

STC INNOVATION & GROWTH CONFERENCE

2023

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CONFERENCE **2023**

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“Round Are Way...”



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It's never gonna be the same

Good morning to you all!

Great to see so many Silverstone Technology Cluster members, guests and other attendees here today

A privilege to be invited to speak about the marketplace, while shining a light on STC collaboration and innovation

If you have any questions about my thoughts this morning, we are in the lobby today – so come and have a chat... or join us for an award winning, sustainably-made beer!

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Round are way

At Prova, we work with the world's fastest growing future mobility & cleantech businesses. We drive business growth by amplifying their stories to existing sectors, new markets, prospective investors and onwards towards maximised exits.

With 25 years' experience of knowing what works, we invest too, with 3 exits this year...

OEMs, venture capital, government, industry bodies, global outlets; we see the market from many angles, helping us deliver for ambitious technology, motorsport & cleantech businesses.

And we see the unique scale of innovation and collaboration across the STC community – something we'd like to shine a light on this morning.

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Life thru a lens

A time of seismic change, seismic opportunity
But the wider picture – high interest rates, the global outlook and a ‘hunker’ down philosophy - are making conditions supremely challenging
Recently, there has been little appetite from funds to invest in fast-growth tech and engineering firms

However, there may be light at the end of the tunnel, with increasing talk of a mini revival
There were 360 European tech seed funding deals done in October, against 280 in September, including the Jetson personal electric aerial vehicle

And the UK is leading the way with 142 million euros raised in October for seed deals - more than any other European market
So things are moving again...

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Opportunity rising

Autonomous technology accelerates, with 10 million autonomous vehicles expected by 2035

Across spacetech, low-cost satellites and reusable launch vehicles are lowering the cost of access

Intelligent engineering, additive, nanotech; all are growing areas thanks to the need for lightweighting & innovative material development

The race to net zero heightens demand for innovation – hydrogen, EV, zero emission fuels or last mile logistics

Supply chain disruption, cybersecurity and digital dust, as well as talent shortages will all act as drivers of change too

Legislation, the drive to decarbonisation and net zero – all will drive future PE funding too – and act as enablers

Innovation never goes out of fashion – and STC members bring that in spades

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Feel good by numbers

Its inspiring to watch STC members continue to thrive and expand into new markets

Common traits of spirit, culture and innovation

But it is at its best when members are collaborating together; $2 + 2$ can equal 5!

So, let's look at some examples...

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JRM working with Catesby

The JRM RR23 is a track-focused, road-legal supercar produced by JRM Group in commemoration of its World Championship win with the Nissan GT-R Nismo GT1

As part of the vehicle development programme, JRM collaborated with Catesby Projects to develop high-performance aerodynamic and cooling performance using Computational Fluid Dynamics (CFD), a branch of fluid mechanics that uses numerical techniques to solve complex fluid flow equations

The engineering challenge was to enhance the cooling flow while adhering to strict packaging constraints and maintaining the aerodynamic performance of the vehicle - these challenges are commonly experienced whenever a vehicle is modified to generate more performance, be that ICE or EV

One of the key advantages of CFD was the ability to iterate through many different radiator layout configurations to help with packaging decisions

CFD simulations allowed for informed, data-driven design decisions while maintaining the aerodynamic performance of the vehicle

Wirth Research working with Partner Electronics

AirDoor is a free-standing structure that sits within the door of retail premises that uses variable speed fans to counteract weather related infiltration from wind and rain

Key advantage over conventional electric heated air curtains is the control system, which is where Partner Electronics came in

Partner Electronics supported Wirth Research with around 25 of the early installs

Energy monitoring trials have demonstrated impressive savings – one unit near Birmingham saw a 26% reduction in gas use, while a retail unit at Bicester saw a 50% reduction in electricity

Allows for an energy efficient 'open door policy', while reducing draught, expenditure on HVAC plant, keeping out airborne particles, such as dust, exhaust fumes and insects and providing overall improved control of a store environment

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Performance Projects with OxDrive

Climate crisis & labour availability driving change across industry including agri-tech, construction & mining

With agri-tech alone, seasonal labour shortage of 10-25% - automation and electrification can play a key role

Alongside OxDrive – a market leader in high torque off-highway drivelines, Performance Projects has led design & development of the fully integrated OxDrive e-hub family

The e-hubs provide reliable drive for the incoming wave of electric and electric-autonomous vehicles and services, aiming to meet net-zero targets, maximise yield/productivity and address labour challenges

OxDrive e-hubs bolt onto vehicle chassis, each controlled independently, enabling control of speed and torque

The e-hubs allow easy adoption of a compact, reliable and efficient means of propelling a vehicle or robot, enabling vehicle manufacturers to optimise vehicle layout

Initial range covers 0.8kW, typically for swarm robotics, to 8kW, for medium sized tractors

e-hubs are engineered for speed, torque and durability demands of off-highway use and designed as a 'one-box' driveline enabling optimised vehicle layout for maximum efficacy and commercial viability and have a dual input emergency brake, synchronised independently of the vehicle or robot's computer control system

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Randle Engineering working with Altair

Partnership formed to provide clients with a cohesive offering drawing on the expertise and approaches of Randle Engineering and Altair Engineering

The collaboration creates an integrated workflow where the chassis design expertise of Randle Engineering is combined with the optimisation led body design approach C123 of Altair Engineering

Combining the expertise and approaches from both parties gives numerous benefits, including innovative design, improved attribute performance and reduced lead times

Partnership also brings reduced vehicle mass with optimised body and hardpoint locations; integrated chassis and body development for both crash and NVH (traditionally body focus) and dynamics (traditionally chassis focused); improved communication between suspension, body design and attribute teams; and powerful toolset to rapidly assess all powertrain, chassis and body variants for a given platform or architecture

And all that, from working in partnership, across the STC community...

He ain't heavy

The STC is a unique cluster – one where innovation brings unrivalled collaboration across its membership

It is here to foster, to facilitate that sense of partnership across the cluster

So, don't look too far for partners

They might just be sitting right next to you this morning

Many thanks

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Driving commercial growth
through PR and communications

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