







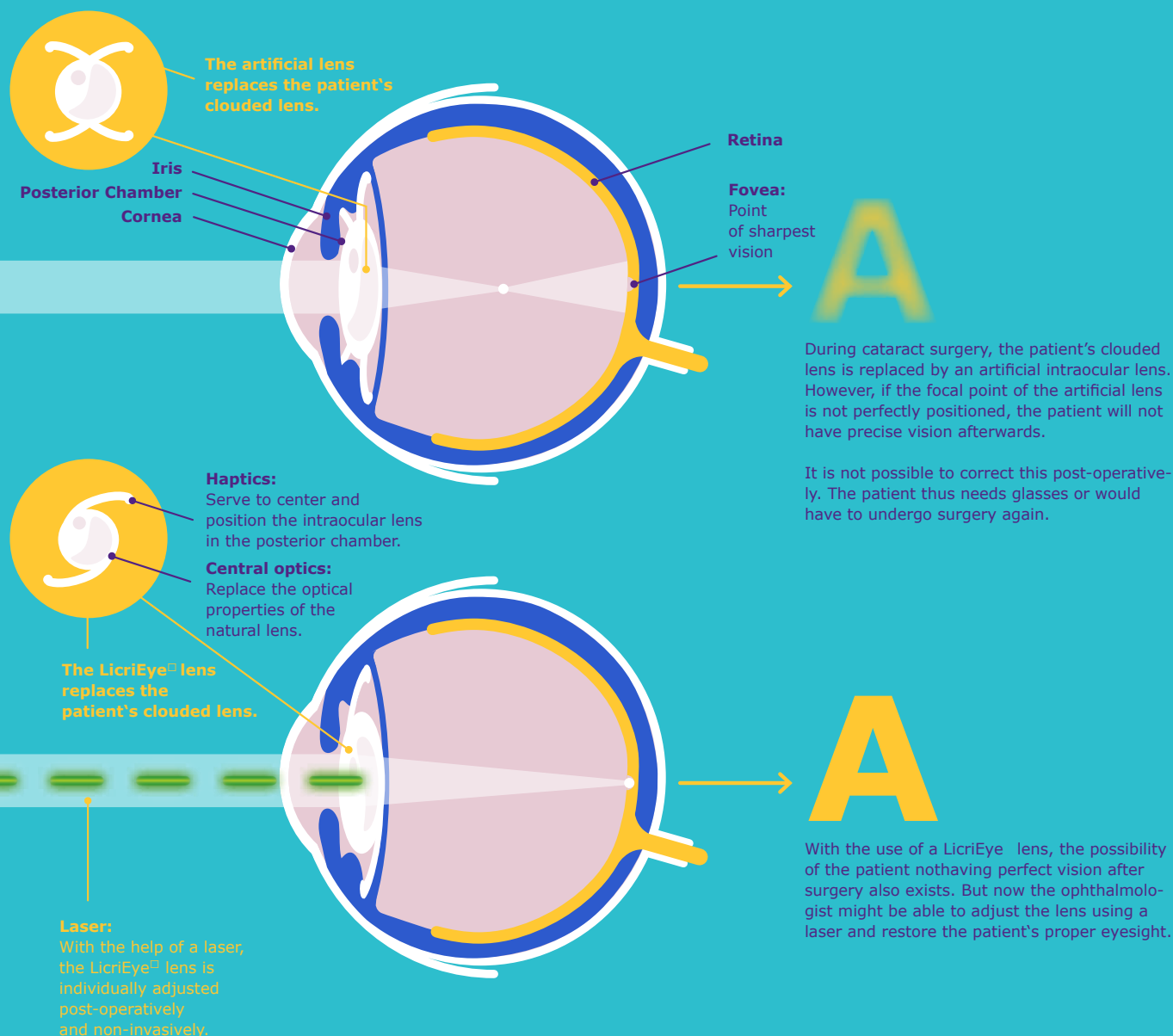
## LicriEye<sup>□</sup>: A Breakthrough Innovation in Cataract Surgery

LicriEye<sup>®</sup> is a smart lens whose focal point(s) can be painlessly adjusted to the patient's visual needs after Cataract surgery using a laser. This treatment can be performed immediately after the surgery, or at any time afterwards. Also, if the visual acuity of the patient changes, the LicriEye<sup>®</sup> lens can be adjusted multiple times, i.e. the diopters of the lens can be increased or decreased over time. The LicriEye<sup>®</sup> lens is constructed from a transparent, flexible and biocompatible material based on Merck KGaA, Darmstadt, Germany's liquid crystals expertise. This innovative material can be photochemically targeted to the patient's individual optical requirements using two-photon chemistry. This process represents a major breakthrough in Cataract treatment that could obviate the need for patients to wear glasses, post-surgery. The three primary benefits of this approach are:

- 1 Adjustment can be easily reversed using a different wavelength
- 2 Faster results for patients because the photochemical changes induced by the treatment process occur immediately after adjustment
- 3 With one lens design multiple features like monofocal, multifocal and toric can be realized.

The function and application of the LicriEye<sup>®</sup> solution are illustrated in more detail in Figure 1 below.

**Figure 1. Illustration of the breakthrough LicriEye<sup>□</sup> solution for Cataract Surgery**



## Future Outlook

According to a March 2015 article in the US publication "Review of Ophthalmology", around 20 million surgical Cataract procedures are completed globally each year, a number which is sure to rise as the global population ages.<sup>14</sup> Indeed, the goal of the World Health Organization's "Vision 2020: The right to sight" initiative, is to help ensure that 32 million operations take place annually by 2020.<sup>15</sup>

As demand for Cataract surgery increases, the market for intraocular lenses is growing steadily. According to the latest report available from Transparency Market Research, its value will increase from USD 3.4 billion per year in 2016, to USD 5.1 billion per year in 2024.<sup>16</sup> LicriEye® could participate in this rapidly growing market, with solutions intended for market segments such as monofocals, multifocals and toric.

The LicriEye® project is making good progress as it advances through the testing and compliance processes required to meet inter-national regulatory standards.

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### Application

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