

FLEXPOINT SENSOR SYSTEMS, INC.

New Critical Applications Drives Broad Deployment

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FLEXPOINT SENSOR SYSTEMS, INC. (OTC:QB – FLXT - \$0.041)

Price Target: \$0.20

Rating: Speculative Buy

COMPANY SNAPSHOT

Flexpoint Sensor Systems, Inc. is an innovative technology firm specializing in developing products that feature the Company's patented *Bend Sensor®* and related technology. The *Bend Sensor®* is a ground-breaking sensing solution that is revolutionizing applications in the automotive, safety, medical and industrial industries. The Bend Sensor's single-layer, thin film construction cuts costs and mechanical bulk while introducing a range of functions and stylistic design possibilities that have never before been available in sensing technology. Flexpoint's technology and expertise have been recognized by the world's elite business and academic innovators for over 17 years.

KEY STATISTICS

Price as of 8/30/13	\$0.041
52 Wk High – Low	\$0.19– 0.0391
Est. Shares Outstanding	49.6M
Market Capitalization	\$2.0M
3 Mo Avg Vol	67,000
Exchange	OTC:QB

COMPANY INFORMATION

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INVESTMENT HIGHLIGHTS

With its ground-breaking, patented sensor technology, Flexpoint Sensor Systems is poised to broadly deploy its products for use in a whole host of applications. The unique functionality and form factor of the Company's flagship *Bend Sensor®* will enable Flexpoint to emerge as one of the most sought-after and profitable firms in its space.

The pioneering and one-of-a-kind *Bend Sensor®*'s construction and wide range of functionality will lead to broad deployment in the automotive, medical, industrial, and leisure, and safety industries. Based on the current tailored product design, testing, and deployment schedules for various applications, 2014 should see a big increase in Flexpoint's sales.

The near-term opportunities include the sale of its flagship products for use in automotive horn switches, colonoscopies, medical beds, mattress covers, commercial beds and others. The colonoscope opportunity in particular holds great near term promise, given the millions of procedures performed annually. Plus, Flexpoint already has achieved "implementation ready" status with a top U.S. automotive manufacturer for its products, which bodes well for sales in the next few years.

With a series of milestones ahead, the undervalued FLXT stock offers huge potential for both the stock trader and the long term investor. With projected gross margins north of 50%, we believe that FLXT could earn nearly \$2M in net income on \$6-7M in revenue once broad automotive product deployment occurs. This event would likely result in a \$30-40M market cap, versus the ridiculously low \$2M current market value. We rate FLXT Speculative Buy with a \$0.20 price target.

FLEXPOINT SENSOR SYSTEMS (OTC:QB FLXT)**COMPANY OVERVIEW**

Flexpoint Sensor Systems, Inc. is a firm migrating from the development stage to the commercialization phase. The Company is principally engaged in designing, engineering and manufacturing bend sensor technology and products using its patented Bend Sensor® technology, (a flexible potentiometer technology). The Company believes that its sensors are more durable, adaptable and cost-effective than anything currently on the market. Flexpoint owns, or controls the rights, on ten patents, including patents on specific devices that use the *Bend Sensor*® and have filed for additional patents and are continuing to develop and enhance intellectual properties that will result in additional patents being filed.

Since 2004, while in the development phase, the Company has sold products and generated limited revenue via design and engineering services. This includes manufacturing sensors and providing design and engineering services for a supplier to a Top 10 automotive manufacturer, and achieved “implementation ready” status with a top U.S. automotive manufacturer for its products which bodes well for sales in the next few years. Separately, the Company has expanded its marketing efforts to a number of larger domestic and international companies that have applications which will greatly increase the volume of sensor sales.

The Company owns the patent rights to its *Bend Sensor*® technology through Sensitron, a wholly-owned subsidiary of the Company. The *Bend Sensor*® is a flexible potentiometer and the bend sensor product consists of a coated substrate, such as plastic, that changes electrical conductivity as it is bent in a consistent manner. Electronic systems can connect to this sensor and measure in detail the amount of bending or movement that occurs in a predictable manner.

A typical potentiometer functions through the means of metal contacts swiping or rubbing across a resistive element. The Flexpoint Bend Sensor® potentiometer is a single layer with no mechanical assembly that makes it more reliable and significantly smaller, lighter in weight and usually less expensive than mechanical potentiometers. As a result, many current sensor applications can be improved and new applications can be engaged through the use of the technology.

In our view, the pioneering and one-of-a-kind *Bend Sensor*®’s construction and wide range of functionality will lead to broad deployment in the automotive, medical, industrial, and leisure, and safety industries. The near-term opportunities include the sale of its flagship products for use in automotive horn switches, colonoscopies, medical beds, mattress covers, commercial beds and others. The colonoscope opportunity in particular holds great near-term promise, given the millions of procedures performed annually. Based on the current, tailored product design, testing, and deployment schedules for various applications, 2014 should see a big increase in Flexpoint’s sales, with hockey-stick type growth in 2015 and 2016, especially as automotive-specific product volumes occur.

FLEXPOINT SENSOR SYSTEMS (OTC:QB FLXT)

THE FLAGSHIP

With 10 awarded patents and more pending, the proprietary *Bend Sensor®* was designed to be the smallest and lightest as well as the most durable and cost effective variable resistor on the market. Variable resistors are the platform that sensors are designed on because there is a change in resistance as current flows through them, allowing them to measure some sort of deflection in mechanical or electrical systems. The Flexpoint product will permit engineers at OEM's greater flexibility and improved reliability in sensing and actuation system design over traditional mechanical technology.

As illustrated in the image below, the revolutionary *Bend Sensor®* from Flexpoint can be produced in different custom sizes.

Image 1: *Bend Sensor®* Custom Sizes



Source: Flexpoint Sensor Systems, Inc.

The *Bend Sensor®* works in a very easy to understand fashion. First, the device consists of a single thin-layer flexible plastic film (0.005") coated with a proprietary coating that can also be applied to other materials. When the sensor is bent, the coating separates into micro cracks that correspond to the angle at which the entire sensor is bent. This bending causes the variable resistance change and thus the corresponding sensing measurement feedback with connected electrical systems. Second, the micro level design of the *Bend Sensor®* potentiometer, or resistance element, can provide 200,000 discrete data points with one inch of movement with appropriate calibration with the electrical systems in the application. This allows superior accuracy versus traditional mechanical designs.

FLEXPOINT SENSOR SYSTEMS (OTC:QB FLXT)

Image 2 below demonstrates a side by side comparison of a traditional variable resistance sensor on the left and the *Bend Sensor®* on the right. The most significant difference in the design is that the *Bend Sensor®* has no moving or rubbing contact mechanical parts or sub-assemblies which greatly reduce wear and increase the cycle life. Additionally, the technology permits custom sizes at minimal engineering costs which provides more flexibility to meet OEM size constraint specifications. Finally, contamination, which can cause seizure and ultimately failure of moving mechanical parts in traditional designs, is not an issue with the *Bend Sensor®*.

Image 2: Typical Competitive Sensor (left) vs. *Bend Sensor®* (right)



Source: Flexpoint Sensor Systems, Inc.

The *Bend Sensor®* has tested to meet a number of specifications:

- Cycle life reliability tested to over 35 million without failure – design specifications call for 1 million cycles at 2 Hz (cycles per second) and 0.25" displacement.
- Resolution (discrete accurate measurements) of 1°
- 95% humidity or higher
- -31 °F to 185 °F temperature range

The *Bend Sensor®* design also has the potential to offset shipping, packaging, and material costs because of its efficient design related to size constraint, which is a reduction of nearly 90% versus other typical sensors. Finally, the superior technology allows for application in mechanical systems, flow measurement, and humidity control at the high level to illustrate a few applications.

FLEXPOINT SENSOR SYSTEMS (OTC:QB FLXT)

MARKETS AND APPLICATIONS

The opportunities and potential applications of the Company's flagship are virtually limitless and the Company is in varying stages of negotiations and design for many in disparate industries. In this report, we attempt to identify what we believe are the low-hanging fruit and most likely near-term market opportunities. We believe the medical space and sports show may offer the best opportunities for the next 2-3 years, with automotive to drive sales beyond 2015-2016. *Figure 1* below is a brief summary of the working applications being currently pursued and negotiated by Flexpoint for the Bend Sensor®.

Figure 1: Summary of Applications for *Bend Sensor*®

Application	Description	Market	Competitive Advantage(s)
<i>Horn Pad</i>	Sensor is used to actuate horn when driver gives appropriate load signal.	14 million new cars sold in US in 2012	Traditional design is mechanical spring loaded. Failure can occur with inadvertent horn, or worse no functioning horn with driver input. Bend Sensor® has no mechanical moving parts.
<i>Colonoscopy</i>	Positioning of scope monitoring during procedure.	About 5 million procedures per year in US alone. Growth expected as population ages in industrialized nations.	Superior accuracy and resolution over traditional sensor designs. Disposable after one use.
<i>Sport Shoe</i>	Senses weight distribution for athletes. First application will be in golf training monitoring swing balance. There are endless possibilities for application for athletes in other sports like football.	About 13 million golfers in US, 60 million worldwide. Number will increase in US as 'baby boomer' generation continues to retire.	Superior accuracy and resolution over traditional sensor designs. Can also be applied to golf club shafts. No effects from moisture or contamination as with traditional sensors
<i>Mattress Covers</i>	Monitors infants, elderly, and infirmed detecting pressure for any abnormalities.	Hospital ER and infant wards. Home infant monitoring devices. Assisted care living facilities, which currently house 2.5 million, projected 3.3 million by 2020 in US.	Existing monitoring systems only detects movement of the entire crib mattress or bed. Bend Sensor® system features a series of sensors that is able to detect and report the movement of person/child and anything around them.
<i>Medical Beds</i>	System can accurately and precisely move bed to desired position to alleviate pressure points of patient.	About \$7 billion globally.	Multi-chambered bed with 30 sensors that offers superior positioning accuracy.
<i>Commercial Beds</i>	Similar to <i>Medical Beds</i> applied to non-spring bed design for home use.	The Specialty Bed market is currently well over a billion dollars a year or about 22% of the bedding market, an increase of approx. 6% of market share over the last six years	Similar advantage as with Medical Beds mentioned above, superior positioning accuracy.

Horn Pad:

A Steering Wheel Horn Pad Sensor that features *Bend Sensor*® technology has achieved "Implementation Ready" status with a major US Fortune 100 Automaker that we have been jointly developing this product with for the last several years. There are a total of four vehicle platforms currently being considered for Flexpoint's longer-lasting, more cost-effective horn switch. The sensor has been slated to replace their current horn assembly and implementation has been initially targeted for two of these platforms. In the automotive industry, Implementation Ready status indicates that "the part or assembly is ready for implementation in today's production vehicles. The product has been tested and an industrial validation performed. The Walker Component Group, a privately held Tier I automotive supplier (www.walkercomponent.com), plans to add the *Bend Sensor*® to automotive sub-assemblies before shipping to the final OEM. Flexpoint anticipates annual revenue over \$1 million once this product reaches the marketplace in the next 2-3 years.

FLEXPOINT SENSOR SYSTEMS (OTC:QB FLXT)**Colonoscopy:**

Flexpoint recently announced that it has completed all tasks included in the Phase One development of a disposable directional colonoscope application with Haemoband Surgical, Ltd., a Northern Ireland-based company specializing in unique medical technologies. Flexpoint has received approval for and is well into the tasks involved in completion of Phase Two development and expects this phase to be completed during the next 60 days.

Phase Two development includes refinements to the sensor, completion of the development of the electronics package to accompany the scope and colonoscope device, which uses Flexpoint's patented *Bend Sensor®* technology to monitor the device's position as it is administered to the patient. Phase Two also includes production of working prototypes to be used for in-field testing and testing of completed systems. This will be followed by field trials of production ready units for completion of the required certifications. It is anticipated that the device will initially be approved for use in Europe and use will expand to the U.S. market as the necessary approvals are obtained. It is expected that the needed certifications in Europe can be completed by late this year or early next year.

There is pent-up demand for inexpensive, accurate methods of determining the position of the colonoscopes around the world, and Haemoband's device is the first of its class. Testing to date has demonstrated the ability of Flexpoint's sensor to graphically display the shape of the colonoscope and to accurately detect any looping of the scope. With more accurate readings on the position of the device, doctors can minimize complications that can arise from the colonoscope coiling, and can cut down on the time necessary to perform the procedure. With the incorporation of the Bend Sensor, the current monitoring equipment can now graphically display the position and formation of the colonoscope. This is a distinct advantage over the capabilities of the existing equipment.

We believe that production could begin in 1H14. At full production, this is the most promising consistent revenue stream with annual volumes in the millions.

Sport Shoe:

The golf shoe technology has been shown and demonstrated by Mitch Vogues, President of *Max Out Golf* to PGA professionals with very positive feedback. The system can be used in conjunction with a smart phone to provide real time feedback and analysis and has the potential to be a huge training tool for all golfers. Annual volume of 100,000 units in the first year of production is forecast.

Mattress Covers – Adult and Infant:

As mentioned in *Figure 1* the mattress cover system can be used for adults, children, and infants. The *Bend Sensor®* system will enhance monitoring and help to prevent SIDS, or Sudden Death Infant Syndrome, which contributes to 3,000 infant deaths in the U.S. alone annually. The monitoring device will deliver real-time information to the parents to smart phone and other platforms.

FLEXPOINT SENSOR SYSTEMS (OTC:QB FLXT)

Medical Beds:

In April, Flexpoint reached a favorable universal settlement in the legal case involving a series of products with the *Bend Sensor®* technology in Medical Bed applications. This clears the way for revenue generating in this application which the Company anticipates to be about \$5 million at maturity.

Other:

Just last week, Flexpoint updated the current status of its agreement to supply sensors for Intertek Industrial Corp., a leading supplier of quality seatbelt systems and safety devices to the emergency vehicle market. The system is installed in the seats of the rear compartments of the emergency vehicle and provides the driver with constant feedback as to the "seated and secured" status of passengers and personnel in the rear of the vehicle.

The NFPA specification that requires a system like this one has been adopted and is expected to go into effect during 2014. Sales through Intertek are expected to continue at low levels until the legislation requiring safety systems such as the Protek system goes into effect. The system is currently in use in emergency vehicles in the US and is being tested in applications for other types of emergency vehicles. There are approximately 6,000 new ambulances constructed annually in the US. Intertek estimates that sales of their system could exceed 1,000 systems annually and upon adoption of the legislation, annual sales of the product should result in hundreds of thousands in revenue for Flexpoint.

As noted above, the *Bend Sensor®* technology is being tested for broad deployment and use in automotive applications with the Occupant Detection System developed by Flexpoint. This sensing system makes 'smart' decisions about the mass of each passenger allowing the deployment or suppression of the airbag in the event of an accident or abrupt stop of a vehicle. While volumes could potentially be in the millions annually, the auto industry is notoriously slow to adopt new products and thus we believe that revenue from this vertical could be further out than others listed. Still, one wild card is in braking systems for garbage trucks and other large commercial vehicles.

THE FLEXPOINT LEADERSHIP

Clark M. Mower – President, Chief Executive Officer

Mr. Mower was appointed President and CEO in January 2005. He was appointed as Director, President and CEO of Sensitron in February 2005. He formerly served as Senior Vice President - Mergers and Acquisitions - Merchant Energy Group for El Paso Energy Corporation (NYSE: EP). From August 2002 through 2004 he was the managing member of Polaris Energy, LLC, a non-affiliated consulting company to energy related mergers and acquisition. From August 2002 to July 2004 he was a management committee member for Saguaro Power Company, a non-affiliated company operating a 100 megawatts power plant in Henderson, Nevada. Prior to that he served as President and Chief Executive Officer of Bonneville Pacific Corporation (a public company) for eight years until El Paso Corporation acquired Bonneville Pacific Corporation in October 1999.

FLEXPOINT SENSOR SYSTEMS (OTC:QB FLXT)**John A. Sindt - Chairman of the Board**

Mr. Sindt has served as a director of the company since 1999 and served as President and Chief Executive and Financial Officer from 2001 to 2004. He served as Secretary/Treasurer from January 2005 through July 2005. Mr. Sindt is also the Chairman of the Board of Sensitron, one of our subsidiaries. He has been employed since 1965 as a Salt Lake County, Utah Constable and he currently heads that department. He has also served as President, Corporate Secretary and Director for the National Constables Association.

David B. Beck – Director of Engineering

Before Flexpoint, Dave spent 6 years as a manufacturing engineer at Varian Associates in their X-Ray and Power Tube division in Salt Lake City where he had responsibility for processes as well as product development. From 1993 to 1995 he worked for ATK Motorcycles developing manufacturing lines, assembly tooling, incoming inspection and inventory systems. Dave started at Flexpoint in 1995 and has been instrumental in developing products such as the Occupant Classification Sensor, Shoe Sensor and Golf Club concept, Medical and Commercial beds, Colonoscope sensor and various other devices and is named on several issued and pending patents.

Thomas N. Strong - Chief Financial Officer

Prior to accepting the position of Controller and Chief Financial Officer of Flexpoint in August 2008, Mr. Strong was employed by Praxair Healthcare Services as a Regional Financial Analyst, and part of his responsibilities with this provider of medical gases and equipment was to direct that company's regional compliance with the Sarbanes-Oxley Act of 2002. From 2002 to 2005 he was employed as Regional Corporate Controller for INVE America and Subsidiaries, an international agriculture and aquaculture company responsible for the accounting, financial reporting and treasury duties for all of North and South America. Mr. Strong has over 20 years of experience in the accounting field, primarily in controller positions.

RISK FACTORS

In our view, Flexpoint's biggest risk factors are the typical issues facing component manufacturers, including the timing of sales to OEMs and partners in the various vertical markets, as well as the sales volumes. Moreover, volume production delays and reduced profitability forecasts could occur if additional engineering and customization is required by customers. Considering the Firm is relatively small in size it will have to hire personnel as volumes increase, in order to meet the demand. Competition from larger firms or even from newer entrants with new technologies or feature-sets is another typical concern and is also consistent with firms of Flexpoint's size and standing.

FLEXPOINT SENSOR SYSTEMS (OTC:QB FLXT)

CONCLUSION

In our view, the Flexpoint advantages are clear. The firm migrating from the development stage to the commercialization phase and should achieve significant success since its patented, ground-breaking products are more durable, adaptable and cost-effective than anything currently on the market. Based on the current, tailored product design, testing, and deployment schedules for various applications, 2014 should see a big increase in Flexpoint's sales, with hockey-stick type growth in 2015 and 2016 to the \$6-7M area, especially as meaningful medical-related and automotive-specific product volumes occur.

Interestingly, the value of the IP and customer relationships alone are likely worth much more than the current \$2M market cap. This indicates to us that FLXT is clearly under the radar and thus presents an unusual opportunity for savvy investors. With a series of testing and production milestones ahead, the undervalued FLXT stock offers huge potential for both the stock trader and the long term investor. With projected gross margins north of 50%, we believe that FLXT could earn nearly \$2M in net income once broad automotive product deployment occurs. This event would likely result in a \$30-40M market cap, versus the ridiculously low \$2M current market value. We rate these shares Speculative Buy with a \$0.20 price target.

Recent Trading History For FLXT

(Source: Stockta.com)





FLEXPOINT SENSOR SYSTEMS (OTC:QB FLXT)

Senior Analyst: Robert Goldman

Rob Goldman founded Goldman Small Cap Research in 2009 and has over 20 years of investment and company research experience as a senior research analyst and as a portfolio and mutual fund manager. During his tenure as a sell side analyst, Rob was a senior member of Piper Jaffray's Technology and Communications teams. Prior to joining Piper, Rob led Josephthal & Co.'s Washington-based Emerging Growth Research Group. In addition to his sell-side experience Rob served as Chief Investment Officer of a boutique investment management firm and Blue and White Investment Management, where he managed Small Cap Growth portfolios and *The Blue and White Fund*.

Analyst Certification

I, Robert Goldman, hereby certify that the view expressed in this research report accurately reflect my personal views about the subject securities and issuers. I also certify that no part of my compensation was, is, or will be, directly or indirectly, related to the recommendations or views expressed in this research report.

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FLEXPOINT SENSOR SYSTEMS (OTC:QB FLXT)

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