slice of the registrations of the last year is the following models, where there has been an overall decrease of about 24,000 cars, where only a few models have increased their own models. registrations compared to 2016:

4: Registrations 10MM Segment I3 - 2017 vs 2016

Model	Regs. 2016	Regs. 2017	Δ Regs.	Rank
X5	31.593	29.153	-2.440	1
Q7	29.570	26.102	-3.468	2
Gle	28.650	23.946	-4.704	3
Rr Sport	25.432	23.484	-1.948	4
Xc 90	27.330	22.480	-4.850	5
Discovery	16.294	17.770	1.476	6
Range Rover	13.627	13.890	263	7
Touareg	15.443	12.367	-3.076	8
Cayenne	16.802	11.113	-5.689	9
Grand Cherokee	12.963	9.413	-3.550	10
X6	10.779	9.319	-1.460	11
Rx300	6.119	5.788	-331	12
Landcruiser	6.861	5.583	-1.278	13
Lift	2.355	5.404	3.049	14
Model X	1.775	4.857	3.082	15
Pajero	5.911	4.845	-1.066	16
Gls	3.357	3.439	82	17
M-Class	1.365	2.288	923	18
Bentayga	936	1.476	540	19
TOTAL	257.162	232.717	-24.445	

Source: ACEA Data



6 THE ROLE OF JEEP FOR THE FCA GROUP

6.1 Birth of Fiat Chrysler Automobiles

The interest in this company stems from the fact that Fiat before the merger with the Chrysler Group was not present in the category of *sport utility vehicles*, but thanks to the amalgamation with the Us group and the sharing of *know-how*, the Turin company had the opportunity to serve this expanding segment.

The origins of the Chrysler Corporation date back to June 6, 1925, in the state of Michigan thanks to the creator Walter Chrysler, who in the years to come became a world-renowned entrepreneur. After the first half of the 1960s the American company entered the European market, which was far from simple, and which led to a serious financial crisis for the company, which was forced to entrust the PSA Peugeot Citroen group for its European activities. Over the next few years, Chrysler decided to invest about 450 million dollars to develop large-capacity models in the United States; As well known, the oil crisis caused a halt in demand by changing demand from consumers, who began to prefer more compact and smaller vehicles than traditional ones, forcing American company Chrysler and competitors to reverse course, investing in projects that changed the various product ranges. Chrysler, however, had to apply for a 1.5 billion loan from Congress because it risked bankruptcy, failing to cope with changing consumer needs. Through the modification of the market strategies implemented by the then CEO, Lee Iacocca, the economic and financial situation improved, thanks to the commercialization of niche models.

In 1986 there was another major American company, the American Motor Company (AMC), which owned 1% of the American market share, but especially among the *brand* portfolio, there was Jeep which made up two-thirds of the sales of the entire group, going through a period of strong expansion and development of the models, which were greatly appreciated by consumers and also by the press. In the same year, about two hundred thousand Jeeps were sold, 77% of the group's sales in America, in addition to the approximately fifty thousand exported abroad. Despite these results, AMC was going through a period of time when financial results were anything but positive, in fact there was a loss of 91.3 million dollars⁵⁴. On the contrary, the Chrysler Corporation managed to pay off the debt with the government, which had allowed it to avoid bankruptcy and to start again with excellent performance, so much so that it created the opportunity to think about the purchase of The AMC, presenting a bailout worth 1.5 billion dollars. Negotiation for the purchase lasted a year and it was not until August 1987 that the American Motor Company came under the control of the Detroit company. Another important stimulus, which led Chrysler to push for the purchase of AMC, was the fact that unlike Ford and Chevrolet, it was not present in the *vehicle sports utilities* segment, and therefore through the acquisition of AMC it was able to enter this segment, also through Jeep models.

The acquisition of the Jeep *franchise*, estimated to be worth 800 million dollars, and the Ontario technology plant, worth about 650 million dollars, came through Chrysler's assumption of the debt of 855 million dollars accumulated by the AMC. The strategies were aimed at closing the production of vehicles that did not perform well and the renewal of Toledo's production *plants*. More advanced and efficient engines were developed that were mounted on the Wagoneer and Cherokee models. In the early 1990s, Chrysler's single-volume vehicles and Jeep Wrangler and Grand Cherokee off-road vehicles were also achieved.



Due to the economic crisis of the 2000s, most consumer goods companies suffered huge losses, in some cases risking bankruptcy; The automotive industry was certainly one of the hardest hit, with the U.S. market reporting three million fewer cars in 2008 than in 2007, hurting major American automakers, the so-called "Big Three": General Motors, Ford and Chrysler. The latter being the smallest of the three was also the one that risked the most, with a sharp decrease in sales, and therefore the only viable solution was to look for a partner with which to share investments and renew the product portfolio.

By the end of the 1990s, the CEO of Germany's largest industrial group Daimler Benz had proposed a merger, with the intention of establishing "an integrated high-tech company". Prior to the merger, Chrysler Corporation, representing the third largest U.S. group by sales and revenue, operated in two different *businesses*: *automotive* and *financial service*. The first was the development and marketing of cars, trucks, components and accessories through the Chrysler, Dodge, Plymouth and Jeep brands in North and South America, Europe and South East Asia. The second activity consisted of financing and facilitated credit operations.

7 May 1998, Agreement between Daimler-Benz and Chrysler Corporation



The merger with Daimler was prompted by two main reasons: the geographical compatibility of the two companies and the complementarity of the products. The geographical compatibility was that Daimler concentrated 63% of sales in Europe, while Chrysler 97% in the US. This agreement had the opportunity to serve every segment of the market, from *city cars* to luxury cars, in order to meet all the needs of consumers. Despite the excellent chances of success, after an excellent start, highlighted by the results on the stock exchange, it was faced with problems due to mistakes made by management such as: sales of obsolete models, mortification of resources and the failure of the exploitation of the expected synergies caused by excessive differences in the company culture. The huge losses, which occurred, managed to "burn" 36 billion dollars invested initially and subsequently Daimler had to sell 80% of the group's shares in 2007 to the American Private Equity fund Cerberus Capital Management, keeping only the remaining 20%. However, as already anticipated, the financial crisis hit Chrysler deeply and therefore after a loss of 1.5 billion dollars, on March 30, 2009 the fund gave up its share of capital. Following this,



the American fund, requested by the U.S. Treasury, forced this operation to rescue the company, which announced its bankruptcy a month later by accessing the procedure. This is an introduction to the context in which Fiat had to operate in order to keep the American company operational, saving it from bankruptcy.

The reasons that led Fiat, or rather, the CEO Sergio Marchionne to want to acquire the Detroit company, relate to the fact that he was convinced that the economic crisis would soon lead to a concentration in the world of estimating that only six automakers would survive. Thanks to the intuition and the awareness of the CEO of the Turin company at the time, that the world landscape was changing, more precisely it was moving towards greater consolidation that led several companies to ally with others, in order to continue to do their job. The acquisition by Fiat took place gradually, starting from a 35% that allowed it to start selling its models in the U.S. market, through the use of Chrysler's distribution channels, which for its part was able to exploit the poles Italian companies, developing smaller cars with lower consumption.

The final negotiations for the completion of the amalgamation began on January 1, 2014, with the announcement of Fiat S.p.A., that on the 29th of the same month, following the meeting of the board of directors at the Lingotto area, there was approval of the corporate reorganization in order to create a new and unique industrial group, under the name Fiat Chrysler Automobiles (FCA).

On May 6, 2014, at the Auburn Hills Headquarters, during the presentation of the industrial plan to potential investors, Marchionne stated that this was the first day of life for the group. Initially, the sales targets were considered too ambitious according to analysts, as the expected volumes for 2018 were very far from the *performance* of the period for Fiat and Chrysler:

Plan Sales Volume Forecasts 2014-2018



Fonte: FCA Group Press Release, 2014.

Certainly, the problem stemmed from the fact that doubling Jeep's sales volumes and reviving a *brand* like Alfa Romeo were far from simple challenges, more so because of the simultaneous loss of 173 million euros in the first quarter from the effect of the acquisition of Chrysler. The plan included the launch of about a dozen new models and the intensification of production processes in the Italian state, at the Melfi production plant, where the Jeep Renegade and Fiat 500X are still being built.



Each individual brand had different goals to achieve. Starting from the luxury *brands*, Maserati had the *challenge* of registering about 75,000 cars thanks to the introduction of five new models: Coupè Alfieri, the SUV Levante, the Ghibli and Quattro ruote sedans and finally the new Gran turismo; as for the Ferrari Cavallino, the goal was to keep its registrations stable, with the introduction of a new model on an annual basis, focusing on the formula.

Moving on to the more generalist brands, Fiat had as a challenge to reach a sales target of 1.9 million vehicles, with the doubling of the number of registrations in the NAFTA market. In addition, the introduction of eight new models such as the 500X, the new Fiat Tipo and the new Spider 124 was also targeted. Speaking of Alfa Romeo, it was to represent one of the two most important brands of the plan, through the introductions of the Giulia sedan and the Stelvio SUV; the forecast share was 400,000 cars in 2018 compared to 74,000 in 2013. Finally, the second brand critical to the growth of the group was to be Jeep, which had a sales target of 1.9 million cars at the end of 2018 entrusted to the commercialization of a new model of the Compass, with the expected launch in 2017, and the Jeep Renegade, with its various *makeovers* over the years, as would also be the case for the other models Cherokee, Wrangler and Grand Cherokee.

On October 12, 2014, FCA was officialized as a Dutch company. the resulting entity was subsequently listed the following day on the New York and Milan stock exchanges. A single Dutch company with a tax domicile was created in the United Kingdom with the amalgamation of two industrial groups such as Fiat S.p.A. and its subsidiary Chrysler Group LLC.

Following the formalization of the merger, CEO Marchionne and Chairman John Elkann commented on the birth of Fiat Chrysler Automobiles:

Debutto di FCA nella Borsa di New York



"The official birth of Fiat Chrysler Automobiles, with its debut on the New York Stock Exchange, represents a historic moment. Starting from the foundations and aspirations of Fiat and Chrysler, today we are opening a completely new phase, which will allow us to face the future of the global automotive industry as protagonists. It is a great challenge, which we are ready to take up with determination" – John Elkann
"The FCA listing marks an important milestone, conquered with tenacity. Yet, like so many milestones, it not only represents the end of something, but it is above all a new



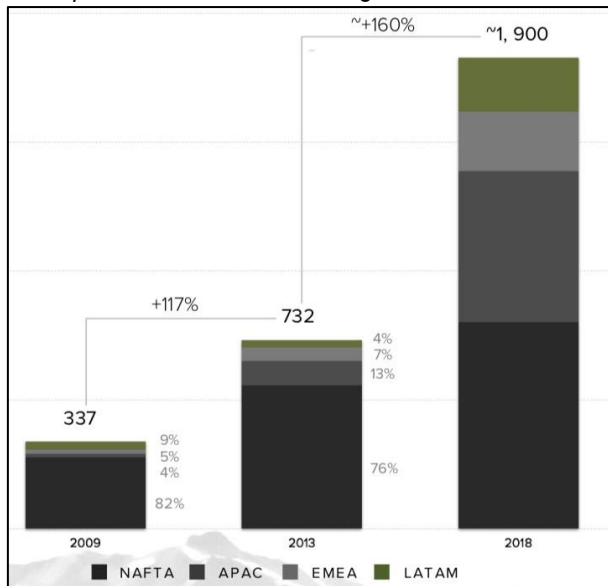
beginning. Today marks the beginning of our journey as FCA, as a single global manufacturer" – Sergio Marchionne

6.2 Jeep's role within FCA

To underline the fundamental importance of the Jeep brand for the FCA group, it is useful to recall the 2014 *Investor Day* event.

The first person to speak during the event was the *head* brand of Jeep, current CEO of the group following the death of Sergio Marchionne, Mike Manley, who promised that the Jeep brand would develop a greater internationalization: in fact in 2014 there was a project to expand production in six different countries of the world, such as the current Melfi plant, in which, as already stated, the production of the smallest model takes place Jeep range.

Jeep Global Sales Volume Target 2013 - 2018



Fonte: FCA Group Press release, 2014

The strategy presented by Manley showed a global sales volume of 1.9 million vehicles for the year 2018, 160% higher than the share reached in 2013, already 117% higher than in 2009: this plan was to be supported by the increase in commercial *performance* in Asian countries (APAC) and the EMEA market, characterized by the growing *trend* of SUVs, especially small ones. In addition, a strong development of Jeep marketing in booming African states is expected.

6.2.1.1 Historical nods of the American brand

The history of the brand has already been anticipated by that of Willis-Overland, which produced the MB, during the Second World War, and which began to use the name Jeep with the commercial of MB suitable for civilian use, the "*Civilian Jeep*". In its history, the brand had several changes of ownership, in fact in 1953 it was purchased by Kaiser, thus becoming Kaiser-Jeep ten years later. In 1970, AMC, which received investment from Renault, took over the Kaiser-Jeep brand until Chrysler acquired the AMC group in 1979, specifically to control Jeep. With the move to Daimler-Chrysler, the "*seven slots*" brand specialized more intensively in the production of SUVs and compact crossovers: in these years two new GS chassis cars with front and all-wheel drive, the Patriot and Compass, were fully assembled in the U.S. state and exported globally, marketing them at low prices in order to expand the market share in terms of



market. volumes on the American continent and in the European continent. The good results were also accompanied by the continuous renewals of the classic models: the Wrangler, also proposed in the four-door Un limited version, the Cherokee and the Grand Cherokee. Following the split with Daimler, Jeep was merged with the Cerberus Group, but always controlled by Chrysler LLC, and during this period the design of the new Grand Cherokee WK2 model was finished, which was still based on Mercedes-Benz technologies, but however production was not started until 2010, following Fiat's entry into the stock market. As described above, Chrysler's control then passed into the hands of the Turin-based company and the first Jeep SUV launched under the "regime" of the new era was the new Cherokee model in 2013, which was produced on the Compact US Wide platform that originated Fiat. The real sign of the relaunch of the brand, in particular for the affirmation in Europe, was the launch of the Renegade in 2014; In the same year, Cherokee production was also started at the Chinese plant in Changsha, thanks to the joint venture with GAC Fiat Automobiles. To compete in the Chinese market segment, the local production of the Renegade is started in 2016 and as supported by Marchionne, the Guangzhou plant stood out for technology and management, and that would also contribute to the growth of the automotive sector in Guangdong province. Another leap forward for Jeep was the design of the new generation of Compass in 2016 with production starting in 2017 at the Mexican plant in Toluca and at the Pune plant in India, for right-hand-drive production. In early 2018, the Cherokee makeovers were finally unveiled at the Detroit Motor Show in January and a new Wrangler model was also unveiled, completely redesigned and produced at the historic Toledo, Ohio, plant. Finally, the last makeover presented was that of the Renegade in the city of Turin, with a series of innovations that will be addressed later. 2018 represents a historic date for the brand, as it surpasses the number of sales of the Fiat brand, thanks to the numerous investments and development of the product range.

6.2.1.2 The range

The Jeep brand, in addition to being the pioneer of the SUV segment, through the introduction of the Willis, was also the first to segment this market. In order to achieve the desired results, since 2014 with the introduction of Renegade, the portfolio of models covers all four segments of THE SUV, through the trade of state-of-the-art cars that constitute the premium character pursued by the brand. In addition, for the way in all the car manufacturers, the Jeep brand for its models has several outfits: Sport for basic or entry versions, Longitude models for medium ones, Business for those suitable for business use, Limited for the top of the range; to these is added the Trail Hawk trim, suitable for off-road use, marked with the Trail-rated symbol. This certification means passing a particular test of the U.S. industry, created in 2004 by the Nevada Automotive Test Center, in collaboration with Jeep engineers, which determines the strong off-road capabilities. The test consists of a series of assessments on natural fields, extreme-targeted driving dynamics tests and some computer simulations. And so, the Trail rated logo means that the car is able to travel on roads in extreme conditions, thanks to the excellent traction and height from the ground.

Figure below: Logo Trail Rated



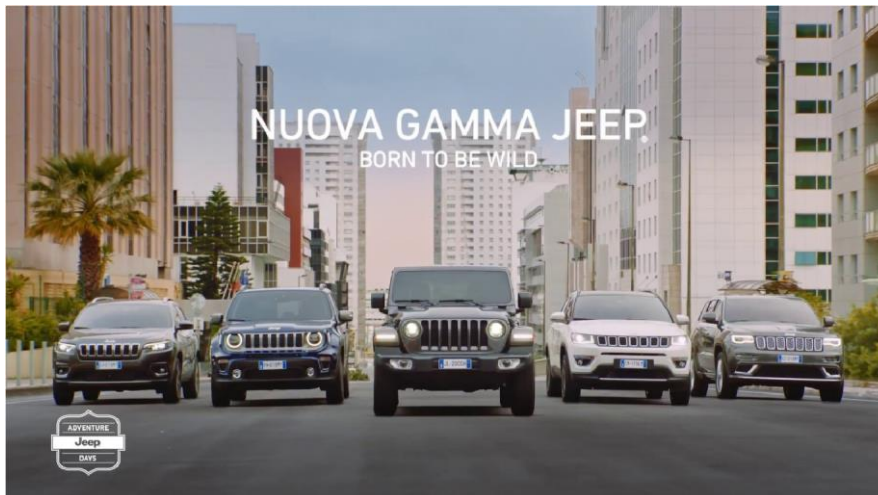
Currently, the product range consists of five models that occupy the different segments and include:

- **Renegade:** represents the model on which Jeep has bet and is aiming a lot to increase its sales volume, which will be analyzed in the following paragraph.
- **Compass:** the second series was marketed last year and is placed in the second segment of SUVs (I1). It was developed on the same *Small US Wide* platform, shared with the Renegade, with which it shares only the mechanics, but the *design* echoes that of the top of the range grand Cherokee. This model has replaced its previous version and at the same time the Patriot. FCA Group executives consider the sales potential of this car to be very high, believing that in a short time it will be the best-selling Jeep model.
- **Cherokee:** It is included in the I2 segment, and this year a new version was unveiled which introduced significant technological changes and improvements in off-road capabilities. The design of this sixth series has been revamped especially in the front with a new front headband, the inclusion of new LED headlights with daytime lights (DRL) and a new ultralight aluminum structure separated from the front fenders that emphasize its distinctive character.
- **Wrangler:** this car represents for the brand, the most famous model in the world, both for its remarkable off- *road* ability, but also for its expression of adventure, passion, authenticity and freedom. The Wrangler is the icon of the brand and off-road, in fact it is considered the direct heir of the Jeep

Willis, as it encompasses the fundamental values. At the last Geneva Motor Show, the latest model was shown, which has brought greater sophistication and robustness and is the most skilled Wrangler ever in non-urban driving, but can be adopted without problems in the city's use thanks to greater comfort and handling.

- **Grand Cherokee:** as a product, the most important car. Jeep financially, as it owns the margin higher profit than other models. The first version was launched in 1993 and released a year later in Europe. In 2013 the new model was unveiled, designed for an active and adventurous lifestyle, which has retained the typical characters of the seven *slots*. In the last reimagining, the interiors and exteriors were renewed, adding new technological content of the latest generation; A new automatic transmission has also been applied, which allows for more efficient consumption and limited emissions.

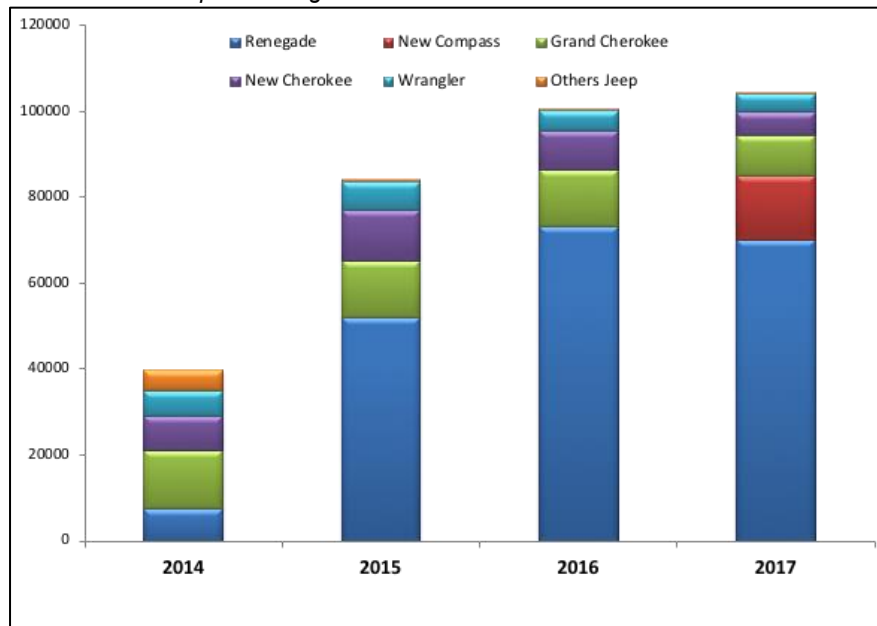
Figure below The new Jeep 2018



6.2.1.3 Renegade Launch

The introduction of the Jeep Renegade marked a fundamental step for the brand, but especially for the entire FCA group. First, we must consider the fact that in recent years in Europe there has been a strong growth in sales volumes in the *small SUV* segment and consequently also the models offered by the competition. For a carmaker it can be a risk to enter a new segment totally from scratch, but for the Turin group it represented a significant leap forward. A second element is that the Renegade has allowed Jeep to detach itself from brands considered niche, to position itself among one of the most well-known and popular brands, thanks to the strong increase in sales volumes. The chart below allows you to actually understand what was the "jump" in terms of sales, in the ten main markets, made by Jeep from 2014 to 2017 thanks to the launch of the small SUV: registrations went from being about 40,000 to just over 104 thousand, an increase of 162%.

Jeep brand registrations in the 10MM of individual models



Source: My aceA data processing

Considering the ten main markets, it can be seen in the table below, that except for the year 2014, the weight of the model, given by Renegade registrations on the jeep *brand total*, constitutes more than half of the registrations of the brand, reaching in 2016 as much as 73%.

Weight individual Jeep models from 2014 to 2017 in 10MM

Model	2014	2015	2016	2017
Renegade	19%	62%	73%	67%
New Compass	0%	0%	0%	14%
Grand Cherokee	33%	16%	13%	9%
New Cherokee	21%	14%	9%	5%
Wrangler	15%	8%	5%	4%
Others Jeep	12%	1%	1%	0%
Grand total	100%	100%	100%	100%

Source: My Processing, ACEA Data

In the following sections we will analyze the three different versions of the Renegade, starting from the launch in 2014 until the last model presented in July 2018, going to emphasize what were the different innovations made.

6.2.1.4 Model Year 2015

Jeep Renegade Model year 2015



The Renegade was born thanks to a joint project that also included the development of the 500X, and marked the first real step of the alliance. Although the project was joint, the two vehicles, although they have the same initial mechanical basis, show many stylistic and conceptual differences. In fact, the 500X encompasses all the characteristics of the small 500 launched in 2007, and the goal was to create an SUV that expressed the concepts of elegance, trend and modernity. A second objective was the real possibility of relaunching a historic production plant such as that of Melfi, which in those years suffered from a strong overcapacity and absenteeism, but also from union clashes.

By bringing attention to the small Jeep house, its real goal was to be able to penetrate the European market in an important way. That American consumers are usually more attracted to large machines.

Renegade engineers knew from the outset that the car should allow consumers to tackle *off-road* routes with proportions suitable for urban driving, representing a benchmark in the category, conveying the brand's bold, versatile and functional style. For this reason, the Renegade was the first SUV of the I0 segment to own the nine-speed automatic transmission in each engine, in order to offer both on-road and off-road performance, with the help of fuel-efficient engines. Secondly, the car was and is characterized by important safety and technological content. As for the aesthetics of the vehicle, the task of Jeep designers, was to create a model with American design and ingenuity, ensuring the *open air* driving typical of the Jeep Willys models of 1941. The result was a vehicle with a robust character, precise lines and aggressive proportions reminiscent of the Wrangler icon.

"The new Jeep Renegade 2015 expands the range of Jeep models and enters the growing segment of small SUVs to set new standards in terms of efficiency and driving performance, while ensuring the off-road capabilities of the brand. Renegade is synonymous with American design, ingenuity and innovation and marks the Jeep brand's entry into the Small SUV segment in more than 100 markets around the world."
" – Mike Manley

The front of the Renegade is undoubtedly typical of the Jeep models, characterized by the seven-slit grille, framed by a satin finish and another element associated with the

Wrangler is the vertical frame of the windshield in the tint with the which gives visual force to the car.

Regarding the brand-wide 4x4 technology, the first Renegade offered two advanced traction systems, which are the *benchmark* in the reference segment, as they are able to transfer 100% of the torque to a single wheel, ensuring maximum grip:

- *Jeep Active Drive*: all-wheel drive system
- *Jeep Active Drive Low*: all-wheel drive system with final reduction ratio of 20:1 – an exclusive in the segment

These two systems are also combined by traction management, called "*Jeep Select-Terrain*", which allows the driver to adjust the traction depending on the terrain he is going through, and the modes are: *Cars*; *Snow*; *Sand*; *Mud*; *Rock*, exclusive to the Trail Hawk version.

Figura below: Selec-Terrain of model Jeep



Source: own processing

The Jeep brand also in this model was able to confirm that innovation is an essential element, in fact the Renegade was the first *small* SUV to possess the disconnection device of the rear axle and the power transmission unit, defined by the acronym PTU, which allows to reduce the consumption of 4x4 vehicles. A dedicated version: the Trailhawk has been designed for off-road driving customers. It represents the richest version in terms of content of the Renegade range and is precisely the version on which the best *off-road* technology of the *brand* is installed.



Jeep Renegade Trailhawk unveiled at Geneva Motor Show. From left, Manley, Elkann, Marchionne and Altavilla



In 2015, Renegade won the "4x4 of the Year 2015" award, awarded by a jury made up of readers and journalists of the specialized magazine "4x4 Magazine", leader in France, adding to other awards won in the same year: "News of the Year 2015" by the Italian magazine Quattro ruote and award for "Best SUV of 2015" by the digital magazine Coches.net, leader of the Spanish motor industry. This coveted prize before 2015 had already been won by other Jeep models, such as the Cherokee TD in 1986, the Cherokee 4.0 in 1989, the Grand Cherokee in 1994 and the Wrangler in 2008.

As an initial communication Jeep focused on a *target* never considered before by the brand, in fact the Renegade must represent the "Your daily Jeep in a smaller vehicle for an urban *exploration*". This slogan takes on particular importance because in the first time in history the *brand* tries to break away from the extra-urban context to serve the customer who uses his car also for city use. The focus of the advertising campaign has been on the *digital* channel, especially focusing on smartphones and social networks, as the target customer has been called "social *addicted*". However, not to overlook the off-road capabilities typical of Jeeps, the commercials were set both in urban settings and *outdoor* environments typical of *free ride*, snowboarding, surfing and climbing activities.

Thanks to the launch of this model, customers who had never thought to own a Jeep and thus became part of the Jeepers world were stimulated to buy Jeeps. The Renegade has also been dubbed "Next *Icon*" after the inimitable Wrangler. To give greater visibility to the vehicle, in 2015 it was exposed to all the events organized by the *brand*, often assigning it the leading role; it was also chosen as a testimonial for some events related to the outdoor world, such as the "Winter *Tour*" thanks to partnerships with The North Face, Fisher and Reef.

6.2.1.5 Model Year 2018

Renegade Model Year 2018



The first real renewal of the model was with the launch of the *Model Year 2018* in January, with the introduction of major technological, functional and customization updates. Starting from the first, the *updates* concerned what infotainment related with the introduction of the system "Uconnect TM": this is the result of the combination of touchscreen and steering wheel controls, which provide the driver with information about the vehicle, the desired entertainment and the ability to make calls without him distracting from the driving. The 5.0, 7.0 and 8.4-inch screens debuted on Renegade MY18, the last of which was and is still one of the most extensive in the segment, allowing a wide range of possibilities of navigation and multimedia functions. The two largest are designed for consumers who want to own a *high-definition full-color* tactile screen, representing a real difference from the 5.0 inches. The theme considered by the developers of the Uconnect TM system was to be able to ensure safe, relaxing and always connected driving to the driver without him having to move his hands away from the steering wheel, which unfortunately is increasingly causing accidents. In addition, always inherent in the infotainment system, to keep up with industry *trends*, the possibility of supporting the two most important *software* of last year in the *automotive* was integrated:

- *Apple CarPlay* which is the easiest way to use your iPhone while driving;
- *Android^{Auto}TM* in order to be able to use all Android operating systems while driving.

Apple CarPlay vs Android Auto™



Moving on to the second update introduced, it concerned functionality, where new spaces were created in the central *console* to store *smartphones*, new cup holders and other additional compartments; in addition, the USB port was moved, in order to make it more accessible for rear seat passengers. The last major novelty was the opportunity given to customers to be able to customize their version according to different needs. In particular, the opportunity to be able to choose the material for the seat coverings and the color of the finishes on the frames of the radio, the ventilation vents, the central tunnel and the speakers.

6.2.1.6 Model Year 2019

Renegade Model Year 2019



Finally, the latest version of the Renegade was presented at the Valentino Park 2018, during the Turin Motor Show in June of the current year. The latter version aims to "annoy" the premium urban SUV segment, introducing the following innovations: new engines, assistance systems and some aesthetic *makeovers*.

With regard to engines, the Jeep brand, but more precisely the entire FCA group, has developed a new type of modular petrol engines of displacement to improve fuel efficiency, comply with emissions regulations and to increase performance. In addition, this structure guarantees considerable modularity and high level of standardization of both components and the production process in order to ensure flexibility and an excellent preparation for future developments in this field. The way to intervene on the weight of the engine in order to reduce it has also been designed, for this reason it was designed in aluminum alloy, in fact the three-cylinder engine weighs only 93 kg. Before they could be approved and installed on the car, these engines had to undergo over 75,000 hours of virtual analysis and about 60,000 hours of test hours, corresponding to about five million kilometers traveled worldwide, both on the road and *off-road*, to test its reliability and robustness. The new petrol engines allow consumers to have fun while driving and at the same time can save 20% fuel, offer the choice between the three-cylinder turbo petrol 1.0 120 horsepower or four-cylinder turbo petrol 1.3 liters of 150 or 180 horsepower. While diesel engines can be fitted with the second-generation *Multi Jet* technology, developed and patented by FCA, updated with the *Selective Catalytic Reduction (SCR)*, which is a system that acts directly on the exhaust in order to reduce its Emissions of Nox. The new Jeep Renegade can be equipped with a 1.6-litre and 120 horsepower diesel engine or a 2.0 which consists of two versions of 140 horsepower or 170 horsepower.

The most important interventions that took place at the aesthetic level were implemented on the front, giving the Renegade an even more modern character, through the transformation on the front bumper, in which the new headlights and fog lights were inserted. Among the biggest innovations of this theme are undoubtedly the opportunity for customers to choose, for two top-of-the-range outfits (Limited and *Trail hawk*), the new optical groups: daytime lights, dazzling, dazzling and fog lights all



characterized by full *LED* technology. These features, in addition to improving the aesthetic factor, also act positively with regard to safety as they increase visibility compared to halogen headlights by 50% and the brightness compared to Xeno headlights by 20%. The rear of the Jeep has also been partially improved, thanks to the introduction of the new headlights, which for the Renegade represent its key element that distinguish it for their particular "X" shape.

The new optical clusters of the Jeep Renegade



The latest addition, regarding the exterior appearance of the mini SUV, is that customers can also choose their preferred rim shape from a range of seven different types, ranging in size from 16", 17", 18" and 19", of which the last can be assembled on the Limited set-up.

Moving on to the renovations inside the cabin, we wanted to maintain the appearance of functionality typical of the first versions, improving as well as the exploitation of spaces, also the attention to details and high-quality materials. The habitability has also been renewed, so much so that it differentiates the Renegade from its competitors in terms of spaciousness and width of the seat.

Finally, the latest introduction is about safety and driving comfort. The *Lane Sense Departure Warning-Plus* has been placed on all set-ups, which is an alert system that activates in the event of an unintentional lane exit, and through integration with *Lane Keeping Assist*, a corrective action is activated that brings the vehicle back to the current lane, which is a useful element in the case of driver's sleep blows. Two other combined technologies are *Intelligent Speed Assist* and *Traffic Sign Recognition (TSR)*, which together allow the driver to adapt the speed of the car to the value detected by the TSR, which "recognizes" the maximum speeds on the road signs.

7 JEEP CHALLENGES FOR THE FUTURE: THE 2018-2020 PLAN

The consistency, with the plans described in the first paragraphs, was demonstrated during the second *Investor Day* of June 1, 2018 held in Balocco (VC), which was the last in which Marchionne participated to illustrate the new strategic plan "2018-2022". What surprised the audience present was the leading role of the Jeep *brand* compared to and at the expense of the historic Fiat brand, which will occupy a secondary position. The American brand was able to be reborn under the leadership of Marchionne, so much so that it became not only a competitive element in the SUV segment, but also became the flag of the entire Group.

At the important event in Balocco, the 2014 forecasts were reached, thanks to the extension of the product range and of the production *plants*, spread in six different countries, which allowed to increase production capacity by 138%, producing almost two million vehicles. As happened in the previous event, the first person to speak was Mike Manley himself, who during his speech highlighted the goal of achieving a global market share of "one Jeep for every twelve SUVs sold", increasing the current one to "one for seventeen". Manley himself pointed out that the eastern markets have already grown considerably, Jeep's share in China has increased by 240%. Touching on the theme of innovation in the product portfolio, Jeep by 2022 will have its own electric engines assembled in its own models, of which ten new ones will be introduced, or about two per year. Manley wanted to focus on the relationship between Jeep and technological evolution, highlighting how the brand's future cars will maintain their DNA *Trail Rated*, around which new innovations regarding electric motors, connectivity, autonomous driving and the increasingly adapting use of the Sport Utility Vehicle will be integrated.

Figure: New Technologies report and Jeep – Plan 2018-2020



2018-2020 - Capital market Day - 1° Jan 2018

As for the new models, all segments of the off-road market will be covered, as currently only 80% of them are covered in the global landscape: Jeep will compete in the *mini-SUV* segments through the introduction of a "baby *Renegade*"; there will also be entry into the pick-up market, as a type of model much loved by American customers, and it will position a model in the segment of large SUVs, characterized by the ability to carry up to seven passengers.



Jeep - Product plan 2018-2020

GLOBAL		2018	2022	ELECTRIFICATION AUTONOMY CONNECTIVITY		
		80% MARKET COVERAGE	100% MARKET COVERAGE			
SEGMENTS	A/B					
	B	 Renegade	 New Renegade			2 LAUNCHES PER YEAR • 10 PHEVs by 2022 • 4 BEVs by 2022
	C	 Compass All-New Wrangler	 Refreshed Compass Wrangler			ELECTRIFICATION OPTIONS AVAILABLE ACROSS EACH NAMEPLATE BY 2021
	D	 Refreshed Cherokee Grand Commander	 New Cherokee Low D 3-Row Grand Commander Jeep Truck			L3 AUTONOMY BY 2021 ENTER 3 NEW SEGMENTS
	E	 Most-Awarded SUV Grand Cherokee	 Grand Cherokee 2-Row E-Segment 3-Row			
	F		 Return of Storied Nameplates Wagoneer/Grand Wagoneer			

PHEV BEV Autonomy Connected

2018-2020 - Capital market Day – 1 Jan. 2018



8 CONCLUSIONS

As has been mentioned several times, the aim of the following article was to understand and analyse the importance of investing in innovation for companies, due to the increasing level of competition that characterizes each sector. Innovation allows any company to be able to fit into certain segments that may be populated by other companies, but the key goal for each must be to meet the different needs of consumers. The focus must be on the development of customer needs as over time they tend to change, and only through the development of technology can they be aligned with them. An important factor is that investment in research and development requires great sacrifices in economic and organizational terms. reduce development time.

As we have seen in the automotive sector, one of the most adopted strategies is that of the formation of *house of brands*, which interface on the market through different brands; in fact, companies that market their models using a single brand are very rare. The *house of brands* strategy allows you to serve a greater number of types of customers with different needs, to be able to be present in different markets taking advantage of the competitive advantage of the individual brand in each market. Another point in favor of this strategy stems from the fact that if one brand starts to run into problems, the group may decide to focus resources on another, without risking losing its attractiveness.

One of the fastest growing segments in this sector is that of *Sport Utility Vehicles*, where the ratio of registrations of this to the total of the segments has been increasing in the years after the crisis. The shift in tastes towards this type of vehicle is explained by the fact that there is a parallel growth of interest on the part of customers towards cars that allow a good versatility and a good ability to meet the needs coming from an entire family. In addition, the BSUV and C-SUV segments allow drivers to move smoothly in urban settings, but to travel in complete comfort in case long journeys are to be made.

One of the main groups that managed to grow in its *performance* was the Fiat group following the merger with Chrysler, becoming FCA. As widely described, the growth of the FCA group began in 2014, where the Jeep brand, which was already very active in the off-road segment in the US context, was immediately given the lead role. As European roads have different characteristics, as they are smaller and more winding, the B-SUV and CSUV segments are the main ones in the European market and about this, the FCA group to cover a segment in which it was not present, designed the I0 and developed the Jeep Renegade that as shown in the graphs of the previous chapters, thanks to the excellent features and commercial performance, allowed the *brand* to exceed 100,000 total registrations. In the years that followed, to keep up with technological evolution and competitors, the model underwent some renovations, including the main infotainment, design lines and engines, not to incur penalties due to the regulations related to emissions. The future of the Jeep brand is undoubtedly linked to the introduction of electric motors as clearly explained by CEO Manley and a growing connectivity that goes hand in hand with the evolution of *smartphone* technology. What the Jeep brand will no doubt have to overlook will be its own distinction and *capability* in off-road.



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