

# HIGH-END ENGINEERING

## for better mobility

***Ralph Saliba, President of IAV S.A.S.U.,*** explains to us through this interview the holistic engineering approach of his company and how they contribute to the development of the mobility of the future.



**Ralph Saliba**

**Through a holistic engineering approach, IAV has become synonymous with high-end engineering in the automotive industry worldwide. Tell us more about your positioning.**

As one of the globally leading engineering partners, IAV develops the mobility of the future. Regardless of the specific manufacturer, our engineering proves itself in vehicles and technologies all over the world. With more than 35 years of experience and an unsurpassed range of expertise, we combine the best of many different worlds: automotive and IT, hardware and software, products and services.

With our workforce of more than 8 000 employees and first-class technical resources, we help our customers to implement their projects, from the concept right through to SOP. Our goal: better mobility.

**Digital change is transforming the automotive industry at a rapid pace. What have you seen in this regard?**

The impact of digitalization is indeed significant: Artificial intelligence (AI), Machine Learning and Big Data are finding their way into companies. Our aim is to combine knowledge from the various disciplines – from autonomous systems to the use of the latest AI technologies – with know-how from the various fields. This is where domain meets technology. This mission is driven by our innovation process that is continually improved with a constant cycle of know-how transfer. Another important component is the exchange with our research network. One of our core competencies is to develop new solutions for our customers to achieve production maturity in a reliable way. Every day, we are dealing with increasingly complex systems, higher quality requirements, increasing documentation efforts and shorter development times. Digitalization helps everyone in the industry to meet and master these challenges effectively.

The automotive sector generates an extremely large amount of data. There is a lot of potential, but the systematic evaluation of this data is a major challenge.

We must focus on smart information gathering. We also see a big lever in virtualization and many opportunities in the use of reinforcement learning. It is always a matter of finding new or even better solutions. As a leading development partner, we cannot afford to stand idle and have therefore worked successfully on core technologies in the past. The task now is to deploy these new technologies across the board.

**In which digitization technologies do you see the greatest potential for the automotive industry?**

Visual Simultaneous Localization and Mapping (vSLAM) opens up a promising opportunity to bring intelligent environmental perception into series products in a cost-effective and scalable way. It can also supplement or even replace lidar systems of highly automated vehicles. IAV has developed its own algorithm for this purpose, with a focus on applications in the mobility sector. In addition, software tests are complex and increasingly automated. An AI-based solution from IAV accelerates this process: It creates test scripts from the manual test descriptions and achieves a high degree of accuracy in the selection of automation components. Test automation is becoming increasingly important: many companies rely on machine assistance for software quality assurance because it increases efficiency and allows them to run tests independently. This saves valuable time and reduces costs.



### What are your perspectives in this context?

In the future, IAV intends to distinguish itself even more as a tech provider. Customers should turn to us with all questions relating to digitalization and the use of new technologies. As of today, IAV already owns the best development methods and serves customers who entrust us with their most demanding and success-critical topics and projects. There can be no better basis for IAV as a development partner.

This trust ensures that our expertise is increasingly appreciated and in demand beyond the automotive industry. This is not an end in itself, because in a digital and networked world, universal cross-system solutions are important – solutions that transcend industrial sector boundaries. That is what IAV already offers to its customers today. ×

## IAV IN FRANCE

- Full range of powertrain engineering and testing services, from benchmarking to turnkey projects
- Recent investment in 48V system e-testing
- Extended offer thanks to our long term relationships and network of local partners, in France and nearshore regions
- Key references on strategic technologies development such as high-voltage batteries (HW & SW), combustion and after-treatment technologies, alternative fuels, hydrogen and fuel cell...
- Leading engineering partner in France in ADAS and AD functions development, integration and validation, from research to series applications
- Innovation projects underway with the best European labs and PhDs to foster creativity and a disruptive approach in automated driving, from Level 3 to Level 5
- Teams of highly skilled and flexible technicians and engineers
- [france@iav.de](mailto:france@iav.de)

We have therefore set ourselves the goal of noticeably accelerating the implementation of test automation with the help of artificial intelligence.

Besides, IAV is involved in a research project with more than 60 Work XL street scooters from Deutsche Post DHL. We are examining the flexibility potential of electric fleets and the possibilities of intelligent network integration. Electric mobility is becoming increasingly popular and the demand for electricity is growing.

The danger: without intelligent planning, the supply and demand of energy can become unbalanced at peak times.

To prevent this, IAV, the Reiner Lemoine Institute and E.DIS Netz have joined forces

in a research project specified as « intelligent grid integration of electrified logistics ». The aim is to develop a procedure for automated load and charge management, so that the entire vehicle fleet can be operated in a grid-compatible manner and thus make its own contribution towards grid stabilization.

The idea is to use targeted, time-controlled load shifts to predictively avoid possible grid bottlenecks on the one hand and thus ensure that the fleet is charged, and on the other hand to compensate for the peaks in the feed-in of renewable energies into the grid.