



**Silex**  
Systems Limited

## **IQE Announces Successful Development of New 5G Filter Product Built on cREO™**

**12 November 2020**

Silex Systems Limited (Silex) (ASX: SLX) (OTCQX: SILXY) provides the following information disclosed by IQE in London (AIM: IQE), relating to wholly owned subsidiary Translucent Inc's cREO™ technology agreement with IQE.

IQE has announced the successful development of a new high frequency (RF) filter product (called IQepiMo™) which is built on the cREO™ technology platform purchased from Translucent in 2018. IQE states this new product can eliminate technical issues related to the demands that 5G technology places on electronic components, including RF filters, which are key to managing high frequency signals in 5G devices such as mobile handsets. Trials of IQE's new RF filter product are underway with potential customers and partners. The full IQE announcement is attached hereto.

Under the 2015 Agreement, Translucent Inc. will be eligible for minimum annual royalties for the cREO™ technology and a perpetual royalty of at least 3% will be payable to Translucent on the sale of any IQE products that utilise the cREO™ technology. The first minimum royalty payment of US\$400,000 for the year ended CY2019 was received in March 2020.

***Authorised for release by the Silex Board of Directors.***

Further information on the Company's activities can be found on the Silex website: [www.silex.com.au](http://www.silex.com.au) or by contacting:

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### **Forward Looking Statements and Risk Factors:**

#### **About Silex Systems Limited (ASX: SLX) (OTCQX: SILXY)**

Silex Systems Limited ABN 69 003 372 067 (Silex) is a research and development company whose primary asset is the SILEX laser enrichment technology, originally developed at the Company's technology facility in Sydney, Australia. The SILEX technology was licensed exclusively in 2006 to GE-Hitachi Global Laser Enrichment LLC (GLE) in the USA for application to uranium enrichment. GLE has been undergoing a restructure for a number of years after GE-Hitachi disclosed it was seeking to exit the venture. In view of the time the GLE restructure has taken to date and the dependency of the closing of the restructure on obtaining US Government approvals, combined with the continuing depressed nuclear fuel market conditions, plans for commercial deployment of the SILEX technology have been significantly delayed, and remain at risk.

Silex is also in the early stages of pursuing additional commercial applications of the SILEX technology, including the production of 'Zero-Spin Silicon' for the emerging technology of silicon-based quantum computing. The 'Zero-Spin Silicon' project remains dependent on the outcomes of the project and the viability of silicon quantum computing and is therefore at risk. The future of the SILEX technology is therefore highly uncertain and any plans for commercial deployment are speculative.

Silex also has an interest in a unique semiconductor technology known as 'cREO™' through its ownership of subsidiary Translucent Inc. The cREO™ technology developed by Translucent has been acquired by IQE Plc based in the UK. IQE is progressing the cREO™ technology towards commercial deployment for 5G filter applications. The outcome of IQE's commercialisation program is also highly uncertain and remains subject to various technology and market risks.

#### **Forward Looking Statements**

The commercial potential of these technologies is currently unknown. Accordingly, no guarantees as to the future performance of these technologies can be made. The nature of the statements in this Announcement regarding the future of the SILEX technology, the cREO™ technology and any associated commercial prospects are forward-looking and are subject to a number of variables, including but not limited to, unknown risks, contingencies and assumptions which may be beyond the control of Silex, its directors and management. You should not place reliance on any forward-looking statements as actual results could be materially different from those expressed or implied by such forward looking statements as a result of various risk factors. Further, the forward-looking statements contained in this Announcement involve subjective judgement and analysis and are subject to change due to management's analysis of Silex's business, changes in industry patterns, and any new or unforeseen circumstances. The Company's management believes that there are reasonable grounds to make such statements as at the date of this Announcement. Silex does not intend, and is not obligated, to update the forward-looking statements except to the extent required by law or the ASX Listing Rules.

#### **Risk Factors**

Risk factors that could affect future results and commercial prospects of Silex include, but are not limited to: ongoing economic uncertainty including concerning the COVID-19 pandemic; the outcome of the GLE restructure including obtaining US Government approvals; the results of the SILEX uranium enrichment engineering development program; the market demand for natural uranium and enriched uranium; the outcome of the project for the production of 'Zero-Spin Silicon' for the emerging technology of silicon-based quantum computing; the potential development of, or competition from alternative technologies; the potential for third party claims against the Company's ownership of Intellectual Property; the potential impact of prevailing laws or government regulations or policies in the USA, Australia or elsewhere; results from IQE's commercialisation program and the market demand for cREO™ products; and the outcomes of various strategies and projects undertaken by the Company.

## **IQE plc**

### **Reach**

Cardiff, UK  
11 November 2020

### **Development of IQepiMo™ template technology for RF Filters**

IQE plc (AIM: IQE, "IQE" or the "Group"), the leading manufacturer of advanced semiconductor wafer products for the global semiconductor industry, is pleased to announce the successful development of its IQepiMo™ template technology for RF Filters and for any application requiring low resistance buried electrodes. Built on its cREO® technology platform, IQepiMo™ templates are available in diameters of up to 200 mm and trials are underway with potential customers and partners.

Low resistance contacts are essential for the efficient operation of almost all electronic circuits. As dimensions shrink, the limitations of existing technologies are exposed, resulting in compromised device performance. This is especially true of RF Filters, which are electronic components that allow or prevent the transmission of selected signals or frequencies.

As 5G technology rolls out worldwide, the requirements for RF devices are becoming significantly more demanding. For RF Bulk Acoustic Wave (BAW) filters, the higher frequencies of 5G translate into an electrical penalty for thinner electrodes that must be accommodated. IQepiMo™ eliminates this electrical penalty by providing bulk-like metal resistance for very thin layers (down to 50 nm). In addition, IQepiMo™ templates enable higher quality piezoelectric layers to be fabricated from customers' current processes, offering a clear path for improved quality AlN piezoelectric materials. As such, IQepiMo™ extends the capability of existing customer processes for next generation applications.

#### **Dr Rodney Pelzel, Chief Technology Officer of IQE, commented:**

*"I am pleased to announce the successful development of IQepiMo™ templates based on IQE's patented cREO® technology. These templates will mean that customers, while using their existing processes, can fabricate higher quality, better performing BAW filters and eliminate the electrical*

*penalty that had until now been inherent in the application of current technology to higher frequencies."*

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**ABOUT IQE**

<http://iqep.com>

IQE is the leading global supplier of advanced compound semiconductor wafers and materials solutions that enable a diverse range of applications across:

- handset devices
- global telecoms infrastructure
- connected devices
- 3D sensing

As a scaled global epitaxy wafer manufacturer, IQE is uniquely positioned in this market which has high barriers to entry. IQE supplies the whole market and is agnostic to the winners and losers at chip and OEM level. By leveraging the Group's intellectual property portfolio including know-how and patents, it produces epitaxy wafers of superior quality, yield and unit economics.

IQE is headquartered in Cardiff UK, with c. 650 employees across nine manufacturing locations in the UK, US, Taiwan and Singapore, and is listed on the AIM Stock Exchange in London.

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