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Romanian Car Brands: Their Narratives, History and Logos

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Abstract

Passenger cars are automobiles which, by their construction and equipment, are intended for the transportation of a small number of persons, luggage and/or their goods, with a seating capacity of two to nine seats, including the driver's seat. This scientific paper presents the authors' own point of view on the famous brands of cars manufactured in Romania, Dacia car, ARO car, Oltcit car and Dacia 500 Lăstun car. Romania, of course, was a communist country at that time, one of the few countries in Eastern Europe where tractors, trucks and passenger cars were manufactured. This highlights the concern and skill of Romanian engineers and specialists in the automotive industry. The work takes the form of a literature review type narrative and is intended to help those interested to find out important facts about the establishment and development over time of the cars presented, as well as about the history, narratives and logos of these car manufacturers. At the end of the paper specific conclusions are presented, as well as aspects unknown to the readers about the car brands presented and analyzed in the paper.

Keywords: Automobile, Brand, History, Narrative, Evolution, Logo

Introduction

The specialized literature and the on-line environment abound with data, testimonies, stories, indications or histories about the logos, insignia, emblems, but also about the history of the establishment of Romanian automobile brands. In this sense, we have decided to centralize in this scientific paper in the most efficient and effective, complete and concrete way, data about the Romanian cars manufactured over the years by this industry. I say industry, because at that time Romania was one of the few communist countries in Eastern Europe where tractors, trucks and passenger cars were manufactured. According to Romanian Government Ordinance No 27/2011 [1], aticle 3(2) stipulates that a passenger car is a motor vehicle with at least 4 wheels and a maximum design speed exceeding 25 km/h, designed and constructed for the carriage of passengers, having not more than 9 seats, including the driver's seat. Unfortunately, the history of the Romanian automobile does not have many pages. Most Romanians consider DACIA as the first car made in Romania. Some know that in the late 1930s FORD cars were assembled in Bucharest. Few know, however, that almost 117 years ago, in 1908, the MARTA automobile factory was established in Arad [2]. Marta represents the first Romanian automobile, built on the current territory of Romania. In 1908, the request of the mayor of Arad to equip itself with buses receives the most favorable response from the French company Westinghouse in Le Havre (a subsidiary of the American concern of the same name) [3]. Another attempt to manufacture cars in Romania took place in 1945, when the car that bears his name was built in Reșița in the factories of the Romanian industrialist Nicolae Malaxa. There was no similar initiative in Romania until 1966. Set up in the mid-1960s following a cooperation agreement between the government in Bucharest and the French car manufacturer Renault, Dacia has become a symbol of success and a real calling card for Romania, winning [4]. On September 6, 1966, a contract is signed between the Romanian and French parties providing for the construction of a plant in Colibași (Mioveni since 1996), where a new model (the Renault 12) will be manufactured under license, to be launched simultaneously in both countries. The plant is completed in a year and a half, and on August 20, 1968, Dacia 1100 (Renault 8 license) is launched in Colibași, Argeș County, Romania. By the end of the year, 2,030 cars are produced. This car, weighing just 760 kg, had automatic shock (a luxury at the time, the Dacia 1300 had manual shock), rear-wheel drive and a ratio of 80% imported parts. The remaining 20%, parts such as tires, batteries and windows, were assimilated by the industry at the time. The 1,108 cc engine developed 49 HP, had a fuel consumption of 6.8-7l/100 km and propelled the car to a top speed of 135 km/h. Total production of the Dacia 1100 amounted to 37,546 units between 1968-1971 [3]. 49 years ago (1976), the ARO 240, manufactured at the Câmpulung plant, was awarded the Gold Medal at the Zagreb

International Fair. Also on Romanian territory, many years ago, ARO Câmpulung was an internationally recognized producer of Romanian off-road vehicles. The first off-road passenger car was produced in 1957. More than 360,000 ARO 4×4 cars have been manufactured in Câmpulung Muscel, Romania, of which more than two thirds have been exported to over 100 countries. What's more, an ARO 10 model car also won one of the Paris-Dakar rallies [5]. On December 30, 1976, an agreement is signed between Citroen and the Romanian socialist government to build a 35 hectares factory in Craiova city, Romania for the production of Oltcit cars. Citroen was to provide the license, the plans and everything related to the design of a new model of city car (produced exclusively in Romania), together with a guarantee to buy 40% of the cars produced in Craiova for export to France, Austria, Belgium, Holland and Italy. The factory only starts production in October 1982, well after the planned date [3]. The leaders of the communist regime in Romania had the idea in the 1980s to make a cheap car that even poorer Romanians would be able to afford. The result was the Dacia 500 Lăstun, the Romanian small car made between 1988 and 1991 in Timișoara city, Romania. The story of the narratives and logos of these Romanian car brands, which have become famous over time, is presented in detail below.

1. The start of road car manufacturing in Romania

1.1 The MARTA car

Of the many car factories that appeared in Central Europe before the First World War, only a few have survived to the present day. Those that survived the vicissitudes of the war and the economic and financial difficulties of the post-war period. These include: Skoda (called Nesseldorf until 1920), Austro-Daimler, Raba, Steyr, Puch and Praga.

In 1908, the city hall of Arad intended to equip urban transportation with buses. To this end, it made a request to the French firm Westinghouse in Le Havre (a subsidiary of the American concern of the same name), which responded positively to the request of the Arad authorities, building a factory on the land made available by the town hall.

This is how Marta (Magyar Automobil Reszveny Tarsasag Tarsasag Arad) was born, as a branch of the parent company Westinghouse [2]. For this purpose buildings and halls were constructed for design and production and the necessary machinery was installed. Within a year of its debut, in 1909 production of engines for the propulsion of railway and road vehicles such as double or single decker buses and three or five tons payload trucks began.

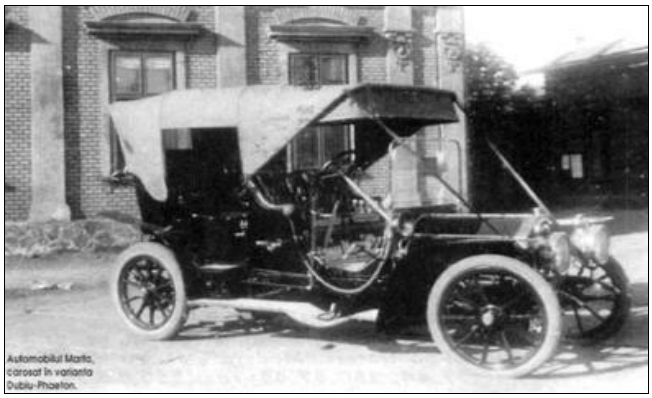

Fig 1: Marta car with bodywork in Double - Phaeton version [2]

In 1910, the production of passenger cars with different body styles began: Double - Featon (Figure 1), Landolet, Limousine, etc. The engines were four cylinder of 20, 30 or 40 HP. Cars with engines of 20 or 30 hp had a cardan drive, while those with 40 hp had a chain drive. Of course, all cars were manufactured under license from Westinghouse [2].

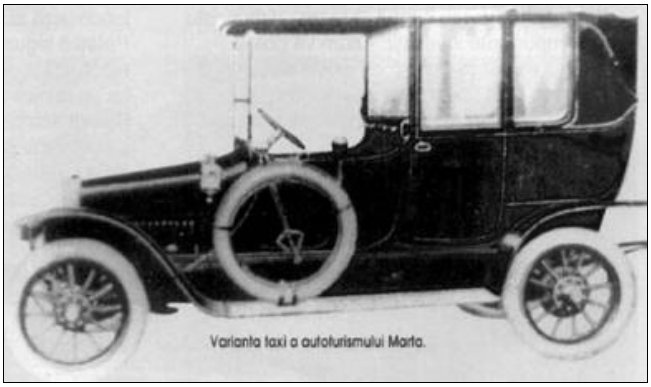

Fig 2: Taxi version of the Marta car [2]

About 150 of these cars were produced in 1912, after which the French company went bankrupt. The future didn't look good for the French firm, but Austro Daimler from Austria came to the rescue by taking over the Marta drift, reorganizing production and introducing new car models under its own license. The basic model was transformed into a 4 cylinder, 2.5 liter, 18/22 HP car, much lighter than the basic concept (Figure 2). This model was used mainly as a taxi cab in Central European countries. In 1936, there was still such a model being used as a taxi on the streets of Arad, which had more than one million kilometers on board. This gave the owner complete satisfaction.

Of course, the Marta trucks produced after 1912 were also Daimler-licensed, with the three-pointed star as their logo. Between 1909 and 1914 about 650 cars and buses were produced (Figure 3).

Fig 3: Taxi version of the Marta car [2]

In 1914 the First World War begins and the automobile production in the Marta factory switches to war production which, from 1915 to 1918, produces exclusively airplane engines. The First World War ended in 1918, the Austro-Hungarian Empire collapsed and Transylvania was united with Romania, a country that was ruled by royalty at the time. MARTA cars were produced under a single logo, the Daimler star, as shown in Figure 4.

Fig 4: MARTA cars logo [2]

Major changes are also taking place in Marta. The relationships with the former owners deteriorated, production was disorganized. Under these circumstances, Astra - the first Romanian wagon and engine factory - was founded. It was realized by merging the Weitzer wagon factory with the Marta factory. As part of Astra, the Marta factory was renamed the Engine Factory. It was here that trucks, buses, highway buses, passenger cars, gasoline and methane gas engines, precision machine tools and airplanes were built. The Astra-Porto reconnaissance plane, built here according to the design of engineer Ștefan Protopopescu and powered by a Hispano-Suiza 300 HP engine, was highly appreciated by the Romanian Army, which ordered 25 of them. In 1926, the automobile chapter of the Arad factory was closed for good. All the machines were shipped to Brasov city, where the Romanian Aeronautical Enterprise (IAR) was established [2].

1.2 The MALAXA 1C car

Nicolae Malaxa, one of the most renowned Romanian engineers and industrialists of the inter-war and post-war period, played a crucial role in the development of the automotive industry in Romania. His most notable contribution in this field was the Malaxa 1C passenger car of 1945 (Figure 5).

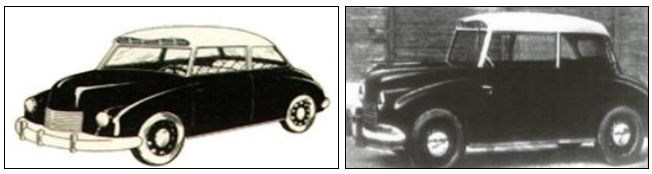

Fig 5: Version of the Malaxa 1C car [12]

During that period, Malaxa coordinated a group of talented engineers and technicians at his Reșița plant, together with specialists from the A.S.A.M. plants in Bucharest and IAR Brasov. Under his guidance and that of engineer Petre Carp, this dedicated crew managed to design and build a completely new car, which was to become the first Romanian car. The car was designed and built by a group of engineers and technicians from the Malaxa plants in Reșița and technicians from the A.S.A.M plants in Bucharest and technicians from IAR Brasov, led by engineer Petre Carp. This remarkable achievement not only demonstrated the technical capabilities of the Romanian engineers, but also paved the way for the further development of the automotive industry in the country. Even if this first car did not achieve the same notoriety as Dacia's later models at the time, its importance in the history of the Romanian car industry remains incontestable [6].

Built in a post-war context and at a time of limited resources, the Malaxa 1C and its parent were a symbol of the ingenuity and perseverance of Romanian engineers. Although it lacked the advanced technology of other contemporary cars, the Malaxa car from Reșița was an impressive achievement, reflecting the skill and creativity of the engineers of the time. Its simple yet robust design and features adapted to local conditions made the Malaxa 1C a practical and reliable vehicle for the transportation needs of Romania at the time. Although its production was limited and its examples today are rare and prized by collectors, the Malaxa 1C remains a symbol of the beginnings of the Romanian automotive industry and of the innovative potential of the country's engineers.

The car was powered by a three-cylinder, air-cooled, three-cylinder, star-shaped engine capable of producing 30 HP. The design solution was “all in the back”, with the engine forming a unit with the differential and gearbox. The weight of the engine weighed 80 kg and the differential and gearbox together weighed 150 kg. To cool the engine, a space was left between the roof and the roof to channel the necessary air. The air was drawn in from the front above the windshield and channeled through the double-walled roof by a fan, which sucked it in, directing some of it over the cylinders and the rest to the carburetor [6].

Being equipped with such a propulsion unit, the Malaxa was probably quite maneuverable and agile in urban traffic and on the less developed roads of the time. Although it lacked today's advanced technologies, these features made the Malaxa a popular and useful option for local and regional transportation at the time.

The first trip on board a Malaxa 1C and the testing of the prototype represented a significant moment in the history of road transportation in Romania. This maiden voyage demonstrated the potential and reliability of the Malaxa and was an important step in the development of the Romanian automotive industry.

This journey can be seen as a moment of triumph for the engineers and technicians involved in the design and construction of the Malaxa in Bucharest, demonstrating that it was not only a technical achievement, but also a practical and functional means of transportation.

The Malaxa offered a high level of comfort and could carry up to six people. The body had a sleek, aerodynamic shape, with the trunk at the front, under the bonnet, where the spare wheel was located. The body was attached to the chassis by rubber pads. Top speed was 120 km/h and fuel consumption was 10 l/100 km. The body was mounted on the chassis with 10 cm thick rubber pads, giving it a ride comfort unmatched by other manufacturers. About 800 cars a year were produced between 1945 and 1947 [6].

Its production was stopped when the Soviets decided to move the assembly line to the USSR, after a Moscow official in Sofia was transported in a Malaxa automobile and was impressed by its performance. (The name of this major-general was Leonid Brezhnev (1906-1982), accompanied by Colonel Vladimir Semichastnîi (1924-2001). General

Brezhnev was so impressed by the automobile that he telephoned the Kremlin and asked to move the Malaxa plant from Resita to Podgorye in the Urals. That's how the Malaxa automobile disappeared [6].

The Malaxa 1C car did not have a clear defined logo, but the model remains a symbol of the promising beginnings of automobile production in Romania.

2. Brand history and logo of the Romanian car manufacturer DACIA

Since the car factory in Mioveni city, Argeș county, as well as the DACIA cars manufactured here have undergone a multitude of stages and transformations over time, we will present their historical evolution in a succinct, chronological and logical form.

Table 1: History of the evolution of the DACIA car factory and of the cars produced in Mioveni, Argeș County [4]

Year	Action/Activity/Event	Appearance/Image/Figure
1943	The history of the plant begins in 1943, near Colibași, 12 km north of the city of Pitesti. The first buildings were intended for the manufacture of engines and equipment for airplanes produced at the IAR plant in Brasov. Some buildings made of brick, with a profile specific to the industrial architecture of the first half of the last century, can also be found in the current perimeter of the Mioveni factory.	
1963	After the Second World War, these buildings will be used as ammunition depots until 1949 and then they will be fitted out for locomotive repair. In 1952, the plant specializes in the manufacture of parts for trucks and tractors.In 1963, the enterprise, initially known as "Plants Vasile Tudose", becomes of Auto Parts Colibași Plants (UPAC).	
1965	In 1965, the Romanian authorities at that time decided to develop a national car industry. The solution chosen was to produce cars under license, given the lack of Romanian experience in this field. Several Western companies were contacted, including Renault, which won the tender organized by the government in Bucharest with a model that was at that time still in the design stage: the Renault 12.	
1966	**Contract with Rnur** On September 6, 1966, a framework contract is signed in Bucharest between the Romanian state and the Regia Nationale des Usines Renault (RNUR), for an initial validity of 10 years. 10 days later, on September 16, 1966, it was decided that the future car plant would be built in Colibași, close to the existing UPAC plant.	
1968	**The Beginning of Production** Construction work on the Pitesti Automobile Plant began in the first months of 1967 and was completed in May 1968. The first R8 Major vehicles rolled off the assembly line on August 3, 1968, under the name Dacia 1100. The inauguration of the plant took place on August 20, 1968. Dacia 1100 will be produced until the beginning of 1972 in just over 37,500 units.	
1969	**The Intermediate Solution** Given that the R12 was not due to go into production in France until the end of 1969 (the car would be presented at the Paris Motor Show in October 1969), the contract provided for the temporary production of another vehicle of the same type. If at first the R16 model seemed to be preferred by the Romanian side, the final decision would be made in favor of the R8 (in the Major version), mainly for cost reasons.	
	The major event of 1969 is the commercial launch, at the beginning of October, of the first R12 models produced in Romania under the name Dacia 1300. The model proved a real commercial success both in Romania and in other neighboring countries, where the model will be exported from 1971. Another milestone of 1969 was the merger of the two companies existing at that time in Colibași - UPAC and UAP, under the umbrella and under the name UAP.	
1973	In 1973, the first Dacia 1300 station wagon is produced. A station wagon version of the Dacia 1300 would not be marketed until 1973, 3 years after the launch of the equivalent Renault model. This Dacia 1300 becomes the basic model in a large series of VP and VU versions, which will total more than 2 million examples developed over 35 years.	
1975	**The First Van** In 1975 a first utilitarian derivative of the Dacia 1300 is launched, called Dacia 1302. In the same year, Dacia starts small series production of the Estafette van. During this period, the plant also produces gearboxes and front and rear axles for the Renault Estafette, thus providing the necessary funds for the purchase of industrial equipment.	
1978	**End of Cooperation with Renault:** After the termination of the contract signed in September 1966, the Romanian authorities resumed negotiations with Renault. These resulted, in June 1978, in a draft framework agreement for the manufacture of the Renault Model 18 in Romania. In the end, this agreement was not signed, despite favorable provisions for the Romanian side. This turning point leaves the Colibași plant alone with a range whose production is now almost 100% locally integrated.	

1980	At the beginning of the 1980s, the plant, whose name has since been changed to the Pitești Automobile Enterprise (IAP), produced 300 vehicles a day and employed 20,000 people. The range is evolving with the launch of a restyled version of the Dacia 1300, henceforth called Dacia 1310. This vehicle will undergo several design and mechanical changes over the years. Unfortunately, the quality of the workmanship dropped considerably after 1980.	
1983	In 1983 the first real Dacia pick-up is launched. This model, with a payload of 1,000 kg, will be declined in a platform version and later in a double-cab version, which will enjoy great commercial success.	
	In the 1980s, Dacia developed two derivatives of the 1310 range. The sports version will enjoy some success in Romania, as will the five-door version, the Dacia 1320, which will have a very short life, with only 2,500 units sold in three years.	
1991	The Dacia 1325 Liberta has been marketed since 1991, but the model will not be as successful as expected. It will cease production in 1996, after just over 5,200 examples have been built.	
1992	**A New Utility** The Dacia 1309, derived from the 1310 Estate, with an open platform at the rear, makes its appearance in the Dacia range in 1992. This ingenious vehicle was mainly intended for export, mainly to the Chinese market. Its production will enable the plant to overcome the very difficult situation in the early 1990s, when the Romanian car market collapsed by more than 40% in just two years.	
	Year 1999 - Dacia becomes a Renault Group Brand	
1999	In the late 1990s, after lengthy negotiations, a new agreement is concluded between Dacia and Renault. The contract was signed in Bucharest on July 2, 1999 and provides for the production under the Dacia brand, by 2004, of a vehicle costing around 6 000 dollars (the future Logan), intended for emerging markets. Renault Group is buying 51% of Dacia's shares for USD 50 million and is committed to investing USD 219 million by 2003. *"During two trips to Russia, I visited dealerships of Western brands and a distribution center that sold several thousand well-equipped Ladas annually for $6,000. These models were technically obsolete, but satisfied a local demand. On returning from these trips, the project for the 5,000 euro car was born, which was to be a medium-sized vehicle designed for family use."*	 **Louis Schweitzer** Chairman and CEO Renault Group between 1992 and 2005.
	Year 1999 - Modernization of the Plant	
2000	The objective of producing a car at a price of USD 6,000 and EUR 5,000 respectively after 2002 will involve a thorough restructuring of the Mioveni platform. Several work sites will be carried out in parallel to modernize industrial installations, introduce the Renault Production System and train employees. Modernizing the plant will lead to a fairly rapid improvement in production quality.	
	In October 2000, the Dacia SupeRNova is launched, equipped with a modern powertrain from the Renault range. It is the first model produced by Dacia after the takeover by Renault. The SupeRNova quickly establishes itself as a real sales success on the Romanian market. In total, over 60 000 units will be produced by 2003.	
2002	At the end of 2002, the range of Dacia commercial vehicles is equipped with the F8Q diesel engine. This development, eagerly awaited by Romanian customers, will significantly boost sales of Dacia commercial vehicles in the coming years.	
2003	In March 2003 the Solenza model is launched. It initially takes over the powertrain of the SupeRNova. From September 2003, the model will also have a diesel version, equipped with the F8Q engine already installed in the brand's vans. The Solenza will also unveil a new logo. The Solenza is a real dress rehearsal before the launch next year of the 5,000 euro vehicle, already known under the X90 codename.	
2004	**First Dacia Logan Car** The model that will relaunch the Dacia brand is presented to the international press on June 2, 2004. The first deliveries will take place in Romania starting September 9, 2004. Sales targets will be surpassed in the first year due to strong customer demand. Renault will therefore decide to sell the model in Western Europe as well.	

2005	**International Expansion** In 2005, in order to support the international development of the X90 project (under the Dacia and Renault brands) in countries such as Russia, Colombia and Iran, CKD, Renault Group's largest logistics center at the time, was inaugurated in Mioveni. At the same time, in order to meet commercial demand, the plant's production capacity is gradually increased to 350,000 units/year by the end of the decade.	
2006	The first model derived from the Logan range is unveiled at the Geneva Motor Show in March 2006. Available in two configurations - with 5 and 7 seats, the Logan MCV surprises the international press and becomes a sales success, especially in Western Europe.	
2008	The Sandero completes the Dacia range in 2008. The model will be highly appreciated by customers and will become the number one selling car to private customers in Europe. With its launch, Dacia inaugurates a new visual identity and a new brand logo.	
2009	At the 2009 Barcelona Motor Show, Dacia unveiled a model derived from the Sandero under the name Stepway. This version, with its distinctive design and increased rear-view, has since become a real success in all markets where the Dacia brand is sold.	
2010	**Duster, the Off-Road Vehicle** With the launch of the Duster, Dacia is offering a model that responds perfectly to new trends on the European market. And success is not waiting for it. The Dacia SUV will become the brand's first model to be produced in over 1 million units.	 
2012 – 2017 The Period of Modernity		
2012	**New generation Logan and Sandero models** In 2012, a new generation of the successful Logan and Sandero models is launched, benefiting from an eye-catching design and modern equipment.	
	Lodgy and Dokker In 2012, Renault Group inaugurates the Tangiers plant, where the Lodgy (the brand's first MPV), the Dokker combi, and its Van utility version are exclusively produced.	
2013	**New Logan MCV** In 2013, to complete the Logan and Sandero family of models, Dacia introduces a new version of the Logan MCV, a station wagon with a traditional look but spacious inside and a trunk volume of more than 560 liters.	
2016	**A complete, renewed range** The entire Dacia range benefits from a major restyling in 2016. Phase 2 of the Logan, Logan MCV and Sandero models also get a robotized gearbox for the first time.	
2017	New Duster The new generation Duster is launched at the end of 2017. The brand's new SUV integrates numerous features that are a first on a Dacia model and displays a significantly improved level of perceived quality. The model will get the title of Car of the Year 2018 in Romania.	
2020	A RENEWED RANGE With the new Sandero, Sandero Stepway and Logan, Dacia is renewing its offer in the versatile and compact city car segment. Developed on a new modular platform, CMF-B, the new Sandero, Sandero Stepway and Logan take a real leap forward in terms of modernity. This platform is a key element of the brand's future, as it will be used to develop all future models.	
2021	**Spring, the electric revolution** With the launch of Spring, Dacia opens a new chapter in its history and offers the cheapest 100% electric city car on the market. It is Dacia's first electric model and its first small city car. Dacia Spring targets individual customers as well as fleets, especially those owned by car-sharing operators.	

	Dacia unveils its strategy for the next 5 years Dacia has unveiled its strategy for the next five years as Renault Group unveiled its Renaulution strategic plan. The Dacia Bigster concept offers a first glimpse of the brand's evolution as it aims to tackle a new market segment in the future - that of compact vehicles, known as the C-segment.	
	Dacia Duster The Dacia Duster has reached its third generation. The first generation was launched in 2010, the second in 2017, and the third generation was unveiled in early 2024. The European leader in SUV sales to private customers in its segment, the Duster was renewed in the summer of 2021, adopting the styling elements of Dacia's new visual identity, already present on the Logan, Sandero and Sandero Stepway models. The Duster features a variant equipped with the 6-speed EDC automatic EDC gearbox, mated to the TCe 150 CP gasoline engine. The new Duster has several engine versions, the most important being: a 140 hp full hybrid unit, a 130 hp (96 kW) TCe 130 4x4 engine, and a 140 hp (94 kW) mild hybrid variant. There is also an Eco-G 100 (100 hp) gasoline/LPG version.	 
2022	**Dacia is adopting the new brand identity across its model range** This includes the new "Dacia Link" logo, composed of stylized letters D and C, linked together like the elements of a chain, and a new logo, which is displayed on the back of all models and on the steering wheel.	
	Manifesto At the Paris Motor Show, Dacia presents, under the name MANIFESTO, a concept car that concentrates its brand values. With this concept, Dacia is reaffirming its vision of the automobile as an essential, cool, robust, affordable and environmentally friendly vehicle. MANIFESTO is a veritable laboratory of ideas that presents a vehicle connected to nature and environmentally friendly. While it does not anticipate a future model, some of the innovations it brings will be found on future vehicles in the range.	
2023	**Jogger Hybrid** In early 2023, Dacia launches its first vehicle equipped with hybrid technology. Benefiting from Renault Group's expertise and manufactured in Romania at the Mioveni plant, the HYBRID 140 version will soon account for 25% of total Jogger orders.	
2024	**New Spring** Dacia's all-electric model gets a new look, with a completely redesigned exterior and interior, new equipment and the largest storage space in its segment.	
	Bigster Bigster and the C-segment expansion Dacia's first C-segment SUV under the Dacia logo makes its public debut at the Paris Motor Show. A true top of the range for the brand, Bigster debuts new, 100% electrified powertrains and offers equipment never seen before in Dacia's range, such as a dual-zone air conditioning system, panoramic roof and electric tailgate.	

Note: The specifications and images in Table 1 were taken in their entirety from the DACIA Romania online website and are the exclusive property of the DACIA automobile manufacturer in Romania. The emblem and logo of DACIA passenger cars has evolved in different ways from its inception to the present day, depending on the ideas of the designers, the features of the vehicles, as well as technological developments at the time of their appearance.

The evolution of the DACIA emblem (logo) in Romania from its debut until 2021 and in present is presented in Figure 6.

The current emblem that represents with honor the DACIA symbol is called *Dacia Link* and we see it mounted both in the center of the front grille of each Dacia car and on the rims of their wheels.

And to make the transformation coherent, the designers also made changes to the grille. The logo, the centerpiece of the current visual identity, inspires sturdiness and stability at first glance. For the rear, Dacia has kept the full logo, which can also be seen on the steering wheel (the last logo in Figure 5). Along with these changes, we'll also notice something new: the Gris Mégalithe shade on the flag bars, front and rear bumpers, and the rear-view mirror housings of the Sandero Stepway, Spring and Duster models. The design of the letters is deliberately minimalist - the letter 'D' is an inverted 'C' - visually expressing both the simplicity and ingenuity of the brand. The geometric layout of the logo creates the impression that the sequence of letters that make up the logo is in a mechanical gear. The letter D in the logo is reminiscent of an arrow, expressing the dynamism of a

forward-looking brand. The logo is an element of identity that makes the brand easily recognizable. You can see from a distance that the car approaching you is one produced at the DACIA plants in Mioveni, Argeș County, Romania. And it seems only natural that this brand would want to refresh its image, given that the last real logo refresh came in 2008. The emblem is made up of the letters D and C joined together like the components of a chain, thus expressing solidity and connection. The new emblem will make it easy to identify the brand, even from a distance. Simple and legible, the two strong elements - the logo and the emblem - express the solidity of Dacia cars (Figure 6) [7].

Fig 6: The evolution of the Romanian DACIA emblem (logo) from its debut until 2021 and in present [7]

Like any car manufacturer in the world, the Dacia car plant designed and built prototypes on the production line that either remained at the same stage or were produced in limited series. Table 2 presents all these prototypes.

Table 2: Prototypes of DACIA cars that remained in the same phase or were produced in limited series [8]

Year	Action/Activity/Event	Appearance/Image/Figure
1975	The Dacia D6 (Estafette) is the first van ever produced by Automobile Dacia, being a replica of the French model of the same name, Renault Estafette. It was produced between 1975 and 1978 and 842 models were built.	
1980	Dacia Brasovia a coupe prototype modified at the Brasov Service. Dacia Sport was later derived from this model. The specific feature of this car model is that it uses a windshield identical to the front one at the rear instead of a rear window, and many elements of the bodywork were built by hand.	
1980	The Dacia 2000 was a Renault 20 assembled in Romania under the Dacia name. Being very exclusive, it was made in limited numbers, with only 2 colors: black and dark blue. The car was reserved only for the elites of the Romanian Communist Party (PCR), which was in power in Romania at the time.	
1980	The Dacia 1310 Break Limousine was made in the late 1980s, it is a 7-seater long estate model, produced in 5 cars.	
1987	The Dacia MD87 was a sports car, specifically designed to compete in rally competitions. It was originally inspired by the Toyota MR2 and was produced in at least two examples, one with Dacie 1310 headlights and one with retractable headlights. The car was mid-engined and rear-wheel drive. Unfortunately, it is not known what happened to these valuable examples.	
1990	Dacia 1308 Jumbo was a prototype created from the Pick-up model with hardtop and large windows.	
1992	Dacia Extase was the name of a series of 5 prototypes realized by the Dacia plant in 1992-1994. The cars were based on 1310 models but with modified elements taken from others. At that time they were trying to discover the magic formula by which the factory could bring a new body to the market.	
1994	Dacia 1306, is a car made in the form of a sedan from a pick-up. Only 5 cars were made.	
1995	The Dacia Nova Van was a one-off prototype. It was a taller and longer Nova that could accommodate up to 6 people. Unfortunately, or fortunately, the car was never mass-produced.	
1997	The Dacia D33 was produced in 1997 by the Idea Torino coachbuilder, commissioned by the Romanians at the Dacia plant. This model was to be the future Dacie, more modern and elegant. The only example now lies in a barn in Mioveni.	

1999	Dacia Convertible was a UAMT Oradea project. It was designed and homologated for small series production at this plant. In the end the project was abandoned as it was considered an unprofitable investment and had some opposition from the parent plant UAP.	
2005	The Dacia Grand Sandero was an exercise by the Dacia plant to try to restyle the Logan MCV. That is, a Logan MCV was given a Sandero front end, which was the only modification.	

3. Brand history and logo of Romanian off-road car manufacturer ARO

Although it was one of the most successful cars during the period when the communist regime of President Nicolae Ceausescu was in power in Romania, in fact, it was the only 100% Romanian-produced off-road car, the ARO (Romanian Automobile) did not have the same fate as the Romanian DACIA cars. We say all this because now, when we are writing these stories, these histories of Romanian cars, the ARO passenger car plant in Câmpulung Muscel, Argeș County, Romania no longer exists.

The plant's decline started after the 1989 revolution in Romania, more precisely in 2003, when the Romanian state sold 68.7% of ARO to the American company Cross Lander, owned by John Perez, a Cuban-born American, for 180,000 USD. The privatization contract foresaw a $2 million investment in ARO, but no investment took place and the ARO equipment was sold.

We searched the literature and online and also found a wealth of information about the ARO plant and off-road cars.

As at the DACIA plant, the engineers and specialists at the ARO Câmpulung Muscel plant have tried and succeeded in designing and manufacturing a multitude of successful models of the Romanian SUV. They were inspired by the GAZ - 69 off-road car from Soviet Russia.

The history of Aro (Automobil Romanesc) begins in 1885, when the "Compania Letea" paper factory was established in Câmpulung Muscel. In the inter-war period the factory is reprofiled for the production of propellers and firing equipment for I.A.R. Brasov [9].

In this sense, in Table 3 we present in a logical and chronological manner the history of the ARO plant and off-road cars in Câmpulung Muscel, Argeș County, Romania.

Table 3: The history of the ARO passenger car factory and of the cars produced in Câmpulung Muscel, Argeș county [9]

Year	Action/Activity/Event	Appearance/Image/Figure
1953	In 1953 the "State Metallurgical Enterprise" produced 12 Romanian motorcycles called IMS 53 with a two cylinder 350 cc engine. In the same year spare parts for GAZ-67 and GAZ-MM, which initiates the plant in the manufacture of off-road cars.	
1957	In 1957 the first Romanian off-road cars are produced. They were produced in a total of 154 units in the year of their launch, under the name IMS 57. It was based on the Russian GAZ-69 model, and was equipped with a rudimentary 3260 cc engine developing 50 hp and a fuel consumption of 24 liters per 100 km traveled. In 1958, 760 were produced.	 
1959	An improved variant called the M59 is launched, produced in 803 examples in 1959.	
1963	3,222 M 59 cars are produced. It is also the year of the appearance of the M 461, a model with a redesigned body and equipped with a more modern engine: the M-207 (derived from the SR 211 engine (Ford license) on the Red Flag "Bucegi" and "Carpați" Red Flag trucks). The four-stroke, in-line 4-cylinder engine develops 77 HP at 4,000 rpm and in constant revs develops 70 HP at 3,800 rpm. The M 461 was produced in 80,233 units (46,549 exported) until 1975.	
1966	Design begins on a completely new model, with a new body, curved chassis, independent front suspension, to be produced in over 60 variants.	
1969	The production of off-road cars that will be "branded" with the Aro logo begins. The M 461-C is a more modern model, benefiting from some of the electrical systems from the newly-built Colibași factory. Collaborations between Romanian car manufacturers were very common, with many parts being common to several car models.	

1972	This is the year of the launch of the Aro 24 "family". It is initially launched with the L25 engine, a modification of the M-207 engine used in the IMS M 461. The Aro 24 has two basic models: Aro 241 (four-door) and Aro 240 (two-door) from which many other models were derived such as Aro 242 (pick-up), Aro 243 (bodied van), Aro 244 (four-door station wagon). The L25 is a 2,495 cc engine producing 83 HP.	
1973	Imported diesel engines from Daihatsu, Peugeot, Volvo and Perkins are fitted to the Aro 24. Also in 1973, the M473 appears, the last of the IMS family. It was intended almost exclusively for export and was fitted with the L25 engine.	
1977	The design of the ARO 24 has been redesigned, going from Dacia 1300 headlights to round headlights.	
1978	Mounted on these cars is a Romanian Aro 4×4 diesel engine. It was called D-127 and came from the Tractorul Brasov plant. The D-127 has a displacement of 3,119 cc and develops 68 HP. The same year the 320 pick-up was being designed.The picture on the left shows an Aro 243 Diesel, presented at the 1979 Bucharest International Fair.	
1980	The Aro 10 "family" is also launched, initially in 4 variants. At first, all variants were equipped with Dacia's 1,284 cc engine. A carburettor, spark-ignition, 4-cylinder engine developing 54 hp at 5250 rpm. The 1,550-pound all-terrain reaches a top speed of 110 km/h with the Dacia 1300 engine. The 4 variants are: Aro 10.0 (with tarpaulin, two seats), Aro 10.1 (with tarpaulin, five seats), Aro 10.3 (closed cab, two seats) and Aro 10.4 (closed cab, five seats).	
1983	L27 2,660 cc diesel engines start production in Câmpulung Muscel.	
1984	he 1,397 cc engines (also from Dacia) start being fitted to the ARO 10.	
1985	The right-hand drive ARO 10 is introduced to the UK market as the Dacia 4×4 Duster. They were powered by 1,397cc Dacia engines, and were available in pick-up, van, roadster and GLX variants. In the same year the ARO 10.8 is launched.	
1986	There were active export contracts for 35 countries.	
1990	Immediately after the revolution, Romanians buy an Aro 4×4 in droves. At a time when President Nicolae Ceausescu's communist regime was restricting the Romanian population's purchases of this vehicle, it was almost impossible for an ordinary citizen to own a Romanian off-road car.	
	The Aro 244 Hunter model is presented at the Bucharest International Fair, which was to be exported to the USA. The project fails and too few Aro 4×4 Hunter models reach the Americans. However, cars are exported to France, Spain and Czechoslovakia with 1870 cc and 64 HP Renault engines.	
1991	A production of 9,240 units/year is recorded	
1992	It brings a diversification of the range, also seen at Dacia this year, with the introduction of double-cab models such as the Aro 324 and Aro 326. The second generation Aro 10 is also launched. At that time, four types of Romanian engines were available for the Aro models: the Dacia engine, the L30 gasoline, the L27 diesel and the D127 diesel. Production in 1992 amounted to 10,152 units, 3,000 of which were exported to France, Spain, Belgium, Greece, Greece, Morocco, Angola, Argentina, Venezuela and others. The export price of an Aro 24 was 5,500-7,000$ with a Romanian engine, and 9,000$ with a VM or Peugeot engine, while an Aro 10 ranged from 5,500$ to 7,000$.	 
1993	In 1993, ARO's profits rose from 4% in 1992 to 10.5% in 1993 and production increased by 20%. This is also the year in which the Caritas "phenomenon" reaches the national level and ARO starts to be sold like "warm bread" directly at the factory gates. Export and research are neglected during this period. However, diversification continues with the launch of the Aro 10.6, the Aro 10.8 with a body cab (tarpaulin replaced with sheet metal), the Aro 10.9 (characteristics: double cab, 4.5 m long, 1400 kg mass, Dacia 1,397 cc engine with 62 HP and a fuel consumption of 12 liters per 100 km).	
1994	The Aro 246 is launched, a combination of the Aro 243 and Aro 244. The Aro 246 is a 5 + 2 seater, 1750 kg, equipped with the L27 diesel engine. This is in fact (according to Autoturism magazine no.1/1994), an old spark-ignition engine (with turbulence-prechamber spark plug) converted to a compression-ignition, naturally aspirated engine with indirect diesel injection. The bodywork and spark plugs appear to be unchanged 22 years after the launch of the Model 24. The lack of power steering and stiff suspension add another drawback to the off-road machine.A facelift of the Aro 24 and Aro 32 family is developed in the following years.	 
1997	The DX 28-01 engine, developed from the L27, is introduced.	

1998	The DX 28-01 turbodiesel version of the DX 28-01 engine is also introduced (turbocharged produced at Hidromecanica Brasov), developing 88 hp at 4000 rpm. In the same year, some collaborations with Daewoo Romania and Toyota are started: Daewoo 1.6 l DOHC engine for the Aro 10 and Toyota 2,438 cc 140 HP engine for the ARO 24.	

The decline of the ARO plant and off-road cars

After the December 1989 revolution in Romania, around the beginning of 1990, interest groups started waging a war with a predictable end - the end of ARO. But this war was not felt by the great mass of Romanian off-road car desires. If these, before the Revolution, sold on the domestic market only very hard, in the post-Decembrist era, people flocked to ARO. The moment of glory was the period of the Caritas pyramid game in Cluj. AROs sold for more than gold then [9].

But the ARO colossus had to be modernized. Some contracts went by inertia, but the state had a hot potato on its hands that it seemed unaware of. Many production procedures were outdated. The solution was privatization. Famous companies in the car industry were driven out by obsolete technology, but mainly by the interests of influential groups at ARO.

In the year of grace 2000, the ARO plant came to a complete standstill. The preferred solution was privatization. The World Bank recommended that the Câmpulung plant be immediately put on the list of mandatory privatizations [9].

Instead of potential buyers with business cards and credibility, a Cuban with an American passport - John Perez - was chosen to buy the ARO. He had an apartment firm in Miami. Press investigations revealed that this Cuban with the airs of an American tycoon but empty pockets was a collaborator of the Romanian Securitate. Through John Perez, during the dictatorship of then Romanian President Nicolae Ceaușescu, the firms of the Securitate and the Directorate of Foreign Intelligence were making clandestine deals on international markets. It's a classic scheme by investors. American citizens. These people were taking over an automobile brand. The privatization process began in 1997, when two American associates tried to buy the Muscat plant from the State Property Fund. And to impress, they brought along a powerful consultant, Tony Rodham, brother of Hillary Clinton, brother-in-law of President Bill Clinton [9].

Until the smart privatization, the government at the time led by Prime Minister Adrian Nastase kept the ARO plant afloat through government contracts. It was willing to provide support to ARO through government orders, but these orders turned out to be nothing more than oxygen bubbles for a drowning company.

ARO was a place where politics was always present. If the directors were appointed by the State Property Fund or later by the Authority for the Administration of State Assets, there were some big names around ARO. One of the main characters in the game of interests that gravitated around ARO is Constantin Nicolescu, president of CJ Arges, former senator, former president of the SIE control commission [9].

Since the launch of the 24 series ARO has had a study and design office called the Center for Automotive Studies in Romania (CESAR S.A.) At CESAR S.A. preliminary model design drawings, clay models in 1:3 or 1:1 scale, functional prototypes and impact tests of preliminary models were made. CESAR S.A also had an office in Mioveni, Argeș which was owned by Automobile Dacia. The Dacia-owned study and design office materialized prototypes of Dacia cars as well as their subsequent facelifts. In 2006 the assets held by ARO in CESAR S.A Câmpulung Muscel were sold to Amrom Automotive 2006 which did not survive long, going bankrupt in 2007. CESAR S.A was one of the most modern car design centers in Eastern Europe. Like the car manufacturer Dacia and ARO, it designed and built prototypes on the production line, which remained at the same stage or were produced in limited series.

In Table 4 we present the most important and interesting of these prototypes.

Table 4: Prototypes of ARO cars that remained in the same phase or were produced in limited series [10]

Year	Action/Activity/Event	Appearance/Image/Figure
1969	ARO M461 - 4-door prototype was created at the debut of this prototype for the Romanian armed forces.	
1969	ARO M 461 Pick-up truck.	
1977	ARO 304, is a longer model based on the ARO 244 and is equipped with a 2500 cc. gasoline engine, leather upholstery and electrically operated hatch, and a light blue-greenish blue body with many chrome elements. The ARO 304 and ARO 306 were created especially for the then Romanian President Nicolae Ceausescu.	
1980	ARO Homilius - ARO vehicle modified in Germany by Homilius. It is a prototype created on the chassis of ARO 240, with 3 points and functional 6×6 traction system appeared in Germany, in Elsdorf, the prototype was produced by the Homilius firm, named after the owner of the firm, Thomas Homilius. This company produced several prototypes on behalf of ARO Campulung and Automot Heidenau (ARO RDG importer), for example the ARO with Daihatsu Wildcat diesel	

	engine, which was produced for many years in Portugal under the name PORTARO.	
1987	ARO 12 was produced in small series for the Ministry of National Defense. It was built on an Aro 10 chassis, Aro 10 gearbox and Dacia 1310 Break body. The engine was an Ifa 3-piston diesel engine and 4x4 traction. The car was produced in 14 units from the car produced in collaboration with the Dacia plant. The model consisted of a Dacia Break body and the chassis and mechanical parts were from Aro. The Romanian President at the time, Nicolae Ceausescu, was impressed by the model and agreed to test drive it.	 
1988	Ciemme Scorpion is a prototype based on the ARO 10 model. It was made by Ali Ciemme, the company that assembles ARO 10 models in Italy.	 
1989	ARO prototype, a car that never went into production because of the economic problems of the time.	 
	The ARO motorhome is a prototype of a motorhome built on an ARO 320 D chassis and has the following facilities: accommodation for 6-8 persons, shower, toilet, stove, sink, clothes cupboard, folding table, armchairs and intercom to contact the cabin.	
2001/ 2002	CFM Gerula prototype based on the Aro 10 model with components entirely manufactured by Romanian industry. The concept developed by Costel Fetcu proposes to completely remake the exterior and interior design of the Aro 10. Most of the elements used for the assembly come from the Dacia Supernova model (windshield, dashboard, headlights, locking system, window cranes, etc.). All the existing engine variants of the Aro, Toyota, Peugeot, Renault and Daewoo could be adapted to this prototype without any significant changes.	
	ARO 324 AMC BUGARO is an ARO 324 modified by ARO dealer in CEHIA AUTO MAX. It has been modified in 2 stages first stage being the one with thin tires, the second stage being the one with wide tires and lateral sidewalls.	 
2005	ARO M 461 - a prototype based on ARO 244 chassis and IMS body.	

		
2006	The ARO AMR 243 BG prototype car realized by Amrom Automotive, is based on the ARO 243 which has been removed the "eaves" of the roof drain, the corners have been slightly rounded, long doors from the ARO 26 range have been molded and the windows have been glued, eliminating the classic turn handles. It was equipped with a L30 (gasoline) LPG and fuel injection engine.	 
	AMR Raptor - was the last attempt by Amrom Automotive 2006 to produce cars based on ARO mechanics.	 
	BCV MULE is a prototype for farmers designed by AMROM AUTOMOTIVE 2006 and realized by INAR Brasov for BUCOVINA VEHICLES.	 
	ARO Superrally developed by ARO for rally racing. The Super Rally was originally developed with a 3.0 liter Ford Cosworth V6 (bought from where I have no idea), the version in the clips below had a 3.4 liter Toyota VZ V6, like you'd find in a 4Runner.	 

Note: The ARO Câmpulung Muscel plant has manufactured several prototypes throughout its existence. In table 4 we have presented the most important, interesting and significant ones. For more prototypes, those interested can visit https://www.automobileromanesti.ro/Aro/, where they can learn about all these prototypes.

For the realization of the prototypes, modern equipment was used for sculpting the models that were necessary to produce body parts for the prototypes, the models had running gear, engine, headlights and functional taillights. CESAR S.A was equipped with Silicon Graphics workstations and PCs on which Auto CAD and CATIA programs were used for 3D modeling of prototypes and their assemblies and sub-assemblies.

Fig 7: Emblem of the Romanian ARO off-road cars [13]

Throughout its existence, ARO cars have carried only one type of logo (emblem) on their radiator grille, which has not undergone any modification. This logo is shown in Figure 7.

3. Brand history and logo of the Romanian car manufacturer OLTCIT

Cars have been produced in Craiova city for more than 40 years, ever since a contract was signed between the Romanian communist state and the French manufacturer Citroën. Its story actually began in the early 1970s, when Nicolae Ceausescu thought it would be useful to have a second car brand in Romania.

The oil crisis in 1973 led to a massive rise in oil prices, which hit the car industry hard in the West due to high fuel prices. At the time, the Dacia factory - a joint venture between the Romanian state and Renault - had been in operation since 1966 and Romanians queued for years to get their hands on a car.

Romania's president at the time, Nicolae Ceaușescu, saw it as an opportune moment to acquire know-how for a new type of car - a small, economical, city car for young people. At the time the Citroën car company was hit by the oil crisis and Geoges Taylor had taken over the helm in 1975 after a four-decade career at rival Peugeot. Negotiations between the two sides went quickly, and on December 30, 1976, the contract to set up the joint Romanian-French company Oltcit, "Citroën in Oltenia", was signed. The Romanian government held 64% of the shares and Citroën the remaining 36%.

A year later, in 1977, construction of the Craiova factory began, with the technology being brought from France. The plant had an area of 350,000 square meters, and the whole industrial platform had 114 hectares of land.

Ștefan Andrei, a former foreign minister during the communist era, estimated the Romanian state's investment at a billion dollars, which "bailed the French out of bankruptcy to make a stupid and expensive car," according to him.

The Oltcit cars were based on the Protoype Y, which had been started on a platform designed jointly with Fiat, then continued by Citroën alone. However, after Peugeot's acquisition of Citroën, it had no chance of going into production. In 1974, the competitor bought 38.2% of Citroën, and by 1976 its shareholding had risen to 89.95%. Thanks to better technology, many Peugeot designs replace those designed by Citroën, and the Protoype Y is abandoned. However, the Romanian side's insistence revived the project, which was modified to adapt it to our country's roads. It wasn't until 1981 that the first car rolled off the Craiova factory gates.

In order to recoup its investment, Citroën re-exported a significant part of its Craiova production to France under the Axel model, making it the first low-cost car to reach Western Europe.

The Oltcit Club 12 TRS made its way to several countries, including the Netherlands, Belgium, Hungary, Czechoslovakia, Poland, Yugoslavia, Argentina, Uruguay, Paraguay, Ecuador, Venezuela, Costa Rica, Colombia, Syria, Jordan, Egypt, Turkey and Bulgaria. Between 1981 and 1993 some 200,000 cars were produced, of which 60,000 were exported under the Axel name.

In 1991 Citroën sells its stake in Oltcit to the Romanian state, which renames the company Automobile Craiova. Production continued until 1994, when the Koreans from Daewoo arrived in Craiova. The last Oltcit rolled off the production line in 1996 under the Oltena brand. Subsequently, after Daewoo went bankrupt, Ford arrived in Craiova, operating in the former Oltcit factory.

In Table 5 we present in a logical and chronological manner the history of the Oltcit plant and cars in Craiova city, Dolj County, Romania.

Table 5: The history of Oltcit plant and cars in Craiova city, Dolj county [3]

Year	Action/Activity/Event	Appearance/Image/Figure
1976	On December 30, 1976, an agreement is signed between Citroen and the Romanian socialist government to build a 35-hectare factory in Craiova. Citroen was to provide the license, plans and everything related to the design of a new car model (produced exclusively in Romania), together with a guarantee to buy 40% of the cars produced in Craiova for export to France, Austria, Belgium, Holland and Italy. The factory only starts production in October 1982, well after the planned date.	
1980	First the Oltcit Special and Oltcit Club 11R models were built, and later the Axel 12 TRS model was introduced, which had a more powerful engine from the Citroen Visa, but was intended exclusively for export. The Axel went into production too late as it was unable to cope with the new competitors, so production of the model was not long-lasting. The French designs are adapted for the conditions in the First the Oltcit Special and Oltcit Club 11R models were built, and later the Axel 12 TRS model was introduced, which had a more powerful engine from the Citroen Visa, but was intended exclusively for export. The Axel went into production too late as it was unable to cope with country, so the car gets a higher ground clearance, a modified carburetor and loses 2 doors and the remaining doors are lengthened to facilitate access to the back seat. The Special and Club models differed only in engines, with the Special having a 652cc engine that propelled the car to a top speed of 120 km/h and averaged 7 l/100 km city. The Club11R had an engine displacement of 1129 cc, which propelled the car to a top speed of 148 km/h and averaged 8.8 l/100 km city.	
1990	Although the factory had a maximum annual production capacity of 130,000 cars, only 60,184 cars were produced between 1984 and 1988. After the revolution, Citroen is dissatisfied with the new Romanian leadership, which has the same socialist conceptions of	

	intervention in the market and keeping the currency in the country. Citroen also had some disputes with the Oltcit managers, who were using some components not authorized by Dacia. So Citroen withdrew from the company in November 1991 (it held 36% of the company's shares), wanting the syllable "Cit" to disappear from the company name and the Citroen sign (that inverted V) to disappear from the Olcit logo. Thus Automobile Craiova S.A. was born in 1991, an entirely Romanian company.	
1993	The Axel 12 TRS is back in production, only under the name of Club 12 TRS, and this time also sold in Romania. This was the most powerful Oltcit ever built, with a 1299 cc engine that propelled the car to a top speed of 157 km/h. And the 61.5 horsepower allowed a 5-speed gearbox to be fitted. But the engine was technically outdated (the license bought in 1980), couldn't cope with foreign pollution standards and had high fuel consumption compared to similar cars of the time. The same technical director, Adrian Spulber, describes the situation in Craiova in an interview in Autoturism magazine 12/1993.	
	The director complains about the paradoxical fiscal constraints of the time, where foreign currency payments are restricted domestically (payment to suppliers) but dollar payments of up to 70% of the value of energy bills are imposed. The director looks optimistically to the future, even though only 12,000 cars were produced in 93`. By that time, 200,000 Oltcit had left the Oltena plant.Also in 1993, the Oltena 12 CL prototype, a pick-up based on the 12 TRS, was produced. It later went into series production as the Oltena 12 CS.	
1994	It was the year that brought another collaboration to Craiova, this time with Daewoo Motors. RodaeAutomobile S.A. is set up, with the Romanian state holding 49% of the company and Daewoo 51% (capital contribution of 156 million dollars). Oltcituri was still produced until early 1996, under the name Oltena, when production stopped because the cars manufactured in Craiova were selling at a loss of $1,500. Parts production continues until 2004.	
1996	The production of Oltcit passenger cars ends and Daewoo Cielo starts in March 1996. It is produced until 2007, and other models such as Nubira or Matiz from Daewoo are produced until 2008.	
2006	The Romanian state buys the 51% stake in Daewoo Motors (now owned by GM) for $60 million, and later privatizes the plant. At the time the plant had 4,000 employees.	
2008	Ford Motor Company buys a 72.5% stake in the Oltenia plant in 2008.	
2009	Ford car production starts in Craiova. Production started with B-Max and Transit Connect models. At the time of writing, Ford cars are being produced at the Craiova plant. The plant has maintained its continuity, with a different type of car compared to the beginning of production.	

In Table 6 we present the most important and interesting prototypes of the Oltcit car model, which remained in the same phase or were produced in limited series.

Tabelul 6: Prototypes of Oltcit cars that remained at the same stage or were produced in limited series [10]

Year	Action/Activity/Event	Appearance/Image/Figure
1984	Oltcit Cabrio manufactured at Oltcit S.A., has never been homologated or mass produced Unfortunately there is only one original example left.The second one is unknown for now.There are still a few examples around the country, handcrafted in private workshops, but without direct connection with the original product.	
1989	Oltina, Oltcit with four doors. With the fall of communism, this prototype was no longer produced.However, it was presented at T.I.B 1990.It would have been interesting to know the impact of this model on the market.The inspiration for this model was obviously Citroen Visa.	
1993	Oltena Club 12 CL. a prototype car, based on the 12CS platform, but with a longer arm. Unfortunately, due to a so-called "defective design" of the rear structure, the car could not be homologated by RAR.It was found that at maximum load, the car tended to deform. Along with other problems,found in tests,the car was refused homologation. However, specific to the time,we believe that this homologation was not wanted,because of rivalry with the other manufacturer who had vans of this type.The engineers of those times,were not able/not allowed or did not want to fix the "design mistakes",and finally the model was given up.	

1994	Tricycle with Oltcit-TCS TRIKE engine. Few people know that in Craiova a group of kind-hearted engineers manufactured a three-wheeled motorcycle powered by the oltcit engine. This was sold mainly for export.Nowadays it is a collector's item, impossible to find for sale.	 
1994	Oltcit diesel. Apparently there was such a prototype. In the TCS Trike movie at minute 9:20, an Oltcit prototype with a diesel engine mounted transversely. From the pictures it seems to be a Renault 1600 cc engine, which was later mounted on some Dacia 1304s. The car had a major body modification, with McPherson suspension on the front. The Oltcit diesel of green color, circulated for some time in Craiova with test numbers. According to ex-employees, there seemed to have been several examples. Unfortunately there's no official information, only pictures and video.	

Throughout its existence, Oltcit cars have carried only one type of logo (emblem) on their radiator grille, which has not undergone any changes. This logo is shown in figure 8.

Fig 8: Emblem of Oltcit cars produced in Craiova city [14]

4. Brand history and logo of the Romanian car manufacturer DACIA 500 LĂSTUN

Plans to build a very low liter passenger car (A.F.M.L.) originated in the late 1970s, with several studies and surveys being carried out to test public interest in the concept. Some sources say that the idea came from the Romanian president at the time, Nicolae Ceaușescu, who wanted a more affordable car than the Dacia 1300 and the Oltcit to be produced in Craiova. Three projects were proposed and the winner was the one created by a group of engineers from the National Institute of Thermal Engines in Bucharest. Not a surprising result, given the other two proposals: a Dacie 1300 Break with a shortened wheelbase to have just three doors and a home-made vehicle with two Mobra 50 moped engines.

Thus, a team of engineers selected from all branches of the car manufacturing industry (Câmpulung, Colibași and Bucharest) was created, headed by Valentin Cosoroabă, former director of INMT, and in April 1980 the car design began. In five months the experimental model was finalized, which envisaged the construction of a 2+2 seater car, using materials and technologies existing or being assimilated in our country. This was followed by the functional models called "Egreta" and "Falcon", which were tested between 1980 and 1983 in a wide variety of weather and terrain conditions. Several variants of bodies and powertrains were designed. The Egreta had a separate chassis construction, and 350 cc single-cylinder engines were also available in the texts, made by halving the Oltcit Special's powerplant. In March 1982 there was also an opinion poll in which the name of the future car, "Lăstun", was chosen. There followed a series of wind tunnel tests, where a 1:5 scale model achieved a very competitive coefficient of 0.25 for the [11].

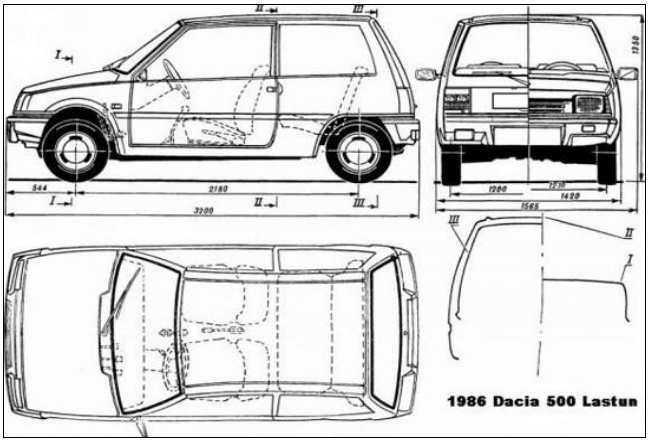

Fig 9: Dimensions of the Dacia 500 Lastun car [11]

The four-stroke engine that equipped the Lăstun model had 2 parallel vertical cylinders, 499 cc, 22.5 HP and a fuel consumption of 3.3 l/100 km in constant mode and 4.5 l/100 km in the urban cycle.

Between 1983 and 1984 the concept prototypes followed, when three Lăstun cars were built and subjected to numerous tests and trials at I.C.S.I.T.A. Pitești. Front and rear impact tests were carried out according to European regulations, thus also finalizing the body strength structure. Three other prototypes followed, with the help of which the materials used for the outer skin of the body were finalized. In September 1984, the prototype phase was completed, with the execution documentation on the basis of which the constituent parts and assembly operations were to be carried out.

Fig 10: Dacia 500 Lastun car [15]

Between 1984 and 1985, approval tests were also carried out on the prototype, in order to ensure that it complied with STAS and ECE standards. The cars met the standards and on September 25, 1985, the Lăstunul was officially homologated (Figure 10). The production-ready AMFL had a self-supporting body with a fiberglass-reinforced polyester outer shell. Arranged transversely in front was an air-cooled, 499 cc, in-line twin-cylinder engine developing 22.5 HP. The unit was derived from the Oltcit Club's four-cylinder boxer powerplant, from which only half of the block was taken, and displacement was reduced by downsizing the stroke. The four-speed gearbox was copied from the Trabant's, including the same lever on the steering wheel, and front-wheel drive [11].

Engineer Paul Pascu has dedicated a decade of his life to the design and implementation of the Lăstun. He was part of the lNMT team led by Valentin Cosoroabă that designed the car and has more than 800,000 kilometers behind the wheel of the prototypes he and his colleagues built in Bucharest.

> *"We were a team of 70-80 people who designed the car end to end. We had to use as many existing parts as possible. So we took 207 parts from Dacia and another 200 from Oltcit. For example, the electric motor and alternator were from Dacia 1300. We even integrated washers and bolts"* [11].

One of the reasons, of course, for integrating existing landmarks was the size of the Lăstun (Figure 9), in order to keep the manufacturing price as low as possible. "It had to be half the size of the Dacia," recalls Paul Pascu. "But a 12-inch wheel doesn't cost half as much as a 13-inch wheel, just as a smaller windshield doesn't cost half as much as a Dacie. So the price of the Lăstunul was 37,000 lei." Tehnometal Timișoara was chosen to build the Lăstun, a factory where various parts for the zootechnical industry (animal shelters) were made.

U445 tractors were also assembled here for export, an activity that brought in foreign currency. This was also the reason why the plant manager initially resisted the production of the Lăstun, which angered Ceausescu. So a new management was sought, and the one who offered to take over as director was a young engineer from Hobby Service Timișoara, the head of the team that had previously proposed one of the two projects rejected at the beginning of the project (Dacia Junior, made from Dacia 1300 Break). Although the experience of the staff was not suitable for car construction, the plant was upgraded to become the Timișoara Automobile Enterprise, where in 1987 the homologation of the zero series was started [11].

Fig 11: Egreta Buggy car [15]

At the end of the research program, a car called Egreta (Figure 11) was proposed, which then General Athanasie Stănculescu proposed as a radio communications and casualty evacuation vehicle for the wounded in conflict zones. Parachutes were provided for this machine.

The start of production was therefore problematic. Because although the factory was not yet ready to deliver cars of an adequate quality, political pressure pushed the launch of the Lăstun onto the market. Without any prior publicity, without the slightest effort to inform the public, the Dacia 500 LĂSTUN (a brand name already known to the public) was launched in 1988 at a price of 47,000 lei [11].

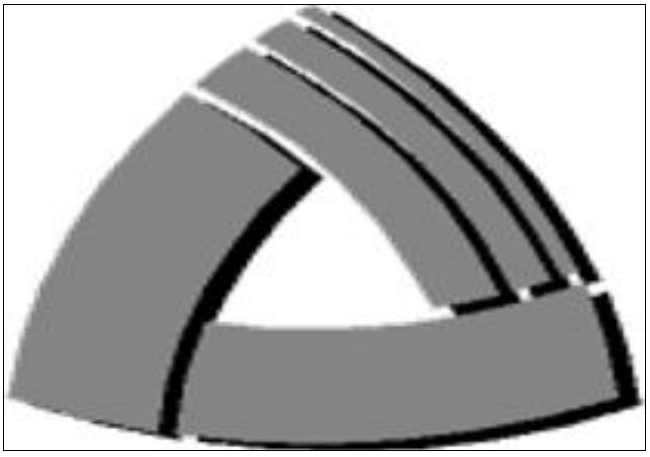

Fig 12: Dacia 500 Lastun car loggo (emblem) [16]

The driving force behind the Lăstun engine was the electromagnetically driven gasoline pump, built in a town with a strong resonance in communist Romania: Scornicești. The birthplace of the people's most beloved son was to give the country yet another scrap. Because the part of the block taken from the Oltcit boxer engine was the one that drove the delco, another solution had to be found for the fuel pump. So the engineers adapted an electromagnetic pulsator that operated the diaphragm of a Dacie 1300/1310 pump, thus covering the carburetor's gasoline needs. The resulting part was not only unreliable, it was also extremely noisy, making the engine sound an annoyingly loud clunk.

Gearboxes were notorious for their unreliability.

> *"Ever since gearbox production began, there were problems. The gearboxes were made in Pitesti and*

copied from Trabant. And because we had problems with them, engineer Cosoroabă asked an expert's opinion. Samples were sent to Ploiești, to the Petroleum Institute, where he was the leading expert in gears. And after the inspection, the expert said that such a gearbox could not work, justifying that on the width of the toothing there are deviations larger than are allowed on the 500 mm diameter pinions they use on oil extraction gears" [11].

So within two years of production, Dacia's service workshops were full of defective Laps, but mechanics had not been trained to fix them and spare parts were also missing.

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However, looking back at the story of the Grasshopper from the design stages, the AFML was not a bad idea. The design team came up with an innovative car that was beyond the technological level of the time. For Paul Pascu, the Lăstunul remains a great achievement that goes beyond the professional spectrum: *"The car was made with sacrifice and dedication. No bonuses, no expectations. There were months when we even covered 10,000 kilometers in tests. I had incidents and borderline situations, at one point I drove under a truck, another time I traveled 500 meters on the roof of the car. I was the man in the team with the most wheels skipped. But the car was good. Obviously, not with the parts on the tread, not with the parts that the factory got afterwards"* [11].

The logo of the Dacia 500 LĂSTUN is shown in Figure 12.

Conclusions and unknown facts about the car brands presented

As far as Astra cars are concerned, the largest share of Astra's production was buses and trucks. At that time, however, there were people who were interested in cars and could afford them. Luxury cars with four-cylinder, 8,000 cc engines producing 60 HP could be built to order.

The Malaxa 1 C passenger car is living proof of the technical and intellectual abilities of Romanian engineers to innovate and build reliable and quality means of road transportation. Although it was a modest start, the Malaxa model set an important precedent for the further development of the automotive industry in Romania.

The presentation of the new visual identity on all Dacia models is the third and final chapter of the strategy launched more than a year ago. This new visual universe reflects our values - simplicity, robustness, authentic spirit - in a more assertive and modern form. The new identity is a visible boost for Dacia in realizing its ambitions.

The Dacia plant was launched in 1966 in Colibași, today Mioveni, Argeș County, under the communist regime. It started production under Renault license (Renault model 8 under the name Dacia 1100. But after 1978, links with Renault were severed and Dacia continued to produce its own models (Dacia 1300, 1310, Nova, etc). The situation before privatization: after 1989 and the anti-communist revolution, in the context of the transition to a market economy, Dacia faced great difficulties (lack of viable investments, outdated technology, decreasing competitiveness, etc). The Romanian government at that time was looking for a strategic partner to revitalize the plant. The takeover by Renault in 1999 was a breathing space for the government and the plant. In this context it was decided to privatize the plant. Following a selection process, Renault was declared the winner. On July 14, 1999 Renault signed the contract to acquire 51% of Dacia's shares for 50 million dollars.

Subsequently, Renault gradually increased its stake and now owns 99.3% of the company. Renault is committed to investing heavily in modernizing its plant and infrastructure. He transformed Dacia into a global brand, with investments of more than two billion euros in modernization, technology and development. So 2004 saw the launch of the Logan, an affordable car model aimed at emerging markets. Dacia has become one of the Renault group's most successful brands, exported to dozens of countries. Renault's takeover made the Mioveni plant one of the most efficient in Europe. Thousands of jobs were created and safeguarded. Dacia became a symbol of the rebirth of the Romanian car industry under French leadership.

The whole Dacia range gets a facelift with the implementation of the new logo. Logan, Sandero, Sandero Stepway, Duster, Jogger and Spring now have a new look. And I don't think it's just me, but a new badge changes the design impact quite a bit.

As you can see from the images, Dacia aims to tackle the modern side with colors as well. A much stronger color signature, too. And for this reason, officials of the Mioveni-based brand have introduced with the Bigster concept also a new palette of body shades. The new color palette, centered on khaki-green, evokes a closeness to nature, an important landmark for our customers and a territory where Dacia vehicles make the most of their capabilities, like the iconic Duster. A series of secondary colors completes the range: three earthy-mineral colors - dark khaki, terracotta and sandy, and two contrasting colors - an orange and a deep green.

The Dacia Sport is one of the most spectacular cars ever launched by a domestic manufacturer. The people behind this ambitious project were tasked with providing drivers with a sports car that would surprise drivers with its sporty features compared to standard models. Challenges were kept in building the car due to a low budget and the lack of a dedicated assembly line. The Dacia sport is the first sports coupé produced by the Romanian company. The prototype of this model was first presented in 1979 at the Exhibition of National Economic Achievements (EREN), under the name Dacia 1300 Sport-Brașovia. In 1981, the Dacia plant in Mioveni launched the Dacia 1310 Sport model. By 1985, about 1,000 examples were produced. The coupé model assembled during this period is easily recognizable thanks to the short doors borrowed from the Dacia 1310. It is known as the "short door" model. This type of car is said to have been 'made from a hammer', the body and chassis being built from parts scavenged from existing models.

1985 saw the launch of the Dacia 1410 Sport Coupé. It differed from its predecessor with longer doors and was produced until 1992. During this time around 5000 units went on sale, of which around 200 were exported to Greece. They are known as the 'long door' model. The two models produced in Mioveni were equipped with different engines. Thus, the Dacia 1310 Sport was equipped with a 1289 cc engine developing 54 HP. The Dacia Sport Coupé (1410) was assembled with a 1397 cc engine and a five speed gearbox. It developed 65 HP.

In the case of the Dacia Sport Coupé, a model with a 1580 cc engine developing 84 HP with a camshaft in the cylinder head and another variant developing 100 hp were also presented, but they were not launched in series production. Assembly of the engines for the two sports models was carried out at the IATSA Ștefănești factory. The biggest challenge for the engineers involved in the Dacia Sport Coupé project was to build a sports car using parts from the production models. So they adapted all the components, from the engine to the bodywork, to the new model. For a sporty design, the car was designed about 24 cm shorter than the Dacia Sedan. This makes the length of the Dacia Sport approximately 4,151 mm. The height of the car has been reduced by about 8 cm to about 1,295 mm and the axles have been brought closer together. This has lowered the car's center of gravity closer to the asphalt and given it optimal cornering behavior.

At the front of the car, the engineers have kept the same Dacia Sedan design. For an aerodynamic look, engineers made the following adjustments to the rear area of the car:

- the rear and middle roof pillars were reduced in size;
- the rear wing was extended by means of a panel reaching under the rear side window.

On this project, as a result of the reduced dimensions, the engineers made the following modifications:

- adjusting the exhaust;
- use of shorter shock absorbers;
- the routing of the fuel lines was changed.

In 1985, engineers decided to adjust the size of the doors. They were lengthened by about six inches. Also, the windows were adapted and the door handles were adjusted to the new dimensions. All the parts used in the assembly of these cars were modified from the mass-produced models.

An important exterior design change was applied to the rear window. Following the process of lowering the roof to achieve an aerodynamic shape, the engineers could no longer use a standard Dacia 1310 rear window. So they opted to fit a windshield at the rear of the car with a higher rake than the one at the front.

The Dacia Sport was the first and only production car in the world whose engineers decided to use the same type of glass for both the windshield and the rear window. The latest versions were improved. The car was available with a demisting system for the windows. The trunk door is another item that had to be adjusted. The standard trunk lid of the Dacia 1310 was shortened to the optimal dimensions. As a result of the reduced exterior dimensions and lowering the roof for a sporty and aerodynamic design, inside, the engineers adjusted both the dashboard and the seating positions. In the rear, the car was fitted with a 2-seater bench seat instead of the classic Dacia 1310. This made it easy to create space laterally for suspension system elements.

The vehicle floor has been lowered so as not to inconvenience the driver. The dashboard instruments are still standard. For a sporty and aggressive design, engineers added a number of distinctive plastic elements and the Dacia Sport lettering appeared on the dashboard.

Among the special features Dacia Sport has offered drivers are:

- radio-cassette system;
- day-night rear-view mirror;
- improved climate control;
- anatomic stylized seats with headrests.

The launch of the Dacia Sport model was an important event in the history of the domestic automobile. This project offered the automotive market an agile, high-performance and reliable vehicle. The Dacia Sport has been used on the automobile circuits for more than 20 years.

ARO is the first and only 100% Romanian production automobile company.

The first contact with commercial success came in 1965, when Romania started exporting M461 to China and Colombia.

Until 1981, all models produced by ARO in Campulung Muscel went exclusively to state institutions.

ARO was also built in Portugal, under the name PORTARO, and in Spain, under the name HISPARO.

In the early 1980s, ARO ranked fourth in the world in terms of the number of off-road vehicles sold and markets.

A private Czech company called "Auto Max Czech a.s." from the town of Hradec Kralove offered new ARO cars for sale until 2013, but the Czechs' biggest problem was that they could not trace the legal owner of the ARO brand.

As for the Czech company's offer of new ARO cars, it was unexpectedly diverse. All 24, 32 and 33 series models were available. Some were even in stock.

Prices for a new ARO ranged from 416,000 to 500,000 Czech crowns (around 17,000 to 20,000 euros), including all taxes. There was a network of dealerships in the Czech Republic, five in number, and even an unexpectedly extensive network of specialized ARO service outlets: 25 units.

All ARO models offered by the Czech company are powered by Andoria's 2.4 liter supercharged diesel engines, which deliver between 87 and 117 horsepower, with an average fuel consumption of 10 to 12 liters per 100 km.

The quality of the finish was better than previously achieved at Câmpulung. The warranty is three years or 100,000 km.

The Czech-made AROs are equipped with power steering, air conditioning or optional additional heating, aluminum wheels, off-road tires, fog lamps, bumpers, winch, high-performance audio systems, etc.

Oltcit S.A. was a French-Romanian joint venture with 64% owned by the Romanian side and 36% by the French side.

According to the contract, Citroën was to supply a turnkey plant for the construction of a small car based on the latest technologies owned by the French at that time.

The Oltcit was intended to be a high-performance car compared with the competition at the time. This agreement between the parties led to a considerable increase in the number of orders placed with Citroën's factories and with French manufacturers of machine tools and equipment (one third of all orders for machine tools in France in 1978 and 1979). The car and plant sales accounted for about 3 million hours of work for Citroën workers across France to manufacture capital goods and 500,000 hours for design,another 500,000 hours working on vehicle plans.

There was talk at the time that the infusion of Romanian capital into Citroen had somehow prolonged the agony of bankruptcy of the French company.But with all the money taken from the Romanian state as a contractual party (first assembly parts, machinery, etc), Citroen did not escape bankruptcy, and was eventually bought by Peugeot.

The Craiova plant has a happy destiny compared to ARO, Tractor of Brasov, Rocar Bucharest, *et al*. The truth is that almost nobody in the country's leadership has pursued a beneficial development of the car manufacturing industry. The state refused to sign Oltcit's collaborations with companies such as Renault, imposed disadvantageous fiscal restrictions for the companies and the companies had bad management. Oltcit held out until 1996, mostly due to quality (imported) paint with low corrosive levels. Old engine, lack of research led the plant and the cars made here to disappear

The Otcit 12 CL was a prototype, it was 300 mm longer than the CS, the CL's problem was that when it was loaded, it would bend in the middle and the doors would open, a problem noted by RAR and mentioned in the article dedicated to this model in The Autoturism Magazine.

The "Oltcit" cars manufactured in Craiova had a short history of 15 years. Production of this type of car began in 1981 and ended in 1996. The acceptance of know-how mergers at the Craiova car factory meant that it did not disappear, as happened with the ARO Câmpulung Muscel factory. This created continuity in the manufacture of cars, which, admittedly, are not Romanian, but the factory is still operating today.

According to his story, we conclude that the Oltcit car is perceived today as a misunderstood genius, a glorious failure, and the memory of a vehicle that had the courage to be different.

The design of the Dacia 500 Lăstun was completed at the end of 1985. Two years passed before it went into production.

The Lăstun could only have been a good car if Romanians had been able to build it. And it's not just the technological limitations, but also the lack of interest of those in the labor field, which led to a decline in the quality of products in all areas in Romania in the 80s and 90s. As Paul Pascu says with visible bitterness, "many of the milestones achieved in the horizontal industry were rejects, and built from them, the little Lăstun had no chance of becoming anything other than another reject".

The fact that so many variants were tried, produced and homologated or non-homologated for so many Romanian car brands demonstrates the ingenuity and ingeniousness of the engineers and technicians who were educated, trained and prepared by Romanian post-secondary or higher education. This aspect reflects the good training of engineers in Romanian engineering faculties, who are well liked and appreciated anywhere in the world.

Therefore, the scientific paper has achieved its purpose and objectives for which it was written.

References

1. Government R. Ordinance No 27 of August 31, 2011 on road transportation. Romanian Government, August 31, 2011 [Interactiv]. Available: https://legislatie.just.ro/Public/DetaliiDocument/13120. [Accessed March 4, 2025].
2. Opriș D. The first cars made in Romania. old.cimec.ro, June 1996 [Online]. Available: https://old.cimec.ro/Muzee/Auto/AUTO.HTM. [Accessed March 4, 2025].
3. Crișan M. Oltcit. romaniancar.com, April 8, 2014. [Interactiv]. Available: http://romaniancar.com/. [Accessed March 4, 2025].
4. dacia.ro. DACIA. dacia.ro, March 4, 2025 [Interactiv]. Available: https://www.dacia.ro/despre-dacia/istoric.html. [A Accessed March 4, 2025.
5. M. Ion. ARO, the first car produced in Romania. rador.ro, September 26, 2023 [Online]. Available: https://www.rador.ro/2023/09/26/aro-primul-autoturism-produs-in-romania/. [Accessed March 4, 2025].
6. pint.ro. Malaxa - the first Romanian car in Romania was not Dacia!. pint.ro, October 16, 2013 [Interactiv]. Available: https://pint.ro/blog/care-a-fost-primul-automobil-romanesc. [Accessed March 5, 2025].
7. Șocariciu C. Dacia's new logo: Change of identity In 2021, Dacia introduced a new brand identity. And from now on, the new logo and modern logo are present on all models of the brand from Mioveni. autocritica.ro; AUTO CRITICA, June 15, 2022 [Interactiv]. Available: https://www.autocritica.ro/feature/noua-sigla-dacia-schimb-de-identitate/. [Accessed March 6, 2025].
8. stirileprotv.ro. What the DACIA models you've never seen look like. Story prototypes. stirileprotv.ro, June 10, 2011 [Online]. Available: https://stirileprotv.ro/exclusiv-online/hi-tech/foto-modele-dacia-pe-care-nu-le-ai-mai-vazut-pana-acum-secretele-celui-mai-cunoscut-brand-romanesc.html. [Accessed March 7, 2025].
9. aro4x4. ARO History. aro4x4, October 26, 2023 [Online]. Available: https://aro4x4.ro/istoria-aro/. [Accessed March 7, 2025].
10. automobileromanesti.ro. Romanian cars. automobileromanesti.ro, 2009 [Interactiv]. Available: https://www.automobileromanesti.ro/Aro/Aro_Prototipuri/. [Accessed March 7, 2025].
11. Ionescu AA. The painful story of the Dacia 500. autocritica.ro, April 26, 2021 [Interactiv]. Available: https://www.autocritica.ro/feature/dacia-lastun-ideea-rebutul/. [Accessed March 7, 2025].
12. wall-street.ro. Malaxa 1C car. wall-street.ro, March 5, 2025 [Online]. Available: https://www.wall-street.ro/slideshow/Auto/258178/cand-au-fost-fabricate-primele-masini-romanesti/2/malaxa-1945.html. [Accessed March 5, 2025].
13. ro.wikipedia.org. ARO. ro.wikipedia.org, January 24, 2024 [Online]. Available: https://ro.wikipedia.org/wiki/ARO#/media/Fi%C8%99ier:Aro_Campulung_Muscel.png/2. [Accessed March 7, 2025].
14. commons.wikimedia.org. File:Calandre Oltcit.jpg. commons.wikimedia.org, January 26, 2024 [Interactiv]. Available: https://commons.wikimedia.org/wiki/File:Calandre_Oltcit.jpg. [Accessed March 7, 2025].
15. Atanasiu B. A brought back to life Dacia 500 Lăstun has arrived at the Romanian Car Register. What speed can the "plastic beast". ziare.com, September 22, 2022 [Interactiv]. Available: https://ziare.com/dacia/dacia-

500-lastun-rara-performante-motor-benzina-cai-putere-viteza-1762499. [Accessed March 7, 2025].
16. wikimedia.org. File:Dacia500 logo.gif. wikimedia.org, July 21, 2022 [Interactiv]. Available: https://upload.wikimedia.org/wikipedia/commons/b/bb/Dacia500_logo.gi. [Accessed March 7, 2025].