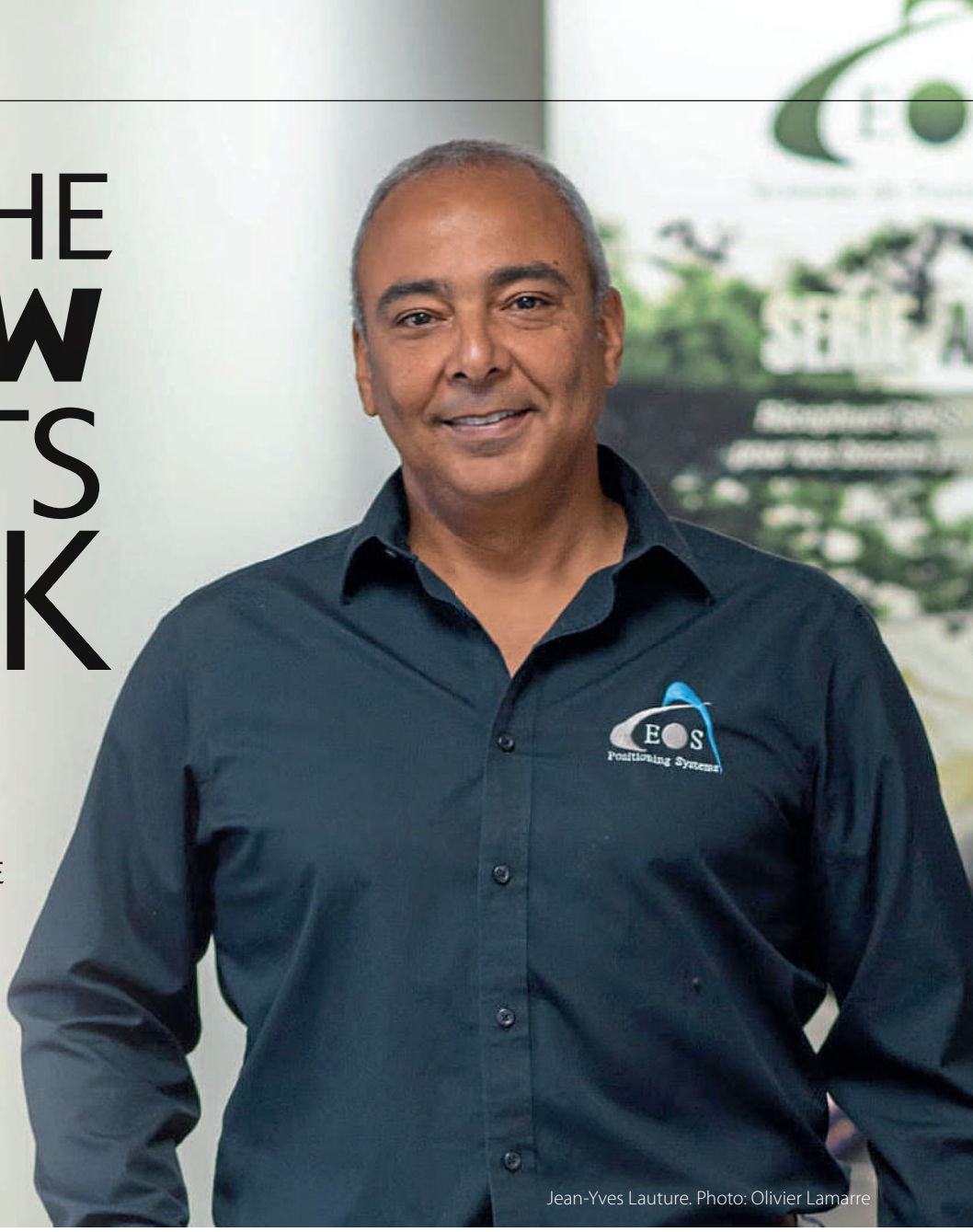
HOW THE ARROW HITS ITS MARK

WITH A DOUBLING OF ITS REVENUES YEAR-ON-YEAR, EOS POSITIONING SYSTEMS HAS EMERGED AS A VERITABLE TIGER IN THE MARKET FOR HIGH ACCURACY GNSS RECEIVERS. GEOCONNEXION SPOKE TO THE COMPANY'S CTO, **JEAN-YVES LAUTURE**, TO DISCOVER ITS SECRET FOR SUCCESS



Jean-Yves Lauture. Photo: Olivier Lamarre

GEO: What do you regard as the company's biggest achievements since its creation five years ago? And its biggest challenges going forward?

Jean-Yves Lauture (J-YL): In 2014, the same team of GNSS thought leaders who pioneered Bluetooth GPS receivers almost two decades earlier came together to create Eos Positioning Systems (Eos). The vision was simple: To provide affordable high-accuracy GNSS receivers that were easy to use for GIS customers, with the emphasis was on three issues: Simplicity of use, so users could collect high-accuracy data using mobile apps of their choice; Device agnosticism, so crews could work on any iOS, Android or Windows smart device; and Positive customer experience, so the product and related support evolved to meet customer needs, thereby protecting their long-term investment.

Executing this mandate remains our greatest achievement. Since then, Eos has emerged as the market leader in high-accuracy GNSS data collection. Going forward, we want to continue our momentum of constantly innovating, while remaining attentive to — and effectively addressing — our customer needs.

GEO: The Arrow Series survey-grade GNSS receivers represent the company's flagship products. Can you give us some idea of the Eos technology that is able to extract higher degrees of accuracy than from most other receivers – and at an affordable cost?

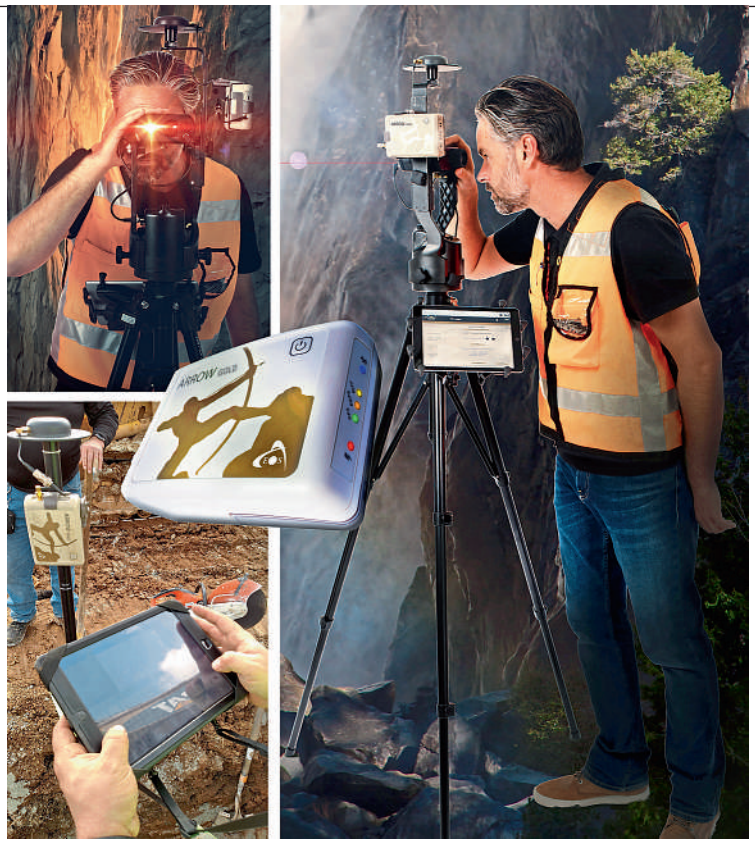
J-YL: In embracing the mobile-to-cloud trend, these receivers bring reliable real-time high-accuracy locations into our customers' workflows without the need for post-processing. For sub-meter applications, the Arrow 100 GNSS offers superior tracking under dense canopy. It effectively makes use of the free Satellite Based Augmentation Systems, aka SBAS (i.e., WAAS, EGNOS, GAGAN, MSAS, and the new Australian SBAS testbed) signals to maintain differentially corrected GNSS (DGNSS) positioning in the most challenging conditions.

For applications requiring cm-level RTK accuracy, the Arrow Gold GNSS brings the latest development in GNSS technology to the professional mapping community. With all four global constellations (GPS, GLONASS, Galileo, BeiDou) supported, this triple-frequency receiver, coupled with a long-range RTK capability and SafeRTKR features, optimises both long-term investment and field productivity. When no local RTK network or free SBAS is available, Atlas® worldwide satellite-based differential corrections still ensure the delivery of real-time submeter or decimeter locations into any app.

GEO: At last year's Esri UC in San Diego, Eos, LTI and Esri showcased the world's first Apple iOS point-and-shoot laser offset solution for Collector for ArcGIS. What has been the reaction of the user community?

J-YL: We have been humbled and proud to see the adoption of our laser offset solution (aka "laser mapping") throughout all sectors of the GIS community. For instance, at the 2018

Esri GeoConX conference in Texas, one of our customers showcased its use of iPads, Esri Collector for ArcGIS, LTI TruPulse 200X, and our Eos Arrow Gold GNSS receiver to map new construction designs for clients in the telecommunications and energy sectors. Another customer is a 120-year-old zoo in downtown Seattle which uses laser offsets on iPhone to map its above-and-below ground infrastructure - everything from gas lines to gardens. Being able to shoot points and edges from afar overcomes many obstacles, not just the dense canopy in exhibits or urban buildings, but also unsafe areas. This is also the case for some of our water utility customers mapping assets in dangerous or hard-to-reach places.



GEO: Last year also saw the launch of Geoid orthometric height support for Arrow series receivers operating in Canada and the U.S. What other territories are in the pipeline?

J-YL: There has been an increase in requests for Geoid models from those of our utility and AEC customers who are adopting centimetre-level accuracy with the Arrow Gold receiver. The immediate demand, originating from the USA and Canada, drove our first release with support for orthometric height. Since then, models for other countries (e.g. Australia, Sweden, and Brazil) have been added. Geoid models for most countries will be supported in the coming months.

GEO: With exports accounting for some 98% of Eos revenues, where do you anticipate future market growth?

J-YL: The Arrow is used for asset management in utility, government, forestry, pipeline, and other sectors. High-accuracy asset data creates a high-confidence system of record. This, in turn, creates improvements and efficiencies in workflows related to regulatory compliance, work order management, as-builts, enterprise information sharing, and more. Eos customers are regularly realising ROI from asset management projects. With the affordability and ease of use of high-accuracy positioning systems, there is a global trend in wanting to optimise the system of record.

Future growth for high-accuracy location will depend on how fast some industries in specific countries implement a spatially-enabled digital twin of their assets. It will also depend on regulations put in place by government agencies for some of these industries.

In the meantime, we are constantly improving our product line and solutions to ensure we offer the latest technology for a variety of expanding industries. This includes supporting all new GNSS frequencies (for example GPS L5) and new GNSS constellations (for example Galileo and BeiDou) in addition to existing ones (such as GPS and GLONASS). This ensures our customers have access to the latest technology in a future-proof product when building a high-confidence system of record.

GEO: The company has traditionally doubled its revenues year-on-year. Is this likely to continue?

J-YL: With our focus on overall customers satisfaction, we look not only at the quality of our products and solutions, but also at our level of service and support. Building long-term relationships with our customers, and exceeding their expectations, gives us an enviable word-of-mouth reputation and a high level of repeat business.

GEO: You recently moved your headquarters to bigger premises in Terrebonne, Quebec. How has this improved/streamlined your operation?

J-YL: Yes, we've been fortunate to have expanded our manufacturing space as well as our corporate headquarters. This way, we can accommodate more employees in our various company divisions.

GEO: Are there any common product improvements/ enhancements on customer wish lists and, if so, how is the company responding to these?

J-YL: Eos' mission is to listen to our customers to ensure we provide solutions and products that meet their current – and anticipate their future - needs. When the Eos technical team created the world's first Bluetooth submeter GPS receiver back in 2001, the market was not ready. When it launched the first Apple certified high-accuracy GNSS receiver, the market was not ready. When Eos proposed 1cm RTK accuracy years ago to the GIS industry, the market was not ready. Now customers are demanding them all, and we have been delivering and are ready to deliver more. Meanwhile, Eos leadership is constantly learning from customers about their upcoming requirements and innovating products and app features that anticipate GNSS market needs. Our latest releases will always be a response to what the market wants.

GEO: We notice that Eos partners such as Esri, SmartApp, CartoPac, Futura, and others are fully supporting Arrow Series™ receivers. How do you make this integration with 3rd party mobile apps possible?

J-YL: Eos greatly values its mobile app partners and provides them with all the tools they need to achieve easy integration of our receivers' protocol into their apps.

Thanks to the Arrow Series™ cross platform compatibility, and its ability to provide accurate real-time locations, Esri's Collector for ArcGIS was one of the first mobile apps - of this new generation of cloud-based mapping solutions - to support GNSS metadata from our receivers. Also, the first release of Survey123 for ArcGIS with full support for the Arrow is imminent. Other partners such as AmigoCloud, CartoPac, CMT, Futura, SmartApp, TerraGo, etc, have all integrated similar functionality into their mobile solutions.

GEO: Can we expect any new additions to the Eos portfolio this year?

J-YL: You certainly can, as Eos is always on the go. We recommend anyone looking for the latest updates about our product line and solutions signs up for our monthly newsletter: https://eos-gnss.com/subscribe/.