POET Technologies, Inc.

Company Overview

March 2019
Safe Harbor

This presentation contains forward-looking statements and forward-looking information within the meaning of U.S. and Canadian securities laws, including but not limited to statements relating to revenue potential, growth and/or projections such as those included at slides 7, 11, 14 - 19 of this presentation. Forward-looking statements and information can generally be identified by the use of forward-looking terminology or words, such as, "continues", "with a view to", "is designed to", "pending", "predict", "potential", "plans", "expects", "anticipates", "believes", "intends", "estimates", "projects", and similar expressions or variations thereon, or statements that events, conditions or results "can", "might", "will", "shall", "may", "must", "would", "could", or "should" occur or be achieved and similar expressions in connection with any discussion, expectation, or projection of future operating or financial performance, events or trends. Forward-looking statements and forward-looking information are based on management's current expectations and assumptions, which are inherently subject to uncertainties, risks and changes in circumstances that are difficult to predict.

The forward-looking statements and information in this presentation are subject to various risks and uncertainties, including those described under the heading "Risk Factors" in the Corporation's annual information form, many of which are difficult to predict and generally beyond the control of the Corporation, including without limitation risks: associated with the Corporation's limited operating history; associated with the Corporation's need for additional financing, which may not be available on acceptable terms or at all; that the Corporation will not be able to compete in the highly competitive semiconductor market; that the Corporation's objectives will not be met within the time lines the Corporation expects or at all; associated with research and development; associated with the integration of recently acquired businesses; associated with successfully protecting patents and trademarks and other intellectual property; concerning the need to control costs and the possibility of unanticipated expenses; associated with manufacturing and development; that the trading price of the common shares of the Corporation will be volatile; and that shareholders' interests will be diluted through future stock offerings or options and warrant exercises. For all of the reasons set forth above, investors should not place undue reliance on forward-looking statements.

Other than any obligation to disclose material information under applicable securities laws or otherwise as may be required by law, the Corporation undertakes no obligation to revise or update any forward-looking statements after the date hereof.
Recent News from POET

POET Technologies Receives First Orders for Optical Interposer Solutions

SAN JOSE, CA, November 12, 2018 — POET Technologies Inc. (the “Company” or “POET”) [OTCQX: POETF; TSX Venture: PTK], a designer, developer and manufacturer of optoelectronic devices, including light sources, passive waveguides, and Photonic Integrated Circuits (PICs) for the data- and tele-communication markets, announced today that it has received its first orders for POET Optical Interposer™-based solutions from leading global communications companies targeting data communication applications, which represents a new served market for the Company’s products.

The orders include sales and development contracts with a value in excess of US$3 million (CAD$3.9 million) to purchase current device prototypes, to develop and provide increasingly integrated optical engine components or to systematically address specific customer integration requirements under paid development programs. Together, these recent orders represent a material increase in the overall revenue run-rate for the Company and are expected to be fulfilled beginning now through mid-2019. POET’s latest reported revenue for the six months ending June 30, 2018 was US$1,425,427 (CAD$1,869,804), which was entirely from sales of light source products for the sensing market.

POET Technologies Receives Offer for DenseLight Subsidiary

SAN JOSE, CA, February 4, 2019 — POET Technologies Inc. (the “Company” or “POET”) [OTCQX: POETF; TSX Venture: PTK], a designer, developer and manufacturer of optoelectronic devices announced today that it has signed a non-binding Letter of Intent (LOI) for the sale of the capital stock of its Singapore-based DenseLight subsidiary.

Key terms of the non-binding LOI include proposed cash consideration in the range of US$26 - $30 million (C$34.5 - C$40 million), including a US$4 million (C$5.3 million) earn-out provision, no-shop and confidentiality clauses, and an undertaking to enter into key operating agreements, including a preferred supply agreement and a long-term strategic cooperation agreement among the parties. The parties expect to complete the signing of the definitive transaction agreements on or before September 15, 2019. The broad terms of the LOI and the consummation of any transaction are subject to further due diligence, the negotiation of definitive agreements and obtaining required approvals by all parties, including but not limited to the TSX Venture Exchange and a majority of the Company’s shareholders.

POET Technologies Establishes Photonics Design Capabilities in Ottawa

- Combines Development Efforts with MilView Photonics
- POET Named to the 2019 TSX Venture 50 List of Companies

SAN JOSE, CA, February 21, 2019 — POET Technologies Inc. (the “Company” or “POET”) [OTCQX: POETF; TSX Venture: PTK], a designer, developer and manufacturer of optoelectronic devices, including light sources, passive waveguides, and Photonic Integrated Circuits (PICs) for the data- and tele-communication markets today announced that it had entered into an agreement with the highly-respected firm, MilView Photonics, Inc. (“MilView”) to establish a collaborative design center in Ottawa, Ontario, Canada.

MilView was established two years ago by Dr. Trevor J. Hall, Professor in the School of Electrical Engineering & Computer Science and Founding Director of the Centre for Research in Photonics at the University of Ottawa. Along with his team, which includes Peng Lu, senior passive component designer, Mihail Dumitrescu, senior active component designer, and supported by doctoral and postdoctoral graduate engineers, MilView serves clients in photonics research, simulation, design and process development.
POET Technologies, Inc.
• Innovators in chip-scale integration of photonics products
• Company at an inflection point for rapid growth
  • Received first orders for Optical Interposer solutions from leading global networking companies valued at over $3M – doubling revenue
  • TTM Revenue $3.1M as of Sept. 30, 2018
  • Guiding to $8-10M Revenue for 2019, with only marginal increases in OpEx
  • $2M CAPEX planned for 2019

POET Optical Interposer Platform
• Meets a long-standing industry need to integrate photonics and electronics in the same chip-scale package
• Proprietary technology dramatically reduces cost of key components in optical transceivers and ASIC’s
• First and only company to introduce true chip-scale integration and wafer-scale assembly and test of photonics devices
• Minimal engineering risks to completion of platform applications

Markets / Applications / Customers
• Fast growth, multi-billion $ markets driven by Internet traffic and hyperscale data center development
• First application area is Optical Engines for transceivers for use in datacenters; telecom and 5G cell networks to follow
• Customers are large, global Networking, Data Communications, Telecommunications and Electronic Component companies
Data Communications market fueled by growth of the Internet

90% of the world’s data was created in the past two years alone*

Photonic Transceivers convert digital electric signals into light signals and back again.

Photons and light waves compared to **copper**:
- 100X more data per second
- 10X lower power consumption
- 10X less heat produced
Data centers require new technology

- Need smaller, faster, cheaper and lower power integrated photonic transceivers

- 5X more traffic in the Data Center than from the Data Center to the Internet

- Hyperscale Data Centers*:
  - Growing from 338 in 2016 to 628 by 2021
  - 53% of all installed data center servers in 2021
  - Global Internet Protocol (IP) traffic growing at 25% CAGR

* Source: Cisco Global Cloud Index, February 1, 2018
Integrated photonic transceivers will dominate the market

Integrated transceivers forecast to

$20 Billion by 2025

from $3.2 Billion today surpassing current discrete-based devices in 2021

Integrated Transceivers Sales Forecast

Source: Oculi, llc, Report Commissioned by POET
Three types of Photonic Transceivers – two are Integrated

Majority of transceivers sold today

Conventional
Built and tested one at a time

Integrated
Built at wafer scale – hundreds at a time

Silicon Photonics

POET Optical Interposer™

Photonic Integrated Devices (PICs) are rapidly replacing Conventional Photonics Devices because of the lower cost of components, assembly and test
A novel approach to photonics device integration

- Massively lower cost than Conventional Photonics
- Can both improve and complement Silicon Photonics
- Provides a flexible and scalable Platform to replace Silicon Photonics

- Electrical interposers are used today in high-speed computing
The POET Optical Interposer excels by lowering costs

- First company to offer **true chip-scale integration** and wafer-level assembly and test in photonics

<table>
<thead>
<tr>
<th>Rank</th>
<th>Cost Driver</th>
<th>Conventional</th>
<th>Silicon Photonics</th>
<th>POET Optical Interposer</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Component Materials</td>
<td>0</td>
<td>++</td>
<td>++</td>
</tr>
<tr>
<td>2</td>
<td>Passive Alignment</td>
<td>0</td>
<td>0</td>
<td>++</td>
</tr>
<tr>
<td>3</td>
<td>Pick and Place</td>
<td>0</td>
<td>+</td>
<td>++</td>
</tr>
<tr>
<td>4</td>
<td>Wafer-level fabrication</td>
<td>0</td>
<td>++</td>
<td>++</td>
</tr>
<tr>
<td>5</td>
<td>Wafer-level testing</td>
<td>0</td>
<td>+</td>
<td>++</td>
</tr>
<tr>
<td>6</td>
<td>Chip-scale integration</td>
<td>0</td>
<td>0</td>
<td>++</td>
</tr>
<tr>
<td>7</td>
<td>Known Good Die</td>
<td>++</td>
<td>+</td>
<td>++</td>
</tr>
</tbody>
</table>

• First company to offer **true chip-scale integration** and wafer-level assembly and test in photonics
POET’s Optical Engine reduces Transceiver BOM Cost by more than 50%

- Translates into ~100% increase in Transceiver Module Profit Margin

*modeled at production volumes
POET's Optical Interposer is a true platform technology

Photonics-in-a-Package
- Optical Engines – receive and transmit
- Light Bars – multiple lasers
- Receivers – multiple detectors
- Passive Assemblies – filters and waveguides

Multiple Applications because of platform flexibility

- Optical Engines for Datacom and Telecom Transceivers
- Photodetectors for IOT and Industrial Sensing
- CWDM Laser Modules Automotive LIDAR
- Photonics-integrated ASICs Switches, Graphics Generators, Microprocessors

Presentations at OFC 2018
Microsoft and Arista looking for an Optical Interposer
Optical Engines for Datacom (Data Centers)

- 100G CWDM
- 400G

Optical Engines for Telecom

- 10G PON ONU – end point of Fiber To The X (home, office, IoT)
- 10G PON OLT (Combo PON 10G/2.5G) – backward compatible central office to distribution point
- CPRI 25G B/H – cell network Radio Control Unit (RCU) to Radio Equipment (RE)
Target Markets for POET Optical Engines will be 100G CWDM (second generation) and 400G (first generation)

TOTAL DATACOM UNIT SHIPMENT TAM*
CUMULATIVE 2019-2023

- 100G Short Range: 51M Units (14%)
- 100G Medium Range: 12% (5%)
- 100G Long Range: 12% (12%)
- 400G All Ranges: 69% (5%)

TOTAL DATACOM REVENUE TAM*
CUMULATIVE 2019-2023

- 100G Short Range: $19 Billion (2%)
- 100G Medium Range: 37% (49%)
- 100G Long Range: 12% (12%)
- 400G All Ranges: 49% (51M Units)

*TAM is Total Available Market

Source: LightCounting, “Mega Datacenter Optics”, June 2018. Unit Shipments and Revenue TAM for Indium-Phosphide-based transceivers only.
100G CWDM market is in rapid growth phase – POET can address with second generation cost reduction – 400G now being designed

*TAM is Total Available Market

Unit Shipments and Revenue TAM for Indium-Phosphide-based transceivers only.
POET Optical Engines address top three Telecom market segments

**TELECOM UNIT SHIPMENT TAM**
CUMULATIVE 2019-2023

- 10G PON ONU – end point of fiber To The X
- 10G PON OLT (Combo PON 10G/2.5G) – backward compatible central office to distribution point
- CPRI 25G B/H – cell network Radio Control Unit (RCU) to Radio Equipment (RE)

**TELECOM REVENUE TAM**
CUMULATIVE 2019-2023

- 10G PON ONU
- 10G PON OLT
- CPRI 25G B/H

*TAM is Total Available Market


Unit Shipments and Revenue TAM for Indium-Phosphide-based transceivers only.
POET’s Business Model

- POET designs, manufactures, markets and sell its Optical Engines leveraging its proprietary Optical Interposer Technology to either “sub-assembly” makers or directly to module makers

### Optical Systems Ecosystem

<table>
<thead>
<tr>
<th>Component Makers</th>
<th>Module Makers</th>
<th>System Integrators</th>
<th>End Users</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>POET</strong></td>
<td>• Acelink</td>
<td>• Acacia</td>
<td><strong>Telcos</strong></td>
</tr>
<tr>
<td>• Macom</td>
<td>• Finisar</td>
<td>• Ciena</td>
<td>• AT&amp;T</td>
</tr>
<tr>
<td>• Avago</td>
<td>• Oclaro</td>
<td>• Arista Networks</td>
<td>• Verizon, Others</td>
</tr>
<tr>
<td>• Lumentum</td>
<td>• Applied</td>
<td>• Infinera</td>
<td><strong>Cable Operators</strong></td>
</tr>
<tr>
<td>• Applied</td>
<td>Optoelectronics</td>
<td>• Huawei</td>
<td>• Comcast</td>
</tr>
<tr>
<td>Optoelectronics</td>
<td>• Molex</td>
<td>• Nokia</td>
<td>• Warner, Others</td>
</tr>
<tr>
<td>• Neo Photonics</td>
<td>• Dongguan Mentech</td>
<td>• ZTE</td>
<td><strong>Data Centers</strong></td>
</tr>
<tr>
<td>• Others</td>
<td>• Innolight</td>
<td>• Fujitsu Networks</td>
<td>• Microsoft</td>
</tr>
<tr>
<td></td>
<td>• Source Photonics</td>
<td>• Coriant</td>
<td>• Google</td>
</tr>
<tr>
<td></td>
<td>• Intel</td>
<td>• Cisco</td>
<td>• Facebook</td>
</tr>
<tr>
<td></td>
<td>• Kaim</td>
<td>• Others</td>
<td>• Baidu</td>
</tr>
<tr>
<td></td>
<td>• Luxtera</td>
<td></td>
<td>• Alibaba</td>
</tr>
<tr>
<td></td>
<td>• Others</td>
<td></td>
<td>• Tencent</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Others</td>
</tr>
</tbody>
</table>
POET strategy for achieving growth

- Continued focus on Optical Interposer-based solutions
- Demonstrate device performance with existing key strategic customers
- Win orders for production quantities in datacom / telecom
- Expand co-development to other applications (ASICs)
- Expand customer base

Revenue Growth

- 2015: $0M Act.
- 2016: $2M Act.
- 2018: $4M Est.
- 2019: $8-$10M Est.
- 2020: $2M Act.
## POET Prototype and Qualification Roadmap

<table>
<thead>
<tr>
<th></th>
<th>1H 2018</th>
<th>2H 2018</th>
<th>1H 2019</th>
<th>2H 2019</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Optical Interposer Platform Development</strong></td>
<td>• Process transfer to SilTerra (Completed)</td>
<td>• Interposer module qualification (Started)</td>
<td>• Portfolio expansion in datacom</td>
<td>• Portfolio expansion to sensing</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• Portfolio expansion to telecom</td>
<td></td>
</tr>
<tr>
<td><strong>100G Product Milestones</strong></td>
<td>• Quad PIN device qualification (Completed)</td>
<td>• ROE prototype sampling</td>
<td>• ROE qualification End</td>
<td>• ROE customer orders</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• ROE qualification Start</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• TROE prototype sampling</td>
<td>• TROE qualification Start</td>
<td>• TROE customer orders</td>
</tr>
<tr>
<td><strong>400G Product Milestones</strong></td>
<td>• ROE prototype sampling</td>
<td>• ROE qualification Start</td>
<td>• ROE qualification End</td>
<td>• ROE customer orders</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>• TROE prototype sampling</td>
<td>• TROE qualification Start</td>
</tr>
</tbody>
</table>

ROE = Receive Optical Engine  TROE = Transmit and Receive Optical Engine
POET Technologies, Inc.
- Public by reverse merger in 2006
- Name change to POET Technologies, Inc. in 2013
- Ontario-based Corporation
- Canadian OSC and US SEC compliant

Operating Subsidiaries:
- DenseLight Semiconductors, Pte. Ltd. Singapore
  - Compound semiconductor fab manufacturing chip-based light sources and detectors for photonics markets
- BB Photonics, Inc. USA and UK
  - Source of proprietary dielectric material and waveguide technology
  - Both companies acquired with stock in mid-2016

Locations:
- Toronto, Ontario, Canada – Corporate HQ
- San Jose, California, USA – Admin, design and lab
- Singapore - design, fabrication and testing

100 Employees as of March 2019, located primarily in Singapore
We are an Integrated Photonics device company.

- **100** Employees
- **60** Patents
- **02** Technology Platforms
- **02** Operating Subsidiaries

**Indium Phosphide (InP)**
- Lasers, SLEDs, ELEDs, modules for optical sensing
- Hybrid Integrated Photonics Packaging (HiPP)

**Optical Interposer Platform**
- Passive Dielectric Waveguides
- Wafer-level Integration into Silicon

**Publicly Traded** – TSX Venture (Canada) – PTK.V

- **DenseLight Semiconductors**
  - Singapore

- **BB Photonics**
  - US and UK

**Technology Platforms**
- Indium Phosphide (InP)
- Optical Interposer Platform

**Operating Subsidiaries**
- DenseLight Semiconductors
  - Singapore
- BB Photonics
  - US and UK

**Employees**
- **02**

**Patents**
- **02**

**Technology Platforms**
- **02**

**Subsidiaries**
- **02**

**We are an Integrated Photonics device company.**

**Publicly Traded** – TSX Venture (Canada) – PTK.V
POET DenseLight Fab in Singapore

- DenseLight Semiconductors, Pte. Ltd.
  - Wholly-owned subsidiary of POET Technologies, Inc.
  - 25,000 sq. ft. purpose-built fab for 2” - 4” InP wafers
  - Full in-house vertical integration
    - MOCVD-based epitaxial deposition
    - Wafer fabrication
    - Test & Assembly

- Full product-line of components to modules
  - Super-luminescent light-emitting diodes (SLEDs) and laser products

- Global direct sales and distribution network

- Complete optoelectronics integration capability
Senior Management Team

Dr. Suresh Venkatesan
CEO
25 years semiconductor industry experience
Motorola, Freescale & GLOBALFOUNDRIES
Technology Development &
Commercialization

Rajan Rajgopal
GM and President, DenseLight
28 years semiconductor industry experience
Former VP at Global Foundries and Micron

Dr. William “Bill” Ring
SVP
20 years semiconductor industry experience:
HP, Tyco, BB Photonics
Optical technology, product and business
development

Rajan Rajgopal
GM and President, DenseLight
Over 28 years of semiconductor industry experience
Former VP at Global Foundries and Micron

Richard Zoccolillo
SVP Strategic Marketing & Product Management
25 years optical networking operations experience
AT&T, Lucent, Opnext, Infinera
Business Unit President, SVP Operations,
Product and Technical Management

Dr. Yee-Loy Lam
CTO DenseLight
Co-founder of DenseLight Semiconductors
Professor Nanyang Technological University
Specialist in optoelectronics, fiber-optics
sensors and photonics systems applications
Board of Directors

David E. Lazovsky
Executive Chairman
Founder, CEO and Director of Intermolecular (NASDAQ: IMI)
20 years of semiconductor industry experience - IMI and Applied Materials

Peter D. Charbonneau
Director
Former General Partner, Skypoint Capital, funding early stage data and telecom co’s.
Board Member, Mitel and Teradici

Chris Tsiofas
Director
Partner at Toronto Chartered Professional Accountancy firm Myers Tsiofas Norheim LLP
25 years of experience on both financial and operational issues

Jean-Louis Melinge
Director
Partner with ARCH Venture Partners
Managing Director, YADAIS
Former CEO, Kotura
Leading expert in silicon photonics and optical components

Don Listwin
Director
CEO, iSchemaView, CEO Canary Foundation
Founder, Listwin Ventures
Former CEO, Openwave Systems
Former EVP, Cisco Systems
Consulting Professor, Stanford School of Medicine

Mohandas Warrior
Director
President & CEO of Alfalight, 2004-2016
15 years at Motorola Semiconductors (Freescale) leading test and assembly operations
### Capitalization and key statistics

<table>
<thead>
<tr>
<th>Metric</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total common shares outstanding</td>
<td>288,082,302*</td>
</tr>
<tr>
<td>Warrants Outstanding (11/2/16 offering)</td>
<td>34,800,000 ($0.52 CAD US$0.40)</td>
</tr>
<tr>
<td>Warrants Outstanding (3/21/18 offering)</td>
<td>12,545,350 ($0.75 CAD US$0.58)</td>
</tr>
<tr>
<td>Share price</td>
<td>$0.38 CAD* (US$0.29)</td>
</tr>
<tr>
<td>Market cap</td>
<td>$109.5M CAD* (US$82.4M)</td>
</tr>
<tr>
<td>52 week range</td>
<td>$0.23 – $0.79 CAD* (US$0.17 – $0.61)</td>
</tr>
<tr>
<td>TTM revenue (9/30/18)</td>
<td>$3.1M USD</td>
</tr>
<tr>
<td>TTM gross margin (9/30/18)</td>
<td>56%</td>
</tr>
<tr>
<td>Cash (9/30/18)</td>
<td>$5.9M USD</td>
</tr>
</tbody>
</table>

*As of February 28, 2019
Multi-Billion $ high-growth market opportunity

Robust product development pipeline strong IP position

Able to leverage existing design, manufacturing and sales capabilities

High-margin Business Model with sustainable cost advantages

Paradigm Shift Photonic Integrated Circuits – only path to dramatic cost reductions

Technology developing for mass market commercialization

Investment Highlights