

manufacturing + engineering week

Incorporating
design engineering expo
engineering expo
manufacturing expo
maintec

What's on

Live Events: 8-9 June

Digital Events Review: 10 June

Official Show Catalogue



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planted to
make M&E a
Carbon Neutral
Event

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Zone Sponsor

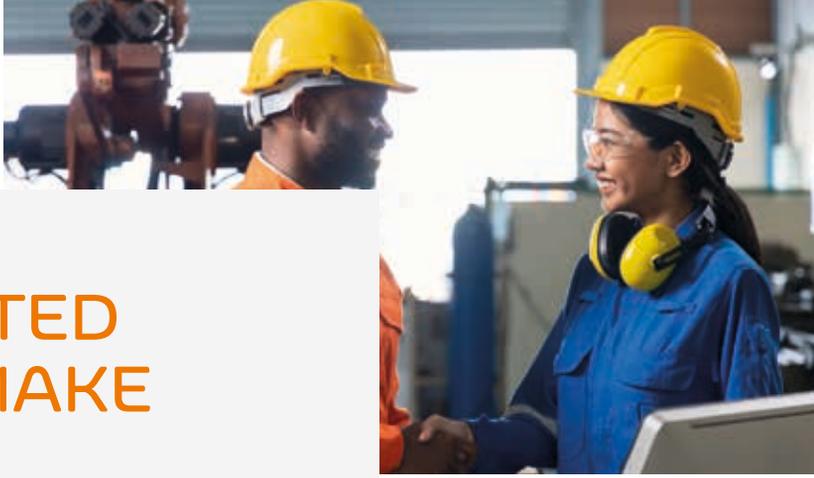
Event
Partner

Knowledge
Partner

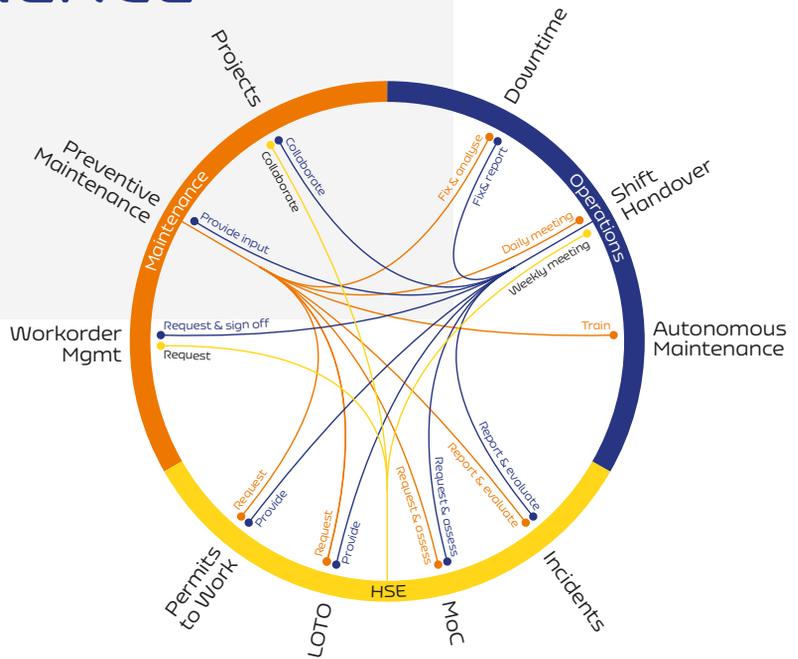
Sustainability
Partner

Premier
Partners





CONNECTED TEAMS MAKE ALL THE DIFFERENCE



The factory of the future is enabled by the efficient collaboration between Maintenance, Safety and Production. User-friendly yet advanced software is crucial for facilitating this, providing teams with a holistic view of operations and a single source of vital information.

By offering fully integrated processes in Shift Handover, Work Order Management,

Autonomous Maintenance, Work Permits, Lockout-Tagout, Downtime Analysis, and HSE Incident Management, Ultimo's EAM platform helps you maximise uptime, minimise administrative tasks, and build a safer place to work. So you can make better-informed decisions, optimise your resources, and do more with less.

Visit stand A26 for a live demo.

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manufacturing + engineering week

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What's on

Live Events *

Wednesday 8 June 2022

09:30-17:00 Exhibition

10:00-17:00 Conference sessions

17:00-18:30 Drinks reception

Thursday 9 June 2022

09:30-16:00 Exhibition

10:00-16:00 Conference sessions

Digital Sessions

Friday 10 June: Event Review

* Venue

Halls 6 & 7, The NEC,
Birmingham, B40 1NT

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Welcome to M&E Week

Making a brighter future

With the Government's plan to help UK manufacturers sell products around the world, the release of the first roadmap to net zero for the sector and ongoing skills shortages, Manufacturing and Engineering Week (M&E Week) comes at a crucial time to bring the community together to debate and discuss the current challenges.

We are delighted to have partnered with industry, to deliver an event focussed on uniting the manufacturing and engineering sector and providing a platform to truly make a difference.

With high profile speakers, practical workshops, market-leading suppliers, and co-located exhibitions, M&E Week promises to be of great value to UK businesses.

Whatever your current manufacturing and engineering challenge, this is an incredible opportunity to connect with experts and leave armed with ideas and solutions to apply.

We hope you enjoy the event and can join us for a drink at the networking reception from 17:00 on day one.



Natig Asadullaev
Event Director
M&E Week



We Plant

Impact from trees planted in this forest



136.80

Tons of CO2 absorbed yearly



547.20

Tons of Oxygen created yearly



219

Work Hours created



5.47

Members of forest community

A Carbon Neutral Event

Come on our sustainability journey with us

M&E Week Forest – 5472 trees planted - Plant with us

Do you want to know how much carbon was released from your journey to the event?

Come find out now!



Let's reduce your carbon footprint together.

Scan the QR Code to plant trees in the M&E Forest now

Go to the ForestNation Stand A28 to find out more



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Maintec Conference Sponsor



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Product Spotlight Sponsor



Premier Partner



Innovation Zone Sponsor



Skills Survey Sponsor



Workshop Sponsors



Premier Partner



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Event Partner



Crisis Cast Cyber Demonstrator Sponsor



Maintec Registration Sponsor



Manufacturing Keynote Theatre Sponsor



Sustainability Partner



Lanyard Sponsor



The Inspired Sustainability Café

Please come along to the central Café for refreshments and meet our Sustainability Partner - Inspired PLC

Inspired PLC is the UK's leading commercial energy and sustainability advisor, offering energy procurement, utility cost optimisation and legislative compliance for commercial, industrial and public-sector clients.

They value their role in meeting the UK's target and we will be net zero before 2050. The steps they've taken on their own carbon-reduction journey mean they're ready to lead others towards adapting to a net zero economy. With expert ongoing data collection, reporting and consultancy support, we are helping businesses to turn their Science Based Targets and net zero goals into reality.

<https://inspiredenergy.co.uk/>

Net Zero Game

Are You A Net Zero Hero?

With many businesses now aiming for net zero, the race is on when it comes to decarbonisation. Is your organisation leading the way, or lagging behind its competitors?

Get Your Net Zero Score

Inspired PLC conducted some benchmark research to find out how far businesses have progressed on their decarbonisation journey and when they expect to reach net zero.

To discover how your business's decarbonisation action compares to its competitors, answer 14 quick questions to receive your score.

At the end, you'll find out how you scored compared to your peers and receive a personalised report containing practical next steps for you to make ongoing progress towards net zero.

GET YOUR SCORE <https://inspiredenergy.co.uk/landing/netzero/start.html>



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Displays
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Solutions

STAND J31



Through innovation, custom manufacturing expertise and exceptional service we help customers to realise competitive advantage by solving design challenges and product enhancement needs.

Visit us on stand J31 | www.gtk.co.uk

Useful Information



When does it open and what time?

Halls 6-7
8 & 9 June 2022,
NEC Birmingham

Wednesday 8 June 2022
0930-1700 Exhibition
10:00-1700 Conference sessions
17:00-1830 Drinks reception

Thursday 9 June 2022
0930-1600 Exhibition
10:00-1600 Conference sessions



Digital Events Review

10 June. Visit <https://www.mandeweek.co.uk/digitalsessionsagenda>



Evacuation

If it becomes necessary to evacuate the building, the following message will be broadcast. Attention please, attention please, this is an emergency announcement. Circumstances make it necessary for everyone to leave the building. Please make your way quietly to the nearest exit. Please note, your nearest exit may not be the one you came in.



Banks

You'll find portable cash dispensers (withdrawal fees apply) around the venue, while free NatWest and HSBC ATMs can be found at the train station.



Business Facilities

There are vending zone areas within the Atrium where printing facilities are available.



Car Parking

Is payable on exit payment machines are available in the Atrium.



Cloakroom

There are cloakroom facilities situated between Halls 6 and 7 Items can be deposited at a charge of £1 per item. Cloakroom closes 30 minutes after the show.



Co-located Events

You can use your badge to get free entry to all shows: Design Engineering Expo, Engineering Expo, Manufacturing and Maintec. Also show your badge at two additional events run by Rapid News Group – TCT 3Sixty in TCT Hall 9 and Med-Tech Innovation Expo in Medtech Hall 10-



CPD Information

We are proud offer CPD accredited conference programmes designed to provide expert insight and learnings for professionals. Please contact us if you require a certificate post event enquiries@mandeweek.co.uk



Floorplan

Please refer to the relevant plan in this catalogue and pocket books. 'You Are Here' boards are also situated within Halls 6 & 7



Food and Refreshments

There are a wide range of restaurants and bars open during the exhibition.



Lost Property

Lost property should be reported to the Organisers Office in Hall 6 or the Security Office next to Hall 6. Telephone: 0121 767 3883.



Networking Drinks

Wednesday 8 June 17:00-18:30



Organisers' Office

Situated next to the entrance to Hall 6



Post office

Post boxes are situated in the Atrium



Sales Office

Situated at the rear of Hall 7



Security

For security reasons, please wear your badges at all times.



Toilets

Toilets are available at the back of each Hall and in the Piazza. There are also disabled and baby changing facilities.



WIFI Internet Access

Free access is available within the Halls throughout the NEC. No code is required



Badge Policy

You understand that by allowing your badge to be scanned by an exhibitor, partner, sponsor or speaker at one of our events ("event partner"):

- (i) you will be providing the event partner with your personal data including your contact details; and
- (ii) the event partner will process your personal data in accordance with their privacy policy.

Should you wish to prevent your personal data being processed in this way, please contact the event partner directly.



Discover our remote service and maintenance solutions

Stop by our booth F40

Listen to our presentation: IoT Strategy and Business Innovation - The OEM Perspective on June 9th at 1PM in theater 2.



With speaker

Daniel Phillips-Fern

UK & Ireland Country Manager



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STAND J4

Product Spotlight

Sponsored by



Soundcam UK will be giving live demos of the new SoundCam BIONIC and SoundCam ULTRASONIC systems. Anyone can come by and have the amazing experience of SEEING SOUND! Refine your products, solve noise problems, find leaks and save energy FAST with live acoustic pictures and videos. Visit Stand P40.



With our **BlueLight** sensors, the new standard for fast, accurate detection sensors, you can reduce your downtime and detect complex objects with ease. Curious? Come check out our BlueLight sensors and ask about registering for a chance to win one of our Brand New FT 10-BHD sensors. Visit Stand G54



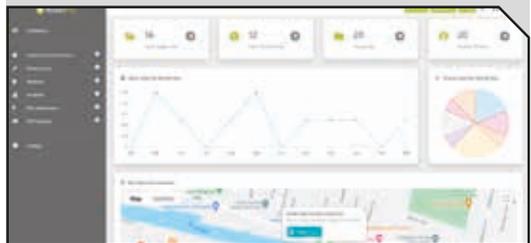
Equilibrium Risk will be running a lock picking competition. Stop by to see the full set of lock picking tools and see who can crack the lock on the chain the quickest. Visit Stand A44



Exalens are running an exciting competition where up to three manufacturers will have to the chance to win a free 12-month subscription to the Exalens cyber-physical security platform worth up to £30,000. To enter, attendees are invited to visit stand G63 and complete a short questionnaire on Industry 4.0 cybersecurity.



Boccard has extensive experience & knowledge with implementing best Practice Lubrication Management programmes for all industry sectors. For an opportunity to win a free Lubrication Review leave your business card and the winner will be announced at the end of the final day. Visit Stand B28



IEB Software are launching the new AssetHQ Management Platform. Pop over to see how AssetHQ is helping Maintenance & Safety teams take the pain out of managing: Maintenance Schedules, Maintenance Works, Safety Checks, Safety Certificates, Risk Assessments, Safety Training. Visit Stand A57.

Infrared Inspection Windows

These Electrical Maintenance Safety Devices should be adopted as part of a comprehensive Condition-Based Maintenance System. With the proper procedures in place that take advantage of this technology, companies are able to monitor the health of their assets and schedule necessary maintenance before an unplanned event occurs, causing costly downtime and possible injury of fatality. Come and See Iriss on Stand E37 for their full range of products.



Hunter Selection are so pleased to be back at Maintec this year and looking forward to welcoming everyone to our stand for our virtual golf event - whether you have never picked up a golf club or you think you should be playing in The Open come and have a go!! Visit Stand B64.



TAWI will be demonstrating a range of equipment including hoists, trolleys, and vacuum lifters. See a demonstration by a member of the technical team and then visitors are able to operate it for themselves! Visit Stand J52.



ONE Creative environments, a multi-disciplinary design company, will be exhibiting some of their extensive portfolio. Visit the stand to enter their prize draw to win a fantastic Star Wars Lego set with one lucky winner also receiving a one-hour free consultation from an Architect or Engineer - at no cost. Visit Stand H71.

UDISYS
DISPLAY SYSTEMS & ELECTRONICS

STM32 Based Displays

- High Bright - 1000 cd/m²
- High Resolution
- IPS
- Incorporates the STM32H7 processor
- Available with or without touch and optical bonding
- No MOQ's



UDISYS are launching the STM32 based display from their partner Riverdi. UDISYS will be giving away a 7inch STM32 based display to one lucky customer who visits the stand during the show! Visit Stand N33.



Visit the **Mestec** stand for a live, interactive, real time shop floor data capture IOT demo improving manufacturing efficiencies. Our cost effective solution uses the latest technologies and works with both modern and legacy equipment. Visit Stand H65.



New! TouchFree ID Clocks by **UKG**. Delivering touch-free convenience, the system is easy to use and recognises everyone in your workforce. Visit stand H58 and try for yourself! Also stop by to be mesmerised by their on-stand Magician! #magicofukg

A-Z Exhibitor List

Key:

- Design Engineering Expo & Engineering Expo
- Manufacturing Expo
- Maintec

Find The Solutions To Your Business' Challenges - Meet hundreds of suppliers showcasing their latest innovative products and services.

O			
3Di	■ D23	Distence Oy	■ B35
3M	■ H6	Dragos Security Ltd	■ J61
53 North Group	■ B33		
A			
ABB Oy	■	E	
Acoem	■ A41	ECH Scientific Ltd	■ D21
Acoustic Camera UK Ltd	■ P40	Elecosoft UK Ltd	■ C60
ADM Pressing	■ J68	Electro Mechanical Systems	■ N30
Advanced Adhesives	■ J34	Electronic Specifier	■ J27
Advanced Propulsion Centre UK	■ J2	Element Logic	■ H52
Alfed	■ P36	Emerson	■ B36
Altimex	■ E30	EMS-GRIVORY	■ H16
Anglia/ Hirose	■ L19	Engineering UK	■ P34
Applied Maintenance Technology	■ F73	Equilibrium Risk Ltd	■ A44
Arrow Electronics UK Ltd	■ K16	Eurobond Adhesives	■ L11
Assured Cyber Protection	■ J46	Exalens	■ G63
ATS Applied Tech Systems	■ E75		
B			
Barrier Networks	■ K54	F	
BCAS	■ C22	FasteningandBonding.net	■ K3
BenLink UK Limited	■ D36	FATH Components	■ H33
Binder UK Ltd	■ J17	Farnell	■ E28
BLH Nobel VPG Systems UK Ltd	■ J63	Festo	■ E28
Boccard UK	■ B28	Fixturlaser UK	■ C26
Boneham	■ K34	Fluke (UK) Ltd	■ E57
Bowman International	■ G26	Fluke Reliability	■ D62
British Encoder	■ H10	Forest Nation	■ A28
BSIF	■ A61	Future Facilities Ltd	■ L16
C			
CAD-IT	■ D23	G	
Cambridge Industrial Design	■ J15	Geno Software	■ L54
Cardwave Services	■ K22	Global Precision Ltd	■ K52
CBM	■ H60	Good to go Safety	■ D64
CC Jensen Ltd	■ C70	Gruetzner GmbH	■ B22
CCL Design	■ J14	GTK UK	■ J31
Claroty UK Ltd	■ K54		
ClearVUE	■ J67	H	
Clockwork IT Ltd	■ B29	Hammond	■ K27
Cloud Printing Solutions	■ G28	Hansford Sensors Limited	■ E51
Composites UK	■ F72	Heights Ltd	■ G58
Connection Technology Center Inc	■ D28	Henkan	■ G40
Connect+ Live	■ J1	Hikvision	■ B82
CounterCraft	■ J46	Hirose Electric Europe B.V	■ L19
CRC Industries UK Limited	■ D26	Hunter Selection	■ B64
Crimson Industrial Vision	■ B39		
CrisisCast	■ L48	I	
CyberMIND	■ J46	I-Care	■ D44
		IEB Software	■ A57
		ifm Electronic	■ E38
		IFS	■ G90
		Ignys Ltd	■ B38
		igus UK Ltd	■ M40
		Industrial Plant & Equipment	■ A40
		Industrial Technology	■ K3
		Infologic Design	■ M15
		Inspired PLC	■
		Institution of Engineering Designers	■ M16
		Institution of Mechanical Engineers	■ L46
		Interface Force Measurements	■ M43
		Invent Design Build	■ M3
D			
Datasound Laboratories Ltd	■ H18		
DCO	■ E34		
DER-Driving The Electrical			
Revolution Industrialisation Centres	■ H70		
Direct Air & Pipework Ltd	■ C34		

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- > Optimise your manufacturing operations
- > Solve your design challenges
- > Enhance your electronic solutions

Cable Assemblies | Connectors | Displays | Manufacturing Solutions



A Voltec Company

Stand J31

IRISS Inc
ISS Global
Iter Digital
Ixon BV

■ E37
■ G72
■ G66
■ F40

Review Display Systems
Ripley Solutions
Rose & Krieger
Rotor Clip

■ K12
■ G36
■ H19
■ H17
■ E44

K

KDP Electronic Systems Ltd
Kelvin Engineering
Keytracker
Klere Ltd

■ B27
■ J51
■ C21
■ F33
■ H63

Kognitiv Spark

L

Laser Lines
LG Motion
Librestream Technologies
Lighthouse(UK) Ltd
LKE UK

■ H64
■ H34
■ J58
■ D22
■ G39

M

MachineBuilding.net
Machinery Safety Compliance Services

■ K3
■ J22

Made Smarter Innovation:

Innovate UK KTN

MaintMaster
Make UK
Mav Reality
Maverick ML
Maxim Computer Services
MC Global Solutions
Megger Limited
Melling Performance Springs
Mendix
Merceric
Mestec
Metalis Engineering Recruitment

■ ■ ■ E42
■ D52
■ J24
M47
■ L1
■ H59
■ D40
■ E45
■ G21
■ G34
■ K55
■ H65
■ J64

MHA

MiniTec UK
Morgan Innovation & Technology
Move Marketing

■ ■ ■ J33
■ L27
■ H27

N

Nanoprecise Sci Corp

Neutronic Technologies Ltd
NL Acoustics
Nozomi Networks

■ A53
■ A34
■ C39
■ H66

O

Omega
Omron Electronic
ONE Creative environments (ONE)
Onesys
Orderwise
Origin Engineering Solutions

■ E28
■ L15
■ H71
■ H62
■ F58
■ H26

P

Pathfindr
Photronix
Piller UK Ltd
Plastometrex
Powerstar
PPL Training
Proband

■ G56
■ J28
■ G59
■ H35
■ F31
■ B41
■ K32

Q

Quick Parts Ltd

■ J16

R

RAMCO Europe SPA
RDP
Reliability Maintenance Solutions Ltd

■ K56
■ H22
■ A70

S

SafetyCulture (UK) Ltd
Safety-Kleen UK Limited
Santon Switchgear
SciMed
Scintam Engineering Ltd
sedApta Ltd
Senseye Ltd
Sensopart UK Ltd
Service Geeni Limited
SGS
Sigga Technologies
Sightcall UK
Siveco UK Ltd
SJ Electronics
Smartia
SmartMore
Software Imaging Limited
Southwest Fabrications
SPM Instrument UK Ltd
SSG Insight (EMEA) Ltd
St Davids Assemblies
Stanelco RF Tech

■ J62
■ B26
■ D35
■ D39
■ E74
■ G45
■ E39
■ G54
■ B24
■ J46
■ B51
■ J69
■ D74
■ J32
■ E73
■ M14
■ E40
■ E64
■ C40
■ A47
■ H25
■ L42

T

Tawi UK Ltd
Technotrans
Techsil Ltd
Terryberry UK and Europe
The Engineering Network
The Manufacturer / Smart Factory Expo
The Safety Knife Company Limited
The University of Manchester
Theorem Solutions Ltd
Think Engineer
Thomas Wright-Thorite Group
Total Control Pro Ltd
Toyota Material Handling (UK) Limited
TPI Europe

■ J52
■ L25
■ K2
■ J70
■ K3
F21
■ E21
■ A63
■ H28
■ G71
■ H15
■ H20
■ B60
■ B40

U

U E Systems Europe B.V
Udisys Ltd
UKG
Ultimo Software Solutions Limited
University of Nottingham

■ B34
■ N33
■ H58
■ A26
■ J54

V

Vision Engineering
Visual UK Ltd
Volta Compliance

■ F70
■ A65
■ C27

W

Wavenet
WD40 Co Ltd
WDS Component Parts
West Midlands Made Smarter
Wise Robotics
Wisersense Information Technologies Ltd
WMS UK
Women's Engineering Society
Würth Electronics UK

■ E41
■ C30
■ J4
■ E43
■ F58
■ A55
■ G70
■ P32
■ M34

Y

Yokogawa

■ H2

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- > Innovate through engineering support
- > Provide custom manufacturing expertise
- > Deliver an exceptional service

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gtk

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Stand J31

Floorplan



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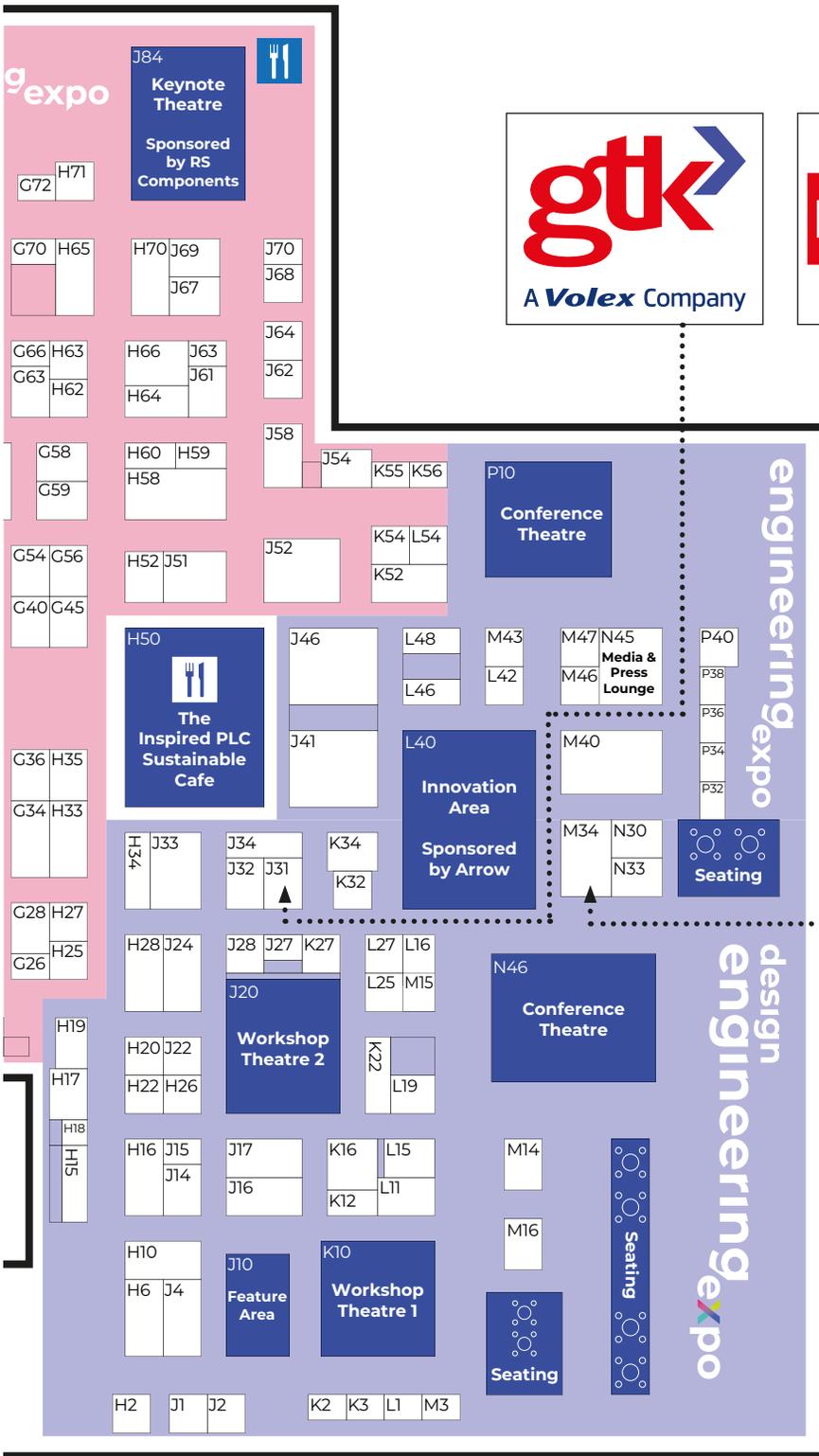
- > Optimise your manufacturing operations
- > Solve your design challenges
- > Enhance your electronic solutions

Cable Assemblies | Connectors | Displays | Manufacturing Solutions



A Voltec Company

Stand J31



Work with GTK and we will

- > Innovate through engineering support
- > Provide custom manufacturing expertise
- > Deliver an exceptional service

Cable Assemblies | Connectors | Displays | Manufacturing Solutions



A Volex Company

Stand J31

Speakers

Workshop Theatres 1-5

Abi Hird, Design Innovation Network Lead, Innovate UK KTN

Adam Hooper, Operations Director, Martin's Rubber Company

Alastair Morris, Chief Commercial Officer, Powerstar

Alex Cairns, Managing Director, Move - Marketing for Complex Industries

Alison Horner, Indirect Tax Partner, MHA

Andrew Doherty, Managing Director, DCO Systems

Andrew Burton, Global Industry Director - Manufacturing, IFS

Andrew Thurston, Customs Duty Consultant, MHA

Andy Parker-Bates, Relationship Development Manager, FESTO UK & Ireland

Ben Sturgess, Founder and CTO, Pathfindr

Blair Fraser, Director of Global IIoT Solutions, UE Systems

Brendan Garvey, Chief Commercial Officer, ClearVUE Systems

Christophe Wuyts, Account Executive, Sigga Technologies

Conrad Blenkinsop, Business Unit Director EMEA, OMEGA

Dan Hockham, Customer Solutions Manager, Cardwave Services Ltd

Dan Smith, Director of Energy Services, ClearVUE Systems

Dan Hulme, Head Sales: Key Accounts, Inspired PLC

Daniel Fern, Country Manager - UK & Ireland, IXON Cloud

Darren Griffiths, Business Development Director, Safetykleen

Dave Tranter, Sales and Product Manager EMEA, OMEGA

David Smith, Business Development Manager, CRC Industries

David Miny, Sales Manager Europe RS, Emerson Automation Solutions

Gary Marsden, Global Product Director, Elecosoft

Gethin Llewelyn, Technical Customer Service & Development Manager, EMS-GRIVORY

Gopi Patel, Field Applications Engineer, Würth Electronics UK

Heather Badower, Lead Manufacturing Industry Manager, UKG

Ian Mercer, Executive Coach and Owner, Merceric Executive Coaching

Jamie Tilley, Director, Cloud Printing Solutions Ltd

Jay Bhatti MEng, Mphil, R&D Tax Senior Manager, MHA

Jean-Baptiste, PINSON-LION, International Account Manager, Siveco Group

Keith Maclean-Martin, Technical Manager, Piller UK Limited

Kim McCann, Head of Sustainability - Global Consumer & Manufacturing, Arrow

Maggie Slowik, Global Industry Director - Manufacturing, IFS

Mark Priestley, Senior MES Consultant, ATS Global

Mark Carleton, General Manager, MESTEC Limited

Matthew Aldridge, Managing Director UK, Igus

Mercy Liu, Head of Global Industrial Business, SmartMore Corporation Limited

Michael Coto, Commercial Officer, Plastometrex

Michael Wooster, UK Country Manager, Tawi

Niall Sullivan, Global Marketing Manager, Senseye

Paul Wright, Managing Director, Henkan

For more information and speaker biographies please visit <https://www.mandeweek.co.uk/seminars>



A specialist supplier of electronic design & manufacturing services and fibre optic connectivity solutions.

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Paul Holding, Principal Solutions Architect, Ripley Solutions

Paul Holding, Principal Solutions Architect, Ripley Solutions

Phil Tonkin, Senior Director of Strategy, Dragos Threat Operations Centre

Phillip Townend, Group Marketing Manager, Vision Engineering

Prof Jon King, Centre Lead, DER-IC Midlands, Driving the Electric Revolution Industrialisation Centres

Richard Mellard, Head of UK Sales, Piller UK Limited

Richard Allbert, Smart Manufacturing Expert, Smartia

Rob Shropshire, Director ,Origin Engineering Solutions

Ryan Heartfield, CTO, Exalens

Sean Hopkins, Head of Customer Success, sedApta

Simon Coward, Innovation Lead Made Smarter Innovation, Innovate UK

Simon Meadmore, VP of Product and Supplier Management, Farnell Global

Stephen Sanderson, International Product Manager - Inspection Products, Vision Engineering

Steve Collins, Senior Pre-Sales Engineer, Mendix

Stuart Walker, Director, Reliability Maintenance Solutions

Tom Gregory, Product Manager, 6SigmaET by Future Facilities

Will Batchellor, Account Manager, Ultimo Software Solutions Ltd

For more information and speaker biographies please visit <https://www.mandeweek.co.uk/seminars>

Speakers

Keynote Conference Theatres



Adam Fair, Transport UK
BIM Lead, Ramboll



Alan Banks, UK
Lightweight Innovations
Manager, Ford Motor
Company



Alistair Walshaw,
Innovation Manager,
CNH Industrial



Andrew Clarke, Chief
Strategy Officer, Assured
Cyber Protection



Andy Sellars, Chief
Business Development
Officer, Compound
Semiconductor
Applications Catapult



Ben Horn, Digital
Transformation Director,
Crystal Doors



Brinley Salzmann,
Director - Overseas &
Exports, ADS Group Ltd



Bruce Jackson, Global
Services
Siemens Digital
Industries



Chris Courtney,
Challenge Director,
Manufacturing Made
Smarter, UK Research
and Innovation



Chris Needham,
Innovation Lead: Made
Smarter Innovation,
Innovate UK



Claire Arbery, Director
West of England Institute
of Technology, Weston
College



Clive Lewis, Managing
Director & Technology
Manger, Achieving the
Difference & Midlands
Aerospace Alliance



Colin Turner, CEO, West
of England Aerospace
Forum



David Best, Head of
Business and Strategy,
Airbus



Dr David Pugh, Head
of Sustainability, Digital
Catapult



Dr Jen Baxter, Director:
Innovation and Policy &
Head of Protium Wales,
Protium Green Solutions



Dr Jo Morrison, Director
of Digital Innovation and
Research, Calvium



Dr Salma Alarefi,
Teaching Fellow, School
of Electronic and
Electrical Engineering,
University of Leeds



Duncan Engeham,
Director – Research &
Technology Europe,
Cummins Inc



**Elena Rodriguez-
Falcon**, Chief Executive
Officer and President,
New Model Institute
for Technology and
Engineering (NMITE)



Elizabeth Donnelly,
Chief Executive Officer,
Women's Engineering
Society



Elliot Thompson,
Principal Cyber Engineer,
Assured Cyber Protection



Gareth Purdy,
Director, Strive Project
Management Limited



Graham Malley,
Principal Director
Digital Manufacturing,
Accenture



Harriet Wollerton,
NATEP Programme
Director, National
Aerospace Technology
Exploitation Programme



Hayden Cotgrove,
Product Development,
Envirobuild



Iván Hutter, Director,
Marketing Europe and
Africa, GE Aviation



Jake Boxall-Legge,
Technical Editor and
Formula E reporter,
Autosport

For more information and speaker biographies please visit <https://www.mandeweek.co.uk/seminars>



James Brown, Digital Manufacturing Engineer, Prodtex



James Cameron, Founder and CEO, Mission Motorsport



James Widmer, CEO & Founder, Advanced Electric Machines



Jane Pierce, Deputy Director, Engineering, Construction and Transport Division, Insitute for Apprenticeships and Technical Education



John Clark, Alloy Development Engineer, OxMet Technologies



John Hutton, Baron Hutton of Furness, Chair, MAKE UK



John Pearce, CEO, Made in Britain



Jono Gilworth, Design researcher and strategist, Smallfry Industrial Design



Jonquil Hackenberg, Partner and Head of Sustainability & Climate Response, PA Consulting



Katy Milne, Chief Engineer, MTC - Manufacturing Technology Centre



Kevin Hogwood, Director, Invvu



Kwasi Kwarteng, Secretary of State for Business, Energy and Industrial Strategy



Liam Wilbur, Research and Development Engineer, Advanced Manufacturing (AML)



Lina Huertes, Industry Executive for Manufacturing UK, Microsoft



Luca Leone, Head Of Programme, Aeralis



Luke Bonnett, Aerospace and Aviation Business Manager, Frazer-Nash Consultancy



Mandy Chessell, Founder, Pragmatic Data Research Ltd



Manoj Vadher, Head of Central Engineering, Royal Mail



Mari Emilia Haapala, Digital Solution Lead, ABB Motion



Martin Baxter, Director of Policy and External Affairs, IEMA - The Institute of Environmental Management and Assessment



Michael Cervenka, President, Vertical Aerospace Group Ltd



Mike England, Group Chief Operating Officer, Electrocomponents plc



Mike Hague-Morgan, Co-owner & Commercial Director, Autocraft Solutions Group



Mike Sloan, Director, Technical Composite Systems



Mike Wilson, Chief Automation Officer, MTC - Manufacturing Technology Centre



Mitch Scherr, Chief Executive Officer, Assured Cyber Protection



Nick Carter, Commercial Director - Waste & Environmental, Mitie



Nour Eid, Senior Innovation Manager, ATI



Paul Jeffries, Head of Digital Strategy, Ramboll



Paul Perera, Strategy and Technology Operations Director, Waygate Technologies



Peter Oram, CEO, NBT Group Ltd



Philip Curnock, Aerospace and Defence Senior Director, West of England Aerospace Forum



Philippa Oldham, Stakeholder Engagement Director, Advanced Propulsion Centre UK



Professor Deborah Andrews, Design School of Engineering, London South Bank University



Richard Jeffers, Founder and MD, RS Industria

Speakers

Conference



Rosa Wilkinson, Director of Policy, High Value Manufacturing Catapult



Roy Brooks, Technical Development Officer, British Compressed Air Society



Ruth Ginever, Director Manufacturing Engineering, GKN Aerospace



Si Ellis, CEO & Founder, EllisJames Creative



Simon Benfield, Transport Sustainability Lead, Ramboll UK



Simon Pavitt, Head of Cyber Awareness, Behaviour and Culture at UK Ministry of Defence



Stephen Phipson CBE, Chief Executive Officer, MAKE UK



Steven Stanley, NATEP Technology Manager, National Aerospace Technology Exploitation Programme



Susan Robson, Principal Consultant, National Grid and WES Trustee



Tim Evans, Director, Jigsaw Structures



Tim Whitehead, Senior Lecturer, Aston University



Toby Scott-Jackson, Chief Cyber Services Engineer, Assured Cyber Protection



Tom Channell, Transport UK Digital Development Lead, Ramboll



Tom Grundy, Chief Executive Officer, Hybrid Air Vehicles Ltd



Tom Hamilton-Dick, Deputy Principal, Curriculum & Innovation, North Warwickshire & South Leicestershire College



Vanda Jones, Executive Director, British Compressed Air Society



Will Butler-Adams OBE, Chief Executive Officer, Brompton Bicycle Ltd



Will Ocean, Director of Reliability, Maintain Reliability Ltd



William Lovell, Head of Future Technology, Bank of England

For more information visit <https://www.designengineeringexpo.co.uk/speakers-mxff>

Keynote Conferences

Inspiration, Future Thinking, and Practical Advice

M&E Week provides a programme of CPD accredited sessions packed with invaluable content. The main keynote conference stages host an unrivalled line up inspiring leaders and innovators to debate current issues and challenge thinking with a particular focus on SME's and OEM's strategy

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Keynote Theatre

Wednesday 8 June	
10:00	Opening Keynote Session Lord John Hutton, Baron Hutton of Furness, Chair, MAKE UK
10:10	Opening Keynote Session Kwasi Kwarteng, Secretary of State for Business, Energy and Industrial Strategy
10:40	Driving the Future of Manufacturing Through Sustainability and Technology Jonquil Hackenberg, Partner and Head of Sustainability & Climate Response, PA Consulting
11:30	Overview of UK Manufacturing from the CEO of MAKE UK Stephen Phipson CBE, Chief Executive Officer, MAKE UK
12:20	Future Flight - Challenges and Opportunities for Manufacturing Technologies Katy Milne, Chief Engineer, MTC - Manufacturing Technology Centre
13:10	New Business Models to Support Low Carbon Manufacturing Dr David Pugh, Head of Sustainability, Digital Catapult
14:00	Digitalised Manufacturing The Data Driven Revolution James Brown, Digital Manufacturing Engineer, Prodtex
14:50	Panel - Innovation Driving Change in Manufacturing Chair - Rosa Wilkinson, Director of Policy, High Value Manufacturing Catapult Martin Baxter, Director of Policy and External Affairs, IEMA - The Institute of Environmental Management and Assessment Mitch Scherr, Chief Executive Officer, Assured Cyber Protection Katy Milne, Chief Engineer, MTC - Manufacturing Technology Centre Kimberly-Clark Speaker
15:40	Building Resilience in Manufacturing Through Digitisation Richard Jeffers, Founder and MD, RS Industria

Thursday 9 June	
10:00	Opening Keynote Session Digital Money & Industry 4.0 William Lovell, Head of Future Technology, Bank of England
11:00	UK Industry: Predator or Prey? Mike England, Group Chief Operating Officer, RS Group PLC
12:00	Panel - Digitalisation - the Key to Achieving Net Zero Chair - Chris Courtney, Challenge Director, Manufacturing Made Smarter, UK Research and Innovation Graham Malley, Principal Director Digital Manufacturing, Accenture Lina Huertes, Industry Executive for Manufacturing UK, Microsoft
13:00	Transformation in Manufacturing - A New Revolution Rosa Wilkinson, Director of Policy, High Value Manufacturing, Catapult
14:00	Innovation In British Manufacturing John Pearce, CEO, Made in Britain
15:00	Reaching Net Zero by 2022 Ben Horn, Digital Transformation Director, Crystal Doors



Keynote Conferences

Keynote Theatre

design
engineering_{expo}

Wednesday 8 June

10:00	<p>Opening Keynote Session Advanced Materials, Lightweighting and Sustainability</p> <p>Alan Banks, UK Lightweight Innovations Manager, Ford Motor Company</p>
11:00	<p>Panel - Designing for the Circular Economy</p> <p>Chair - Simon Benfield, Transport Sustainability Lead, Ramboll UK Professor Deborah Andrews, Design School of Engineering, London South Bank University Kevin Hogwood, Director, Invvu Hayden Cotgrove, Product Development, Envirobuild Tim Whitehead, Senior Lecturer, Aston University</p>
12:00	<p>Rethinking the Skies for Zero Emission Air Services</p> <p>Tom Grundy, Chief Executive Officer, Hybrid Air Vehicles</p>
13:00	<p>Panel - The Evolution of The Automotive Sector</p> <p>Chair - Philippa Oldham, Stakeholder Engagement Director, Advanced Propulsion Centre UK James Widmer, CEO & Founder, Advanced Electric Machines Duncan Engeham, Director - Research & Technology Europe, Cummins Inc Mike Hague-Morgan, Co-owner & Commercial Director, Autocraft Solutions Group Chris White, Ford Motor Company, Battery Systems Manufacturing Engineering Manager</p>
14:00	<p>Growing Good Ideas Into Great Products</p> <p>Jono Gilworth, Design researcher and strategist, Smallfry Industrial Design</p>
15:00	<p>Creative Partnering</p> <p>Si Ellis, CEO & Founder, EllisJames Creative</p>

Thursday 9 June

10:00	<p>Opening Keynote Session Vertical Aerospace - Pioneering Electric Aviation</p> <p>Michael Cervenka, President at Vertical Aerospace Group Ltd</p>
11:00	<p>Uncovering Design Engineering Secrets for Success</p> <p>Jake Boxall-Legge, Technical Editor and Formula E reporter at Autosport</p>
12:00	<p>Success Story: The World's First Methane Powered Tractor</p> <p>Alistair Walshaw, Innovation Manager, CNH Industrial</p>
13:00	<p>Panel - Design Automation</p> <p>Chair - Tom Channell, Transport UK Digital Development Lead, Ramboll Paul Jeffries, Head of Digital Strategy, Ramboll Adam Fair, Transport UK BIM Lead, Ramboll Bruce Jackson, Global Services, Siemens Digital Industries</p>
14:00	<p>Designing and Building an Open Software Ecosystem</p> <p>Mandy Chessell, Founder, Pragmatic Data Research Ltd</p>
15:00	<p>Innovating at Speed and With Care</p> <p>Dr Jo Morrison, Director of Digital Innovation and Research, Calvium</p>

Keynote Conferences

Keynote Theatre

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Wednesday 8 June

10:00 **Opening Keynote Session
Creating a Sustainable Future
– Overcoming Challenges and
Seizing the Opportunities**

Martin Baxter, Director of Policy and External Affairs, IEMA - The Institute of Environmental Management and Assessment

11:00 **Know Your Supply Chain**
Mitch Scherr, Chief Executive Officer, [Assured Cyber Protection](#)
Andrew Clarke, Chief Strategy Officer, [Assured Cyber Protection](#)
Simon Pavitt, Head of Cyber Awareness, Behaviour and Culture at [UK Ministry of Defence](#)

11:30 **Live Interactive Hacking Session**
Toby Scott-Jackson, Chief Cyber Services Engineer, [Assured Cyber Protection](#)
Elliot Thompson, Principal Cyber Engineer

11:50 **Q&A**

12:00 **Reliability and Condition Monitoring**
Will Ocean, Director of Reliability, [Maintain Reliability Ltd](#)

13:00 **Saving Today For a Greener Future**
Roy Brooks, Technical Development Officer, [British Compressed Air Society](#)

14:00 **Vibration-Based Condition Monitoring: Future Trend**
Professor Jyoti Sinha, Programme Director, Reliability Engineering and Asset Management, [The University of Manchester](#)

15:00 **Energy Efficiency Through Data Insights and Expertise**
Mari Emilia Haapala, Digital Solution Lead, [ABB Motion](#)

Thursday 9 June

10:00 **How to Trade Outside of The UK, Opportunities and Overcoming Potential Barriers**

Brinley Salzmann, Director - Overseas & Exports, [ADS Group Ltd](#)

11:00 **Waste and Resource Management - Moving Towards the Circular Economy**

Nick Carter, Commercial Director - Waste & Environmental, [Mitie](#)

12:00 **Made Smarter Innovation: Impact From Our Investments in Maintenance Innovations**

Chris Needham, Innovation Lead: Made Smarter Innovation - [Innovate UK](#)

13:00 **A Strategy to Build Resilient Semiconductor Supply Chains**

Andy Sellars, Chief Business Development Officer, Compound Semiconductor Applications, [Catapult](#)

14:00 **Services Contribution to a Circular Economy**

Stuart Melling, Global Channel Manager, [ABB](#)



Keynote Conferences

Keynote Theatre

engineering expo

Wednesday 8 June

10:00	Opening Keynote Session The Brompton story Will Butler-Adams OBE, Chief Executive Officer, Brompton Bicycle Ltd
11:00 - 11:10	The National Aerospace Technology Exploitation Programme NATEP Overview Chair - Harriet Wollerton, NATEP Programme Director Steven Stanley, NATEP Technology Manager - NATEP
11:10 - 11:20	Case study 1 - LFA Seal presented by Jigsaw Structures Tim Evans, Director, Jigsaw Structures
11:20 - 11:30	Case study 2 - Visual Inspection for Aerospace (Ravine) by Advanced Manufacturing Sheffield Liam Wilbur, Research and Development Engineer, Advanced Manufacturing (AML)
11:30 - 11:40	Case study 3 - Optimising the Material Properties of Novel High-Temperature Superalloys for Additive Manufacturing John Clark, Alloy Development Engineer, OxMet Technologies
11:40 - 11:50	Case study 4 - Technical Composites Systems Mike Sloan, Director, Technical Composite Systems
11:50 - 12:00	Q&A
12:00	How Manufacturers Can Mitigate Supply Chain Disruption in The Post-COVID World Paul Perera, Strategy and Technology Operations Director, Waygate Technologies
13:00	Cross Sector Digital Capability and Collaboration Platform Colin Turner, CEO, West of England Aerospace Forum Philip Curnock, Aerospace and Defence Senior Director, West of England Aerospace Forum
14:00	Airbus Strategy for Sustainable Aviation David Best, Head of Business and Strategy, Airbus
15:00	The Future of Hydrogen Dr Jen Baxter, Director of Innovation and Policy & Head of Protium Wales Protium Green Solutions

Thursday 9 June

10:00	Opening Keynote Session - Celebrating Women in Engineering Elizabeth Donnelly, Chief Executive Officer at Women's Engineering Society
10:10	Technology Trends in Robotics Mike Wilson, Chief Automation Officer, MTC - Manufacturing Technology Centre Panel - How Will Hiring Female Engineers Benefit Your Business? (And How To Hire Them) Chair - Elizabeth Donnelly, Chief Executive Officer at Women's Engineering Society Susan Robson, Principal Consultant at National Grid and WES Trustee Elena Rodriguez-Falcon, Chief Executive Officer and President of New Model Institute for Technology and Engineering (NMITE) Dr Salma Alarefi, Teaching Fellow, School of Electronic and Electrical Engineering, University of Leeds
11:00	Race, Retrain, Recover James Cameron, Founder and CEO, Mission Motorsport Panel - The Future of Technical Education & Skills Development in Manufacturing & Engineering Chair - Ruth Ginever, Director, Manufacturing Engineering, GKN Aerospace Manoj Vadher, Head of Central Engineering for Royal Mail Jane Pierce, Deputy Director, Engineering, Construction and Transport Division, Insitute for Apprenticeships and Technical Education Claire Arbery, Director, West of England Institute of Technology, Weston College Tom Hamilton-Dick, Deputy Principal, Curriculum & Innovation, North Warwickshire & South Leicestershire College
12:00	Digital Engineering Delivering a Sustainable Future Luke Bonnett, Aerospace and Aviation Business Manager, Frazer-Nash Consultancy
13:00	Panel - Supporting Engineering Innovation in the UK Chair - Nour Eid, Innovation Manager, ATI Clive Lewis , Managing Director, Achieving the Difference & Technology Manager, Midlands Aerospace Alliance Gareth Purdy, Director, Strive Project Management Limited
14:00	
15:00	

Workshop Agendas

The workshop theatres feature supplier case study led presentations delivering practical solutions aimed at improving process and efficiencies

Theatre 1

Theatre 2

Wednesday 8 June

10:00-10:40	<p>How to be the perfect manager? Ian Mercer, Executive Coach and Owner - Merceric Executive Coaching</p>	10:00-10:40	<p>Why thermal simulation is a must for electronics design? Tom Gregory, Product Manager - 6SigmaET by Future Facilities</p>
11:00-11:40	<p>Cutting Edge Sustainable Product Development Gethin Llewelyn, Technical Customer Service and Development Manager - EMS-GRIVORY</p>	11:00-11:40	<p>Hot off the press: Thermal management solutions and implementation Mohamed AlAlami, Senior Field Applications Engineer - Wurth Electronics UK</p>
12:00-12:40	<p>The Art of product and supply chain design Andrew Heath: Enterprise Solutions Manager James Davey: Director Engineering-UK, IRE, BLX & Engineering Services - EMEA</p>	12:00-12:40	<p>microSD memory cards; what you need to know about removable memory in embedded applications Dan Hockham, Customer Solutions Manager - Cardwave Service Ltd</p>
13:00-13:40	<p>Manufacturing Power Electronics, Machines and Drives in the UK Kevin Edgar, Head of Customer Technical Service - Tata Steel UK Mike O'Neill, Operations Director - Advanced Electric Machines Ltd Jon King, Centre Lead, DER-IC Midlands - Driving the Electric Revolution Industrialisation Centres</p>	13:00-13:40	<p>Optimizing the "Last-mile" of Quality Management in Precision Parts Manufacturing Mercy Liu, Head of Global Industrial Business - SmartMore Corporation Limited</p>
14:00-14:40	<p>Instantaneous FEA, CFD and Thermal Analysis for Designers with Ansys Discovery Rob Shropshire, Director - Origin Engineering Solutions Ltd</p>	14:00-14:40	<p>A new chapter in motion plastics Matthew Aldridge, Managing Director (UK) - Iigus</p>
15:00-15:40	<p>Made Smarter Innovation: Digital Supply Chain & Smart Factory Hubs Simon Coward, Innovation Lead - Manufacturing Made Smarter Innovate UK</p>	15:00-15:40	<p>Why IIoT doesn't have to be scary: How to make digital transformation simple, low risk and cost effective Ben Sturgess, Founder and CTO - Pathfinder</p>
		16:00-16:40	<p>Visual Inspection Post COVID - New Technology and Opportunities Phillip Townsend, Group Marketing Manager - Vision Engineering Stephen Sanderson, International Product Manager - Inspection Products - Vision Engineering</p>

Workshop Agendas

Theatre 3

Theatre 4

Wednesday 8 June

10:00-10:40	<p>Seizing the Sustainability & Circular Economy Opportunity in Manufacturing</p> <p>Maggie Slowik, Global Industry Director - Manufacturing - IFS</p>	10:00-10:40	<p>How to Navigate International Trade in a Post-Brexit World</p> <p>Andrew Thurston, Customs Duty Consultant - MHA Macintyre Hudson</p> <p>Alison Horner, Indirect Tax Partner - MHA Macintyre Hudson</p>
11:00-11:40	<p>Omega Engineering – Sensing incredible things</p> <p>Simon Meadmore, VP of Product and Supplier Management - Farnell Global</p> <p>Conrad Blenkinsop, Business Unit Director EMEA - Omega</p> <p>Dave Tranter, Sales and Product Manager EMEA - Omega</p>	11:00-11:40	<p>How to navigate the shift to digital</p> <p>Alex Cairns, Managing Director - Move Marketing for Complex Industries</p>
12:00-12:40	<p>The Importance of Ergonomics in the Workplace</p> <p>Michael Wooster, UK Country Manager - Tawi</p>	12:00-12:40	<p>The benefits of cloud based labelling solutions</p> <p>Jamie Tilley, Director - Cloud Printing Solutions Ltd</p>
13:00-13:40	<p>Sustainable Power Protection for your Critical Process</p> <p>Richard Mellard, Head of UK Sales - Piller UK Limited</p>	13:00-13:40	<p>Using Data to drive agility in the face of Pandemics and Supply Shortages</p> <p>Andrew Burton, Global Industry Director – Manufacturing - IFS</p>
14:00-14:40	<p>The Smart Factory Journey - A roadmap to connected manufacturing</p> <p>Paul Holding, Principal Solutions Architect - Ripley Solutions</p>	14:00-14:40	<p>Perpetual motion machines : Advance your monitoring with energy harvesting sensors</p> <p>Andrew Doherty, Managing Director - DCO Systems</p>
15:00-15:40	<p>The Digitisation of Mechanical Testing</p> <p>Michael Coto, Commercial Officer - Plastometrex</p>	15:00-15:40	<p>What achieving net zero means for your manufacturing site</p> <p>Alastair Morris, Chief Commercial Officer - Powerstar</p>
16:00-16:40	<p>Digital Rising</p> <p>Mark Priestley, Senior MES Consultant - ATS Global</p>	16:00-16:40	<p>Optimising Energy Usage & Asset Utilisation in Manufacturing</p> <p>Richard Allbert, Smart Manufacturing Expert - Smartia</p>

Workshop Agendas

Theatre 5

Wednesday 8 June

10:00-10:40	<p>Proactive compliance and maintenance efficiency with integrated permit to work</p> <p>Gary Marsden, Global Product Director - Elecosoft</p>
11:00-11:40	<p>Who are Safetykleen</p> <p>Darren Griffiths, Business Development Director - SafetyKleen</p>
12:00-12:40	<p>Measuring Bearing Friction in Real-Time: What 8.5 Million Data Points Has Taught Us</p> <p>Blair Fraser, Director of Global IIoT Solutions - UE Systems</p>
13:00-13:40	<p>Air leaks are costly and difficult to find, here's how you can detect them accurately and easily</p> <p>David Gambarte, Area Sales Manager - N L Acoustics</p>
14:00-14:40	<p>How to run a PdM project – the keys steps to success</p> <p>Johnathan Bonner, Lead Pre-Sales Engineer (Global) - Senseye</p>

Workshop Agendas

Theatre 1

Theatre 2

Thursday 9 June

10:00-10:40	<p>Net Zero – Future challenges for manufacturers and their supply chains</p> <p>Dan Hulme, Head Sales: Key Accounts - Inspired PLC</p>	10:00-10:40	<p>Bridging the gap between Operational Technology (OT) and Information Technology (IT)</p> <p>Paul Holding, Principal Solutions Architect - Ripley Solutions</p>
11:00-11:40	<p>Cutting Edge Sustainable Product Development</p> <p>Gethin Llewelyn, Technical Customer Service and Development Manager - EMS-GRIVORY</p>	11:00-11:40	<p>Masterclass in Digital Sensors</p> <p>Gopi Patel, Field Applications Engineer - Wurth Electronics UK</p>
12:00-12:40	<p>Power Management Design Toolchain</p> <p>An introduction to LTpowerPlanner, LTpowerCad, Filter Designer and LTspice</p> <p>Frederik Dostal – Power Specialist – Analog Devices</p>	12:00-12:40	<p>R&D Tax Relief- The Facts, Common Misconceptions & Benefits</p> <p>Jay Bhatti, R&D Tax Senior Manager - MHA</p>
13:00-13:40	<p>Using Design to ensure you are relevant, competitive and doing the right thing</p> <p>Abi Hird, Design Innovation Network Lead - Innovate UK KTN</p>	13:00-13:40	<p>IoT Strategy & Business Innovation - The OEM Perspective</p> <p>Daniel Fern - IXON Cloud</p>
		14:00-14:40	<p>A new chapter in motion plastics</p> <p>Matthew Aldridge, Managing Director (UK) - Iigus</p>

Workshop Agendas

Theatre 3

Theatre 4

Thursday 9 June

10:00-10:40	<p>Life-work Technology: Securing the Future Manufacturing Workforce</p> <p>Heather Badower, Lead Manufacturing Industry Manager - UKG</p>	10:00-10:40	<p>Emerging Cyber Threats in Manufacturing</p> <p>Phil Tonkin, Senior Director of Strategy - Dragos Threat Operations Centre</p>
11:00-11:40	<p>Choosing your approach to reduce compressed air energy consumption in production</p> <p>Andy Parker-Bates, Relationship Development Manager - FESTO UK & Ireland</p>	11:00-11:40	<p>Securely enabling Industry 4.0 with Cyber-Physical Security</p> <p>Ryan Heartfield, CTO - Exalens</p>
12:00-12:40	<p>Overcoming the Instability of the Grid</p> <p>Keith Maclean-Martin, Technical Manager - Piller UK Limited</p>	12:00-12:40	<p>Delivering Service Excellence with Remote Visual Support</p> <p>Sylvie Giangolini, Managing Director - Hako Machines Ltd</p>
13:00-13:40	<p>Why manufacturers need rapid application development and how to get started?</p> <p>Steve Collins, Senior Pre-Sales Engineer - Mendix</p>	13:00-13:40	<p>The full Net Zero consultancy journey. Getting a ClearVUE of your carbon footprint from big data</p> <p>Dan Smith, Director of Energy Services - ClearVUE</p>
14:00-14:40	<p>Bringing legacy manufacturing equipment into the age of IoT</p> <p>Mark Carleton, General Manager - MESTEC Limited Adam Hooper, Operations Director - Martin's Rubber Company</p>	14:00-14:40	<p>Net-zero – How environment, social and corporate governance (ESG) is essential to helping businesses achieve their net-zero strategy</p> <p>Brendan Garvey, Chief Commercial Officer - ClearVUE</p>
15:00-15:40	<p>Resilience: Redefining Lean Manufacturing to Survive & Thrive in Disruption</p> <p>Sean Hopkins, Head of Customer Success - SedApta</p>	15:00-15:40	<p>How to successfully create an Army of Problem Solvers - GKN Aerospace Case Study</p> <p>Paul Wright, Managing Director - Henkan</p>

Workshop Agendas

Theatre 5

Thursday 9 June

10:00-10:40	<p>Coswin 8i CMMS at the heart of your maintenance strategy</p> <p>Jean-Baptiste Pinson-Lion, International Account Manager - Siveco</p>
11:00-11:40	<p>Autonomous Maintenance integrated in Ultimo EAM</p> <p>Will Batchellor, Account Manager - Ultimo Software Solutions Ltd</p>
12:00-12:40	<p>Visualising vibration a 'gamechanger' for troubleshooting, diagnostics and root cause analysis</p> <p>Stuart Walker, Director - Reliability Maintenance Solutions Ltd</p>
13:00-13:40	<p>Bio-Remediating Parts Washers</p> <p>David Smith, Business Development Manager - CRC Industries</p>
14:00-14:40	<p>A Game Changer in SAP Digitalization for Your Maintenance Operations</p> <p>Christophe Wuyts, Account Executive - Sigga Technologies</p>
15:00-15:40	<p>Vibration analysis 4.0</p> <p>David Miny, Sales Manager Europe RS - Emerson Automation Solutions</p>

Ask the Expert Q&A **Business Advisory Clinics**

Got specific questions about issues your business is facing?

Get free 1-1 advice and have your questions answered at the MHA Business Advisory Clinics.

Concourse Suite 23

Wednesday 8 June

11:00-11:50	International Trade Hosts: Andrew Thurston, Customs Duty Consultant- MHA Alison Horner, Indirect Tax Partner – MHA
12:00-12:50	Tax Hosts: Neil Berry, Tax Partner, MHA Jay Boyce, Partner, MHA Beverley Scott - Associate Director - MHA
13:00-13:50	R&D Hosts: Jay Bhatti, R&D Tax Senior Manager - MHA Scott London-Hill - Research & Development Tax Consultant, MHA
14:00-14:50	Mergers & Acquisitions Host: Laurence Whitehead, Partner, MHA

Thursday 9 June

10:00-10:50	Tax Neil Berry, Tax Partner, MHA Jay Boyce, Partner, MHA Beverley Scott - Associate Director - MHA
11:00-11:50	International Trade Hosts: Andrew Thurston, Customs Duty Consultant- MHA Alison Horner, Indirect Tax Partner – MHA
13:00-13:50	R&D Hosts: Jay Bhatti, R&D Tax Senior Manager - MHA Scott London-Hill - Research & Development Tax Consultant, MHA
14:00-14:50	Mergers & Acquisitions Host: Laurence Whitehead, Partner, MHA

Places are pre booked only – please go to the registration desk to check for availability.

Made Smarter Innovation Focus Groups

**MADE
SMARTER**
INNOVATION

Stand E42

Made Smarter Innovation has recently launched 6 Research Centres and 2 Innovation Hubs covering the latest concepts and applied research in digital manufacturing technologies. To help maximise value from these, they are running a series of focus groups.

8th June

10.00-10.45 - Sustainability - How would you like to see Made Smarter approach Sustainable manufacturing? Current status and thoughts.

8th June

14.00-14.45 - Big Data - How can we unlock supply chain effectiveness through the use of big data, including AI and

Machine Learning? What is preventing your company from progressing?

9th June

10.00-10.45 - Materials Supply Chain - How could materials be more effectively tracked through the supply chain? What business models would be effective in progressing this, including end of life obligations?

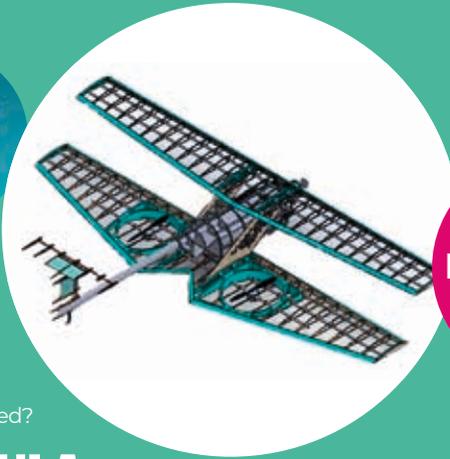
9th June

14.00-14.45 - Diversity & Inclusion: Made Smarter has a big drive on D&I. How can Made Smarter work more effectively with companies to maximise the mutual benefit of activities?

Spaces are limited – drop by the stand to check availability.

If you would like a more personal chat on how Made Smarter could help your business, 121 sessions are also available.

Innovation Zone



Live
Immersive
Action

Sponsored by:

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What is featured?

**FORMULA
STUDENT**

IMechE 175th Anniversary
**INSTITUTION OF
MECHANICAL
ENGINEERS**

Innovation Zone

The Innovation Zone, Sponsored by Arrow, features live demonstrations of the most cutting edge products.

Walk through the area and see solutions in action and discover the latest technologies that are shaping the future of the industry.

Coventry University's AI car and bi-plane UAS brought by the Formula Student and UAS Challenge Team in association with the Institution of Mechanical Engineers

Coventry University has been developing Autonomous Vehicles for some years. Having already lead the way with four trophies in the international AI competition at Silverstone, the home of the British Grand Prix, the Coventry University AI Team are excited to showcase their latest work to industry and the new generation of engineers that will be visiting the show. This will be a great opportunity for prospective students and engineers of the future to have a close up look at what we have been doing and to chat to the student team developing the car and its software systems.



Engineers with these skills are in very short supply and are highly valued by Industry and this IMechE initiative is one of the best things available to prospective engineers looking for a bright clean future.

AI and electric powertrain is the future of the automotive industry and Coventry University's new School of Future Transport Engineering will be embracing these new technologies and leading the way on developments and teaching these skills to the next generation.

Aston Martin F1 Racing Car Simulator



Aston Martin Formula 1 racing car simulator Aston Martin Cognizant F1™ Team use cloud ERP from software vendor IFS to help manage their complex factory operations and to help the team grow in the future.



As a strategic technology partner, IFS will empower Aston Martin Cognizant F1™ Team with its state-of-the-art tools to ensure operational excellence.

Have a spin in the simulator for a chance to take part in the fastest lap competition, take your spot on the Top Gear style leaderboard and win prizes!

Also don't miss Max McMurdo's modular camping system for converting regular vans into semi-campers/weekend leisure vehicles.



Max's latest project, a converted ambulance, features a number of FATH's 'industrial' products and can be found on Stand J10.

The World's First Methane Powered Tractor

The New Holland T6 Methane Power is the world's first 100% methane powered production tractor and is key to CO₂ reduction without compromising performance. The T6 Methane Power tractor is the final piece of the jigsaw to complete the virtuous cycle of the Energy Independent FarmSM concept. Farmers can make use of agricultural or animal waste (as well as specifically-grown energy crops), to generate biomethane, which powers the tractor, which, in turn, helps to grow those very crops.



Cyber Zone

Hosted by Assured Cyber Protection®

Cyber Zone Hosted by Assured Cyber Protection®

CrisisCast Cyber Demonstrator powered by Assured Cyber Protection

The central immersive feature recreates the unique settings of a hacker's bedroom and a manufacturing plant boardroom. Using high-tech staging and film techniques actors will play out the cyber hacking scenario in real-time, clearly demonstrating the challenges faced by the leadership team as they work to contain and overcome the threat.

The 20 minute performances run regularly throughout the show at the following times both days:

1045
1200
1245
1400
1500
1600
1630

Cyber Pavilion – Know Your Supply Chain™

The biggest risks are the ones you don't see

Alongside the demonstrator is a dedicated Cyber Pavilion featuring Assured Cyber Protection® a global technology partner empowering organisations to protect their most valuable assets, people, and data from cyber-attacks enabling resilient and sustainable business, plus a host of other cyber partners.



NEW REPORT WORTH £1000

Manufacturers may think they are well-prepared for cyber threats, but in reality most are vulnerable.

Only a small group of leading manufacturers have managed to fend off cyber attacks — how have they done it?

Read our report to find out how cyber-secure manufacturers are best placed to deal with the heightened threat of cyber attack.

Uncover
the secrets
of success:

Scan the QR to read ACP's new report:
Five Habits of Cyber-Secure Manufacturers



On Stand Live Hacking & Presentations

Wednesday 8 June

11:10-11:25	Live pipeline hack demonstration. Are you cyber safe? Elliot Thompson, Assured Cyber Protection
11:30-12:00	The biggest threat to your Supply Chain - People, Organisation and Technology Andrew Clarke, Simon Pavitt and Lee Mora, Assured Cyber Protection
12:20-12:40	Live pipeline hack demonstration. Are you cyber safe? Elliot Thompson, Assured Cyber Protection
13:10-13:40	Mitigating the risks of your supply chain using cyber deception Conrado Crespo, Counter Craft
13:40-14:00	Live pipeline hack demonstration. Are you cyber safe? Elliot Thompson, Assured Cyber Protection
14:30-15:00	Who and what is your greatest insider threat? Ellen Kay, CyberMIND Technology
15:30-16:00	Verification, Certification and Validation - a next generation approach to Supply Chain Security Frédéric Schenk, SGS
17:00-17:10	Daily prize winners announced

Thursday 9 June

11:10-11:25	Live pipeline hack demonstration. Are you cyber safe? Elliot Thompson, Assured Cyber Protection
11:30-12:00	Who and what is your greatest insider threat? Ellen Kay, CyberMIND Technology
12:20-12:40	Live pipeline hack demonstration. Are you cyber safe? Elliot Thompson, Assured Cyber Protection
13:00-13:40	Verification, Certification and Validation - a next generation approach to Supply Chain Security Frédéric Schenk, SGS
13:40-14:00	Live pipeline hack demonstration. Are you cyber safe? Elliot Thompson, Assured Cyber Protection
14:30-15:00	The biggest threat to your Supply Chain - People, Organisation and Technology, Assured Cyber Protection
15:30-16:00	Mitigating the risks of your supply chain using cyber deception Conrado Crespo, Counter Craft
16:00-16:10	Daily prize winners announced



The Great Egg Race

An exciting live challenge taking place over both days of the show, inspired by the TV show of the same name, people will compete to build gadgets to propel an uncooked egg over a wall into a tractor trailer. A compere will host the challenge with winners presented with prizes onsite.

Live competition 12.30-13.15
Winner presented 13.15

The Story?

Every day, Farmer Gill has taken high quality eggs laid by her hens and put them into the trailer of her tractor ready to take to the market. Recognised as the tastiest in the county, Farmer Gill's eggs have always outsold those of her arch-rival Farmer Fiendish. However, one day, Farmer Gill came out of the henhouse to be confronted by a brick wall built overnight by Farmer Fiendish. By stopping poor Farmer Gill, Farmer Fiendish hopes to get to market first and steal all of her customers.

With no way to go around it, the only way for farmer Gill to get the eggs to her tractor is to find a way to safely transfer them over the wall and into the tractor trailer. Your challenge is to help her to develop a way of doing this, without breaking the egg and (most importantly) without missing the tractor trailer!

The challenge

To propel an uncooked egg using the equipment provided over a wall into the trailer of a ride on tractor. The egg must land in the tractor trailer, without breaking.

On the first day, teams will be provided with a kit that will allow them to build a motorised solution. On the second day, the kit provided will include items that will allow them to shoot / propel the egg.

Equipment will include string, elastic bands, cotton reels, Gaffer tape, Paper card, Pens, electric motor, clothes peg and more.



Want to enter?

Go to the registration desk to check availability

Come and watch the live competition in action.

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News

Submersible Vibration Sensors Help Protect Pumps

Pumps perform important tasks across many industries, some operating continuously, and others triggered into action to move liquids at specific times or as a result of leakage. As rotating machinery, they have critical components such as shaft bearings which are subject to wear. By monitoring the vibration of the machinery, maintenance engineers have the information they need to predict when corrective work or component replacement is needed. This ensures an efficient operating plant, reducing running costs and avoiding lost production or services.

Hansford Sensors offer a range of submersible vibration sensors, which have been specifically designed for operation in partial or complete immersion in water, making them ideal for the monitoring of pumps in a maintenance role. The vibration sensors are sealed to IP68 for operation in or under water, and is also available with ATEX approved versions, with certification for operation in explosive liquids and gases.

Bespoke Heating Solutions

New from Stanelco RF Technologies, their highly efficient RFP Induction Heating Systems now form part of a growing equipment range, operating at various output frequencies and power levels, built alongside their well-established Genstar products, and manufactured with output power values of up to 500kW.

The newly re-fitted Applications Laboratory has a comprehensive range of systems installed, allowing Stanelco Engineers to select the

most appropriate equipment, thus meeting requirements for the ultimate heating solution, engineered to suit the customer's individual thermal process and component geometry.

Supporting Industry for over 50 years, Stanelco produce induction equipment together with bespoke handling systems, capable of a wide range of applications. This includes heating sections once considered far too small to be processed efficiently, through to

the heating of large piping for the oil industry.

The Stanelco portfolio has been expanded with the release of their Compact RFP Range, processing high-value medical and telecom components that require delicate heating solutions such as annealing, curing, brazing, and soldering.





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Could Power Harvesting Boost your Equipment Monitoring?

DCO Systems provides the answer for Industry 4.0 integration.

The powering of sensors is often a roadblock for widespread adoption, particularly for when retrofitting sensing solutions.



Projects adopting Industry 4.0 techniques often require more widespread and comprehensive sensor deployment than in traditional PLC deployments. When looking to maximise availability, functionality and long-term capabilities, energy (power) harvesting sensors punch above their weight. But for those engineers used to traditional devices, the simple question is usually: How do they work?



DCO's thermal harvester can utilise a heat source to generate power, specifically by taking advantage of the temperature differentials between the source and environment"

Previously, two types of sensors supported the integration of Industry 4.0; however, their power sources meant inherited limitations on what the sensors could achieve. Wired-in, or plug-in, sensors required electricians to install power and data cabling. This meant you could be waiting

months to have your sensors installed and then only where you had infrastructure in place. In short, inaccessible equipment and processes were excluded from day one. Alternatively, battery-powered sensors were reliant on their batteries. The obvious characteristic of a battery is that they are finite and need to be replaced. And when that happened in a battery-powered sensor, it stopped collecting new data until the engineer bought a replacement and scheduled a battery change— not an effective use of time or expertise. When looking to overcome and eliminate these limitations, energy harvesting sensors are demonstrating great capabilities to improve monitoring efforts within manufacturing.

Energy harvesting sensors power themselves, therefore providing a truly wireless and battery-free monitoring solution. They can be easily installed by any team member and can gather the data you want or need from day one. They are ready for the harshest conditions and can be installed on new or legacy equipment within a plant, on tall chimney stacks, in forbidding tunnels, and equipment that is installed in remote locations. Depending on the type of equipment you have, each sensor will have a built-in harvester unit, ready to power itself based on the conditions

Thermal harvester



of the equipment and location. Here we'll talk about DCO Systems' 3 most common harvesters: thermal, solar, and electromagnetic.

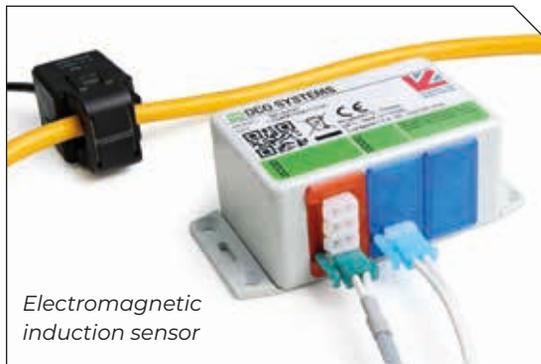
DCO's thermal harvester can utilise a heat source to generate power, specifically by taking advantage of the temperature differentials between the source and environment. For factories with high temperature processes (like steam), this makes thermal harvesting sensors an optimal choice because significant energy can be captured from the temperature differentials in such systems. Thermal harvesting is also a reliable technology with no moving parts and a simple mode of operation. If you have steam traps, boilers, heat exchangers, air handlers, pipework valves or actuators, your sensor can be powered with a thermal harvesting unit. This easily mounts onto the heat source with a clamp and provides power to the sensing unit.



Solar harvesting sensor

Naturally, any equipment with exposure to light would be an obvious candidate for DCO's solar harvesting sensor. Particularly where mounted outside, with available daylight. These sensors have small solar panels incorporated on the sensing units that absorb the light in the environment and convert it to energy. With an Intrusion Protection rating of up to IP67, solar sensors are ideal for environment monitoring and lower temperature pipework stretching over long distances. They are also ideal in hard-to-reach locations, like chimney stacks, where the environment is optimal for this type of energy source for the sensors in use. In most instances

they store surplus power harvested during the day and use it through the night, but applications such as solar farm monitoring lends itself to daylight-only operations as well.



Electromagnetic induction sensor

Another harvesting option utilises electromagnetic induction from power cabling for electrical devices (often motors and drives). Using a current transformer (CT) that simply clips onto the cable allows the sensor to self-power, while also measuring metrics related to the current in the cables, enabling features such as power metering and motor current signal analysis (MCSA) through a single, easy to deploy technology.

A further type of harvesting, less commonly used, is vibration. When machines are continuously in motion, DCO's vibration harvesters utilise that movement to create power for sensing operations. However, vibration harvesting needs to be carefully matched to the characteristics of the equipment in use so thermal, solar, and electromagnetic are often more easily deployed and more effective.

DCO's self-powering sensors not only overcome the limitations of wired or battery-powered sensors, but they also outperform the alternatives. Sensors powered by energy harvesting technology support more complete datasets with improved reporting frequency. They support monitoring more metrics in combination and the smart adjustment of reporting within bounds set by your engineering teams. This freedom or configuration extends to the many types of available Gateways also. It's a successful plug and play modular system that has engineers feeling like they finally have the upper hand in the fight.

Bearing Lubrication Reimagined: Remote and Real Time Friction Monitoring and Lubrication

What if we could lubricate our bearings remotely, from any device, making sure that the right amount and right lubricant are always used – and even better, based on bearing condition? Then, according to UE Systems, we would address the 3 main lubrication issues which cause most of early bearing failures.

We have a serious problem with bearing condition monitoring! Technology is making it easier and more cost-effective to monitor our bearings in real-time and as a result, we are seeing sensors and systems being installed on equipment at an exponential rate.

These monitoring systems are engaged in a race to detect the onset of failure (Point P on the P-F curve) at the earliest possible point. Thus, we are spending more money and extra TIME to detect a failure when we should be preventing that failure in the first place.

Addressing lubrication issues – the root of most bearing failures

It is no secret that over 80% of premature bearings failures can be traced back to lubrication related issues. These issues can be put into three general categories: inadequate lubrication (over or under-lubricated), the wrong lubricant, and contamination. When it comes to addressing premature bearing failure, reducing the impact on just one of these issues can have a large impact on the bearing life. But when we start to address all three, then we can reach excellence in our lubrication programmes.

Time based lubrication vs condition-based

One technique is to use time-based lubrication. In this case, regreasing is done based on time, with a predetermined amount of grease. This method is often based on an ideal calculation that is not reflective of the real-life condition that influences the friction in the bearing. This often leads to the

under-greasing or over-greasing of the bearing. A step-change in lubrication practices came with condition-based lubrication. This uses ultrasound to measure friction in real-time, to determine exactly when lubrication (and how much) is required to bring the friction back to – or near – the ideal level. Moving to ultrasound-assisted lubrication will ensure we do not apply too much or too little lubrication but has still not addressed the two other lubrication-related issues: using the correct lubricant, and contamination.

What about automatic lubricators?

To address these two other issues, many have turned to automatic lubrication devices or auto lubers.

These devices ensure we always use the correct grease stored in the device but also reduce or eliminate the possibility of contamination caused by the operational environment. These devices are time-based and set to dispense lubricant on a set frequency or run time.

The best of two worlds

We have two solutions addressing the different aspects of the common lubrication issues. On one side, we have ultrasound-assisted lubrication, using friction to determine when and how much lubrication is required.

On the other, we have automatic lubrication devices ensuring the correct, contaminant-free lubricant but still based on time or running hours versus the condition or friction in the bearing, often still leading to not optimal lubrication frequency.

What if we were able to combine the proven precision of condition-based lubrication using ultrasound with the convenience, safety, and accuracy of automatic lubricators? We would have a solution that allows us to lubricate bearings only when required by measuring friction and ensuring we always use the correct, contaminant-free lubricant every time. That's exactly what the SmartLube from UE Systems does.

4



These devices ensure we always use the correct grease stored in the device but also reduce or eliminate the possibility of contamination caused by the operational environment”

Lubricate based on friction, from any device, anywhere

When we use technology to make all this remotely operated, we can now monitor the real-time friction of our bearings and, when needed, remotely dispense the correct lubricant. All this with the confidence that the lubricant is getting to the bearing with real-time alerts and notifications from any internet-connected device, anywhere in the world!

The OnTrak SmartLube by UE Systems has the power of real-time bearing friction monitoring and the convenience, safety, and accuracy of single-point bearing lubricators.

How does it work?

This disruptive device works with a simple concept: ultrasonic sensors are permanently mounted on



the bearings to monitor friction levels. All this data is sent to a central processing unit – the OnTrak – and can be viewed in dashboards using any internet-connected device. The OnTrak is also connected to single point lubrication devices. Based on the friction levels and on setup alarms, we now have the possibility to tell the OnTrak that a certain bearing needs lubricant. The OnTrak will then instruct the SmartLube – single point lubricator – to dispense lubricant, in just the right amount. And the best part: all can be done remotely, anywhere, anytime.

Is B2C Manufacturing all it's Cracked Up to Be?

Morgan Innovation & Technology ask if stepping outside your comfort zone actually benefit your business?

In today's post pandemic world where businesses are pressed to manage costs, streamline their operations, and reduce dependency on resellers, many organisations who have traditionally sold into businesses (B2B) are considering a move to retail operations, or selling direct to the consumer (B2C).

With a rise in consumer pricing across the board, an increasing number of manufacturers are cutting out the middleman, in this case their resellers or distributors, and setting up e-commerce platforms to reach their end users. Other businesses are approaching this issue from the opposite end and working to set up their own manufacturing facilities in-house to create a complete end-to-end service for consumers.

Whilst these approaches may sound logical, it is a huge undertaking for both types of operation as it requires skill sets and equipment not hitherto present in the business. Alongside the obvious associated costs there is a steep learning curve involved which may present a heavy drain on existing resources.

Notwithstanding this, we at Morgan chose to launch our own e-commerce platform earlier this year to sell our first ever B2C product, having previously been an exclusively B2B manufacturing company for over three decades.

Is B2C a level playing field?

To undertake B2C operations successfully, an organisation needs to have a solid grasp of consumer marketing strategies which differ enormously from those used in B2B sales. Selling direct to consumers requires a much more emotive approach to marketing communications, whereas B2B sales have traditionally involved a more logical approach, presenting a solution to an individual customer's needs. Companies wishing

to succeed in the B2C market have to consider SEO, PPC, social media and brand presence; these are unlikely to have been focus areas for their previous sales into other businesses.

If companies have the capacity, cashflow and capabilities to manufacture their own products and have complete control, and the expertise in house, then they are in a very fortunate position. This is a situation more typically found in bigger businesses for certain product lines. Smaller organisations may find the investment required to bring new skills in house prohibitive and may instead work in partnership with marketing agencies to create the same end to end service.

Interestingly, even the biggest multinationals often utilise manufacturers such as Morgan who have specialist expertise and recognise the benefit of having an expert partner to take on a certain role enabling them to concentrate on doing what they do best.

What challenges do organisations face in moving towards this model?

As touched on briefly above, businesses face a considerable task if they try and capture everything in house as the skills and expertise for B2C are so very different. A proper end-to-end service covers everything: research and development, sourcing components, manufacturing products and the ability to manage the logistics involved in that process, to marketing – which, in itself, includes market research, communications and data-protection considerations – sales and dealing with an immense amount of customer service and consumer feedback. This requires a huge number of skills under one roof and is generally impractical for a small / medium business.

Traditionally as a B2B manufacturer, we have always partnered with organisations who complement our skills as a 13485 FDA registered manufacturing facility and whose in-house

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expertise is the commercialisation and marketing of the device. This enables us to offer that all-important complete service to our customers. Often new companies starting up have the expertise in the sales and marketing of a product and knowing the market to sell their product. They lack the expertise in the manufacturing of it. It's logical for them to find a good partner who will work with them to implement changes quickly as a reaction to customer feedback.

Is there a benefit to the end user in working with a B2C manufacturer?

The benefit to the end user lies in a company's agility to respond swiftly to consumer feedback, changing and updating a product so that the consumer has access to the best solution for their needs. Additionally, if a manufacturer is able to cut out the middleman they are generally able to pass on those cost savings to the market; this is especially powerful if allied with reshoring.

However, this closer link with the end user presents its own challenges as handling and coordinating feedback is very resource heavy. We have, in the past, seen and experienced larger organisations being so disjointed internally that despite having huge resources they lose that agility which should give them an advantage over smaller firms. Sometimes small is beautiful!

What is Morgan doing in this area?

Here at Morgan we recognise our strength lies not only in manufacturing products but also in R&D, developing new products to bring to market. We thus still prefer to partner with organisations whose expertise equals and complements ours in working with individual customers. Their presence on the ground is invaluable and allows us to focus on what we do best. This has been especially the case with our first B2C product, Zeus, which is designed to stop snoring (and hopefully save millions of marriages!)

Zeus has a huge worldwide market as few of us are unaffected by poor sleep, either directly or indirectly. We are currently seeking links into larger

retail distribution partners with experience of the B2C market to complement us as we continue to develop and manufacture in the UK.



Problem Solved

Gavin Harrison, UK Sales Manager at Element Logic explains why space optimisation is the answer to Britain's warehouse woes.

The massive surge in online shopping and supply chain disruption during the pandemic has put severe constraints on warehouse capacity, with some reports warning that the UK could run out of available space within a year. Fuelling the huge demand are online retail giants like Amazon and manufacturing and logistics companies who want a more local presence. There has also been a massive increase in larger brands, such as Coca Cola and Pringles, launching direct-to-consumer platforms.

While warehouse space is indeed a concern for these large e-commerce and retail companies, their knee-jerk reaction had been to buy up lots of extra space rather than following the more prudent approach of optimising existing space. Effectively managing the space in their current warehouses would, after all, put them in a much better position to head off any fulfilment challenges during peak periods.

The role of robotics

Robotics and automation are at the heart of warehouse optimisation. Fundamentally, the best way to optimise the use of space is to reduce reliance on manual order picking and replace it with an Automated Storage and Retrieval System (ASRS).

Moving pallets and packages around a warehouse isn't easy. Manual order picking requires a warehouse layout that makes it as easy as possible for people to retrieve orders, a requirement that puts natural limitations on how space can be used. The physical limitations of people demand a specific layout.

By comparison, an ASRS like AutoStore can be built to fit your desired space – it doesn't need rows of shelves or long walkways. Instead, this cutting-edge robotic picking system can be adapted or scaled as space requirements change to maximise warehouse efficiency. In many cases, this can lead to a 400% or greater improvement in the utilisation of floorspace.

The order picking robots, which operate within a cube-based storage system, are laid out in a space-efficient grid that doesn't have to be on the floor level. This means valuable space doesn't go to waste and, more importantly, eliminates the need to invest in another warehouse. The added space doubles, triples, or even quadruples inventory capacity, drastically reducing the risk of being out of stock, which means increased customer satisfaction.

The UK's typically taller-than-average warehouses make it possible to implement the grid on a mezzanine, allowing businesses to free up floor space for other activities. This could include value-added customer services such as gift wrapping if you're an e-commerce gift company or setting up workstations to handle incoming and outgoing goods if you're a distributor.

Because of the level of flexibility, no space needs to go unutilised. It is possible to construct the cube around columns and even oddly shaped rooms or areas not considered usable previously.





The order picking robots, which operate within a cube-based storage system, are laid out in a space-efficient grid that doesn't have to be on the floor level"

Maximise space while growing

Another way to optimise warehouse space is to determine anticipated growth and develop a space forecast to plan for expansion. It would serve little purpose, in any case, to create a fully-fledged, primarily manual warehouse layout before investing in an ASRS.

Instead, take advantage of the flexibility and scalability of solutions like AutoStore. For instance, if you're a smaller company with a rapid growth trajectory, you may want to consider expanding your use of ASRS incrementally – starting small then expanding as product demand grows.

Because a system like AutoStore is modular and scalable, a standard solution doesn't mean one-size-fits-all. You can choose a configuration – number of bins, robots, and ports – based on your inventory and throughput requirements.

Therefore, instead of buying up warehouse space, based on a five-year projection and then changing it later or worse, not needing it at all,

it's more sensible to design a solution that suits your current business needs. A highly flexible and easily scalable solution can grow in step with your operation to seamlessly maximise your space without disrupting existing operations. Such a solution will also free up time for your employees to perform more valuable tasks while the robots do the repetitive, manual work.

Automation can solve the space dilemma

While the amount of available warehouse space has fallen to low levels, it's not the lack of space that needs addressing but rather the management of available space. The real crisis lies in the continued reliance on manual processes and a hesitancy to invest in robotics and automation – perpetuated by the mistaken belief that it will be too complex, costly, and inflexible.

Dispelling this myth will be the key to solving the warehousing space crisis in the UK. Ultimately, it's about thinking strategically about warehouse space and how to adapt as demand fluctuates or the business itself evolves over time.

Process Precision

PWC's UK Manufacturing Operations Pulse Survey 2021 found almost half of UK manufacturers are prioritising robotic process automation over the next two years. Here Dave Walsh, sales manager at drive system supplier EMS, looks at how reliable, high-performance micromotors are achieving process precision.

Automated equipment can perform to exact requirements, making it inherently advantageous in testing and control. Developments in robotics have allowed automated equipment to become increasingly sophisticated, performing tasks with superior speed and accuracy. For instance, a hospital in Oxford found a surgical robot could perform an eye surgery with ten times more precision than a human surgeon alone. However, it's not just the medical sector that can capitalise on the high accuracy of automated machines – manufacturers can reap the benefits too.

Keeping control

Manufacturers who adopt automated production lines gain a high level of control over the assembly process, which minimizes waste from defective goods and ensures customers consistently receive a high-quality product. These benefits have contributed to the record high of 2.7 million industrial robots operating in factories around the world in 2020.

Automated equipment can be digitally programmed to perform tasks to exact measurements, demonstrating repeatability that is unmatched by human workers. For instance, when properly calibrated, it's possible for a six-axis industrial robot to achieve a position repeatability of 0.1 millimetres (mm) or better.

There are several production stages that can benefit from the precision of automated equipment. For example, a torque-controlled power screwdriver ensures each screw in the workpiece is turned to the exact same level of tightness, avoiding loose or over-tightened screws.

In addition, an automated dosing pump can supply the exact quantity of materials, such as adhesives, lubricants, or sealants, required to the target product area. As well as preventing waste and avoiding contamination of other product parts, being able to supply precise quantities helps meet the miniaturization trend, aiding the assembly of products with ever-decreasing sizes.

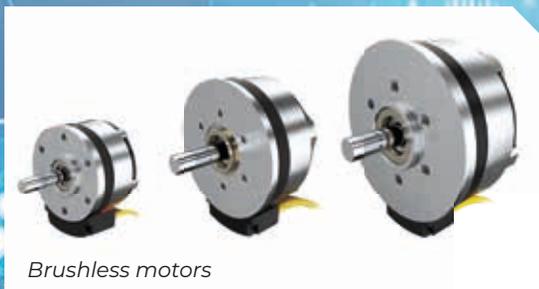
Meticulous testing

However, the benefits of precise automated equipment aren't restricted to product manufacturing; they are also advantageous in testing. For example, an automated testing rig with a motorized locking mechanism can hold a product in place while it's subjected to different tests. One of these tests could involve scanning the product for defects, such as missing screws, damage, or incorrect dimensions, by moving the rig along a motorized conveyor belt to a vision system.

Another assessment where automation is beneficial is tensile testing, where the product is pulled and then monitored when it deforms or snaps to measure its resistance to breaking under tension. This is often used on metal alloys to discover how they perform under different loads. Tensile testing devices may be used as part of a quality control system or during material research when developing new alloys.

Products in powder or liquid form may undergo viscosity testing, where a motorised stirrer moves through the product and sensors detect its resistance. This could be used in product development or for testing batches in industries such as chemicals, pharmaceuticals, cosmetics, or food and beverage.

Another experiment that benefits from automation is accelerated life testing, which subjects a product to conditions such as heat, vibration, and pressure in excess of ordinary levels in order to uncover potential faults in a short amount of time. This could be, for example, turning a light switch on and off multiple times a second, or repeatedly putting pressure on a chair.



Brushless motors



Motion controller

Not only would these testing tasks be highly monotonous for human workers, but they would also take much longer to perform than an automated system. High-performance motors can power an automated system to perform these mechanical tests repeatedly at a fast rate with no human intervention.

Superb motor systems

It's important that automated industrial equipment is matched with advanced motor systems that deliver reliable power. All FAULHABER motors are made in a highly controlled manufacturing process, which ensures they are of consistent quality and perform with unparalleled accuracy.

The motors are renowned for their high-power density, providing enough torque for demanding automated processes such as performing

mechanical tests. Their compact construction adds minimal weight and bulk to systems, aiding automated equipment that require fine control and swift movements, such as dosing pumps.

The FAULHABER brushless motors are ideal for automated systems, as they provide a long life with a wide speed range. They also have a range of compatible motion controllers that create an advanced, programmable drive system with easy and accurate control that is simple to integrate into an automated system.

Many manufacturers are focusing on automation in their future development plans. Motorized equipment can bring high levels of accuracy and precision to production lines and testing facilities, ensuring only consistently high-quality products reach customers.

Train to Productivity Gain



Whether it is automotive, retail, postal or logistics, a surge in demand has led to a greater increase in the need to improve productivity and optimise warehouse space.

LKE Group, which employs over 350 people worldwide have been manufacturing in Germany for over 25 years a wide range of standard and bespoke towable transport systems.

The group is one of the few end-to-end suppliers of handling and logistics products within Intralogistics, and Distribution logistics. It is this success which led to the opening of a UK division in 2014.

During the last 8 years, LKE have been met with unprecedented demand which has seen business grow at a phenomenal rate. They believe that

this is a result of customers now recognising that traditional material handling solutions, such as forklift trucks for example, are no longer an efficient method of transportation.

A 35% increase in online spending (between 2014-2019) has brought with it an expectation for a faster and more efficient service. This has now led to a shift towards a different, leaner approach within both manufacturing and distribution environments.

Matt Howell, Director of Sales at LKE comments "We recognised early on that we needed to adapt and develop our core product range to ensure it was transferrable across a wide range of industries. Businesses are facing more constraints than ever before, specifically surrounding internal logistics. They are looking for new, innovative solutions."



By introducing a tugger train system into an operation, companies are now able to transport a greater volume of material and they can therefore decrease the frequency of deliveries. For example, five pallets towed using specialist trolleys versus one pallet moved with a forklift or powered pallet truck. The obvious advantages being time and cost savings, and by reducing the volume of material handling equipment on site, employee safety is thereby greatly improved.

The shift to Industry 4.0 has led to a greater focus on technology and products which are compatible with these new advances. For instance, LKE Group have seen a marked rise in the number of customers combining their towable trolleys with AGVs (Automated Guided Vehicles); nowhere more so than in the manufacturing and ecommerce sectors where bespoke solutions have become the norm, mainly down to a change in the way items are now picked. Customers now want a variety of trolleys to increase the number of products which can be picked in one trip. The ability to be able to

By introducing a tugger train system into an operation, companies are now able to transport a greater volume of material and they can therefore decrease the frequency of deliveries”

use these trolleys both individually and in a tugger train system has also been especially important.

As demand increases within the supply chain, space also becomes more of a premium. Having the flexibility to manage peak periods is key; sites are now looking for efficiency throughout the year with the option to increase capacity when needed. Solutions such as LKE’s collapsible trolleys which nest for optimum space saving allow for this sudden upsurge.

The solution is no longer driven by price; it is about identifying areas where the necessary productivity gains can be achieved. “We have implemented many thousands of solutions,” concludes Matt Howell, “which has helped our customers to improve lean efficiency and in turn reduce costs.”

A Real Living Wage **Employer**

Hampshire based Contract Electronic Manufacturer (CEM) Esprit Electronics are excited to announce that they have joined the Living Wage Foundation and become a real Living Wage employer. As of January 2022, all employees of Esprit Electronics as a minimum are on the real Living Wage.

The real Living Wage is the only UK wage rate that is voluntarily paid by almost 9,000 UK businesses who believe their staff deserve a wage which meets everyday needs. Even though the Government re-evaluate and set the minimum wage paid every April, this wage is not calculated according to what employees and their families actually need to live on. The Real Living Wage rates are higher because they are independently calculated based on what people need to get by. Esprit Electronics Living Wage commitment will see everyone working at the company receive a minimum hourly wage of £9.90 in the UK or £11.05 in London. Both rates are significantly higher than the Government's minimum for over 23s, which currently stands at £8.91 per hour.

Laurie Sigournay, Esprit Electronics' Managing Director says: "We're thrilled to become a real living wage employer. The wellbeing of the team

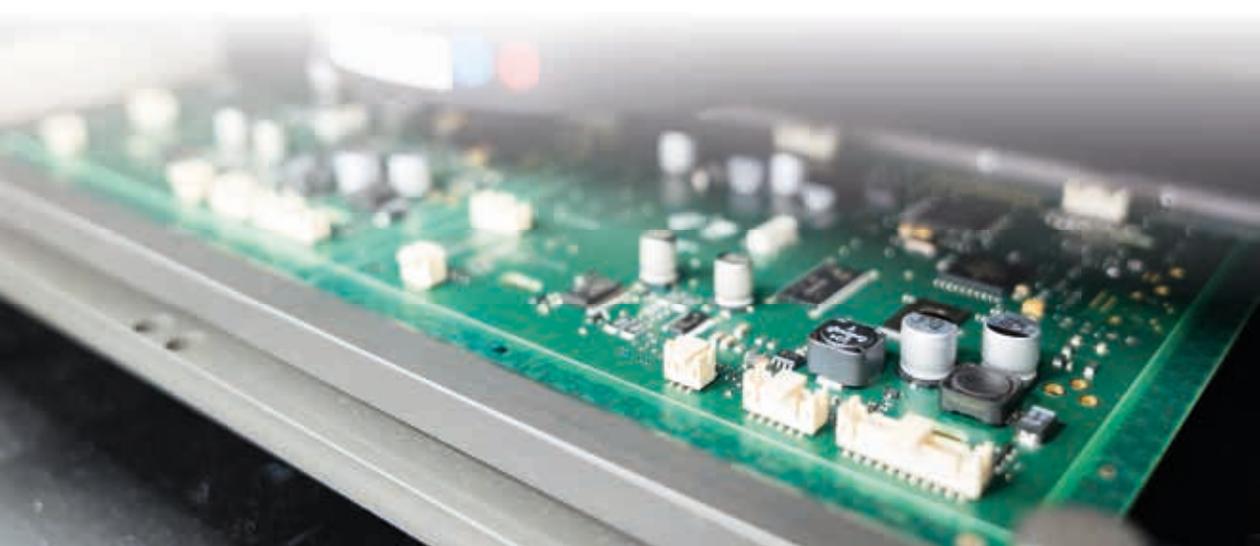
at Esprit Electronics is of utmost importance and we believe that everyone deserves the right to have a wage that reflects the true costs of living. We are proud to become part of the Living Wage Foundation and agree with their ethos that a hard day's work deserves a fair day's pay. We strive to be a responsible employer who choose to go further and pay a real Living Wage based on the cost of living, not just the government minimum".

Describing the difference this makes, one member of staff described it as "A very helpful and positive one – it works out at the equivalent of a week's basic food shop for me and my family. I feel proud and impressed. It makes me feel confident as a person, an individual, not just a number. Esprit Electronics obviously want to help out their employees as much as they can".

About Esprit Electronics

Esprit provides a comprehensive range of Electronic Manufacturing Services (EMS) to UK and European markets.

We work in partnership with our customers, leveraging our 35+ years of experience to thoroughly understand your requirements and provide a solution that's precisely engineered to meet your needs. We pride ourselves on our flexibility to greet any challenges or opportunities you face alongside you.



A woman with brown hair and glasses, wearing a blue lab coat and white gloves, is focused on working on a circular circuit board. She is using a soldering iron. The background is slightly blurred, showing a workshop environment. The text is overlaid on a semi-transparent purple box on the left side of the image.

ONE THING THE LIVING WAGE MEANS TO ME IS...

A very helpful and positive one - it works out the equivalent of a weeks basic food shop for me and my family. I feel proud and impressed as it makes me feel considered as a person, an individual, not just a number. Esprit Electronics obviously want to help out their employees as much as they can"

Exhibitor Entries

Key:

- Design Engineering Expo & Engineering Expo
- Manufacturing Expo
- Maintec

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Acoem ■ A41

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Advanced Propulsion Centre UK ■**J2**

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Tel: +44 (0) 2476 528700 Email: info@apcuk.co.uk

Website: www.apcuk.co.uk

The Advanced Propulsion Centre (APC) collaborates with UK government, the automotive industry and academia to accelerate the industrialisation of technologies, supporting the transition to deliver net-zero emission vehicles.

Alfed ■**P36**

Suite 9, Alcora Building, Mucklow Hill, Halesowen,
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Website: www.alfed.org.uk

The Aluminium Federation (ALFED) is the voice of the UK aluminium industry and represents businesses who process, trade and work with aluminium. From training and networking to research, advocacy, lobbying and outreach, we help our members solve problems, capitalise on opportunities and boost their competitiveness.

Altimex ■**E30**

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Website: www.assuredcyberprotection.com

Assured Cyber Protection is a global technology security partner and is the world's leading inspection, verification, testing and certification company. Together we deal with the risks you don't see. Know Your Supply Chain is a proprietary solution to understand, locate and quantify supply chain risks.

ATS Applied Tech Systems ■ E75

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BSIF is the Trade Association for the safety industry. Established in 1994 the Federation has some 400 members representing the complete supply chain including manufacturers, importers and distributors of PPE and safety products, through to test houses, certification bodies and specialist safety service providers.

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Cardwave Services ■**K22**

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CBM ■**H60**

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Claroty empowers organizations to secure cyber-physical systems across industrial (OT), healthcare (IoMT), and enterprise (IoT) environments: the Extended Internet of Things (XIoT). The company's unified platform integrates with customers' existing infrastructure to provide a full range of controls for visibility, risk and vulnerability management, threat detection, and secure remote access.

ClearVUE ■**J67**

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Website: www.clearvue.business

ClearVUE is a net zero consultancy providing guidance on audits, staff training, scope 1, 2 and 3 emissions and government legislation, helping businesses reach net zero. Its technology is a cloud-connected, smart monitoring and targeting system with data delivered in real-time showing businesses how to reduce energy waste and optimise consumption.

Clockwork IT Ltd ■**B29**

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Composites UK ■**F72**

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Composites UK is the trade association for companies working in the UK's fibre-reinforced polymer composite supply chain. Its focus is to encourage and promote its 370 member companies through furthering knowledge, lobbying government via the Composites Leadership Forum, facilitating networking and supporting industry growth.

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DER-Driving The Electrical Revolution Industrialisation Centres ■ H70

School of Engineering, Merz Court, Newcastle upon Tyne, NE1 7RU, UK
Email: info@der-ic.org.uk
Website: www.der-ic.org.uk

Driving the Electric Revolution Industrialisation Centres (DER-IC) is a UK-wide project developing the UK's clean and resilient supply chains in power electronics, machines and drives (PEMD). DER-IC is funded by UKRI and will provide open-access facilities with state-of-the-art equipment, bringing together the UK's technology and manufacturing expertise.

Direct Air & Pipework Ltd ■ C34

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ECH Scientific Ltd ■**D21**

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Elecosoft UK Ltd ■**C60**

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Element Logic ■**H52**

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Cleveland, LE19 1UX, UK
Tel: +44 (0)870 2401978
Email: marcoms.uk@emerson.com
Website: www.emerson.com

Emerson can help your business drive operational reliability through a portfolio of services and technologies for automation assets, rotating machinery, and fixed equipment. This portfolio includes predictive maintenance and diagnostic software applications as well as technologies for online condition and asset health monitoring, field communicators, wireless monitoring, and route-based analyzers.

EMS-GRIVORY ■**H16**

EMS-CHEMIE (UK) Ltd., Forest Lodge, Dunston Business Village, Dunston, Stafford, ST18 9AB, UK
Tel: +44 (0)1785 283739

Email: welcome@uk.emsgrivory.com

Website: www.emsgrivory.com/en

EMS-GRIVORY is the manufacturer with the broadest range of polyamides worldwide. These high-performance resins, for use in injection-molding and extrusion processes, are sold worldwide under the trade names Grivory®, Grilamid® and Grilon®. Polyamides from EMS-GRIVORY are used in applications in the market segments automotive, industrial and consumer goods, electro and electronics, healthcare, optics, packagings.

Engineering UK ■**P34**

Northern & Shell Building, 5th Floor, 10 Lower Thames Street, London, EC3R 6EN, UK
Tel: +44 (0)20 3206 0400

Email: feedback@engineeringuk.com

Website: www.engineeringuk.com

EngineeringUK works with the engineering community to inspire young people and grow the number and diversity of tomorrow's engineers. The sector needs to work harder to make it more accessible for this generation – for their own life chances and for a diverse and insightful workforce.

Equilibrium Risk Ltd ■**A44**

3M Buckley Innovation Centre, Firth Street, Huddersfield, W Yorks, HD1 3BD, UK
Tel: +44 (0)1484 505321

Email: hello@equilibriumrisk.com

Website: www.equilibriumrisk.com

Equilibrium Risk is an award-winning security management company. It is our mission to support business growth through effective, balanced security. With a specialism in manufacturing, we do this by providing a secure environment in which your business can operate and grow.

Eurobond Adhesives ■**L11**

Eurobond Adhesives Limited, Bonham Drive, Eurolink Industrial Estate, Sittingbourne, Kent, ME10 3RY, UK

Tel: +44 (0)1795 427888

Email: sales@eurobond-adhesives.co.uk

Website: www.eurobond-adhesives.co.uk

Eurobond Adhesives supply high performance adhesives, adhesive tapes, UV light curing systems and adhesive dispensing systems. Our adhesives have been proven in the most demanding of applications by thousands of customers throughout the globe for over 40yrs. Come and talk to our team on stand L11 about your project.

Exalens ■**G63**

Queen Elizabeth, Olympic Park, Plexal, Here East, London, E20 3BS, UK

Tel: +44 (0)20 330 1621

Email: contact-us@exalens.com

Website: www.exalens.com

Exalens are the first and only company to provide automated cyber-physical security for Digital Industry. With Exalens, businesses know in seconds whether cyber incidents are occurring, if and how they might impact production, or whether ongoing physical disruption is a result of a cybersecurity breach, system fault, or equipment failure.

EXALENS®

FasteningandBonding.net ■**K3**

Suite 118, 80 Churchill Square, Kings Hill, West Malling, Kent, ME19 4YU, UK

Tel: +44 (0)1844 278875

Email: info@theengineeringnetwork.co.uk

Website: www.fasteningandbonding.net

FasteningandBonding.net is part of The Engineering Network and digital only platform provides design engineers, production professionals and manufacturing managers with access to the latest technologies, products, practices and processes available so that they can fasten, bond and join better.

FATH Components ■**H33**

Unit 6, Pegasus Court, North Lane, Aldershot,
Hampshire, GU12 4QP, UK
Tel: +44 (0)1252 346610 Email: info.gb@fath24.com
Website: www.fath24.com

FATH manufactures intelligent systems for the production environment. Solutions for industrial ecosystems include manual assembly products as well as material provision and warehouse stock management systems. Flowsort is a pivot wheel diverter system that handles packages, totes and boxes found on manufacturing lines and within the rapidly growing intralogistics market.

Festo ■**E28**

Applied Automation Centre, Brackmills Industrial
Estate, Northampton, NN4 7PY, UK
Tel: 0800 626 422 Email: info.gb@festo.com
Website: www.festo.co.uk

Festo is a leading international supplier of automation technology with a turnover of around €3.35 billion. Festo offers around 30,000 pneumatic and electric products in hundreds of thousands of variants for factory and process automation, many of which can be tailored to specific customer needs.

Fixturlaser UK ■**C26**

Unit 70 Dunston House, Dunston Road,
Chesterfield, Derbyshire, S41 9QD, UK
Tel: +44 (0)1246 251001
Email: sales@fixturlaser.co.uk
Website: www.fixturlaser.co.uk

Fixturlaser UK are distributors of industry leading laser alignment and reliability tools. We cover the UK and Ireland from our base in Chesterfield, Derbyshire. We offer a wide range of tools to suit every need and budget, including technical back-up and training if required. We also stock stainless steel shims.

Fluke Reliability ■**D62**

City Wharf, Davidson Road, Lichfield, Staffordshire,
WS14 9DZ, UK
Tel: +44 (0)1543 417763
Email: ptuk_sales@pruftechnik.co.uk
Website: www.pruftechnik.com/en-GB/

Fluke Reliability offers reliability and maintenance teams the tools, software, and services they need to optimize asset performance. Our products inform customers on the health of their assets and our software and services drive better maintenance decisions – improving productivity, driving uptime, and reducing costs.

Fluke (UK) Ltd ■**E57**

Fluke UK Ltd, 52 Hurricane Wayark Circle, NR6 6JB
Norwich, Norwich, UK
Email: ptuk_sales@pruftechnik.com
Website: www.pruftechnik.com/en-GB

For further information on our products and services please visit our stand.

Forest Nation ■**A28**

1st Floor, 2 Woodberry Grove, Finchley, London, N12
0DR, UK
Tel: +44 (0) 203 239 0088
Email: info@forestnation.com
Website: www.forestnation.com

Forest Nation is a for-profit sustainable business. We offer products and services that unite environmental, social and commercial goals together. We empower individuals and organizations to reforest the planet and reconnect to nature. Our mission is to reforest Mother Earth and to motivate you to grow and plant your own trees.

Future Facilities Ltd ■**L16**

Future Facilities Ltd, 1 Salamanca Street, Vauxhall, London, SE1 7HX, UK
 Tel: +44 (0)20 7840 9540 Email: Info@6SigmaET.info
 Website: www.6sigmaet.info

6SigmaET is a thermal modelling tool that uses advanced computational fluid dynamics (CFD) to create accurate models of electronic equipment. Designed specifically for the electronics industry, our software ushers in unparalleled intelligence, automation and accuracy to help you meet your requirements and to help you overcome thermal design challenges.

Geneo Software ■**L54**

7 Parade, Leamington Spa, Warwickshire, CV32 5SG
 Tel: +44 1926 423132 Email: sales@geneo.co.uk
 Website: www.geneo.co.uk

GENEO Software is your answer to digital solutions in continuous improvement. Our applications can enhance your drive for operational excellence. Come and see us on Stand L54 and interact with our team and software applications. You never know, your visit might win you a free SaaS licence for 12 months!

Global Precision Ltd ■**K52**

Unit 3, River View, Haworth, West Yorkshire, BD22 8SB, UK
 Tel: +44 (0)1274 026513
 Email: enquiries@global-precision.co.uk
 Website: www.globalmanufacturing.co.uk

Global Precision are contract manufacturers of industrial and consumer products, supporting companies from all market sectors including automotive and medical, with extensive expertise in design for manufacture, tooling, moulding and assembly. Working with entrepreneurs, start-ups, design consultancies, SMEs, first tier suppliers and OEMs offering an entire turnkey manufacturing solution.

Good to go Safety ■**D64**

Unit 4, Waverley Road, Mitchelson, Kirkcaldy, Fife, KY1 3NH, UK
 Tel: +44 (0)1592 655646
 Email: sales@goodtogosafety.co.uk
 Website: not supplied

Good to Go Safety's checklist and tagging systems enable companies to complete/record essential pre-use inspections of workplace equipment; improving safety & reducing maintenance costs/downtime. Our TakeAIM app allows inspections to be completed digitally on smart phones/tablets, providing management with instant visibility/analysis of completed inspections via their dedicated company dashboard.

Gruetzner GmbH ■**B22**

Gruetzner GmbH, Dagobertstrasse 15, Nuernberg, Bavaria, 90431, Germany
 Tel: +49 9 1127 7399-0 Email: info@G-LUBE.com
 Website: www.G-LUBE.com

GRUETZNER is a specialist for automatic lubrication systems and Maintenance Equipment since 1993. Our flexible and user-friendly lubrication solutions are used in almost all areas of maintenance in every industry across the globe.

GTK UK ■**J31**

GTK UK Ltd, Antura, Unit C2, Bond Close,
Basingstoke, Hampshire, RG248PZ, UK
Tel: +44 (0)1256 472000 Email: sales@gtk.co.uk
Website: www.gtk.co.uk

GTK provide custom electronic solutions, including cable assemblies, connectors and displays, as well as bespoke turnkey manufacturing solutions. In addition to supplying high quality electronics, we assist with everything from technical drawings and component selection through to providing a full DFM service, ensuring our customers can achieve the best results.



A Volex Company

Hammond ■**K27**

1 Onslow Close, Kingsland Business Park,
Basingstoke, Hampshire, RG24 8QL, UK
Tel: +44 (0)1256 812812
Email: sales@hammond-electronics.co.uk
Website: www.hammondmfg.com

Hammond is a leading manufacturer of small/medium sized plastic, die-cast and metal enclosures for use in the electronics and other industries. Our customisation facilities will be highlighted with the capability to modify any of our enclosures. We will showcase a number of new additions introduced over the past few months.

Hansford Sensors Limited ■**E51**

Artisan Hillbottom Road, Sands Industrial Estate,
High Wycombe, Buckinghamshire, HP124HJ, UK
Tel: +44 (0)845 6801 957
Email: sales@hansfordsensors.com
Website: www.hansfordsensors.com

Hansford Sensors, the leading global manufacturer of high-performance industrial accelerometers, will be showcasing its range of vibration monitoring products on Stand E51 at Maintec. These products can be used in a wide range of industries including paper, wind and mining, playing a key part in the role of predictive maintenance.

Heights Ltd ■**G58**

HEIGHTS UK LTD, Wainstalls Mill, Halifax, West
Yorkshire, HX27TJ, UK
Tel: +44 (0)1422 240914
Email: sutcliffe.n@heights-uk.com
Website: www.heights-uk.com

The Heights Group of Companies spans a wide and diverse variety of industrial markets. Heavily centred on design and manufacturing, we provide key equipment to a number of business sectors. We offer a complete manufacturing service from design, machining through to sub assembly work, including documentation and logistics.

Henkan ■**G40**

Thursby House, 1 Thursby Road, WIRRAL, CH62
3PW, UK
Tel: +44 (0)151 210 5507
Email: andre.pereira@henkan.com
Website: www.henkan.com

Henkan provides world-class CI programmes designed specifically for each customer using an intelligent blend of the leading CI models. This is important because every organisation operates differently, making a tailored solution the only solution when it comes to unlocking efficiencies and ensuring operational excellence.

Hikvision ■**B82**

4 The Square, Uxbridge, Middlesex, UB11 1ET, UK
 Tel: +44 (0)1275 371981
 Email: info@hikmicrotech.com
 Website: www.hikmicrotech.com/en

HikMicro is a leading provider of thermal imaging equipment and solutions. Specializing in SoC and MEMS design, development, and manufacturing, the company offers thermal detectors, cores, modules, cameras and total solutions to the global market, serving customers in more than 100 countries and regions.

Hirose Electric Europe B.V ■**L19**

4 Newton Court, Kelvin Drive, Knowhill, Milton Keynes, Bucks, MK5 8NH, UK
 Tel: +44 (0)1908 202050
 Email: eu.info.3d@hirose-gl.com
 Website: www.hirose.com

Hirose Electric Europe B.V., the European division of Hirose Electric Company Ltd in Japan will be exhibiting the latest connectivity products alongside their distribution partner, Anglia. Hirose have a wide product portfolio of over 50, 000 connectors variations available.

Hunter Selection ■**B64**

Wessex House, Greystoke Business Park, Portishead, Bristol, BS20 6PY, UK
 Tel: +44 (0)1275 371981
 Email: marketing@hunterselection.co.uk
 Website: www.hunterselection.co.uk

Established 2004, we are the UK's leading recruitment service within Engineering, Manufacturing, Service and Technology, we pride ourselves on national reach and local focus. We are employee owned giving us unrivalled staff retention and engagement so you'll always be working with experienced, dedicated consultants, committed to the highest standards.

I-Care ■**D44**

Faulkner House, Victoria Street, St Albans, AL1 3SE, UK
 Tel: +44 (0)2871 730070 Email: uk@icareweb.com
 Website: www.icareweb.com

I-care is a global leader in predictive and prescriptive maintenance. Our AI-powered and data driven solutions predict industrial failures before anyone else. Through our integrated technologies and asset management methods, we enable our customers to decrease maintenance costs and increase equipment uptime.

IEB Software ■**A57**

Gortfoyle Business Centre, 104-108 Spencer Road, Derry Londonderry, County Derry Londonderry, BT47 6AG, UK
 Tel: +44 (0)2871 730070
 Email: contactus@iebsoftware.com
 Website: www.iebsoftware.com/assethq

AssetHQ is a centralised Asset Management Software Platform helping organisations efficiently manage Maintenance Schedules, Work Orders, Safety Inspections, Service Certificates & more in one place. Accessible from any device at any time; producing management reports at the touch of a button AssetHQ is the smarter choice for efficient Asset Management.

ifm Electronic ■**E38**

Efector House, Kingway Business Park, Oldfield Road, Hampton, Middlesex, TW12 2HD, UK
 Tel: +44 (0)20 8213 2222
 Email: marketing.gb@ifm.com
 Website: www.ifm.com/gb/en

ifm stands for products of extraordinary quality and an honest service promise to you. During 50 years of activity as a family-owned company, we have not only been able to implement numerous application solutions but we could at the same time establish intense partnerships with more than 165, 000 customers worldwide.

IFS ■**G90**

Bourne House, Bourne House, Watermans
Business Park, Staines, TW18 3BA, UK
Tel: +44 (0)1784 278222 Email: ruth.white@ifs.com
Website: www.ifs.com

IFS Cloud enables companies to manage the customer, people, and asset elements of their business in a single solution. IFS Cloud is built for your industry, to solve your business challenges, and to make your digital transformation easier.

Ignys Ltd ■**P38**

Ignys Ltd, Unit 3, Isaac Newton Centre,
Nottingham Science Park, University Boulevard,
Nottingham, NG7 2RH, UK
Tel: +44 (0)115 772 2825
Email: enquiries@ignys.co.uk
Website: www.ignys.co.uk

Ignys is an award-winning electronics design and software development consultancy. With a technical expertise in electronics, firmware, and software, their problem-solving team of engineers are primed to assist you at every stage of your product journey. Bring your great ideas to life with Elektra's Design Team of the Year.

igus UK Ltd ■**M40**

igus (UK) Ltd, 51a Caswell Road, Brackmills
Industrial Estate, Northampton, NN4 7PW, UK
Tel: +44 (0)1604 677240 Email: sales@igus.co.uk
Website: www.igus.co.uk

igus® is the largest producer of injection moulded polymer bearings and reinforced plastic cable carriers in the world. Product lines include industry-leading e-chain® cable carriers, chainflex® continuous-flex cables, iglidur® plastic plain bearings, igubal® spherical bearings, drylin® linear bearings and guide systems.

Industrial Plant & Equipment ■**A40**

For further information on our products and services please visit our stand.

Industrial Technology ■**K3**

Suite 118, 80 Churchill Square, Kings Hill, West
Malling, Kent, ME19 4YU, UK
Tel: +44 (0)1844 278875
Email: info@theengineeringnetwork.co.uk
Website: www.industrialtechnology.co.uk

Industrial Technology provides suppliers targeting the design engineering, machine building and systems integration community with a single brand of fully integrated marketing platforms that deliver genuine opportunities to reach, influence and sell to a premium quality, identified audience of professionals.

Infologic Design ■**M15**

5 Greenside, Wappenham, NN128SH, UK
Tel: +44 (0)1327 810383
Email: enquiries@infologicdesign.co.uk
Website: www.infologicdesign.co.uk

Infologic Design provided Electromagnetic simulation tools since 1978 and is the leading provider of design solutions for magnetic devices. As well as general purpose electromagnetic software from Siemens (Simcentre MAGNET, Motorsolve and SPEED), we also provide a Transformer Design Software (TrafoSolve) - ideal for designers requiring fast and accurate results.

Institution of Engineering Designers ■**M16**

Courtleigh, Westbury Leigh, Westbury, Wiltshire,
BA13 3TA, UK
Tel: +44 (0)137 3822801 Email: ied@ied.org.uk
Website: www.ied.org.uk

The IED is a Chartered Body representing over 5000 members working in engineering and product design. Benefits include networking opportunities, an excellent bi-monthly journal, local branch activities and CPD. Suitably qualified members receive guidance and support for registration with the Engineering Council and the IED's own Register for Product Designers.

Institution of Mechanical Engineers ■ L46

Institution of Mechanical Engineers, 1 Birdcage Walk, London, London, SW1H 9JJ, UK
 Tel: +44 (0)20 7222 7899
 Email: enquiries@imeche.org
 Website: www.imeche.org

Established in 1847, The Institution of Mechanical Engineers is one of the fastest growing professional engineering institutions. Headquartered in London, we have operations around the world and have 114,000 members. They work across the most important and dynamic industries such as the automotive, rail, aerospace, medical, power and construction industries.

Interface Force Measurements ■ M43

Unit 19A, Unit 19, Ground Floor, Wellington Business Park, Crowthorne, Berkshire, RG45 6LS, UK
 Tel: +44 (0)1344 776666
 Email: info@interfaceforce.uk.com
 Website: www.interfaceforce.co.uk

If you need to measure force in single axis, multi axis, reaction or rotary torque, pressure or measure the pressure between any two contacting surfaces, we can help. We can supply sensors from some of the best names in the business. Including Interface Inc, AMTI, GP50 and XSensor.

Invent Design Build ■ M3

20 Langlands Avenue, Glasgow, East Kilbride, G75 0YG, UK
 Tel: +44 (0)7378 557533
 Email: megan@inventdesignbuild.com
 Website: www.inventdesignbuild.com

Our main specialties lie within sensors, lighting, wireless and low power devices. The services we provide are of a very high standard which consist of patent search and business intelligence, expert critical design reviews, NPD process, team development and importantly product approvals.

IRISS Inc ■ E37

IRISS Global Headquarters, 10306 Technology Terr, Bradenton, Florida, 34211, United States
 Tel: +1 941 907 9128 Email: m.riccio@iriss.com
 Website: www.iriss.com

IRISS is the global leader in Safety & Reliability solutions for asset monitoring, inspection, and management, for the electrical maintenance industry. We provide customers unsurpassed quality at every touch point & focus on continuously improving Infrared (IR) window, online monitoring devices, and Ultrasound test equipment technology.

ISS Global ■ G72

Velocity 1, Brooklands Drive, Weybridge, Surrey, KT13 0SL, UK
 Tel: +44 (0) 203 859 9186
 Email: info@uk.issworld.com
 Website: www.uk.issworld.com

At ISS, we believe that people make places and places make people. We create, manage and maintain environments that make life easier, more productive and enjoyable. With 30+ locations worldwide, we are truly connected – bringing innovation, insights and consistency to customers across industries and around the world.

Iter Digital ■ G66

Old Chambers, 93-94 West Street, Farnham, Surrey, GU9 7EB, UK
 Tel: +44 (0)1483 912818 Email: info@iterdigital.co.uk
 Website: www.iterdigital.co.uk

Iter Digital has created a Digital Lean Production System with the mission to bring the benefits of digital technology to companies driving improvement through Lean and more specifically Lean Production Systems. The integrated suite of tools is easy to navigate and has been designed using Microsoft365, Teams and Power Platform.

Ixon BV ■**F40**

Zuster Bloemstraat 20, Beugen, 5835 DW,
Netherlands
Tel: +31 (0)85 74 41 105
Email: rada.swetschnikar@ixon.cloud
Website: www.ixon.cloud

IXON offers an end-to-end industrial service solution for all your remote service and maintenance needs: from hardware to the cloud. Our all-in-one platform helps machine builders and system integrators with the step-by-step implementation of IIoT; facilitating field service optimization, improving uptime, and performing predictive maintenance. Visit us on booth F40.

KDP Electronic Systems Ltd ■**B27**

Unit 6, Station Road, Gamlingay, Sandy,
Cambridgeshire, SG19 3HB, UK
Tel: +44 (0)1767 651058
Email: enquiries@kdpes.co.uk
Website: www.kdpes.co.uk

KDP operate in the Industrial Automation, Safety systems, Environmental monitoring, Transportation and Aerospace market segments. We provide intelligent motor & drive solutions, conditional monitoring sensors, signal conditioners, cable assemblies, through to full box build assembly.

Kelvin Engineering ■**J51**

Waterend Farm, Epping Road, Ongar, CM5 0DE, UK
Tel: +44 (0)1342 832101
Email: steve@kelvinengineering.co.uk
Website: www.kelvinmini.com

Kelvin's reputation for designing and building high-quality, reliable products stretches back to 1969. They've applied this knowledge and experience into the Kelvin Mini; the forklift that fits into tight spaces. "Mini in stature, mighty in manoeuvres!" The Kelvin Mini works in 2550mm wide aisles, operates under low ceilings and doorways.

Keytracker ■**C21**

Keytracker Ltd, Station Road, Rowley Regis, West Midlands, B65 0JY, UK
Tel: +44 (0)121 5599000
Email: sales@keytracker.co.uk
Website: www.keytracker.com

Key Cabinets & Key Management Systems. Always keep track of your organised keys and equipment with Keytracker professional management cabinets, software and accessories. No more wasted time looking for keys or equipment. Improved efficiency. Better security. Health & Safety Compliant. Quick to set up. Fast and easy access for authorised users.

Klere Ltd ■**F33**

16 Berkeley Street, London, W1J 8DZ, UK
Tel: +44 (0)203 538 1263 Email: enquiries@klere.uk
Website: www.klere.uk

Klere is a business transformation and ecosystem services consultancy. We build and deliver ESG, sustainability and Net-Zero corporate strategies. We also develop and invest in sustainable initiatives that drive environmental benefit.

Kognitiv Spark ■**H63**

R103, Rutherford Appleton Laboratory, Harwell Campus, Didcot, Oxfordshire, OX11 0QX, UK
Tel: +44 (0)7862 600684
Email: adam@kognitivspark.com
Website: www.kognitivspark.com

Experience RemoteSpark, our industrial grade mixed reality support solution and explore how we're helping organisations drive efficiencies and cut costs. Minimise Equipment & Operational Downtime. Better Leverage Experts. Improve Knowledge Transfer. Reduce Expert Travel. Lower Carbon Footprint. RemoteSpark = Knowledge Where You Need It.

Laser Lines ■**H64**

Laser Lines Ltd, Beaumont Close, Banbury, Oxon,
OX16 1TH, UK

Tel: +44 (0)1295 672500

Email: lasers@laserlines.co.uk

Website: www.laserlines.co.uk

We will be demonstrating our Primary Laser Marking System. This is a compact laser marker, part of a larger range of systems for direct part marking we supply. We will also be demonstrating a Sisma LM-D desktop Laser Welding System, one of a large range of laser welding solutions available.

LG Motion ■**H34**

Unit 1A-1B, Houndmills Estate, Telford Road,
Basingstoke, Hampshire, RG216YU, UK

Tel: +44 (0)1256 365600

Email: info@lg-motion.co.uk

Website: www.lg-motion.co.uk

Simply put, we make things that go in and out, up and down, round and round. We design, engineer and supply a wide range of electro-mechanical motion control systems for a diverse range of applications and industries. The portfolio includes precise, reliable, multi-axis motion control components both standard and customised.

Librestream Technologies ■**J58**

895 Waverley St #110, Winnipeg, R3T 5P4, Canada
Tel: +1 (204) 487 0612 Email: info@librestream.com
Website: www.librestream.com

Librestream transforms workforces through advanced AR and AI solutions that scale knowledge across businesses to enhance safety, efficiency, and resiliency. With the Onsite AR platform, Librestream helps workers and distributed teams gain immediate access to the content, people, relevant data, and guidance needed to solve business challenges.

Lighthouse(UK) Ltd ■**D22**

Unit 23 Charnwood Business Park, North Road,
Loughborough, Leicestershire, LE11 1LE, UK

Tel: +44 (0)1509 264500

Email: sales@lighthouse.uk.com

Website: www.lighthouse.uk.com

Asset labels, instruction labels, equipment ID, rating plates and 2D barcodes can all be produced with using Lighthouse sign and label systems. Lighthouse has full production capabilities and manufactures all printing materials in-house. We make it easy and cost effective for you to design and create bespoke labels and signage.

LKE UK ■**G39**

Unit 205, Century Building, Brunswick Business
Park, Summers Road, Liverpool, Merseyside, L3
4BL, UK

Tel: +44 (0)151 374 2921

Email: info-uk@lke-group.com

Website: www.lke-group.com/en/home.html

With over 25 years of manufacturing experience LKE are responsible for producing world class internal material handling transport systems that are utilised throughout many industries within the UK and Europe. Supporting companies in all sectors including manufacturing to e-commerce and distribution operations, with a specific focus on intralogistics solutions.

MachineBuilding.net ■**K3**

Suite 118, 80 Churchill Square, Kings Hill, West
Malling, Kent, ME19 4YU, UK

Tel: +44 (0)1732 926117

Email: info@theengineeringnetwork.co.uk

Website: www.machinebuilding.net

MachineBuilding.net is unique and has 40,000 articles of reference available for machine builders and systems integrators. A variety of high-performing advertising and promotional programmes are available to suit all budgets and aspirations.

Machinery Safety Compliance Services ■ J22

15 Bentley Court, Paterson Road, Wellingborough, Northamptonshire, NN8 4BQ, UK
 Tel: +44 (0)1933 681255 Email: info@puwer.co.uk
 Website: www.puwer.co.uk

We are different! What we give are practical solutions based on real world applications. Our consultants are engineers we tell you what you need to do to put it right, and more importantly, what you don't need to do. What you need are safe and useable machines, not just a bunch of risk assessments.

**Made Smarter Innovation:
Innovate UK KTN ■ ■ ■****E42**

Suite 218 Business Design Centre, 52 Upper Street, London, N1 0QH, UK
 Tel: +44 (0)3333 403250
 Email: enquiries@ktn-uk.org
 Website: www.madesmarter.uk

We have a mission: to build a digital innovation ecosystem that funds and supports UK innovators and manufacturers. It's our hope that this empowers them to validate, develop and launch their ideas. By partnering with experts along the way, makers and digital solution companies can transform the face of manufacturing.

MaintMaster ■**D52**

MaintMaster Systems Ltd, Plexal, 14 East Bay Lane, Queen Elizabeth Olympic Park, London, E15 2GW, UK
 Tel: +44 (0)7454 915312 Email: tom.reames@maintmaster.com
 Website: www.maintmaster.com

MaintMaster, a cloud-based CMMS, is a Maintenance & Asset Management software configured out of the box to the EN Maintenance Standard and the only CMMS in the UK market that offers IoT automated condition-based maintenance out of the box as a single supplier.

Make UK ■**J24**

Broadway House, Tothill Street, London, SW1H 9NQ, UK
 Tel: +44 (0)808 168 5874
 Email: enquiries@makeuk.org
 Website: www.makeuk.org

We create the next generation of engineers and manufacturing leaders. We do this by being at the forefront of delivering world-class engineering apprenticeships and skills training. Visit stand H15 to get involved with National Manufacturing Day and find out how we can help your business retain and build skills.

Mav Reality ■**M47**

2 Lakeview Stables Lower St. Clere, Kemsing, Sevenoaks, TN15 6NL, UK
 Tel: +44 (0)208 080 1740
 Email: hello@mavreality.co.uk
 Website: www.mavreality.co.uk

Mixed, Augmented and Virtual reality specialists within the smart glasses & virtual headsets industry.

MAVERICK ML ■**L1**

MAVERICK ML, 44 Stacey Road, Cambridge, CB2 9FG, UK
 Tel: +44 (0)7843 966207
 Email: info@maverickml.com
 Website: www.maverickml.com

We are an industrial automation company specialises in developing machine learning solutions for industry. Our consultancy services: AI & Machine Learning / Data-driven Prognostics / Predictive Maintenance. Listed are our products are powered by the MAVERICK AI - technology for predicting failures when data are limited: Predictive Maintenance Platform / Product Defect Detector / AI Agents.

Maxim Computer Services ■**H59**

Unit 7, Key Point, Keys Park Road, Hednesford,
Cannock, Staffordshire, WS12 2FN, UK
Tel: +44 (0)1543 272770
Email: sales@maximcomputer.co.uk
Website: www.maximcomputer.co.uk

Maxim provide data capture, asset tracking and quality-control solutions. As part of Infinity Group, our experienced team specialise in combining best-in-class hardware with bespoke ERP, EDI solutions and integration, offering innovation for the automotive and manufacturing sectors. We will be demonstrating an RFID inventory management system, with hands-free picking application.

MC Global Solutions ■**D40**

Level 17, Dashwood House 69, Old Broad Street,
London, EC2M 1QS
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Email: JOglesby@mcukltd.co.uk
(sales@mcukltd.co.uk)
Website: www.mcgsol.com

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Tel: +44 (0)1253 716900
Email: springsales@melling.com
Website: www.mellingperformancesprings.com

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MiniTec UK ■**J33**

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 Email: gkawulka@nanoprecise.io
 Website: www.nanoprecise.io

Nanoprecise is an automated AI-based predictive maintenance solution provider, that specializes in the delivery of comprehensive, cloud-based solutions for the lifecycle monitoring of equipment, using IoT, AI and Data science applications. Nanoprecise is defining the industry's service standard for the monitoring and analytics of all types of industrial machines.

Neutronic Technologies Ltd ■**A34**

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NL Acoustics ■**C39**

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 Tel: +358 10 583 3240 Email: info@nlacoustics.com
 Website: www.nlacoustics.com

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ONE Creative environments (ONE) ■ H71

ONE Creative environments (ONE), 5 The Triangle, Wildwood Drive, Worcester, Worcestershire, WR5 2QX, UK
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Pathfindr ■ G56

The Glasshouse, Kings Lane, Norwich, Norfolk, NR1 3PS, UK
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Plastometrex ■**H35**

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Rose & Krieger ■**H19**

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 Tel: +44 (0)1296 611660 Email: rk@pmgb.co.uk
 Website: www.phoenix-mecano.co.uk

RK Rose+Krieger manufacture components for automation and machine building such as : aluminium extrusion for frames and guarding, linear technology for positioning control, lifting columns, bespoke workbenches, ITAS platforms, connecting technology for holding and positioning, monitor mounts for HMI's and screens, electric actuators for positional control.

Rotor Clip ■**H17**

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RS Components ■**E44**

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 Email: uk.marketing@rs-components.com
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SafetyCulture, 12 Lever Street, Manchester, Greater Manchester, M1 1LN, UK
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 Email: stuart.sims@safetykleen-int.com
 Website: www.safetykleen.co.uk

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Sensopart UK Ltd ■**G54**

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SGS ■**J46**

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Sightcall UK ■**J69**

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Siveco UK Ltd ■**D74**

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Software Imaging Limited ■ E40

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Stanelco RF Tech ■ L42

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Techsil Ltd ■**K2**

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Tel: +44 (0)1789 773232 Email: sales@techsil.co.uk
Website: www.techsil.co.uk

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Email: enquiries@terryberry.com
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Tel: +44 (0)1844 278875
Email: info@theengineeringnetwork.co.uk
Website: www.theengineeringnetwork.co.uk

The Engineering Network (TEN) is the publisher of leading brands Industrial Technology, MachineBuilding.net and FasteningandBonding.net. Our team of 10 brings more than 200 years of relevant industry experience in the design engineering sector. Our readers are all involved in design engineering, machine building, automation and systems integration.

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29, Progress Business Park, Orders Lane, Preston,
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The Manufacturer / Smart Factory Expo F21

Website: www.themanufacturer.com

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The Safety Knife Company Limited ■ E21

Olympus Park, Quedgeley, Gloucester, Gloucestershire, GL24NF, UK
Tel: +44 (0)1452 887900 Email: sales@safetyknife.net
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The University of Manchester, Oxford Rd, Manchester, M13 9PL, UK
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Tel: +44 (0)1827 305 350
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Think Engineer ■ G71

59-61, Milford Road, Reading, Berkshire, RG1 8LG, UK
Tel: +44 (0)118 959 9255
Email: info@think-engineer.com
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Website: www.toyota-forklifts.co.uk

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 Email: madesmarter@cwgrowthhub.co.uk
 Website: www.madesmarter.uk

Made Smarter is a national movement driving growth amongst UK makers and advancing the UK economy. Backed by world-renowned businesses and government, it improves the development & adoption of emerging technologies. Regionally, Made Smarter is delivered by the West Midlands Growth Hubs, the WMCA and the HVMC (WMG, and MTC).

Wise Robotics ■**F58**

Saxilby Enterprise Park, Skellingthorpe Road,
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Women's Engineering Society ■**P32**

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 Website: www.wes.org.uk

The Women's Engineering Society is a membership organisation, established 1919. Our mission is to support women in engineering to fulfil their potential and support the engineering industry to be inclusive. Founders of International Women in Engineering Day (INWED), held annually on 23 June to raise the profile of women in engineering.

Würth Electronics UK ■**M34**

8 The Vic, MediaCityUk, Manchester, M503SP, UK
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 Email: sales-uk@we-online.com
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CyberMIND ■**J46**

Science Centre, University of Wolverhampton
 Science Park, Wolverhampton, WV10 9RU, UK
 Tel: +44 (0) 7973 205348 Email: cybermindtechnology@gmail.com
 Website: www.cybermindtech.com

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3Di D23

Acoem A41

Boccard UK B28

BenLink

CC Jensen Ltd C70

Connection Technology Center Inc D28

CRC Industries UK Limited D26

Fixturlaser UK C26

I-Care D44

IEB Software A57

Scintam Engineering Ltd E74

Sigga Technologies B51

Siveco UK Ltd D74

The University of Manchester A63

Visual UK Ltd A65

TPI Europe B40

Power Transmission

Megger Limited E45

Predictive / Preventive Maintenance

Abb Oy

Applied Maintenance Technology F73

BenLink UK Limited D36

Boccard UK B28

Connection Technology Center Inc D28

Crimson Industrial Vision B39

Direct Air & Pipework Ltd C34

Distence Oy B35

Elecosoft UK Ltd C60

Fixturlaser UK C26

Fluke Reliability D62

Good to go Safety D64

Hansford Sensors Limited E51

I-Care D44

IRISS Inc E37

KDP Electronic Systems Ltd B27

MaintMaster D52

Megger Limited E45

Nanoprecise Sci Corp A53

NL Acoustics	C39
SciMed	D39
Scintam Engineering Ltd	E74
Senseye Ltd	E39
Sigga Technologies	B51
SSG Insight (EMEA) Ltd	A47
TPI Europe	B40
U E Systems Europe B.V	B34
Volta Compliance	C27
Wisersense Information Technologies Ltd	A55

Production Equipment

3Di	D23
Gruetzner GmbH	B22
Scintam Engineering Ltd	E74
Lighthouse(UK) Ltd	D22

Pumps / Pump Repair

BCAS	C22
Fluke Reliability	D62

Sensors

Boccard UK	B28
Connection Technology Center Inc	D28
Crimson Industrial Vision	B39
Hansford Sensors Limited	E51
KDP Electronic Systems Ltd	B27
Wisersense Information Technologies Ltd	A55

Servicing

Abb Oy	
BenLink UK Limited	D36
MC Global Solutions	D40
Service Geeni Limited	B24
Toyota Material Handling (UK) Limited	B60

Soft ware

53 North Group	B33
Clockwork IT Ltd	B29
Forest Nation	A28
Good to go Safety	D64
IEB Software	A57
MC Global Solutions	D40
Nanoprecise Sci Corp	
Service Geeni Limited	B24
SPM Instrument UK Ltd	C40
SSG Insight (EMEA) Ltd	A47

Test & Measurement

KDP Electronic Systems Ltd	B27
Megger Limited	E45
SciMed	D39
SPM Instrument UK Ltd	C40
TPI Europe	B40

Thermal Imaging

Crimson Industrial Vision	B39
Hikvision	B82

Thermographic Services / Equipment

Crimson Industrial Vision	B39
Hikvision	B82
IRISS Inc	E37
Lighthouse(UK) Ltd	D22

Tightening & Tensioning Equipment

Scintam Engineering Ltd	E74
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Tools & Workshop Equipment

CRC Industries UK Limited	D26
Gruetzner GmbH	B22
Lighthouse(UK) Ltd	D22
Scintam Engineering Ltd	E74

Training

PPL Training	B41
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Ultrasonic Detectors

IRISS Inc	E37
NL Acoustics	C39
U E Systems Europe B.V	B34

Vibration Analysis

Acoem	A41
Applied Maintenance Technology	F73
Distence Oy	B35
Fluke Reliability	D62
Hansford Sensors Limited	E51
I-Care	D44
Lighthouse(UK) Ltd	D22
TPI Europe	B40
Wisersense Information Technologies Ltd	A55

Other

BCAS	C22
BSIF	A61
CAD-IT	D23
Clockwork IT Ltd	B29
Hikvision	B82
Hunter Selection	B64
Safety-Kleen UK Limited	B26
The Safety Knife Company Limited	E21
Visual UK Ltd	A65
PPL Training	B41

MANUFACTURING EXPO

Additive manufacturing

Altimex	E30
Bowman International	G26
Institution of Mechanical Engineers	L46
Laser Lines	H64
Melling Performance Springs	G21
MHA	
Plastometrex	H35
West Midlands Made Smarter	E43

Artificial intelligence (AI)

CyberMIND Technology	
Exalens	G63
Festo	E28
Kognitiv Spark	H63
Librestream Technologies	J58
Made Smarter Innovation: Innovate UK KTN	E42
Premier Farnell	E28
sedApta Ltd	G45
Sightcall UK	J69
Software Imaging Limited	E40
UKG	H58
Wavenet	E41

Cyber security

Assured Cyber Protection	J46
Barrier Networks	K54
Claroty UK Ltd	K54
CounterCraft	J46
CRISCAST	L48
CyberMIND Technology	
Dragos Security Ltd	J61
Exalens	G63
Ixon BV	F40
Kognitiv Spark	H63

Nozomi Networks	H66
Ripley Solutions	G36
Wavenet	E41

Data management

Assured Cyber Protection	J46
DCO	E34
Iter Digital	G66
Ixon BV	F40
Mendix	G34
Orderwise	F58
SafetyCulture (UK) Ltd	J62
sedApta Ltd	G45
UKG	H58

Digital manufacturing

ATS Applied Tech Systems	E75
Bowman International	G26
Geneo Software	L54
ifm Electronic	E38
IFS	G90
Institution of Mechanical Engineers	L46
Iter Digital	G66
Made Smarter Innovation: Innovate UK KTN	E42
MAV Reality	M47
Mendix	G34
Mestec	H65
MHA	
Move Marketing	H27
Omega	E28
Plastometrex	H35
Premier Farnell	E28
Ripley Solutions	G36
SafetyCulture (UK) Ltd	J62
SmartMore	M14
University of Nottingham	J54
West Midlands Made Smarter	E43

Energy & recycling

ClearVUE	J67
DER-Driving The Electrical Revolution	
Industrialisation Centres	H70
Festo	E28
Inspired PLC	
Pillar UK Ltd	G59
Powerstar	F31
SGS	J46
Stanelco RF Tech	L42
Thomas Wright-Thorite Group	H15

Enterprise resource planning (ERP)

IFS	G90
Maxim Computer Services	H59
Orderwise	F58
Ripley Solutions	G36
Software Imaging Limited	E40

Finance and business support services

Merceric	K55
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Health & safety

CBM	H60
ISS Global	G72
Librestream Technologies	J58
Pathfindr	G56
Plastometrex	H35
RS Components	E44
SafetyCulture (UK) Ltd	J62
Tawi UK Ltd	J52
West Midlands Made Smarter	E43

HR support and services

Assured Cyber Protection	J46
CBM	H60
Merceric	K55
Terryberry UK and Europe	J70
UKG	H58

Industry 4.0 and digital transformation

Assured Cyber Protection	J46
ATS Applied Tech Systems	E75
Barrier Networks	K54
Claroty UK Ltd	K54
Cloud Printing Solutions	G28
DCO	E34
Dragos Security Ltd	J61
Exalens	G63
Festo	E28
Geneo Software	L54
ifm Electronic	E38
IFS	G90
Institution of Mechanical Engineers	L46
Ixon BV	F40
Kognitiv Spark	H63
Librestream Technologies	J58
Made Smarter Innovation: Innovate UK KTN	E42
MAV Reality	M47
Mendix	G34

Mestec	H65
Move Marketing	H27
Nozomi Networks	H66
Omega	E28
Pathfindr	G56
Plastometrex	H35
Powerstar	F31
Premier Farnell	E28
Ripley Solutions	G36
RS Components	E44
sedApta Ltd	G45
Sensopart UK Ltd	G54
SGS	J46
Sightcall UK	J69
Smartia	E73
SmartMore	M14
Software Imaging Limited	E40
University of Nottingham	J54
Wavenet	E41
West Midlands Made Smarter	E43

Lean manufacturing

Altimex	E30
Bowman International	G26
FATH Components	H33
Henkan	G40
Geneo Software	L54
Institution of Mechanical Engineers	L46
Iter Digital	G66
Omega	E28
Pathfindr	G56
Premier Farnell	E28
SmartMore	M14
Southwest Fabrications	

Logistics

Kelvin Engineering	J51
ONE Creative environments (ONE)	H71
Pathfindr	G56
Sensopart UK Ltd	G54

Machinery and plant equipment

BLH Nobel VPG Systems UK Ltd	J63
Cloud Printing Solutions	G28
DCO	E34
Element Logic	H52
FATH Components	H33
Heights Ltd	G58
ISS Global	G72
Ixon BV	F40

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Kelvin Engineering	J51
LKE UK	G39
Maxim Computer Services	H59
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Piller UK Ltd	G59
RS Components	E44
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Stanelco RF Tech	L42
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Thomas Wright-Thorite Group	H15
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Manufacturing business support services

ATS Applied Tech Systems	E75
CBM	H60
ClearVUE	J67
Composites UK	F72
CyberMIND Technology	
DER-Driving The Electrical Revolution	
Industrialisation Centres	H70
Henkan	G40
ISS Global	G72
MAV Reality	M47
Melling Performance Springs	G21
Merceric	K55
Move Marketing	H27
ONE Creative environments (ONE)	H71
Orderwise	F58
Piller UK Ltd	G59
SGS	J46
Southwest Fabrications	
University of Nottingham	J54
WMS UK	G70

Manufacturing consultancy

ATS Applied Tech Systems	E75
Bowman International	G26
CBM	H60
DER-Driving The Electrical Revolution	
Industrialisation Centres	H70
Geneo Software	L54
Global Precision Ltd	K52
Henkan	G40
Iter Digital	G66
Klere Ltd	F33
Melling Performance Springs	G21
MHA	
Move Marketing	H27
Stanelco RF Tech	L42
University of Nottingham	J54

Materials, handling and factory operations

BLH Nobel VPG Systems UK Ltd	J63
CBM	H60
Cloud Printing Solutions	G28
Element Logic	H52
FATH Components	H33
Kelvin Engineering	J51
Librestream Technologies	J58
Maxim Computer Services	H59
Mestec	H65
Plastometrex	H35
RS Components	E44
Tawi UK Ltd	J52
West Midlands Made Smarter	E43

Other

Element Logic	H52
Heights Ltd	G58
ISS Global	G72
ONE Creative environments (ONE)	H71
St Davids Assemblies	H25
Terryberry UK and Europe	J70
WMS UK	G70

Overseas trade and exports

MHA	
Move Marketing	H27
SGS	J46

Production engineering solutions

ADM Pressing	J68
Altimex	E30
BLH Nobel VPG Systems UK Ltd	J63
Bowman International	G26
ClearVUE	J67
Global Precision Ltd	K52
Institution of Mechanical Engineers	L46
Kelvin Engineering	J51
Laser Lines	H64
Omega	E28
Piller UK Ltd	G59
RS Components	E44
sedApta Ltd	G45
Southwest Fabrications	E64
Stanelco RF Tech	L42
Tawi UK Ltd	J52
Thomas Wright-Thorite Group	H15

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- R&D
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	8th June	9th June
10-11		Tax How to offset the Tax burden amidst changes in legislation : 10-10.50
11-12	International Trade How to comply with recent VAT and Customs changes : 11-11.50	International Trade How to comply with recent VAT and Customs changes : 11-11.50
12-1	Tax How to offset the Tax burden amidst changes in legislation : 12-12.50	
1-2	R&D Tax Relief How to structure various R&D Reliefs and future-proof claims against changes on the horizon : 1- 1.50	R&D Tax Relief How to structure various R&D Reliefs and future-proof claims against changes on the horizon: 1- 1.50
2-3	Mergers & Acquisitions How to take advantage of the current UK M&A boom : 2 – 2.50	Mergers & Acquisitions How to take advantage of the current UK M&A boom : 2 – 2.50

Robotics & automation

ATS Applied Tech Systems	E75
BLH Nobel VPG Systems UK Ltd	J63
Element Logic	H52
FATH Components	H33
Festo	E28
ifm Electronic	E38
Made Smarter Innovation: Innovate UK KTN	E42
Mendix	G34
Piller UK Ltd	G59
Premier Farnell	E28
Sensopart UK Ltd	G54
SmartMore	M14
Software Imaging Limited	E40
Stanelco RF Tech	L42
Thomas Wright-Thorite Group	H15
Wavenet	E41

Software and IT

Assured Cyber Protection	J46
Barrier Networks	K54
Claroty UK Ltd	K54
Cloud Printing Solutions	G28
CyberMIND Technology	
Dragos Security Ltd	J61
Geneo Software	L54
IFS	G90
Ixon BV	F40
Kognitiv Spark	H63
Maxim Computer Services	H59
Mendix	G34
Mestec	H65
Nozomi Networks	H66
Onesys	H62
Orderwise	F58
Ripley Solutions	G36
SafetyCulture (UK) Ltd	J62
sedApta Ltd	G45
Sightcall UK	J69
Software Imaging Limited	E40
Terryberry UK and Europe	J70
UKG	H58
Wavenet	E41

Sustainability

ClearVUE	J67
DER-Driving The Electrical Revolution Industrialisation Centres	H70
IFS	G90
Inspired PLC	

ISS Global	G72
Klere Ltd	F33
Made Smarter Innovation: Innovate UK KTN	E42
ONE Creative environments (ONE)	H71
Pathfinder	G56
Powerstar	F31
SGS	J46
Sightcall UK	J69

Training

CRISCAST	L48
CyberMIND Technology	
Festo	E28
Henkan	G40
MAV Reality	M47
Merceric	K55
SafetyCulture (UK) Ltd	J62
Thomas Wright-Thorite Group	H15

Virtual & augmented reality

CRISCAST	L48
Kognitiv Spark	H63
Librestream Technologies	J58
MAV Reality	M47
Sightcall UK	J69

Warehousing

Element Logic	H52
FATH Components	H33
Kelvin Engineering	J51
Maxim Computer Services	H59
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ONE Creative environments (ONE)	H71
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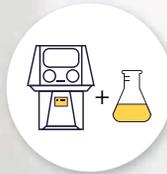
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