

Advanced Transmission System Holdings

PRE IPO OFFERING NOTE

BREAK THE CHAIN !

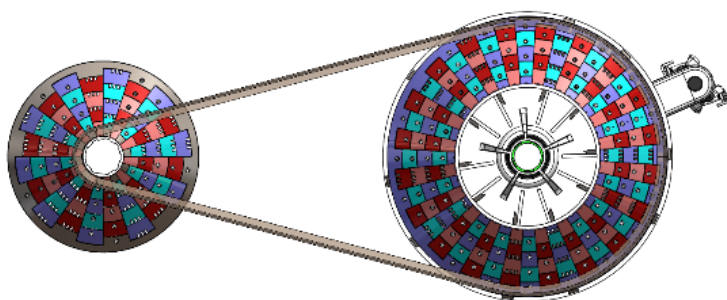
Advanced Transmission Systems Has Developed a Unique Continuously Variable Transmission (CVT) For Use on Mobile, Fixed Industrial and Recreational Equipment Including Bicycles and E-Bikes.

- **Highly disruptive technology especially in cycling**, an automatic transmission that can change seamlessly through a continuous range of effective gear ratios is **a cycling holy grail!**
- Significant design and engineering work is already completed with the prototype ready for construction and a **provisional patent lodged.**
- Potential to penetrate both the **bicycle OEM manufacturer market and retrofit market currently worth over \$ 3.3 billion.**
- Highly experienced, diligent and details driven management with **previous commercial success (SCANALYSE)** and a European focus.
- Potential to capitalise on the growing demand for electric bikes, a fast-growing market estimated currently @ \$15.7 billion.
- **Drive systems especially on Bicycle's are long overdue for disruption; basic designs haven't changed for 50+ years**

BUSINESS OVERVIEW

Advanced Transmission Systems the company has two divisions;

- **Treadlie Engineering**, focussed on the need for bicycles to have a functional, practical, robust, reliable and affordable drivetrain that offers unlimited gearing to the rider.



- **Advanced Transmission Systems**, concentrating on industrial applications and other recreational uses that could be licensed to third parties potentially generating parallel revenue streams.

The primary reason why the company's CVT is attractive for use on a bicycle is that it provides the rider with a choice for setting a suitable gear ratio rather than being restricted to pre-set ratios that may not suit terrain, conditions or rider ability. The purpose of the product is to overcome all of the intrinsic constraints of incumbent derailleur or hub gearing drivetrains.

CAPITAL STRUCTURE

Initial Shares on Issue (m)	25,000,000
Shares to issue this round (m)	7,142,857
Shares Issued 14c Mez. round	2,857,143
Total shares post Seed & Mez	41,500,000
Share est Issue @ IPO @ 20C	25,000,000
Total est. shares at IPO (m)	66,500,000

FUNDS

Shares to issued this round (m)	7,142,857
Issue Price this round in cents	7c
Funds raised in this Seed round	500k

ALLOCATION OF FUNDS

R&D and IP protection (\$m)	0.349
Working capital to fund IPO (\$m)	0.151
Total (\$m)	0.5

Seed Funds Will Be Applied To

- Further R&D Work,
- Test and Refine Current Applications with a View to Commercialisation,
- Explore New Applications
- Fund a Proposed IPO on ASX.

KEY MANAGEMENT

Jochen Franke	Director
Terry Walsh	Proposed Director
Charlie Guilloteau	Engineer

KEY DATES

Date of Offer Document	21 Nov 16
MEP Closing Date	28 Nov 16
Issue of Securities	21 Dec 16

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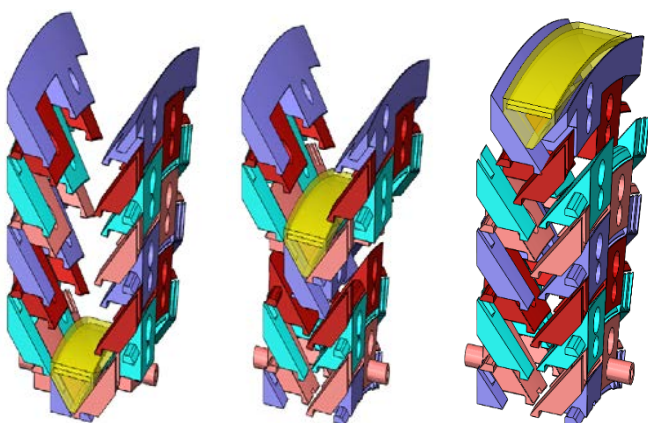
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VARIABLE DIAMETER PULLEY (VDP)

The Company's CVT differs from all other approaches by utilizing a friction based V-belt or V-chain driven Variable Diameter Pulley (VDP) system at the bicycle crank set and rear wheel. V-belt pulley drive trains are well proven and have a long-standing track record in many industrial, automotive and mobile equipment applications, yet have to date not been used on bicycles because of the prohibitive width of traditional conical pulley assemblies to achieve useful gear ratios needed for cycling.

VDP systems have a drive pulley that is rotated by input power. Importantly, gear ratio setting of VDP-CVTs can be achieved by manipulating the drive pulley diameter only, the passive driven pulley diameter simply reacts by automatically adjusting its diameter. This avoids the equivalent need for manipulating both the front and rear gear setting independently to arrive at a desired gear ratio, as is the case for incumbent chain driven derailleur systems currently dominating the market.



The VDP system offers a much more user friendly operation as it gives riders a

- Simplified shifting mechanism, only a single control is needed to change gearing up or down.
- Ability to change gearing while standing.
- Continuous power transmission during gear ratio changes which is unique to CVTs and essential for comfortable uphill riding.
- Elimination of dirty and inconvenient drivetrain lubrication.
- Increased rider safety as it is physically impossible for the V-belt to intentionally come off the pulleys.

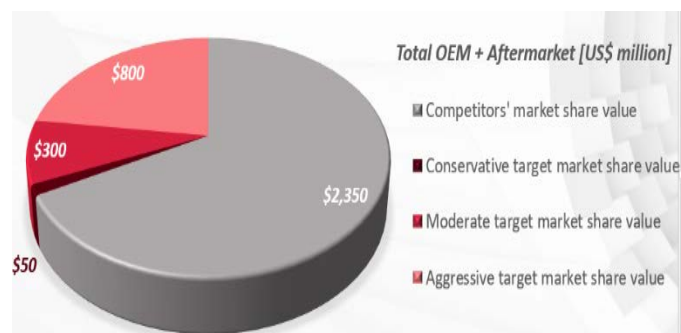
MARKETS AND OPPORTUNITIES

The market for bicycle drivetrains consists of two segments, bicycle OEM manufacturers and aftermarket retrofits, with the largest market share of nominally two thirds located in Western Europe.

Annual Bicycle Drivetrain Wholesales [US\$]

Shimano	SRAM	Campagnolo
\$ 1750 million	\$ 524 million	\$ 150 million

The total market size exceeding \$ 3.3 billion presents a significant target, particularly when considering the strong popularity of Electric bikes (e-bikes) featuring substantial year on year sales growth rates.



The company's CVT has the potential to capitalise on the growing demand for E bikes due to the attractiveness of the simplified shifting mechanism. E-bikes continue to be the highest selling electric vehicle on the planet, with nearly 35 million unit sales forecast for 2016. E-bikes sales are expected to total \$15.7 billion globally this year and reach \$24.3 billion in 2025.



Advanced Transmission System's revolutionary design has the potential to open other markets, including wind turbine drive technology, large compressors/pumps, and offshore equipment.

BOARD AND MANAGEMENT

Mr Jochen Franke
Managing Director

Jochen has a track record in creating, growing and achieving commercial technology venture success from a start-up stage.

His previous brain-child Scanalyse Pty Ltd was awarded Western Australian Innovator of the Year in 2007 and sold to multinational corporation Outotec in 2013.

Jochen has privately self-funded and led the Company's technology development over the past three years.

Terry Walsh
Proposed Director

Terry is a senior commercial lawyer and manager with more than 20 years of experience in project development, and commercial law.

Initially working with leading law firms in Perth and Sydney before moving in house, where he has worked as the General Counsel of Hancock Prospecting Pty and as a corporate counsel at Rio Tinto.

In addition to providing consulting services in the mining and finance industries, he currently serves as the Chief Development Officer of Hazer Group Ltd.

Charlie Guilloteau
Mechanical & Design Engineer

Charlie is a Chartered Professional Mechanical Engineer with a strong focus on product development, problem solving and finite element analysis (FEA). He started his career as a Computational Analysis Engineer at Peugeot Citroen, France, undertaking high end Non-linear crash test FEA to improve new vehicles' crashworthiness.

After moving to Australia, Charlie worked as a Mechanical Design Engineer and has worked within the Rail, Mining and Oil & Gas Industries.

TAX INCENTIVES for EARLY STAGE INNOVATION COMPANIES

IT SHOULD BE CLEARLY NOTED THAT

- **THE ATO DOES NOT GUARANTEE OR ENDORSE ANY POTENTIAL INVESTMENT IN THIS COMPANY**
- **MAC EQUITY PARTNERS OR ADVANCED TRANSMISSION SYEMTEMS DO NOT IN ANY WAY GUARANTEE A FAVOURABLE TAX TREATMENT FOR INVESTORS IN ATS OR ENCOURAGE INVESTORS TO INVEST BECAUSE OF THIS**
- **THE CIRCUMSTANCES OF THE COMPANY MAY CHANGE DOWN THE TRACK.**

From 1 July 2016, Investors In A Qualifying Early Stage Innovation Company (ESIC), May Be Eligible For Tax Incentives Which May Include

- **non-refundable carry forward tax offset equal to 20% of the amount paid for their qualifying investments.** (This is capped at a maximum tax offset amount of \$200,000 for the investor and their affiliates combined in each income year)
- **modified capital gains tax (CGT) treatment, under which capital gains on qualifying shares that are continuously held for at least 12 months and less than ten years may be disregarded.** Capital losses on shares held less than ten years must be disregarded.

Mac Equity Partners has been informed by ATS that they have been in contact with ATO about qualifying for ESIC and have had a case officer assigned.

ATS believes that it is an ESIC qualifying start-up investment at this stage under one qualification method and is now in the process of examining potential qualification under another method.

ATS is now waiting to receive a formal ATO response to confirm investment qualification.

FOR MORE DETAILED INFORMATION

<https://www.ato.gov.au/Business/Tax-incentives-for-innovation/In-detail/Tax-incentives-for-early-stage-investors/#>



Popular European
Commuter E-Bike
Using a standard chain
drive system

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