

# **ENVIRONMENTAL SENSORS INC. ("ESI")**



Symbol ESV.V

Exchange TSX Venture Exchange

Toronto, Canada

Status Strategic development phase

Current Ownership approx.60%Estimated NPV (CAN\$)70,928,000Shares Issued & Outstanding150,000,000

# **Summary and Overview**

Two of the world's most valuable resources are water and oil. Environmental Sensors Inc. develops high-tech sensors that optimize the measurement of these resources, providing significant benefits to producer and environment. Established in 1973, ESI is a British Columbia-based, leading developer of moisture sensing and monitoring systems for a variety of applications.

Although less than one percent of all water on the planet is fresh water, it is subject to enormous waste. For instance, 80% of American fresh water is used for agricultural purposes, and only about half of this amount ever reaches the intended crop. ESI's MoisturePoint and GroPoint systems allow growers to maximize irrigation efficiency by monitoring moisture content in the root zone of the crop, thereby saving up to 40% of water. As global concerns for fresh water consumption continue to grow, Avis Financial recognizes ESI's solution as a big opportunity.

ESI also has its eye on the oil industry, where discoveries of new oil wells have been declining for decades. Conventional oil is mainly extracted from increasingly unstable geo-political regions of the world and from wells and reserves that are difficult to operate.

Water concentrations continue to increase as these wells become less productive. ESI's FloPoint product measures the amount of water within an oil stream - a critical aspect of oil recovery, particularly from secondary oil wells. The company's solution represents a major breakthrough in a market that is worth several US\$ billions.

# **Investment Opportunity**

As a result of redemptions at the beginning of the financial crisis, mutual funds failed to follow up on investments into ESI. This put the company into a difficult position and created a very attractive investment opportunity for Avis Financial Corporation ("AFC") and its partners.

AFC has eliminated or acquired all of ESI's debt, brought the company back to trading and installed a new board of directors and management. Furthermore, it has implemented a number of controlling procedures and is establishing sales & distribution channels for ESI's products.

ESI has 1) potentially market-leading technology; 2) reputable existing clients in both agriculture and oil industries; 3) expanding markets for each product line; 4) valuable distribution contracts.

As a result of these factors, AFC is confident that it can successfully support ESI in multiplying its current market capitalization.

# **Products**

**GroPoint** is a small, rugged, portable, and reliable water monitoring sensor based on Time-domain Transmissiometry ("TDT") methods. It provides continuous moisture data and is designed specifically to allow for the optimization of irrigation control systems in farms, vineyards, golf courses and large commercial growing operations. Such optimization leads to maximized yield, improved crop quality, shorter time to market, water and energy savings and improved profitability.





# ESI continued...

The market potential is large, as there are an estimated total of 570 million acres of irrigated land worldwide, and less than 2% of it is operated with water-conserving technology. Concerns about fresh water supplies are increasing, and pressure to conserve water is already being applied by many governments worldwide.

GroPoint sensors are well placed in their market, providing robust and reliable performance at a price-point that most of their competitors cannot match. GroPoint has recently been redeveloped to feature a serial/digital interface (SDI-12), significantly increasing its compatibility with irrigation systems. Other advantages of GroPoint include a fully integrated wireless system (which can be built up from basic to high-tech with additional components), easy installation (no access tubes, buried elements), coverage of all important measurements, and a high level of reliability (reducing costs for the consumer in the long-term).

**MoisturePoint** sensors are designed to give highly accurate readings of soil-moisture at several depths. MoisturePoint already occupies a strong position within environmental-regulatory, academic research, and agricultural markets. Its closest competitors are both European, which gives ESI greater access to the North American market.

MoisturePoint is very robust and causes minimal soil disruption during installation. In contrast to its competitors, ESI has targeted landfill-analysis markets in addition to agricultural markets, and with increasing environmental regulation by governments it is reasonable to expect an increased demand for environmental monitoring systems such as MoisturePoint.

**FloPoint** is a patented water measurement device capable of determining the percentage by volume of water in a hydrocarbon (oil) stream that is flowing through the instrument at any given time.

During the late 1980s the oil and gas industry realised that the availability of accurate well testing meters could have a large economic impact on the infrastructure of oil and gas developments. This has driven the development of high accuracy, high water cut measurement systems in the oil industry. There is a recognised need for improvement of watercut (water-in-oil) measurement systems.

ESI's FloPoint addresses this need, aiming for greater accuracy at a significantly lower cost than leading competitors. FloPoint, as a prototype, has been tested by the Canadian oil industry. As concerns for efficiency of oil production and efforts to extract oil from more difficult sources are ever-increasing, ESI hopes to capitalize on its huge market potential.

#### **Current Status**

ESI's has completed the development of a digital generation of sensors for the agricultural sector. This new profiling sensor has a variable length from 30 cm up to 1.2 meters and measures both volumetric soil moisture and soil temperature. The combination of TDT technology with a sleek, durable and easy to install profiling sensor represents a unique offering in the international sensor market and has already generated significant interest from distributors worldwide. One of these is Beijing Yanyu Water Technology Company Ltd., a subsidiary of Tri-Tech Holding Inc., who thoroughly tested the sensor over the past 18 months before signing an exclusive Distribution Agreement for the Chinese market worth several million U.S. dollars. With operations in China, the U.S. and India, Tri-tech provides turnkey water resources management, water and wastewater treatment, water-efficient irrigation, and industrial emission and safety control solutions, with fiscal sales of US\$ 72.6M in 2012.

In November 2013, ESI and Dycor Technologies Ltd. ("Dycor") agreed to enter into a formal collaborative relationship for the second-generation development commercialization of ESI's Flo·Point™ technology. The key mission is to jointly develop the best available commercial water cut sensor solution for the oil industry. The development program will involve expertise based at ESI in conjunction with Dycor's technology innovation strength and their vast experience in the oil industry. The co-operation of a significant Canadian oil producer as lead customer, who will assist in running field-testing and aid with solution specification, has also been secured. With over 1'500'000 oil wells worldwide, the global market opportunity for a finalized and ready for market product is at an estimated CAN\$ 7.5 billion.





#### **AVIS MEDIA**

Ownership AFC Ownership

Privately held corporation 100%

Estimated NPV (US\$) Status 609'000 Restructuring phase

### Summary

Avis Media offers digital signage, Internet Protocol Television ("IPTV"), Over-the-top content ("OTT"), hospitality solutions and media content to hotels, public venues, and residential houses in India, the United Arab Emirates and Scandinavia. The company intends to establish itself as a leading provider of innovative media solutions.

#### The Platform

Avis Media provides an open, flexible and versatile media platform for delivering interactive media services and content to the hospitality industry (hotels, resorts, theme parks, etc.) and service operators (Telco's, system integrators, cable operators). Compatible with cloud based architectures like OTT, the platform enables to run features on multiple devices such as smartphones, tablets, PCs and set-top boxes ("STB").

Avis Media offers an end-to-end solution; the platform is capable of running multiple services in a single integrated environment. Most importantly, it is hardware flexible and can seamlessly integrate with most third party systems. Typical features supported by Avis Media's platform are: Widget Store, Instant Messaging over TV, Target Advertising, Connection with Social Media Networks, personal video recorders (PvR) and Time Shifted TV.

#### **Markets**

According to a 2011 IMS Research study "IPTV: A Global Market Analysis", the worldwide IPTV subscriber base was estimated at 40 million, which was projected to rise to exceed 70 million users in 2015. More recent studies have shown that the global market size is infact estimated to exceed 80 million subscribers by 2013 (according to Multimedia Research Group MRG).

The new forecast indicates that the number of global IPTV subscribers will grow from 41.2 million to 101.7 million between 2010-2014, a compound annual growth rate of 25.3%.

As for service revenue, the global IPTV market is US\$17.5 billion in 2010 and is forecasted to grow to US\$46 billion in 2014, a compound annual growth rate of 27%. By 2014, Europe and North America will still generate a larger share of the global revenue, because China and India, the fastest growing (and ultimately, the biggest) markets in Asia are still experiencing very low average revenue per user (ARPU). This will change in the next decades as Chinese and Indian middle classes are growing rapidly, representing more purchasing power.

According to the IMS study, IPTV will also play a large role in the hospitality market, with STB shipments expected to increase by 75% from 2011 to 2015, as hotel operators begin to recognize the value of the IP platform and are increasingly moving to adopt it.

# India

The country's fast economic growth, increasing international trade and the rise of its middle class is urging India to improve its general infrastructure in order to adapt to the standards of these changing times. In the near future, the road and railway network faces an overhaul, the Indian Civil Aviation Ministry targets 500 new airports for national and international travel by 2020, which will allow business and leisure travellers to connect to destinations with greater ease. Due to projected improvements in the transportation infrastructure, the Indian hospitality industry is also poised for tremendous growth. The demand-supply imbalance has prompted several national and international hotel companies to focus their energy towards expansion in India. According to David Kong, the President and CEO of the world's largest single brand hotel chain, Best Western International (BWI) plans to have 8,500 rooms in 100 hotels available in India by 2017.





# AVIS MEDIA continued...

Starwood Hotels & Resorts (Westin, Sheraton, W Hotels), the largest operator of four & five star hotels in India, plans to open 20 new sites in addition to the 33 currently operated hotels.

With its focus on IPTV solutions, particularly in the hospitality market, Avis Media is perfectly positioned to capitalize on the Indian market growth over the next years.

#### **Current Status**

# India

Avis Media is currently finnishing the installation of the 5-Star Sheraton Towers in Chennai with IPTV solutions for 300 rooms. The hotel belongs to the ITC Hotel chain, the country's second largest group with over 100 hotels in 75 destinations. The collaboration with ITC Hotels places Avis Media at the helm of the competition, with the clear vision of providing its solutions to further locations within the rapidly growing luxury hotel industry.

Avis Media is eager to capitalize on the government directives to digitize entire pay TV network including cable TV, the market for India STBs is expected to gain significant momentum. Evaluating the present market scenario, around 93.5% of the total cable TV subscribers are still on analog based networks; however a major shift towards digital cable TV platform in the coming years is expected. Also, with the introduction of High Definition (HD) channels and smart TVs, the market for digital TV viewing is expected to grow exponentially. India's STB market is expected to ship 67.2 million units by 2017, at a compound annual growth rate (CAGR) of 28.5% from 2012-2017.



#### **United Arab Emirates**

In 2011 Avis Media completed its first major project for the telecommunications giant Etisalat by successfully installing its system throughout the new Dubai Sports City complex. In 2013, Avis Media started collaborating with the system integrator BMTS. Their first joint project was successfully executed in March 2013, where an end-to-end customized IPTV solution was installed that provides media content from Etisalat to the Abu Dhabi Investment Councils'(ADIC) head office at the Al Bahar towers. The project proved to be a successful cooperation between Avis Media, BMTS and local Telco operator Etisalat, and may lead to further projects in the geographic region. In 2012 The Al Bahar Towers won the Council on Tall Buildings and Urban Habitat's (CTBUH) First Innovation Award.

#### Europe

Avis Media has cooperated with the Scandinavian hotel chain 'First Hotels', which has sought the company's services to digitalize its hospitality offering. Also, Avis Media has done installations on the Norwegian cruise line Hurtigrutten providing them with solutions for TV and video on demand (VoD) on their cruise ships.



# AFC BUILDING TECHNOLOGIES, INC.

Ownership
AFC Ownership

Privately held corporation 100%

Estimated NPV (US\$)
Status

20'389'000 Early development phase

# **Origin of Business**

In the summer of 2011, Avis Financial Corporation ("AFC") was presented with the opportunity to exploit a promising market niche: the company started laying the groundwork for a venture regarding the provision of low-cost, pre-fabricated housing solutions. The high level of standardization, possible through a modular design, and achieved by pre-fabricating those modules centrally on a largescale basis, makes it possible to offer ready-to-build homes at quality, price-levels, and with an execution time that would otherwise be unthinkable. The global demand for this type of solution is steadily increasing and, having created a convincing concept and established substantial market contacts, the company is facing an extraordinary opportunity.

# **Rstudios' Concept & Design**

The company contracted the Swedish architectural firm Rstudio (www.rstudio.se) to design an innovative, modular housing concept that would meet the criteria of robustness and durability, energy efficiency, easy construction, and competitive pricing. After thorough consultation, Rstudio's architects created the Concept House 'Logos' models, a 58m2, 2-bedroom and a 79m2, 3-bedroom house with an open kitchen, a living- and dining area and bathroom, specifically designed for the Latin American target market.



For the house's exterior and interior walls, sandwich element panels consisting of two solid fiber cement boards insulated with expanded polystyrene (EPS) were chosen. The pre-fabricated roof panels consist of polyisocyanurate (PIR) insulated reflective steel with gutters that collect rain water for reuse.

#### **Current Status**

At this moment, AFC is working together with local developers on private real estate projects for low cost housing in Uruguay. In the meantime, AFC is collaborating industrial main supplier in Poland, with whom the design and technical specifications were improved in order to deliver high quality house at an interesting price point. AFC and its Polish cooperation partner are currently developing a further product line, a design solution that will cater for the upmarket real estate segment, yet still be based on modular, massproduced components.



In addition, AFC collaborates with a manufacturer of high-quality solar modules, which allows the company to provide energy independent housing solutions in the remotest parts of the world. The houses can be equiped with high quality photovoltaic modules, which are an ideal power solution for geographical areas that have insufficent or total lack of power grids.

AFC is capable of presenting model houses in both Uruguay and Poland to potential customers. The complete kit of building components will be shipped from a port in Gdynia/Gdansk, Poland, and today we have a wide interest of many potential customers in Europe, South America, Africa and Asia.







# SMALL WORLD FINANCIAL SERVICES

Ownership AFC Ownership

Privately held corporation approx. 3%

Estimated NPV (US\$)
Status

88'837'000 Exit phase

# **Summary and Overview**

Small World Financial Services is a global international payments operator, offering a secure, fast and inexpensive way to send and receive money to anywhere in the world.

Avis Financial assisted Choice Money Transfer since its inception in 2005. The company started operating profitably within a short periode of time and was able to gradually strengthen its position in the remittance market ever since, achieving solid yearly returns. Small World Financial Services, Europe's largest independent money transfer company, aquired Choice Money Transfer in 2011.

The combination of these two strong regional players led to one of the world's largest money transfer organizations. Small World Financial Services has a global network of more than 200,000 locations, offering services to 163 countries worldwide.

The remittance and money transfer market has experienced rapid growth over the last two decades, fueled mainly by increased immigration flows, disparities among national economies and technological innovation. According to the World Bank, migrant workers sent home over US\$ 300 billion in 2009; a number which has increased yearly, as the figures show a worldwide remittance of US\$ 549 billion in 2012.

This market volume, in combination with growing networks of Money Transfer Organizations and the widening base of banks, has given Small World Financial Services the opportunity to expand its operations into new territories and process larger quantities of orders.

Avis Financial currently holds approximately 3% of the merged entity, Small World Financial Services.

For more information, please visit: www.smallworldfs.com



