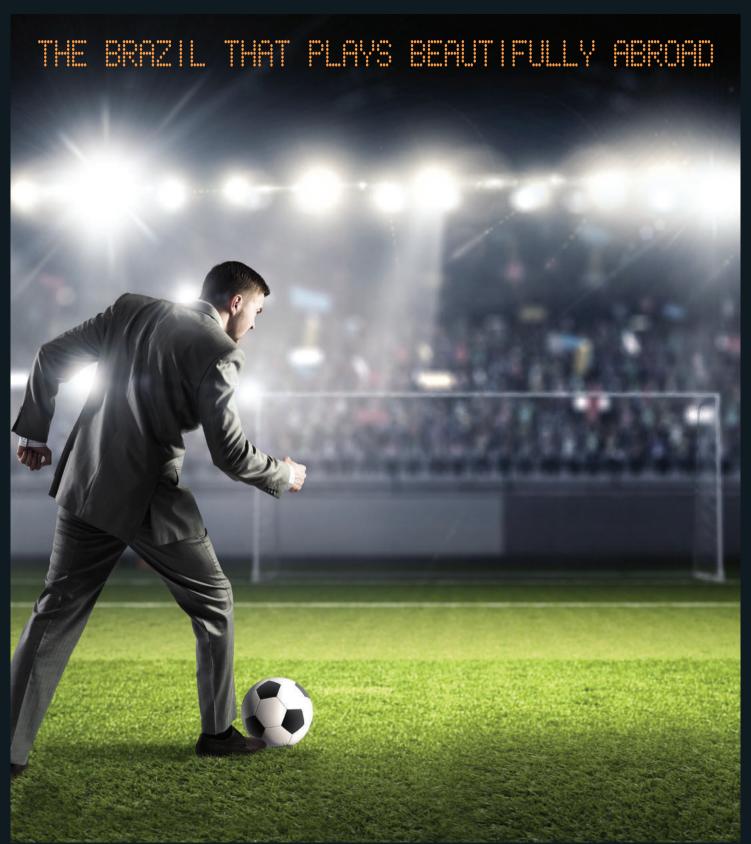
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### » INDEX

## Brazilians play well abroad: some have factories in other **SPECIAL** INTERNATIONALIZATION countries, others dedicate a large portion of production to exports. There is still victory of our engineering for supplying exclusively the headquarters of automakers. It's a whole new world: advances in digital transformation are **TECHNOLOGY** MANUFACTURE occurring in highly collaborative virtual environments where everyone participates of the industry's development at the same time. The theme is delicate and a lot of people avoid talking about it: **LEGISLATION** EURO 6 Proconve P8 still generates a lot of discussion, especially behind the scenes. The technical debate is the smallest of the problems. which have larger focus on political and market issues. Main domestic market launches show good performance in sales **ANALYSIS MARKET** and help pull the market up, but regionally the dispute is quite unique: the Polo has better result, but Kwid and Argo have their victories. Brand associations go abroad in search of references to design **ESSAYS 2025** DISTRIBUTION a new business model for dealers in Brazil. The difficulty begins in convincing the dealers themselves that it is necessary to modernize. Mercedes-Benz inaugurates proving ground for trucks and buses **ENGINEERING** 40 R&D in the factory of Iracemápolis, SP, an investment of R\$ 90 million, a direct result of the incentives of Inovar-Auto. There is a plan to expand the complex, but it depends on the new federal policy. With an eye on individual entrepreneurship Iveco presents Daily LAUNCH **DAILY CITY 30S13** version studied and developed especially for this new customer audience which requires in particular ease of driving and avoidance of restrictions of movement in large cities. After two years of decrease Bosch revenues in Latin America **RESULT** 48 BOSCH grows again in 2017 - and for this year the expectation is the same. Brazil was directly responsible for the result, since the country accounts for 80% of the businesses in the region.

LENSES	FROM THE TOP	AUTODATA ASKS	PEOPLE & BUSINESS	END OF CHAT
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## The backstage of the automotive industry. And the situations in the hornet's nest that nobody pokes.

Ana Theresa Borsari, general director of Peugeot and Citroën: efforts for a new image.

## AUTUDATA ASKS

We choose a theme monthly and invite a specialist to respond

## **LEALTH & RAZINE22**

Executive moves and other news from the Brazilian automotive industry

## END OF CHAI

The most relevant and irrelevant headlines of the month, handpicked by our editors

» EDITORIAL

# A Brazil that that enchants abroad (and disappoints here)

Marcos Rozen, Editor

n World Cup times like this June, we now live a green and yellow spirit that naturally emerges in the Brazilians before battles faced by players in the stadiums from abroad.

This pride, however, should find support beyond the sports universe. In the automotive, as we portrayed in this edition, there are a lot of reasons for that. Companies here become true multinationals. Others work strongly in exports, sending Made in Brazil products to more than a hundred countries. Our engineering wins competition to exclusively supply the automaker headquarters.

Undeniably, it is quite true, at the same time we have to live with own goals against ourselves, and the reflexes of the recent truck drivers' manifestation may be the best example. The automotive industry was the first to be paralyzed by the failure of the just-in-time system, which this industry itself invented, 100% supported by transportation realized by vehicles that the same industry produces. It is a paradox of continental proportions, just like our country.

And from this general and generalist indignation exploded: about our main type of energy, the cost of electric cars, the death of railroad transportation and similar issues, obviously and conveniently forgotten when the fuel returned to the pumps of the stations.

Maybe it is an excellent opportunity to go deep in important discussions left under the carpet decades ago, based on real facts: despite everything, it was interesting to see such a megalopolis like São Paulo having miraculously fluid and gentle traffic, graced by low pollution levels. Result, yes, of search – even forced - for alternative notions of mobility and even immobility, without it here, it is evident, to brag about the facts that led to it.

In any case it was clear from the strictly automotive point of view the dependence on ourselves and how complacent we are on this issue. Would not it be the time for the industry itself in name of its well-being, to bring to society a new concept of transportation? It may seem like an altruistic proposal but it's actually quite individualistic - just be less immediate and think a little more than a mere fuel indicator pointing to empty.









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## WHAT TO SAY, THEN?

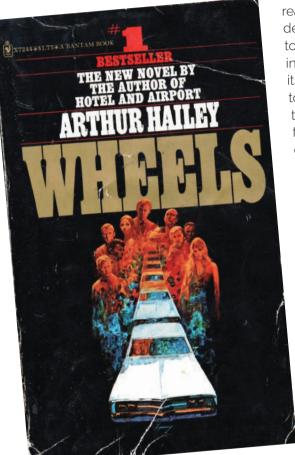
It is useful, and mainly pleasant, to go back to the past to remember a story, although, like in this case, it present itself as fiction – and what fiction! Wheels as work of Arthur Hailey, from 1971, as my copy, from the 15th edition published by the

Nova Fronteira Editora,

was bought in 1984. It is reasonable to date its descriptions from 1968 to 1970. The vehicles industry, as proved itself again, not from today it recognizes the virtues of the future, of the effective combat against the air pollution generated by the internal combustion engines powered by fossil-fuel until the sub-issue of the clean engines - but always as a work of the future. For an industry that plans 10 vears in advance the automobiles it loves a little procrastination in a way to take the last possible profit's penny



even if it costs delays and losses to society.



## WHAT TO SAY, THEN? 2

Follow the dialogue excerpt of two executives with a group of journalists on page 64:

"Over time, - intervened Elroy Braithwaite [Adam Trenton's boss] we believe there must be progress on the batteries, with enough stored energy in small dimensions. And what's more, there is great potential for electric vehicles in the downtown traffic. But based on everything we know, it is possible to foresee that this will not happen before the 1980s." "And for those who think electric cars will stop air pollution - Adam [head manager of product planning] added - there's a factor that many people forget. Regardless of the type of batteries used, they need to be recharged again. So, like hundreds of thousands of cars connected in electricity sources, there will be a need for a much larger number of power plants, each generating its own air pollution. Since power plants are usually built in the suburbs, what will happen is that we end up taking the mist out of the cities and transferring it there."

## WHAT TO SAY, THEN? 3

In 438 pages of text Hailey talks about steam engines, which was the way how the industry at the time referred to the idea of fuel cell, discusses the lower weight and the greater efficiency along with the low cost, signs with hybrid and electric vehicles. It promises new materials, lighter types of steel that would absorb the force of impacts - 47 years ago. And it also describes computers embedded in the dashboards that make braking a regenerative energy action. It is, in synthesis, a very upto-date conversation, it seems like a today's conversation with any reasonably well-informed executive in the vehicle industry.

## WHAT TO SAY, THEN? 4

So what? Nearly fifty years later, hybrids and electric vehicles seem even closer - but how much, after all, for decent access of some of the largest part of the economically active Brazilian population? More: what to say then, about the autonomous vehicles?

## **GM VEHICLES COME FROM CHINA**

The local vehicle industry, along with its recognized virtues, emphasizes the local character of its developments, the presence and leadership of hundreds of Brazilian engineers in decisive positions in global projects, their fabulous investments in this area. It always supports projects such as Inovar Auto and Rota 2030 and expecting them to contain a lot of R&D investments. But in the case of General Motors in what it seems like the company decided to innovate even if this type of innovation does not appear in its press releases: the company decided to reduce at minimum level its engineering area based in São Caetano do Sul, SP.

## **GM VEHICLES COME FROM CHINA 2**

This way the future will show, in Brazil, vehicles developed basically in... China. The hallways, as well as those people fired, say that few engineers are dismissed every week "not to be so evident". It is people with a lot of company time, usually personnel internally forged and that should not be replaced because the vacancies have been extinguished: it will remain small contingent necessary for the progress of what is coming.

## CRAVATTA PER TUTTI

Nothing like generating profit to encourage certain elegance incensed with a touch of formality. This is what happened the other day, on Friday, June 1, in Balocco, near Milan, when a rare well-dressed Sergio Marchionne - by nothing less than John Elkann, Gianni Agnelli's grandson -, announced good FCA results: "That's why the tie is so important today, because since 2007 I was not able to deliver the great results we have now, and that we will have a strong future as we project in this new plan by 2022". He was very pleased because "since 2004 I do not see such a good position. Maybe I have to search at the history of Fiat of the last century a situation as strong as the one we live today."



## **CRAVATTA PER TUTTI 2**

Here's what he said about the Rota 2030 project: "If the program is not approved it will influence all brands, and all of us will have to adopt a strategy based on other parameters, like opting for electrification. But we have to take advantage of the potential of the region, such as ethanol, flex fuel. (...) If it is not approved, which would be a huge mistake, we will have a great loss for the environment."



By Vicente Alessi, filho
Suggestions, criticisms,
comments, offenses
and the like for this column
can be directed to the email
vi@autodata.com.br

## New management for a new image

na Theresa Borsari is a lawyer graduated by the University of São Paulo. She began her career in the area of customer protection, where she worked for Procon (Consumer Protection and Protection Program) and for the law that created the Customer Defense Code. In 1995 she arrived at Peugeot of Brazil, precisely as

director of customer's service.

From there she held several positions until reaching the headquarters and, from there, to the direction of PSA in Slovenia and Peugeot in Southwest France. In 2015 she returned to Brazil as general director of Peugeot and earlier this year also accumulated the command of the Citroën and DS brands.

In this exclusive interview with AutoData she tells how the unified management process of the three PSA brands in the country will work, reveals plans for Peugeot and Citroën in terms of product, comments in the end of the company's relations with Sérgio Habib (ex-president of Citroën in Brazil) and much more.

## PSA always defended how important was to keep the management of Peugeot and Citroen separated, as a way to preserve the personality of each brand. Why did it change?

This move is not a new thing. I did it in Slovenia six years ago, I did the unification of the brands there. It is not a recent movement of the Group, what happened was that Brazil was the last country to apply that.

## Is there any specific reason for that?

The understanding here was that the brands were so weakened that they needed, before, managers that gave personality back to them, that lead them on the right way before a unification to get efficiency.

## Will all the operations be unified?

It is an administrative fusion. The commercial and marketing areas remain independent, with independent products, independent field professionals. Of course there is an operational efficiency gain: the brands always work separately, and when they are put together there is a critical analysis of the process to understand which is the most efficient, you take the best from each one. The distinction of the brands is still stronger when there is only one professional watching them because when there are two, they can think about two different ways that can converge up ahead.

## Was that a little bit of what happened in Brazil with Peugeot and Citroën? Both were losing relevance in Brazilian market over the years.

I believe that during a not short period, and in a very clear way, the company lost the North of the orientation for the customer, underestimated that orientation, thought that it was already implemented in Brazil, that the job was done, that the product would do all the job by



itself. I am very focused on the customer, I started my career in that area. I always believed in a company focused on the client. When I came back I saw a little of that situation, sort of devastated earth, very sad. This was the first challenge then: to redirect the company as a whole, including the dealers, for the customer.

## Is this the reason why PSA is lower in sales that it could be in Brazil today?

The job that I am doing is brand image evolution, of demonstration, with the client's truth. This is a very substantial job, with a base, there is no communication work enough if the base is not solid. This world where there was a publicity saying I Am The Best and that's it, it's over. With social media and people talking to each other the one who tells the truth is the customer, and this basis job is for delivering to the customers an experience that makes them say 'Wow,

so this is what I've got in Peugeot, in Citroën', and from there build the brand.

## What is the main objective of this fusion? To raise the market share of both brands?

The objective is efficiency gain and we do not necessarily get participation with that. We want to effectively assure coherency in the complementarity of the brands. This move brigs results in a mid-term: unifying the administration does not mean that we will sell more. But with a more efficient management in a mid-term we will have better results for the company.

## So, you started this job with Peugeot in Brazil and now you are going to extend it to Citroën?

Nowadays, the position and the brand construction for Peugeot are very clear, the path is totally traced. Of course that result comes with time and we can't accelerate that, because we are in the beginning of the story. In Citroën's case



we are still in full transformation, on the eve of what may be the greatest launch of the brand in Brazil I the C4 CactusI, and we want to take this opportunity not just to launch the car but the new promise of brand as well. We are not starting from a degraded image, but of a more solid residual, a rescue. It is the same principle, even remodeled. I believe this process will be even faster than it was in Peugeot because in that case the change was more substantial.

## Can you notice that the Brazilian customer in general consider French cars not so reliable, from the quality and service point of view?

The image issue, breaking past references, reconstruction, is from mid and long-terms. It is a process. I'm not saying 'Look, it is all solved, everyone thinks we are perfect because we are doing our homework'. I'm just saying 'We are doing our homework'. It's from a solid base that we will change our image. This will happen only when the customers experience the products and say 'Wow, the brans have changed'. This is the process. On a certain way this is already happening. It would be ingenuity from us if we thought we would revert that in two years. We know that just doing our job internally is not enough, we need to explain this to the customer. A good example is the Peugeot Total Care, a program of post-sales in the Brazilian market: there is no other brand offering anything similar. We put more than 1 thousand backup cars on the dealers, we are the only brand that gives to the customer scheduled maintenance free of charge if the work takes more than 24 hours. There are real features to the customer, noticeable ones, which demonstrate that transformation. From this program Peugeot's image has changed a lot in the digital media, and we multiplied by three the conversion rate in sales.

## What about the resale value?

We knew that there were two main points



"In a very clear way, the company lost the orientation for the client, underestimated it, thought that the job was done, that the product would do it by itself."

to attack, the after-sales and the resale value. For sure, Peugeot cars, today, do not devalue more than rivals. And, in the same way, we created programs to stablish confidence to the customers who entered the showroom, and so, Novo de Novo (New Again) from Citroën and Renova (Renew) from Peugeot, were born. They are in all our publicity, it is a world movement, it is the same concept of leasing with purchase option that exists in Europe for a long time, and in our case it is the same dealers which is responsible for the repurchase commitment. This concept already represents more than 20% of Peugeot's total financings and in Citroën, just released, we reached 15% in one month.

## And right at this moment of transformation the businessman who brought Citroën to Brazil, was its president and the largest dealer asks to get out of the business. Was it a surprise?

All professional relationship is a consequence of the focus that has been given by both parts, and from the moment that the focuses are different the situation ends up flowing naturally to a separation. So there was no surprise. The most important is that we take this moment for a deep restructuring in the dealers, we work with partners who really want to focus on the Citroën brand and in its developing.

## And why did he not want to do that, since he carried a very strong identification with the brand?

I think over the years he, as an entrepreneur, focused on other businesses, he stopped having relevance even to us, now he was a small dealer. This relevance you see may be much more of the amplitude he had in the past than now. In the markets where he was acting he was not the only one dealer, so we have dealers, selected and working. It's a totally different situation from what it was in the past, it's even a natural thing, that every automaker goes through.

## So, now, are you going to select new dealers?

Initially our focus is to give preference to the network that already exists. I found many entrepreneurs focused on the business. It is a mostly one-brand network, with a strong historic. It is not a coincidence that there is this residual of brand, it is not only one person's work.

## Are we talking about only Citroën's houses or joint houses with Peugeot?

They can be only Cirtroën or joint-branded, we don't have any dogmas about this. We have in the group the possibility of creating a synergy on the after-sales bigger than the other automakers. Where the situation is favorable we have to take advantage of it.

## How many houses of the network are joint?

30%. If necessary we can increase this index, but the format is not the recipe of success, it is much more the way to operate and the opportunity. Where a business is sustained with both brands both stay, and if not suitable we work with a single-brand structure. It is the benefit of a multi-format, it is the world trend: flexibility.

## How was your experience at the headquarters?

Inside a career in a multinational company there is a time when you can't canvass anything without a passage in the headquarters. It was exceptional, to know deeply the way things are in the headquarters, to understand the mechanisms, how things work. I grew up a lot, even politically.

## Commercially speaking, what are your main goals?

There is still a lot to happen. Initially we will attack in the commercial vehicles segment, which we have already started in Fenatran (International Transport Industry Show). It will consolidate by the end of this year, our idea is to have a por-





"I think over the years Sérgio Habib, as an entrepreneur, focused on other businesses, he stopped having relevance even to us, now he was a small dealer." tfolio close to the European, with small, medium and large vehicles in several versions. We are the leaders in SUVs in Europe and there is no reason why it may be different in Brazil. It is one of our ambitions in the medium term. Including automobiles, in general, in terms of market our goal is to reach 5% of share until 2021, as PSA, adding Peugeot and Citroën [today is around 2%].

### With DS?

Without DS. Today we are in a preliminary work to study what can become DS in Brazil.

## **And without Opel?**

Yes. In the short term there is nothing about Opel on the table for Brazil.

## In terms of product, will the main focus be on SUVs?

Both brands are generalist. We will not abandon segments neither in Brazil nor in the world, the product plan is worldwide. The idea is to be present in the main segments with appropriate platforms to each of the markets and adjust the offer to what the market demands.

## In your point of view, why does the Brazilian market is going so well in sales even with a tumultuous political scenario?

The cycle of replacing a car in Brazil is extremely short, whoever has a three--vear-old car thinks it is an old car, the person feels bad about it. The crisis dammed a lot of demand. We realized that the replaced vehicles are not old, they were semi-new. The people who don't have conditions for that are not buying, but the people who have the condition for that are replacing their cars, and today's interest rate helps. I think that, for now, it is more a cultural issue than economic. There is the fleet question too, where in that case there is a financial question, which is postponed to a certain extent, after that it becomes unfeasible. To sustain this growth we need that the economy help us from now on.





ast month the commercial director of Aethra, Osias Galantine, drove an electric Tesla sports car across the streets of the United States. The executive was there to, among other commitments, attend a meeting with the purchasing area of the Elon Musk's automaker, interested in acquiring products from the company based in Betim, MG.

The crisis in which the Brazilian vehicle market has been through over the last few years changed the plans of the company's directors. In 2016 an important decision was made - Aethra needed to expand its global presence. For two main reasons: to mitigate the dependence of the Brazilian market and obtain new and greater opportunities with its main customers, the automakers.

"The products are more and more global", Galantine summarizes.

The directors decided that the first step would be in the American market. The commercial director tells that the production volume and the reindustrialization wave of the automotive sector there, promoted by the current government, were fundamental factors for the choice: "Donald Trump is giving many incentives for the local production, with tax reductions."

Galantine himself heads the project, which includes own factory, scheduled to start operations in the end of 2019.

Ohio was the chosen state, basically for the location, in the same geographic region of Michigan and his homeland Detroit and the proximity of North Carolina - besides the state, where there is a strong presence of the automotive industry. According to the executive there are lands under analysis to receive work.

The first step has already been taken, with the hiring of a local representative last year and the opening of an office, that will happen soon.

Everything will be a consequence of closing contracts. For the job in the United States, Aethra chose some of its specialties to form its main portfolio, such as hot stamping and hot strip rolling mill, as well





The first adventure of Marcopolo abroad happened in 1991, in Portugal. Important lessons have been learned: the European market is very distinct.

as organometallic coated steel fuel tanks. The targets are light and heavy vehicle assemblers.

"We developed a prototype of this tank for an automaker and we have several conversations in progress. We held face--to-face meetings and via Skype to present our portfolio. There are negotiations with FCA, Ford, General Motors, Honda, Toyota and VolvoTrucks."

Becoming successful in its internationalization plan Aethra will be part of a select group of companies of the local automotive sector that have extended its range to other countries. The Brazilian automotive industry, if may not have succeeded in giving origin to a 100% na-

tional light car manufacturer, has already exported several companies.

Marcopolo and Fras-le are typical and extremely representative examples.

Marcopolo's first adventure abroad was in 1991, when the company from Caxias do Sul, RS, decided to start an operation in Portugal. The factory in Coimbra, however, did not resist the global crisis that began in 2008 with the collapse of Lehman Brothers bank in the United States and closed the doors soon after producing less than 1% of its capacity in 2009.

## BETTER IN THE SIMILAR ONES

"We learned the lesson: the European market is very different from ours", attests André Armaganijan, director of international business strategy. "We now focus our efforts on markets similar to the Brazilian, such as in Latin America, Africa and the Middle East. Besides having similar products, the growth potential is greater."

It was in the beginning of this century that Marcopolo started to take firmer steps in these emerging markets. It started with Colombia, where the company formed a partnership with a local manufacturer to supply truck trailers to Transmilenio, an urban transport system that was beginning to be born in Bogota, Capital.

Then the company headed towards Mexico, Argentina, and again crossed the Atlantic, but this time to get to South Africa and from there to Egypt, India, China and even Australia.

"In some countries we formed a society, in others we built a factory from scratch. We also have our share in a Canadian company operating in the United States."

Last year, R\$ 790 million of the company's revenues came from its operations outside Brazil. Caxias do Sul, however, still plays a fundamental role in the company's business: domestic sales and exports together, Marcopolo earned about R\$ 2.1 billion.

The case of Fras-le is different – the external operations already are the major part: in the first trimester 53% of revenues

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came from abroad. As Sérgio Carvalho, president of the auto parts manufacturer of Caxias do Sul, reveals, "we suffer much less from the impacts of the crisis in Brazil than other companies because we diversify the businesses globally."

## **BRAZILIAN FACTORY IN CHINA**

Fras-le's internationalization process began at about twenty years ago with exports to the aftermarket segment in South America and then through a partnership with Meritor in the United States. In 2008 the company built its first factory out of Brazil, in China, totally from scratch, without local partnership.

It worked so well that in November of last year the company inaugurated another unit there two times larger than the initial one. There are 15 thousand m² of built area and capacity to produce 5 million disc brake pads and 10 million heavy duty brake pads per year for the light and heavy aftermarket.

And it was not even inaugurated yet and the new Chinese factory already demanded expansion: "The initial capacity has already been taken. We are investing to expand, buying more equipment in China."

Also last year Fras-le purchased three companies in South America: Armetal and Farloc from Argentina and the Uruguayan Fanacif.

And it went even further: in India the company entered into a joint venture with ASK Automotive, an investment of US\$ 5.1 million to buy a 51% share of the supplier that attends the disputed two-wheeler segment.

Carvalho represents the right man on the right mission: he joined the Randon Group after years in the United States, working at Meritor. He returned to Brazil precisely to embrace the acceleration plan of the internationalization plan.

The executive observes that the company, now, has well divided revenue sources generated by the original equipment, replacement and export segments, as



There is no longer a chance to export with a readjustment contractual term via dollar: the Chinese do not do this and the comparison is with them.

well as national and international operations: "We export to 107 countries."

Both executives highlight that the internationalization process of their respective companies is still ongoing. The president of Fras-le warns: "Right now all I can say is that this process has not finished yet."

Even without industrial presence outside Brazil Zen's auto parts arrive at more

than one hundred countries with the engraving Made in Brazil. They are all made in Brusque, SC. According to President Gilberto Heinzelmann, the search for foreign customers began in the 1970s:

"About five years ago we made the balance steady: on average 50% of our revenues come from exports and the other half from the domestic market."

## INDEPENDENT OF DOLLAR

In Brazil the company supplies the original and aftermarket segment, while in the external market is mostly for the aftermarket. The executive highlights that selling to other markets is part of Zen's strategy despite the dollar's value.

"We made a huge effort when the exchange rate decreased below R\$ 2, exporting with very low profitability. But we had the feeling that, although not so financially interesting, exports were strategically important in that period. We can not export only because of the exchange rate."

According to the president the value of dollar in the Brazilian market is not so important for the international customer:

"The competition is with the Asians. And that's the comparison they make."

Heinzelmann says that a stable exchange scenario, independent of the level, is the best for the companies' planning: "Today we receive exchange rates for a project that is 24 months ahead, with a three-year contract. The lack of stability is a nightmare, because there is no more room for readjustment with customers, even because Brazil is not very expressive abroad and the Chinese do not impose this type of contractual term."

Anyway Zen now reaps the fruits of its work: by maintaining shipments even with little or no profit ensured the customers level in the favorable dollar period for the exports, its current situation. Besides that the shipments have guaranteed the production of the company in the last years, not suffering with the crisis of the domestic market.

"Now we are going to surf in the wave of the resumption of Brazil and increase the exports", tells the executive highlighting that recently the company has closed contract with automakers from Mexico for start-stop engine system.

## **Brazilian truck with German stamp**

Although today it is not a company of Brazilian currency, Volkswagen Trucks and Buses, part of MAN, has its origin fundamentally from Brazil. In 1980 the German headquarters acquired Chrysler Motors of Brazil, which used to manufacture the Dodge trucks, and changed the company's name adopting the VW brand, until then unknown for trucks. The first VWCO reached the market in 1981, produced in its

own old Chrysler unit in São Bernardo do Campo. It was nothing less than a surprise. In July of 1990 the production was transferred to the Ford unit in Ipiranga, period of Autolatina.

In 1995 the dream of having its own factory finally came true, with the inauguration of the factory in Resende, RJ. From that, the internationalization of division process has started – the first factory out of Brazil was built in Mexico in Puebla, followed by an SKD operation in Nigeria. Both are controlled from Brazil, which was the headquarters of all commercial vehicles division in Rio for years. The change began in 2012 when MAN, controlled by the VW Group, acquired VWCO. Now both are part of the Volkswagen Truck & Bus, conglomerate that also controls Scania.

t is getting more and more often the speech of efficiency improvement in the automotive industry to be competitive abroad. Rota 2030, the new industrial policy, is expected to be a definitive boost so the national sector presents itself to the external market as a relevant competitor.

Even without an official policy, at least for now, there are several ways to reach this: internationalizing operations or investing to destine much of the production abroad even when the dollar does not show an advantageous relation (see page 20). And the path to the outside is not closed even for local operations of global companies.

A great example of this comes from Dana, the manufacturer of transmission systems. The Brazilian operation was chosen to produce a new axle shaft model, a specialty of Gravatai's unit, RS.

The factory where axle shafts have been produced for driveshafts for nothing less than 71 years - Albarus was born - has proved its long history and specialization in the component to beat tough internal

## Brazilian Super Service

Dana Gravataí provides new axle shaft that equips Ford Super Duty F-450 pickup truck sold in the United States



global competition. And so it meets Ford's exclusive demand in the United States: axle shaft for the Super Duty F-450 pickup truck, impressive 3.5-ton load capacity thanks to the dual-wheel drive on the rear axle.

Since 2016 the Brazilian unit has sent the component to the US market, jointly designed by the team of Brazilian and Ford's headquarters engineers. In the commercial aspect, the initiative represents an opportunity to participate in a large volume business: the F Series pickup trucks account for the largest share of the automaker's sales in its homeland.

In the four months period 287 thousand units were traded, a 4% increase compared to the same period last year. The F-Series sales show, according to Ford's balance, twelve consecutive months of growth - and this April was the best since 2000 with 73 thousand units.

The positive scenario, according to Luís Pedro Ferreira, director of international is-

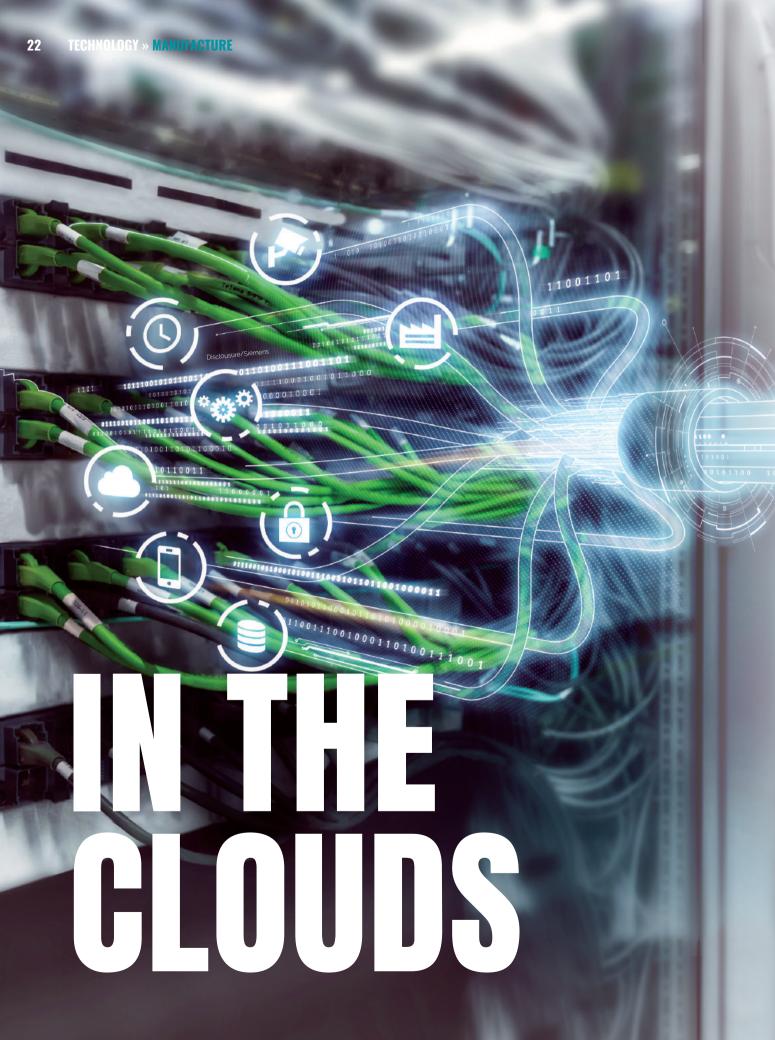
sues at Dana of Brazil, analyses situation that leaves the company less exposed to variations of the internal market: "It is important because it gives us business alternatives in other regions and strengthens the export profile of the Brazilian operation ".

There is another relevant aspect: the professional qualification. Ferreira says that the work of the Brazilian engineers was determining so the unit stayed one step ahead in the dispute for the contract.

"Conquering and maintaining a business this big is also a validation of competitiveness and competence, which goes beyond the stereotypes associated with Brazil and against all the vectors that afflict manufacturing in the country, since structural costs, energy, raw materials and labor until the tax challenges, besides the own exchange oscillations."

Aside from issues related to the product, Dana had changes in its structure to produce the new axle shaft: the company invested R\$ 125 million in equipment purchases to compose new production line, in addition to expenditures in R&D.





## The advances of digital transformation are happening in highly collaborative virtual environments, where everyone participate in the industry's development at the same time

he infinite possibilities of technologies utilization and solutions in what is called Industry 4.0 can unintentionally mess up the Cartesian reasoning of the automotive world, born from mechanical technology and not digital. In a certain way, this revolution that takes all the departments of the automotive industry world is a novelty.

The same people who created the wonderful solutions for the Industry 4.0 are not able to put in one single answer how the utilization of so many technologies and new processes will happen at the same time, and now, in the whole automotive supply chain. The sky is the limit!

This atmosphere was clearly felt in the huge pavilions of Hannover Messe, the largest industrial technology fair in the world, held in April: the place was permeated by optimism in bringing to reality such transformation that could change forever and for the best the development, the manufacturing, the way to consume and the use of several products - not just vehicles.

We are living the first minutes of this new era 4.0. The transformations have occurred so fast in the last five years of the development of this concept - for the standards of the automotive industry - that 50 million data are collected and analyzed every day quickly becoming improvements in productivity or in technology that will solve an insoluble problem until then. This amount of information was unthinkable when the first electronic computer systems were introduced to the industry in

the beginning of the 1990s, kicking off the transformation we witness now.

## **DIGITAL TWIN. ARTIFICIAL INTELLIGENCE**

All this takes place in the cloud, a digital environment featured by hundreds of companies in Hannover Messe. This is the meeting place for new concepts such as IoT, the internet of things, big data, digital twin, artificial intelligence and virtual office shared by an endless volume of companies and specialists who work, all together and at the same time in the construction of a collaborative universe, with the only objective of creating fast, efficient, safe and low cost solutions.

This is the digital industry that left a clear message at Hannover Messe: the moment to apply its solutions in the operations of vehicle manufacturers, suppliers, power generation, naval industry, aeronautics, chemistry, agriculture, mining and even in a soccer field is now. Right now.

The costs and challenges for the digital transition are not few, but so are the benefits. The numbers are estimated at billions of dollars, as the introduction of Industry 4.0 as the efficiency and cost reduction as well.

It is complex to visualize such a transformation, but perhaps the lawn of the Allianz Arena of Bayern from Munich, Germany, can be a good example. Sensors all over the stadium, including on the lawn, analyze various conditions such as temperature, air humidity, nutrients in the ground and even possible shadows of the structure that impair the solar incidence at some points of the soccer field. These data



THE ATTACK OF THE SPIDERS
Robot of Siemens makes automation something portable and flexible.
The robot-spiders can do several types of tasks and are easily reprogrammable

are collected by a platform in the cloud and quickly processed to return a diagnosis of which treatment must be given to every inch of the field.

With all this information the person in charge of the lawn care knows if there is a risk of emerging pests that would attack the grass, besides programming the correct amount of watering.

### **MINDSPHERE**

This was the case presented at the largest booth of the fair, of Siemens, to show its MindSphere platform, a cloud environment capable of storing, controlling and generating data for scanned companies. It is safe and collaborative environment that also enables the integration of solutions created by several companies, startups and partners that work in this new and promising segment of the technology industry.

"This is what we call Industry 4.0. We have been developing technologies, equipment and software for all industrial activities for only five years", told Klaus Helmrich of the Siemens's board of directors. "This process will now be accelerated with the new version of MindSphere and we are ready to offer an innovative solution."

In the automotive sector the MindSphere platform is being used in all stages of development, factory configuration and production process. Companies like Daimler, Nissan, Volkswagen and Volvo already work in the cloud to make these processes more efficient.

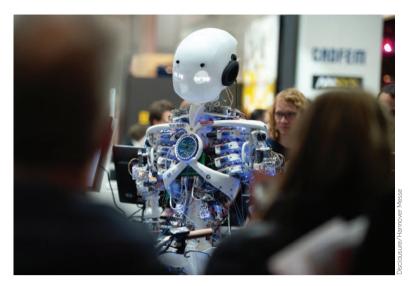
## **NEW PRODUCT IN HALF OF THE TIME**

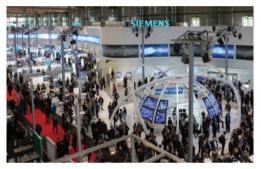
According to the experience accumulated by Siemens with what is called digital twin, reference to the use of customized software, with great processing capacity and network collaboration within the cloud, there was a reduction of 50% in the time of a new product reaching the market. With the digital development it is possible to configure the vehicle structure to use combustion or electric motors, for example.

In 98% of the processes of all production chain, which are much automated in countries like Germany, the programming for a new product can be quickly simulated and updated in the factory's machines by an app.

And still, according to Siemens, the constant analysis and data generation in MindSphere make possible to foresee 99% of possible errors and defects that may occur in any connected assembly line.

Although some initiatives as in the Anchieta plant of Volkswagen and the Mercedes-Benz unit, both in São Bernardo do





LEAVE IT TO US, HUMAN At the Hannover Messe in Frankfurt, Germany, many demonstrations of systems and machines that talk to other systems and machines and work very well by themselves.

HOW MUCH FOR THE SHOW?
The difficult is to obtain numbers that are not related to terabytes and alike. Probably because it costs a lot to reach the large savings generated by Industry 4.0 in

factories





Campo, SP, to use Industry 4.0 solutions, the communication index of machines is still timid around here. In the 332 AutoData edition of April 2017, it was found that only 7% of the machines in the local automotive industry were connected, while in North America this index is 19%, in Europe 20% and in Asia, the leader region in this transformation, 40%.

However, the novelties applied in the industry here already offer some type of benefit in the production. More than that, Industry 4.0 has encouraged workers who are involved in fully manual operations to create solutions using its technologies.

In FCA many processes use the digital twin concept, the IoT tools or are fully connected in the cloud. This novelty for much part of the factory labor encouraged the development of solutions that brought previously unthinkable benefits. This is the case of the maintenance of the solders of the robots used in Betim, MG.

## FROM EYE TO SMARTPHONE

An army of about 100 operators performed the predictive maintenance of the 645 factory robots, 420 of them dedicated to soldering components. Until recently, this verification was purely visual, checking all the copper tips of the welder-robots.

So two electricians of the team mapped all compliance parameters in the welders' operation and developed a smartphone app that monitors the performance of these robots at a distance.

On the other hand the FCA digital twin, a US\$ 1 million virtual reality room investment capable of simulating not only the design of components but the factory configuration and the operation of system assemblers in the vehicles, contributed to the development of Argo. Overall 160 virtual simulations accelerated the definition of processes.

These are some of the first initiatives that come to Brazil and demonstrate, in practice, that this time the technology will not run over the automotive industry as it did with the advent of smartphones a few years ago.



## Simon Williams, of QuantumBlack

Co-founder of the data analysis British company which was born in Formula 1 in 2009. QuantumBlack is specialized in combining and analyzing data that help the teams to promote significant performance improvements during the GPs, as from the car itself as the racing strategy as well.

From an exclusive systematic the company started to offer its services to other segments, such as the industry in several sectors, the automotive in particular. In 2015, QuantumBlack was acquired by McKinsey Consulting, which expanded its services to Latin America.

## What does data analysis of a Formula 1 race can offer to the automotive industry?

When we started the company, 9 years ago, all founders had a background in Formula 1, from race strategy to the truck engineering responsible for the logistics of these races. We noticed how the small little things and small little details could make a huge difference in this segment and we got fascinated by that. Before F1 we worked in other areas and in a certain moment we realized how we analyzed data from the competitions could help identify and explore opportunities in cost and time reduction and quality improvement in other sectors, specially the industry.

## Is sports still the main business of QuantumBlack?

No. We started in Formula 1 and from a sports perspective but now we are more present in areas of complex engineering in advanced industries such as the automotive and aerospace. Those areas, besides pharmaceutical and financial services are our largest activity area. Sports, anyway, represent a fantastic cutting edge laboratory.

## What was transferred from Formula 1 to the industry, exactly?

For example: about car development in racing, they don't develop one front wing, they develop ten, even with subtle differences during the season. So we identify which of these ten wings can offer the best performance in each track. In the case of an automaker that is going to develop a new vehicle the biggest challenges are time, cost and quality. We see the car as a network of 12 thousand connected parts and, this way, we explore the development processes in a totally different way. Putting everything together we can reduce 10% of the time to launch a car in the market, from the beginning of the project to the arrival at the stores.

## 4

## Can the production of hybrid and electric vehicles benefit from this type analysis of data or not necessarily?

Obviously there is a lot of excitement in the industry regarding the autonomous and electric vehicles. Maybe it's a bit controversial, but there are a lot of things that can be done to improve the current business now, not just in the future. For example: reducing service complaints in warranty by 25% will have impact on your business today, while reducing development deadlines will bring results only after some time. In general we do our job from the principle that if the world is turning right we will turn left.

## 5

## Are you currently working in any project in Brazil?

Yes, we are working on some Brazilian companies. We have already started some projects and they have been doing very well. Our first expansion was in North America, but we think there are a lot of interesting cases here in Latin America, with a lot of space for innovation, including administration, and Brazil is obviously the starting place of the region. In very mature markets people sometimes get stuck in certain ways of doing things and it becomes harder to make them absorb new ideas. Here, at least until now, we have noticed a much more open environment.



Disclousure/Red Bull Raci

## P8: TECHNOLOGY IS THE SMALLEST PROBLEM



The technical development to fulfill the new rule Proconve P8, or Euro 6, in theory is ready. There is still political, strategic and market battles to go.

till without a defined date, but with a market estimate to start in 2023, the new Air Pollution Control Program for Automotive Vehicles – Provonve P8, based on the European rule Euro 6, for the containment of pollutant gases and noise emissions for heavy automobiles, it is expected to be concluded this year.

For Paulo Jorge Antônio, director of AEA (Brazilian Automotive Engineering Association), "there is no way to know when the rule will be published. Some meetings happened, public consultation, drafts, everything with a series of entities contributions, but there wasn't the next step. The expectation is that it happens in the second semester".

According to his analysis the technical passage of Euro 5 to Euro 6 will be more complex than from Euro 3 to Euro 5, basically because the limits are naturally more restrict:

"It is a new reality: Euro 5 demands only the engine test bench, while Euro 6 requires tests in the vehicle in a way that this vehicle fulfills the total engine's bench test limit plus a half of it, so that during the daily use of this vehicle the level is maintained as expected. This is called PEMS, Portable Emissions Measurement System".

Although most automakers know very well this technology by applications existed in Europe and in the United States adaptations will be necessary for the Brazilian reality in terms of product, cargo capacity and fuel: "Maybe not from scratch,

but specific development will be necessary for Brazil".

Another important aspect, attests the AEA's director, is that the laboratories where tests happen also need to be adapted to Euro 6.

The fuel issue is directly linked to the percentage of biodiesel even there. And besides that there is the question of maintaining the level of emissions through the useful life of the vehicle - in Euro 5 the minimum requirement is 500 thousand kilometers or five years, while for Euro 6 becomes 700 thousand kilometers or seven years.

"This increment of durability added to the quantity and quality of the biodiesel raise the worries of the automakers."

And the event in Euro 5 must not be forgotten, when several fleet owners anticipated purchases the day before the deadline of new rules entering to force so they escape the additional cost of the new technology - which caused a severe market distortion. For the AEA there is the possibility that this movement happen again in the case of Euro 6. The director, however, discards some of the other fears that occurred in the past phase, such as questions about the supply of the additive Arla 32 and Diesel S10 itself.

### **NO TIME TO FAIL**

As for the term, 2023, still sounds reasonable for Antonio: "Today we can do it until then, but there is no time to fail, It's still a coherent deadline, but less than that would run over things."

Marco Ísola Naufal, researcher at the thermal engineering laboratory of the IPT, Institute of Technological Researches, reveals that the facilities are in renovation process to meet the requirements of Euro 6/P8:

"In parallel, the IPT laboratory realizes training and research projects in the area of RDE, Real Driving Emissions, or emissions tests under real conditions of use."

Probably by the long list quoted previously the Euro 6 theme does not find



easy dialogue with the automakers. The news report looked for DAF, Ford Trucks, Iveco, MAN, Mercedes-Benz, Scania and Volvo to address the issue, but only Volvo responded to the request.

Alexandre Parker, director of governmental and institutional issues for the Volvo Latin America Group, reveals that several areas of the automaker are already working on the development of Euro 6 so when the publication of the new rule comes out. there will be workable time. For the executive, one of the biggest challenges lies in the fuel, because the new technology is more sensitive than Euro 5.

## **LESS TRAUMATIC**

Parker believes that there will be an increase in the final price of the vehicles but estimates that "the transition will be calmer, not as incisive as was the case in the passage from Euro 3 to Euro 5".

About technology he believes that there will be an "Euro 6 with particularities" in Brazil, Volvo has about two hundred engineers who have already been to Europe and Japan to absorb the basic knowledge of the system: "There are specific matters that need to be taken into account in Brazil and in Argentina, such as fuel types and the various local applications".

In his opinion the studies of the resolution follow a traditional parameter, with negotiations inside an already known standard: Brazil has Conama (National Council for the Environment), the technical chambers. Ibama (Brazilian Institute of Environment and Renewable Natural Resources) and the industries. These are discussions that involve a scenario with many faces. Despite the delicate political scenario, we hope that the final publication will happen soon."

Stephen Blumrich, vice-president of Umicore, catalyst manufacturer, affirms that Euro 6 represents an evolution of Euro 5 and, for its stricter limits, will demand a different system: instead of one catalyst as used in Euro 5 three will be needed for Euro 6.



To meet this new demand Umicore acquired, last year, the unit of Joinville, SC, of Haldor Topsoe, from Danish origin, which produces catalysts of the SCR type. "Euro 6 needs all three types of catalysts together. In addition to this SCR unit we have in Americana the production of oxidation catalysts and filters so we can offer to the market the whole product range needed for the P8 with local manufacture."

## **DEADLINE HAS ALREADY PASSED**

He adds that "production lines are ready to provide for the P8 technology without higher investments, but it is very important that the regulation comes into force, with all its definitions so that automakers and suppliers meet the date. If the initial idea was five years we have already missed that date and we run the risk of a postponement to 2024, which may affect exports."

The engines' manufacturer MWM is currently working with a partner to launch Euro 6 in India and in Mexico. According to Cristian Malevic, director of the engines business unit, the biggest challenges are in the engine calibration and in the post-treatment, the use of an additional particle

filter and the emissions' measurement in real cycle of operation, which will demand the use of portable equipment in combination of routes and factors of use.

"The investments for the acquisition of all the equipment are very significant, as well as the delivery time and the stabilization of results."

As his colleague from Volvo Malevic estimates that the new system tends to cost more than the previous one, but with reduced fuel consumption space or power density increase as compensation when compared to the passage from P5 to P7: "The difference of price will depend a lot on the comparison with Euro 5, of the acting market, the vehicle segment and the company's strategy, besides other factors."

In turn Cummins is also getting prepared to receive the Euro 6 in Brazil, taking advantage of a know-how acquired by engineers in China, the United States, India and England. According to Adriano Rishi, engineering director, "the new product will be different, searching for efficiency, to consumption reduction and initial cost".

He believes the biggest difficulty will be the integration of the system: "In Euro

A DEAFENING SILENCE AutoData sought all of the country's truck and bus manufacturers to talk about the Euro 6 theme. Only one company, Volvo, accepted the invitation.







Spectacular classic-modern combination: Cummins has set up a program to equip the legendary double-decker London buses with the advanced Euro 6 engines.



6 the marriage between the engine and the application is fundamental to meet the requirements".

FPT equally brings from abroad the experience of the new technology. Today, in its development center, located in Betim, MG, there are dozens of engineers and technicians dedicated to this theme, studying calibration, validation, durability tests and homologation. Many went through training in Turin, Italy, and Arbon, Switzerland.

Gustavo Teixeira, FTP Industrial specialist in motor vehicle homologation for Latin America, recalls that in relation to Euro 5 the next emissions limits of pollutants should be much more restricted: "In the case of NOx the foreseen reduction is 80%. This requires more efficient catalysts and the use of several technologies together."

Francisco Nigro, professor in the me-

chanical engineering department of the Escola Politécnica da USP (Polytechnic School of University of São Paulo), is part of the group which is linked to energy efficiency and new motorization technologies of Rota 2030. And he clarifies that currently the discussions of P8 revolve around each type of application and standard definitions:

"What we did in Euro 5 for a truck works differently on a bus. We are, at the present stage, studying the types of vehicle, consumption, distances, loads, roads. From there we intend to standardize the tests in four or five types".

The conversations, he adds, involve different instances such as MDIC (Ministry of Industry, Foreign Trade and Services), Ibama (Brazilian Institute of Environment and Renewable Natural Resources) and the Ministry of Mines and Energy: "Euro 6 is a very sophisticated emissions system that can even overcharge fuel consumption. We will only be able to reduce the levels of CO2 with E6 engines, but it is more complicated to convince the parts when there is an element of worsening in the consumption. But controlling pollution is the most important."

There is a possibility, including, that the P8 get to the urban buses first, with a later staging for other applications and vehicles.

### **REASONS OF THE RESISTANCE**

Olímpio Álvares, mechanical engineer, is a specialist in emissions and studious of the subject. For him "Euro 5 does not work well because it does not fully control NOx emissions at low RPMs no longer being efficient in urban operations. Santiago, in Chile, for example, skipped Euro 5 and went straight to Euro 6 in its urban bus fleet, since some vehicles are supplied by Brazilian automakers".

According to him "one of the reasons why the automakers here resist is the homologation in the streets. They will have to follow the tests throughout vehicles' useful life as they accumulate mileage. This is what will guarantee the quality of the vehicle".

# EACH KING IN THEIR KINGDOM

Main launches register good performance in sales and help pull the market up, but regionally the dispute is quite singular

n old saying about the market guarantees that the Brazilian does not resist a good novelty. That feeling of being the first to park at your garage parking space a model only seen on TV or being asked a lot of times about your new car at the gas station has enough strength to overcome any logical or rational argument that determines a purchase choice.

And the sales results of the most recent launches in this 2018 are proving this behavior.

AutoData has compiled data of some launches and analyzed their commercial performances, nationally and regionally. As criteria, it was adopted the effectiveness, in other words, only really new vehicles

participated, not considering launches of specific versions and alike. The deadline, limited to the last twelve months, and minimum sales, within the first fifty models of the Fenabrave ranking from January to May.

Inside this analysis the most successful model was Polo, the sales leader of the beginners. It is the VW most sold of the year, above Gol, and fulfills the manufacturer's goal to be on the list of the country's top five selling cars in general: until May the car is even one step higher, in the fourth position.

Kwid comes in the second position, seventh of the general Brazilian ranking in the accumulated of the first five months. It achieves this objective imposed by Renault,

## Brazil



			^averag	je calculated from Fe	bruary   ^^average c	alculated from March
Position	Model	Units	Average	Local ranking	Brand's best selling?	Fulfills targets?
1st.	Polo	29 165	5 833	4th.	Yes	Yes
2nd.	Kwid	24 674	4 935	7th.	Yes	Yes
3rd.	Argo	22 499	4 500	10th.	Yes	<b>Partly</b>
4th.	Virtus	12 732	3 183*	23th.	No	<b>Partly</b>
5th.	Cronos	8 186	2 728**	30th.	No	<b>Partly</b>

to be the best-selling model of the brand in the country, surpassing Sandero.

The third is Argo, which like the others became the best-selling of its brand, Fiat in this case, taking Mobi's position. But its monthly average sales this year, 4.5 thousand, is still below the projected 6 thousand/month.

Sequentially are Virtus and Cronos, in order, although both have a bit of unprivileged analysis than the others: the actual VW registrations started only in February and Fiat's sales in March.

It is certain that both did not disappointed: Virtus is already VW's top-selling sedan,

overcoming Voyage, even though it is extremely distant from Corolla, which for now compromises the brand's goal of making it the country's best-selling mid-size sedan. And Cronos also represents the top-selling Fiat 3-volume model, beating Siena.

Considering only the three hatches, the regional performance is quite irregular. In some states Polo wins this particular contest, while Kwid and Argo also lead in others – a proof that brand's efforts have been worth it and that consumer's behavior is only linear regarding the novelty theme while the particular choice can vary greatly. Check out below:

## São Paulo





Position	Model	Units	Average	Local ranking
1st.	Polo	8 533	1 707	3rd.
2nd.	Kwid	7 021	1 404	8th.
3rd.	Argo	4 628	925	16th.

In the largest market of Brazil the Polo model goes very well, behind only Onix and HB20. Kwid sells less than others - at least in theory - SUVs like Kwid cost the double or more, such as HR-V, Kicks and Compass. Argo loses from Etios and Mobi.

## **Minas Gerais**





Position	Model	Units	Average	Local ranking
1st.	Argo	4 725	945	9th.
2nd.	Polo	2 692	538	13th.
3rd.	Kwid	1 953	391	20th.

Arriving in Minas Gerais Argo has the payback: in the state the model sells more than the rivals and its volume is even higher than in São Paulo. Polo sells nearly half of Fiat's model and Kwid has a regular performance, losing to Mobi.

## Rio de Janeiro





Position	Model	Units	Average	Local ranking
1st.	Kwid	1 869	373	3rd.
2nd.	Polo	1 767	353	4th.
3rd.	Argo	1 422	284	9th.

On the other hand, Rio de Janeiro is Kwid's territory, even reaching the podium of the general sales ranking of the State, behind only Onix and Ka. Polo comes right behind it, and so both sell more than the HB20. Argo does not goes bad either and it's above Compass, Kicks, and Corolla.

## **Rio Grande do Sul**





Position	Model	Units	Average	Local ranking
1st.	Polo	1 770	354	4th.
2nd.	Kwid	1 664	333	5th.
3rd.	Argo	1 134	227	12th.

In Rio Grande do Sul Polo wins, but Kwid is very close. Both take the top-five list, while Argo watches the dispute far beyond, only in the twelfth position, losing to two direct competitors, the VW Gol and Fox.

## Paraná





Position	Model	Units	Average	Local ranking
1st.	Kwid	2 486	497	2nd.
2nd.	Polo	2 035	407	4th.
3rd.	Argo	1 455	291	10th.

In Paraná the Kwid emerges between the novelties and is the second most sold in general in the state losing only to Onix. Polo has good result and Argo loses its breath again, repeating the scenario that occurs in Rio Grande do Sul: here the model was even behind Sandero.

## **Distrito Federal**





Position	Model	Units	Average	Local ranking
1st.	Polo	1 547	310	1st.
2nd.	Argo	1 124	225	4th.
3rd.	Kwid	953	191	7th.

In Distrito Federal, Polo celebrates its best performance, being the best-selling in the general ranking, beating Onix and HB20 with it. Argo recovers from poor performance in the Southern Region and has the second position in the analysis and the fourth in general. Kwid is left behind and loses to Compass

## **Bahia**





Position	Model	Units	Average	Local ranking
1st.	Kwid	982	196	7th.
2nd.	Argo	929	186	9th.
3rd.	Polo	884	177	12th.

If te model celebrates leadership in DF, in Bahia VW cries one of its worst regional performances. The best here is Kwid, but still only seventh in general, losing to Corolla, Compass and Prisma. Argo is the intermediary model, but behind EcoSport, while Polo sees Gol ahead.

## Ceará





Position	Model	Units	Average	Local ranking
1st.	Argo	<b>590</b>	118	7th.
2nd.	Kwid	581	116	8th.
3rd.	Polo	563	113	9th.

In Ceará is located the most exciting dispute, with the three models disputing and following from seventh to ninth positions of the State, with Argo on the front but for a little bit. And with that, the happiest models are the ones that are ahead, like Corolla, Mobi and Compass.

## THE DAY THAT DEALERS WENT TO GOOGLE

Dealer's associations go abroad in search of references to design a new business model for dealers in Brazil

Brazilian group of dealers was in the region of the Silicon Valley in March, California, in the United States, to watch a presentation by Mario Herger, an American innovation and technology consultant and author of several books about the theme. The speaker exhibited the picture of a baby on the screen and asked the audience:

"Hasn't just born the last person to take a driver's license?"

What Herger questioned, naturally, was if in eighteen years from now autonomous cars will be so developed that the driver's license could become something simply useless since the driver's condition would become equally unnecessary. In an even more extreme scenario, it may be possible to imagine an eventual prohibition of driving in the name of reducing or completely eliminating traffic accidents.

## **NO RESPONSE**

The objective of the speaker, of course, was to offer a provocation to shock the audience, knowing that it was formed mostly by dealers. But this is exactly the type of thing that the distribution segment needs today, believes Luis Eduardo Guião, known as Dado, president of Assobrav, the Brazilian Association of Volkswagen Dealers.

The trip to Silicon Valley, totaling around two hundred people, was a joint initiative





"The dealers business has followed the same standard for fifty years. It's very traditionalist."

Luis Eduardo Guião, Dado, president of Assobrav



between Assobrav and Abrahy, the Brazilian Association of Hyundai Dealers, taking advantage of the same trip of the group to the annual NADA Show, promoted by the National Automobile Dealers Association, in Las Vegas.

There were visits to several companies like Google and HP as part of the program and presentation of a vast series of lectures about technology, entrepreneurship and innovation, such as Herger's presentation.

The central objective was and still is to try to design a new model for the vehicle dealers business in the country as this "follows the same standard since the beginning of the automotive industry here", Dado attests.

It is not only certainly a prickly and arduous way as it is still light-years away from even trying to find an answer to Herger's provocation, the speaker. Before that, it is necessary to convince the dealers that a deep change is fundamentally necessary, attests the president of Assobrav.

"In the case of Volkswagen the dealers are formed by more than two hundred groups that control more than five hundred points of sale. They are, therefore, more than two hundred heads, each one thinking their own way and at their own pace."

Yes, there is resistance inside the dealers' universe because of some changes in the structure of the business: things have been done like this, after all, for more than fifty years and it has always worked. The traditionalism here is really heavy.

And there is no relief with the possibility of a change of scenario when the next generation assume the business because possible successors are jumping off the boat, totally uninterested in running a dealership because, guess what? Things are done today as things have been done for fifty years - which in a young person's mind eliminates any possibility of performing a minimally interesting or challenging career.

To try to break these Everestian barriers Assobrav had only the first initiative of this type in the trip to Silicon Valley. Two other



Tesla houses are the most modern reference available today: they seem more like Apple stores than a OKM car dealership - and they belong to Tesla itself.

missions abroad were carried out, destinations Israel and China, these without specific focus in the automotive universe on purpose and composing a group formed also by professionals from other areas, such as financial, startups, law firm and even architecture.

"We try to glimpse in these trips the most macro atmosphere, learning and sharing experiences to provide with more information to us, references and ideas to try to trace the future of the business. In China, for example, we were impressed by

noticing that they skipped one stage, from the use of cash straight to payment by cell phone, ignoring the credit card. Even a hotdog salesperson has a QR Code printed on the cart to process the payment."

A relevant point is that executives of represented automakers are also participating in the missions. This is already an advance, considering that up until recently many factory-dealers relationships have been in disagreement: "Brands were going to one side and dealers to the other side. We are trying to get them closer to define a path for the same direction."

It is good to remember that there are clear signs that some manufacturers have apparently got tired of waiting for some movement of their respective dealers on the way to modernity and have begun to take some steps of selling by themselves in Brazil, such as Fiat and Renault in their new e- commerce systems, even without eliminating completely the dealer.

Another interesting point: although the initiative comes from Assobrav the dealers of other brands also end up receiving direct impact because most part of dealers is

multi-branded - in the case of VW this profile reaches 60% of the dealers. The group of the president of Assobrav, inclusively, represents Renault and Toyota.

### **NO ONE KNOWS**

And facing what has already been seen, is it possible to establish the ideal format for a dealer from the future?

"Nobody is able to say precisely what the model will be like today, what will work. Our job is to try to understand now what is happening in the process, the technological and customer's changes and from there to develop something new."

But at least there are clues, good clues: a well-defined concept is the need to have in physical stores the same experience that now exists on digital platforms. "For the customer, today, buying a car is not an attractive experience, it does not have a sexy appeal."

According to a survey by Assobrav in a universe of only 4 thousand customers seventeen of them approved the whole process of buying a OKM vehicle.

In this context, the best available references available today are the Tesla and Apple stores, which are far from the parameters of traditional resales: "I believe it will be similar to this, by this type of model, not only here in Brazil but in other countries."

The question is so complex that there is no way to hit the hammer on the table definitively and deliver a ready formula to the dealers now or even in a few months. In this way Dado's objective and his team is to have at least some well-studied, defined and directed parameters so that the next president continues the work - his current term, the second, ends in one year and a half.

Meanwhile the provocations and surprises continue, which must, somehow, at least push the process forward. Like what happened in Israel, when during a lecture with Uri Levine, creator of Waze, a dealer asked his vision about the future of vehicle dealers.

"They will end", he guaranteed without hesitate.



A MERELY PERSPECTIVE QUESTION Have you ever seen someone so happy and smiling like this buying a new car at a dealership?

# LEGACY OF INOVAR-AUTO

Mercedes-Benz inaugurates proving ground for trucks and buses in Iracemápolis, with an investment of R\$ 90 million

f anyone still doubts the benefits that an incentive policy, such as Inovar-Auto or Rota 2030, can bring to Brazil just go on a tour around Iracemápolis, in the countryside of São Paulo, near Piracicaba, and soon after passing by some series of sugar plantations to observe the proving ground that Mercedes-Benz inaugurated there in mid-May.

The enterprise is simply the largest and most advanced proving ground for commercial vehicles in the Southern Hemisphere. It was built in eighteen months next to the automobile factory that the company has maintained there as a result of investment of R\$ 90 million. It has, in a 1,3 km² ares, specialized technology infrastructure for the development of trucks and buses with sixteen asphalt, concrete and land tracks in a total extension of 12 kilometers.

Good part of the resources used came from Inovar-Auto. Mercedes-Benz does not reveal this value or the relative percentage of the benefit, but guarantees that if it wasn't for this the investment would hardly be approved for Brazil. That is what

Philipp Schiemer, president of Mercedes-Benz Brazil and CEO in Latin America, said: "I am sure that without this help, we probably would not be able to build the proving ground here."

### **GERMANY AND THE UNITED STATES**

The new proving ground is the third of the type installed in the world and places Brazil definitely as one of the main company's global vehicle development hubs in the commercial vehicle segment - the other two are in Germany and the United States.

"This complex expands our capacity for simulations and tests and, consequently, the technological development of our products", says the president, "as for the domestic market as for the exports."

By the manufacturer's calculations 17 thousand kilometers driven on the test tracks are equivalent to almost 1 million kilometers driven on roads and streets: "It's a huge efficiency gain that will enable the development of customized solutions which will make us more competitive."

There are sixteen test tracks in total:





test tracks form the complex: 14 especially for analyzes linked to durability and resistance.

thousand km driven on the test tracks are equivalent to 1 million km traveled on roads and streets

km is the total extension of the tracks, including 1,2 km of unpaved

1,2 km of unpaved area to measure seal against dust and mud

fourteen made of concrete, made to check structural durability, one of acoustic and thermal comfort and one off-road track. A total of 844 concrete slabs were installed, 5 m long each with varying widths and weight of 15 to 18 tons - are identical to those existing in the proving grounds in Germany and in the United States.

The new proving ground is interconnected to the others which will allow engineers, in real time, to monitor all vehicles being tested at any of the three units, sharing all the data.

The support structure has rooms, mechanic's workshop, computers and IT network. And as it is installed next to the automobile factory the structure will share several areas such as security, medical care, food and other services, saving resources needed for administration.

The complex will still be expanded in a second phase, with construction of area for speed tests. This, however, still

The next step, construction of tracks for speed tests, will depend on how the incentives for R&D will be contemplated in Rota 2030

depends on the approval of investment by the headquarters and at this point the president of Mercedes-Benz seemed very worried because, in theory, the release of the contribution would be almost directly linked to the approval, by the government , of Rota 2030 and its new R&D incentive program:

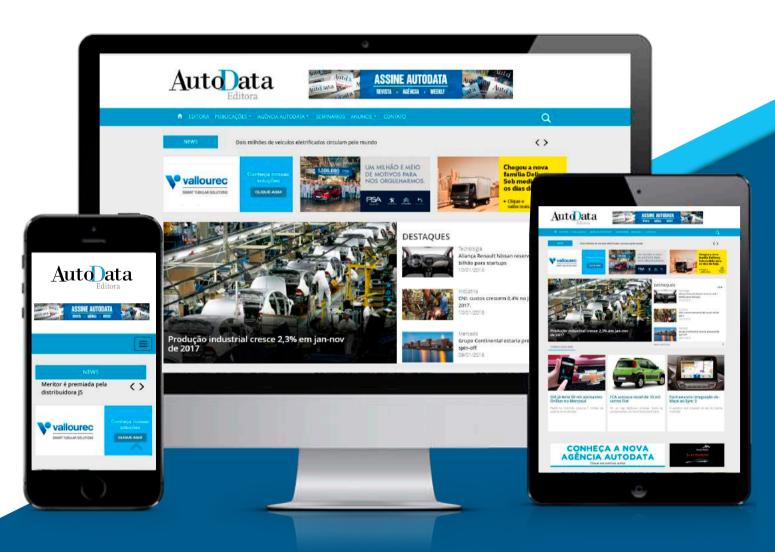
"The problem is that with incentives generated by the law known as Lei do Bem (Law of the Goods), as it is being negotiated, it will be very difficult to approve a new investment because we do not know when the operation will register profit in Brazil again."

Schiemer went on, after recalling the fact that the truck manufacturers are still operating with more than 50% idleness: "And we still have the current problem of the Argentine economy that does not allow us to visualize the future of exports."



## **AUTODATA NEWS AGENCY**

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With an eye on individual entrepreneurship, Iveco presents version of Daily studied and developed especially for this new consumer audience

fter twenty months of a lot of research, development and conversations with many Joes and Marys, that in this case represent the current individual entrepreneurs that are emerging in Brazil, last month Iveco launched the new Daily City 30S13, chassis and van with capacity to transport up to 3,5 tons and extends the line options also to the urban distribution and small trades markets.

The novelty had already been shown casually in the last Fenatran, the National

Transport Fair, in São Paulo, in the end of last year and, at the time, generated a lot of curiosity.

"This is about a new transportation vehicle option specially designed to serve the public that needs an appropriate vehicle to the challenges of their own business and big cities", says the director of sales and marketing Ricardo Barion. "This contemplates from circulation restrictions to driving easiness and the need for low fuel consumption."



Twenty months of research indicated the most important needs: low fuel consumption, driving easiness and escape urban circulation restrictions.

The idea of creating the new Daily City assumed that entrepreneurship has grown intensively in recent years, what has changed transport needs mainly in large urban centers thanks to new models of small businesses and, mainly, e-commerce.

For Barion "this is a new and important market niche. Research indicates that by 2030, 90% of Brazilians will live in urban areas, from which 70% of GDP comes from". He believes that this move will lead to an e-commerce growth in an intensive way.

According to the executive, the digital commerce of vehicles already increases, on average, from 15% to 20% a year and brought changes in distribution logistics, with more flexible deliveries and reaching more locations.

"We went into the field and tried to understand exactly what these new entrepreneurs needed, and only then started the development. In other words, we heard a lot of Joes and Marys who work with the most diverse activities and, from this, we are sure that the new Daily fully attends to what they asked for and need."

According to Barion with the launch Iveco starts to dispute for this new niche because the product meets specific needs in delivery and raw material purchase as well.

Produced at the Iveco industrial complex in Sete Lagoas, MG, the Daily City





Everyone with a B license can drive the new Daily models, in other words: no professional license needed for the chassis version and the van as well.

30S13 has a technical GVM of 3.5 tons and can circle the streets freely in any city and time because it belongs to the category of light commercials. This also allows that the vehicle may be driven by anyone with a B-license (no professional qualification is required).

The model has chassis and van versions. Attributes such as volume capacity 30% higher than the other rivals in the first one and in the second version, it comes with 12 m<sup>3</sup> of space and doorway with 1 m go high and 2 m 70 opening.

The engine is the FPT F1A of 2.3-liter, with 130 hp and equipped with EGR technology, which does not require the use of Arla 32 - according to Iveco it is 10% more economical than its direct competitors. The gearbox is ZF, the 6S480, manual with Overdrive system for greater fuel economy in road use.

The comfort has also received attention: the new front suspension, independent and with last generation leaf spring, improves the drivability and amplifies that sensation of an automobile.

Prices: R\$ 108 thousand for the chassis version and R\$ 128 thousand for the van.

"We are sure that with this new vehicle we will expand our market share and consolidate Iveco as a reference in the light segment market."

### Positive moment confirmed

Iveco confirms positive moment in the Brazilian truck market: "After suffering for almost four years in terms of sales, we felt the beginning of the recovery at the end of the third trimester of last year and the scenario continued during the first four months this year", attests Marco Borba, vice president.

Continuing at the current pace, he calculates, sales of trucks located in segments above 3.5 tons - which last year registered a 3% increase compared to 2016, a true market relief - are expected to be in the range of 80 thousand units what would represent an increase of 33%. "We've been through a difficult

time, it's true, but since the end of last year there have been positive growth rates in industry, retail and consumption as well. There is good probability of GDP evolution and we will have new agricultural harvest record: all of this normally reflects on sales of trucks."



# A COMMUNICATION AGENCY EXPERT IN STRATEGIC SOLUTIONS FOR THE AUTOMOTIVE INDUSTRY

Creation and implementation of corporate events, creation and management of relationship and networking campaigns in the automotive industry



**RESULT » BOSCH**By André Barros

# LATIN AMERICA SMILES AGAIN

48

After two years of decrease Bosch's revenues resumed growth levels in the region in 2017 - and for this year the expectation is the same

osch, after two consecutive years of decline, is celebrating the results obtained in Latin America: driven by the recovery of the Brazilian vehicle production, the company closed 2017 with revenues of R\$ 6.1 billion, which represented a 7% increase compared to numbers of 2016.

According to the company the figure meant an improvement in the operational result of the region, although it was not revealed if the final balance showed positive or negative numbers.

Brazil was the direct responsible for the growth resumption because it represents 80% of Latin American businesses - in 2017 sales represented R\$ 4.9 billion only in the country. Of this total, 28% came from exports, having markets of its own region as well as North America and Europe as the main destinations.

According to Besaliel Botelho, president in the region, due to the exchange rate last year exports lost little share in total invoiced revenues. However, he considers that this is still a healthy index and that this number must grow in 2018, "because we have competitiveness in the United States, Europe and Asia."

The mobility area, which contains the automotive businesses, is the most relevant inside the Bosch Group: it represented 65% of sales in the region. Then, far away, there are business with consumer goods, 22%, industrial technology, 8%, and energy and building technology, 5%.

# Marcos Peron/Disclousure/Bosch

### **IN PARAGUAY**

For the result of 2018 the expectation is to repeat the evolution index, in other words, to grow in the 7% range once more. So far, the numbers have been even better, says Besaliel Botelho, president in the region: "We started 2018 very well, with increase higher than 20% in the first four months."

### He also says that "Latin America continues to be an strategic region for Bosch, and our positive performance reinforces that".

This year Bosch foresees investments of R\$ 130 million in its operations in the region especially in the modernization of the assembly lines. In addition to that, there will be a new sales office in Paraguay – operations has already started there, aside from Brazil, in Argentina, Chile, Colombia, Costa Rica, Ecuador, Panama, Peru, Uruguay and Venezuela.

## Income increased 7% last year compared to 2016. And for this year the projection is to keep the same rhythm.

Last year the company invested more than R\$ 308 million only in Brazil, being R\$ 127 million in modernization of the assembly lines and structure, portfolio development and Industry 4.0, R\$ 162 million in R&D, R\$ 16 million in environmental projects and R\$ 3.8 million in social, cultural and educational projects.

According to the president of Bosch factories have been through many adjustments in the last years. The labor was reduced for 1.6 thousand people - today the company employs 8.3 thousand employees in Brazil and 10 thousand in Latin America.

"We have increased productivity, changed the portfolio and we are looking for new businesses in other segments, such as agribusiness. But even in the recession we invested approximately R\$ 100 million a year". For 2018 the expectation is to keep this stable scenario.

### **Revolution for the diesel**



In a global ambit the big challenge for Bosch is to prepare the diesel engines for the new emission rules in Europe, much stricter. One solution has been presented in the last weeks: a new vehicle powered by diesel with emissions equivalent to one-tenth of today's engines. Besaliel Botelho, president of Robert Bosch Latin America, believes that diesel engines will have their space in the industry one day, even with the advances of electrics, hybrids and of hydrogen cells solutions. The executive understands that the discussion will go through all the electricity production chain in some countries with charcoal energy production the emissions from the electrics, when all the system is taken into account, may even overcome the ones from diesel motors.

For the executive Brazil should realize a separated role in that discussion: although he admits that the hybrid and electric vehicle will possibly have larger presence in the country, especially if contemplated with particular benefits inside Rota 2030, ethanol deserves a more relevant role in our energetic headquarters, he affirms.



### CX 0.28

Audi advances in the development of the E-Tron 100% electric SUV: wind tunnel tests have pointed to Cx, drag coefficients of 0.28, greatly helped by small external mirrors that, for the first time in a production vehicle, will bring cameras instead of traditional mirrors. Autonomy projected in 400 kilometers.

### **SPECIAL STEEL**

Gerdau presented a new line of special types of steel for the automotive industry, in particular for the production of traditional and leaf springs, bearings and gearings.

### **MOVING**

Kongsberg
Automotive is
moving, keeping
the city of
Jundiaí, SP as
headquarters. The
company leaves
a property of 15
thousand m2 of
total area to one
of 42 thousand
m2. In September.

### SYMPOSIUM USP

The Automotive Engineering Center of the Polytechnic School of the University of São Paulo, Poli-USP, and the Federal University of ABC, UFABC, sponsor a Symposium called Competindo na Nuvem e no Solo (Competing in the Cloud and on Soil), which will debate the transformation that the world automotive sector has been through and its technological challenges to produce connected, electric/hybrid and autonomous vehicles. June 16, a Saturday, from 9 a.m. to noon, at USP. Registrations at https://goo.gl/Gq6hWJ.



### **WAZE VIA FORD SYNC**

iPhone Waze users can now project information from the app on the Ford vehicles screen via SYNC AppLink and control it by voice commands in Brazil. The system worked, until then, for only Android phones.



### **CATERPILLAR 50 THOUSAND**

The Caterpillar's line of track-type tractors in Piracicaba, SP, celebrated, in May, production of the 50.000th unit. The model D6K represented the record. The first of them was manufactured in the country in 1969, in the old factory of Santo Amaro, in the capital.

### MCLAREN INAUGURATES

McLaren now has a dealership in Brazil, in the neighborhood of Vila Olímpia, São Paulo Capital. Via Eurobike, its official importer. Offer of the 570S Coupé, 570S Spider, 570GT and 720S models.



### **100 THOUSAND BIG BORE**

MWM Motores celebrates milestone of 100 thousand Big Bore engine blocks machined at the Santo Amaro plant in the Capital of São Paulo. Since 2007, for 11 and 13 liters. Exported to the Navistar Engine Factory in Huntsville, Alabama, United States.

### SIX OUT

Citroën, Jac Motors, Jaguar, Land Rover, Peugeot and Volvo Cars form the list of brands that may not attend the SP 2018 Auto Show, according to the organizers. Thirty brands have confirmed so far.



### **VIANA**

Oduvaldo
Viana is the
new marketing
director of
Bridgestone of
Brazil. With more
than 20 years of
experience in
the area, acting
for companies
such as Mars
Brasil, Itororó
Group, Natura
Cosmetics and
Nestlé.



### **PEREIRA**

Still in Bridgestone Brazil, Edmilson Pereira assumes as finance director. He has more than 25 years of experience in Brazil and abroad, with passages by Kimberly-Clark, Arch Chemistry, PepsiCo, Ford and PwC.



### **MANZANO**

Paulo Manzano is the new manager of marketing and products for Brazil in Jaguar Land Rover. A postgraduate engineer in marketing, 24 years of experience in the automotive industry, he came from PSA Peugeot Citroën.



### **WEHR**

Alexander W. Wehr, President and CEO of the BMW Group Mexico and Latin America, is now also responsible for the Brazilian operation. previously independent of the regional structure. reinforced in 2016 with the inclusion of activities in Mexico.



### **BOAVIDA**

Helder Boavida,
President and
CEO of BMW
Group Brazil,
within the new
regional structure
responds to
Wehr. According
to the company
integration will
improve the
synergy and
competitiveness
of the Group in
these markets.

### **NOT DIESEL**

Volvo Cars has announced that its new S60 sedan will be the first car of the brand without a diesel engine. "Our future is electric", justified Håkan Samuelsson, CEO.

### **FORD REVERSE CAMERA**

Ford introduced a new generation of reverse cameras in Europe: 180-degree vision and automatic braking when an obstacle is detected. Technology is in the new Focus launched in that market.

### THE PIONEER URUGUAY

Uruguay inaugurated the first route for electric cars in Latin America: from Maldonado to Colonia, a 305-kilometer road stretch. The stations are installed at intervals of approximately 60 kilometers and for tourists the service will be initially free.

### **GANDINI COMMODORE**

José Luiz Gandini, president of Kia Motors and Abeiva, was elected the new Commodore of the Ilhabela Yacht Club for the 2018-2020 financial year. "Out of work my passion has always been boats. The sea is the place where I recharge my batteries and Ilhabela is my favorite place", said the businessman.





### **KA FREESTYLE**

Ford introduces the definitive version of Ka Freestyle, which arrives in stores in early July: 1.5-liter Ti-VCT three-cylinder 136 hp engine, six-speed manual gear or automatic transmission, SYNC 3 multimedia center, six airbags, stability and traction control, higher ground clearance. From R\$ 63.5 thousand to R\$ 68 thousand.

### **UNSATISFIED PASSENGERS**

The Idec, Brazilian Institute of Consumer Protection, presented data of evaluation of the bus service in Belo Horizonte. MG, Rio de Janeiro, RJ, and São Paulo, Capital, generated from the MoveCidade app. More than 1,8 thousand responses in the app indicated the maximum occupancy and condition of the vehicles as items of worse evaluation. And more than 70% indicated waiting time of more than 15 minutes for the arrival of the buses in the three capitals.

### **DUNLOP IN TRUCKS**

Dunlop plans to start production of truck tires in Brazil in 2019 at its Fazenda Rio Grande, PR factory, at a rate of 500 units per day. And it also plans to expand tire production for cars and SUVs there from 15 thousand units/day to 18 thousand/ day starting in October this year.

"Is it necessary to have a driver? Is this driver going to be called driver since this person doesn't drive anything, he just operates a machine? So are we going to start calling this person as an operator?"

A question raised by Daniel Mariz Tavares, representative of Denatran (National Traffic Department) in a public audience of the Comissão de Viação e Transportes da Câmara dos Deputados (Commission of Transport of the Chamber of Deputies) that discussed the creation of rules for autonomous cars circulation in Brazil.

**5,7**%

was the increase in the demand for credit of Brazilian companies in the first four months of 2018 compared to the same period of 2017, according to Serasa Experian.

2.5%

of the federal government for the GDP growth in 2018. Previously, was 2,97% 25 970

cases of cargo robbery were registered in Brazil in 2017, according to a study by NTC, Associação Nacional do Transporte de Cargas e Logística (National Association of Cargo Transportation and Logistics).

**1,6** 

billion reais was the loss caused by these robberies, according to the study.

"Technology already exists and could be implemented in Brazil in the short term if we weren't governed by a group of semi-retarded bad-natured baboons."

Lucas di Grassi, Brazilian piloto f F-E, about electric cars in Brazil.

40

billion reais is the estimated cost per year with accidents on Brazilian roads, considering from medical expenses to material damages, according to Ipea (Institute of Applied Economic Research).

"Electric mobility is one of the main options so we can have a healthy mobility, based on the sustainability in the Brazilian independence" (sic)

Gilberto Kassab, minister of Science and Technology, during the launch of Frente Parlamentar Mista em Defesa da Eletromobilidade Brasileira (Mixed Parliamentary Front in Defense of Brazilian Electromobility), in the end of May in Brasília, DF.