Press Release

Artificial intelligence: Geoptis chooses Hardis Group to help optimize special postal worker journeys

The subsidiary of French postal service La Poste offers local authorities a service for auditing the condition of the roads using an on-board camera mounted on the roof of postal workers' vehicles. Hardis Group has developed an algorithm which has shortened road-assessment journeys made by postal workers in addition to mail delivery routes by 20% to 30%.

Grenoble, November 7, 2018 - Hardis Group, a consulting firm, digital services company and independent software vendor, has announced that La Poste group subsidiary Geoptis has chosen it to conduct a feasibility study and develop an algorithm to optimize the journeys of postal workers auditing the condition of the roads using an on-board camera mounted on the roof of their vehicles. Although video is taken primarily on mail delivery rounds, special journeys are required to cover the whole road system. The solution developed by Hardis Group has reduced distances covered during these special journeys by 20% to 30%.

Identifying and prioritizing work required to rectify issues on the road

Faced with a decrease in mail volumes in recent years, La Poste group set up a dedicated business unit to generate new ideas for local services. These services are trialled and, when promising, are offered as a separate service. This is how Geoptis came about in 2017. After being contacted for a trial by some towns and villages in Maine-et-Loire, the solution was developed by the La Poste technical department in partnership with Logiroad, a Nantes-based company.

The principle of Geoptis' service offering is simple: a camera, protected by a specially designed housing which also contains a spare battery, is mounted on the roof of postal delivery vehicles. It films the condition of the roads used to distribute mail, identifies "issues" (potholes, cracks, etc.) and geolocates them. When the postal worker returns from the round, they connect the camera to a computer and the data is sent to a data center. The data is then approved by a dedicated department at La Poste. The client, often a local authority, receives a map of issues on the road (with their GPS coordinates). When analyzing the data, an overall score relating to the condition of the road is given, which combines the scores obtained for the surface and structure of the roads. Based on this information, Geoptis offers to create a road maintenance plan (potential schedule and cost assessment).

Optimizing special postal worker journeys

On average, 80% of footage is currently taken on postal workers' usual routes, with the other 20% being taken on special journeys (poor footage, roads not covered on the usual routes). For these journeys, the postal worker had to make a special journey to film the condition of the road network that was not already covered. *"These sections of road can be very far apart, hence the need to optimize the routes to minimize the number of miles covered on these special journeys. So, in spring 2017, we asked several digital services companies if artificial intelligence could be used in our case,"* explained Fabrice Chamard, innovative information systems manager in La Poste's technical department. Geoptis chose Hardis Group for its positioning: commitment even before knowing if the project would lead to a concrete development, agile methods and an ability to facilitate decisions regarding which technological solutions to implement.

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The theoretical study was conducted in three weeks by teams at Hardis Group's Nantes branch. It concluded that an algorithm could indeed be used to optimize these special journeys. It took two months to develop the algorithm before it was delivered in September 2017. The artificial intelligence solution immediately reduced the number of miles covered by postal workers by 20% to 30%. *"At first, the algorithm calculated the journeys as follows: here is my map, calculate the best route. Then a change was made: here is the map, the postal worker has x hours, calculate the best route,"* explained Fabrice Chamard. Next, the route to be completed by postal workers was connected to a GPS so they simply had to follow the directions. This feature prevents wrong turns and improves driver safety.

The success of the offering has prompted Geoptis to increase its range of services and it now offers authorities the option to gather other data, relating to street furniture and vertical signs for instance.

About Hardis Group

Hardis Group, a consulting firm, digital services company and independent software vendor, is committed to accelerating the transformation of its clients' value chains, information systems and supply chain. Its teams support the strategic, organizational and technological transformations of companies in order to increase their competitive edge. They design, develop and integrate differentiating solutions, capitalizing on the most innovative technologies (cloud, platforming, artificial intelligence, IoT, robotics, etc.). Hardis Group's Reflex software suite and Eyesee inventory drone enable international companies to meet the

challenges of efficient logistics operations in warehouses, factories and stores all over the world. Remaining independent since its creation in 1984, Hardis Group cultivates the spirit of initiative, the creativity and talent development of its 1,000 employees to sustain its growth, and the long-term trust of its 2,500 clients. Hardis Group achieved revenue of €99.1 million in 2017. It has offices in Grenoble (head office), Paris, Lyon, Lille, Nantes, Bordeaux, Geneva, Madrid and Utrecht.

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