



With over 30 years' experience in the global tech industry and, as the Chairman of an evolving company, which over the past three years has grown to around 50 employees with over 30 customers in different geographical regions across the world,

including market leaders and vendors with new technologies, Torgny Hellström has an acute understanding of the Biometrics market. And he's clear about how to grasp the opportunities and face the challenges in order to be successful, particularly for any new entrants into the market. "Be clear. Put the users first and ask 'how can their everyday life become easier by using biometrics?' Then bring a product fast to the market."

Of course, as with any market, it also takes a careful balance of time,



resource and innovation to be successful. It's a big challenge to ensure both a high level of biometric performance and a good user experience of sensor technologies. Torgny explains that "fingerprint sensing under the smartphone's display is a very exciting innovation. The demand for sensors that can be placed beneath the screen or the glass is being driven by the new smartphone designs with edge-to-edge displays. Our experience shows that optical and ultrasound sensors work best as they provide a better user experience and simplify the mobile phone production process. We have over 20 years of research in fingerprint biometrics at Precise Biometrics, and we're now leveraging this knowhow to optimise our fingerprint software for these sensor technologies, making sure that our customers' solutions provide a great user experience and are easily integrated in smartphones."

Biometric smart cards – a more convenient and secure alternative to PIN code-based payment cards

- Biometrics open up the opportunity to lift or raise purchase caps on contactless payments, making it more convenient for cardholders while also complying with card issuer security
- Fingerprint biometrics provide a high level of security and prevent fraud – a concern for many contactless payment cards users
- Retailers can benefit from higher in-store throughput without making additional investments
- Banks and payment providers can reduce payment card fraud
- Consumers are ready to engage as they are used to the convenience of using fingerprint authentication instead of PIN codes through their smartphones

So what are the key market trends that are most important for Precise Biometrics at the moment?

"The greatest demand is from mobile, where we are seeing continued growth of fingerprint technology. This year, we expect to see close to 900 million smartphones with fingerprint biometrics – that's a 20 percent year-on-year growth. The market for fingerprint technology in mobile phones continues to change at a rapid pace and we've seen the start of a technological shift in the sensor market from capacitive sensors to optical and ultrasound sensors. During the first few months of this year, a number of mobile phones featuring these technologies have been launched, and the market is showing an increasing interest.

"Another key trend is the emergence of biometric smart cards and this is expected to grow significantly in the coming years. The first market trials



of biometric payment cards were initiated in 2017 and this year, several commercial pilots of contactless biometric cards have started across the globe – in Europe, Japan, Middle East and the USA. Put simply, Biometric payment cards provide a more convenient and secure alternative to PIN code-based payment cards and are set to gain widespread acceptance.

"Looking ahead, privacy and the protection of individuals' data is becoming more and more important, you just have to look at the advent of GDPR. Biometrics can further increase the protection of data and people's identity,

as it offers improved security compared to pins and passwords. We also think that machine learning and AI will be used more. For many years already, fingerprint biometrics have been using machine learning and that area is still evolving. Advanced (or heavier) biometrics such as face require dedicated AI engines to give an acceptable user experience. Likely other modalities will be able to use these techniques too to become more secure and user friendly."