



A&M EDM Ltd

20 Year Impact Report:

The Economic Impact of
a leading West Midlands
Manufacturing SME

2002 - 2022



Innovation



Growth



Expansion



pure precision

Produced by:

Black Country Consortium



Economic Intelligence Unit

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Executive Summary

A&M EDM is a leading Black Country and West Midlands manufacturing SME, driving considerable economic growth in the last 20 years via:



Delivering an estimated **£5 million Gross Value Added (GVA)** in the latest year and up to **£50 million over time**



Generating yearly sales of **£7 million, a growth of 1300% in two decades**



Employing 176 people over 20 years - including **75 local people currently - developing many into skilled engineers**



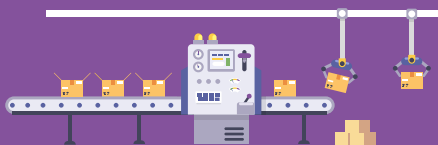
Developing the potential of young local people through a **dedicated apprenticeship programme, 13 in total and 4 currently training**



Supporting the local supply chain by selling products to almost **400 West Midlands customers and spending £5.4m with regional suppliers since 2011**



Achieving **8% annual average growth rate in jobs over the last 10 years**, a positive contrast to manufacturing's national trajectory



Expanding operations to drive growth, in particular **purchasing and equipping a second factory in 2014** – with public funding support



Continually investing in **innovation and R&D**, including **£10m spent on capital expenditure and £4m via R&D tax credits since 2010**

Introduction and Context

Background

This report presents the findings of an independent economic impact assessment of A&M EDM Limited by Black Country Consortium's Economic Intelligence Unit (BC EIU). BC EIU provides rigorous, best in class, economic analysis and offers a comprehensive understanding of the socio-economic challenges and opportunities in the Black Country and the wider region.

On the company's 20th anniversary of operation, the report assesses A&M EDM's local and regional economic / business impact, as well as the manufacturer's impact on people, communities, health, and sustainability.

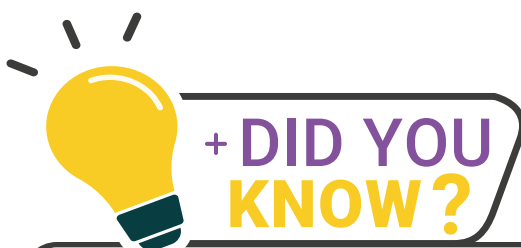
The findings of the assessment provide an opportunity to celebrate 20 years of A&M EDM, highlighting the growth and successes of the company and reflecting on the impact and journey of a West Midlands manufacturing SME. While A&M EDM is unique, some of its features and success are typical of other West Midlands manufacturing SMEs, many of which are clustered in key industry supply chains, acting as important anchor organisations in local places.



Business Secretary, Greg Clark visiting in 2018



A&M's apprentices soon become productive



A&M works to tolerances of 5-10 microns in metrology inspection. A human hair is 75 microns, reflecting the precision required.



UAV rotary engines designed and manufactured by A&M

Introduction to A&M EDM

A&M EDM is a manufacturing SME based in Smethwick in the West Midlands. Established in 2002 by Arthur Watts and Mark Wingfield (hence the name A&M), the company specialises in engineering solutions to manufacture high value components and tooling for many sectors including aerospace, motorsports, automotive, marine and space. In 60,000 square foot of manufacturing space, A&M engineers complex precision components in varied materials from thermoplastics to aluminium, stainless steel, and exotic materials such as Inconel and titanium.

The company's standout engineering capabilities include:

- **Electrical Discharge Machining (EDM)**, including spark, wire erosion and EDM drilling.
- **Precision CNC Machining**, including milling, turning, grinding and laser welding, all complemented by metrology quality inspection.
- **Toolmaking**, both via CNC's and traditional toolmaking equipment.
- **Design for manufacture service to reduce time and cost.**

The delivery of such a wide range of precision engineering services ensures A&M is a trusted partner across industries, both direct to Original Equipment Manufacturers (OEMs) and within wider supply chains – supporting local, national, and international markets.



**+ DID YOU
KNOW?**

in 20 years, A&M has used **750,000 miles** of EDM brass wire. The equivalent of three journeys to the moon.

- A&M manufactures complex components and prototypes for aerospace OEMs, including in a range of materials such as super alloys (e.g., Inconel).
- A&M manufactures multiple components for the automotive and motorsport sectors, including oil pumps, unique exhaust systems, other rapid manufacture (including in Formula 1) and reverse engineering of broken parts.
- A&M has manufactured a wide range of precision components to function at depths of up to 3,000 metres (marine and nuclear sectors) as well as components for space missions and hypersonic travel.

A&M EDM's story is one of growth, powered by entrepreneurship, innovation, and skills development. In 20 years, the company has increased from two people and one rented machine, to over 70 employees and annual sales of £7m, using over 80 machines.

A&M has achieved growth through ambition, resilience and seizing opportunities, which may be expected from an SME, however A&M is unique in other ways. This is reflected by its constant innovation and appetite for further growth, complemented by strong engagement with other local stakeholders like trade bodies and public sector organisations.

A&M EDM's people-centric approach has also ensured the skills development of many local people, and a strong culture that results in loyalty to the company. This is one way that A&M has demonstrated characteristics of being of an "anchor organisation" in the local area, but with wider impact across the UK.



A+5 engine machined in aluminium



A&M has manufactured parts that work on the bottom of the ocean and in the outer reaches of space.

Company Background

The company has fought a multitude of challenges in the past 20 years, achieving great success and growth even within an often uncertain and challenging backdrop. This is a familiar story for many West Midlands manufacturing SMEs: being resilient and agile to challenges and grasping opportunities to grow, despite the threat of external issues. Firms like A&M are critical businesses in our everyday lives, at the heart of supply chains; and as future markets change, businesses like A&M will need to continue evolving while being supported in the best way possible by local and national government and other organisations like trade bodies such as Make UK, which A&M actively engages with.

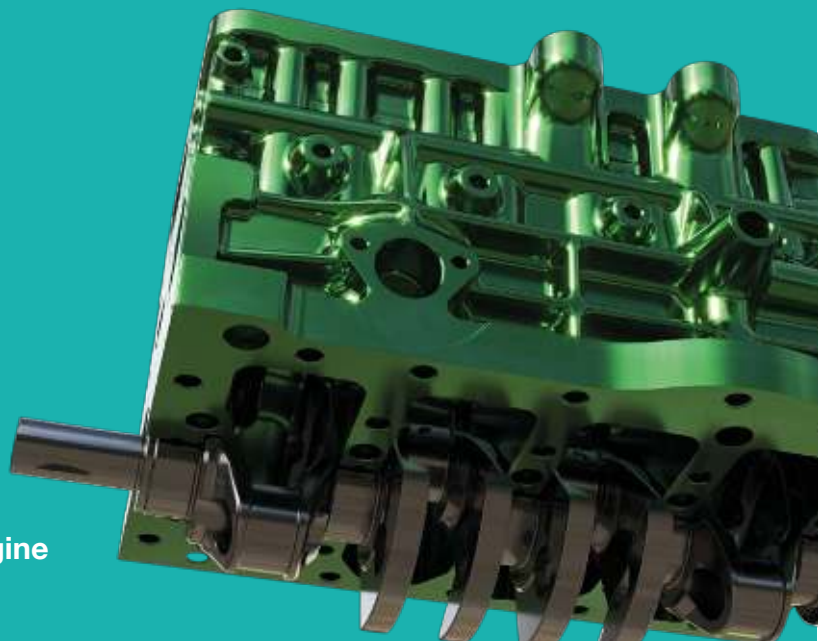
The journey will not stop here for A&M, as the company strives for further growth and success into the future – continuing to make a positive impact on the local economy and communities as it grows.

A message from the Managing Director

In 2002 my ambition was to become sustainable sub-contractors offering EDM (electronic discharge machining) manufacturing. The reduction of the Midlands toolmaking and automotive industries created opportunities to grow the business into other sectors such as aerospace. The advice I'd give to anyone starting today is to add value to every customer and continuously reinvest in equipment and employee training.



Mark Wingfield
Managing Director



CAD of A+5 engine

A&M EDM Development



2002

A&M set up by Mark Wingfield and Arthur Watts

2005

AS9100 and NADCAP aerospace certification

2008

A milk lorry from the dairy opposite crashes into our building



2014

Purchase of second factory in Middlemore Road

2010

SC21 award for aerospace supply excellence



2015

Investment in CNC's and metrology inspection



2016

Winners Make UK Midlands Business Growth Award and apprentice finalists



2017

Growing Priority Sectors grant towards new wire eroders



2019

The Manufacturer Top 100 role models



2022

Continuing investment – new high speed CNC centre, first in the UK

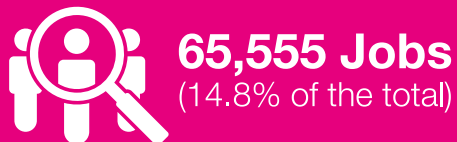


2021

Thrive at Work award for workplace wellbeing

The Broader Economic Context in which A&M EDM Operates

Manufacturing remains a key industry in the Black Country and wider West Midlands, particularly the areas closest to A&M EDM – Sandwell and Birmingham. The sector is significant in both direct and indirect interactions across the region and a strong provider of well-paid employment. Manufacturing as a sector in the Black Country contributes:



However, life as a West Midlands manufacturing SME has been far from easy in the last few decades. Long-term manufacturing activity in the UK has declined, with lower costs available abroad and less investment in the industry at home. The last 20 years has seen a major economic recession and, more recently; a deadly pandemic, the UK's departure from the EU, and Russia's invasion of Ukraine. Given the West Midlands' manufacturing strength, the negative effects of these shocks have been disproportionately high in the region, damaging the prospects of manufacturers and the communities they support.

SMEs, including A&M, are particularly vulnerable to these shocks given they are generally less protected than large companies and have more limited capacity, though they can benefit from greater flexibility and dynamism. They do however face huge challenges related to the cost of energy and materials, while structural problems with skills challenges are now exacerbated by a tighter labour market. The firm also operates in an area with high levels of deprivation, lower skills and employment levels, and a less dynamic, productive and innovative business base / economy than regional and national averages. This context makes success in the industry even more credible; in this sense A&M should be viewed as an exemplar for other SMEs that strong growth is possible.

Moreover, further opportunities exist in the broad manufacturing sector, including specific sub-sectors that A&M EDM operate in. For example:



Next Generation Transport, such as electric battery manufacturing and associated supply chains, sustainable aviation fuels, light and very light rail, and cross-sector applications of new propulsion systems such as hydrogen.



Advanced Metals and Materials, such as circular economy approaches like metal reprocessing and industrial symbiosis, advanced ceramics and composites and polymers for cross-sector application.



Low Carbon Goods, such as the production of control systems for deployment across wind, solar and smart grids, and wider production and roll-out of these renewable energy sources.

Given its industrial concentration, the future of manufacturing represents an integral challenge and opportunity for the West Midlands, particularly to drive industrial decarbonisation, net zero and further modernisation of the economy. Manufacturing SMEs like A&M will continue to be at the heart of this drive and transition, as critical producers, innovators and providers of value across the economy and society.

Contrary to some beliefs and reporting, modern manufacturing takes place in a clean, safe and innovative working environment using cutting-edge technology. More companies continuing the characteristics demonstrated by A&M – entrepreneurship, innovation, and resilience to name just a few – will stand the sector in good stead.



One of the UK's largest EDM spark and wire erosion capabilities

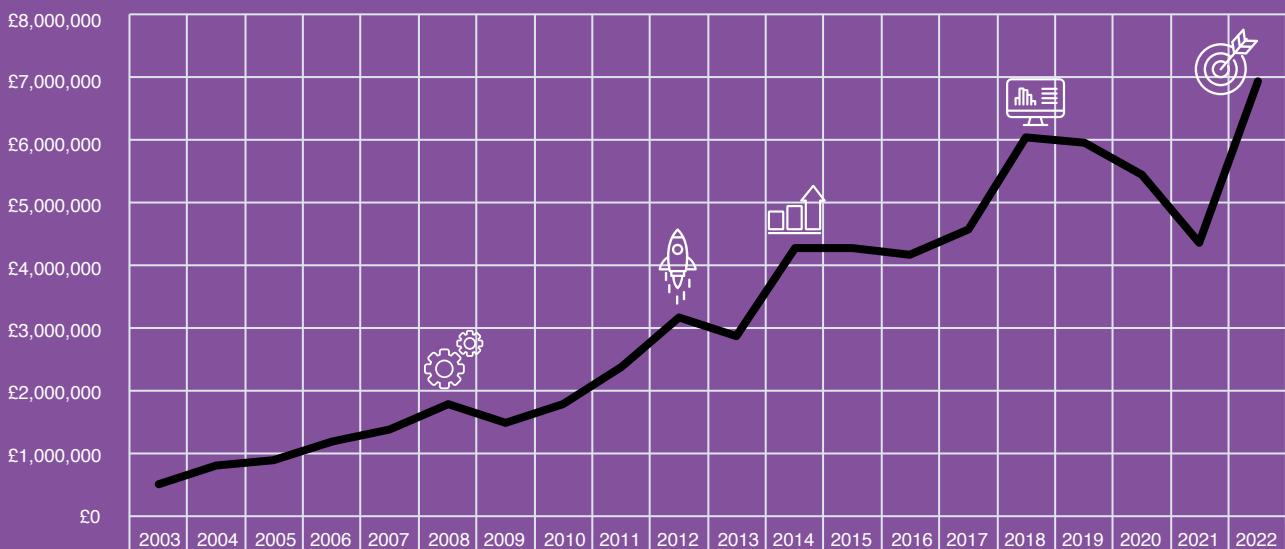
A&M EDM's Economic Impact

In the latest year, it's estimated that A&M EDM has contributed around **£5 million direct Gross Value Added (GVA) to the local and national economy**. Over time, the company has delivered upwards of **£50 million in direct GVA**, reflective of its sales growth, R&D investment and commitment to a skilled local workforce. Key components of this impact over time are presented below.

Turnover - Exponential Growth

- Total sales achieved at A&M in the last 20 years is almost **£64 million, growing from a turnover of £500,000 in year-end 2003 to £7 million in year-end 2022**.
- Overall, this represents growth of 1300% in two decades, while growth since 2012 has remained high at **118.8%**, reflecting an **annual average growth rate of 8% in the last 10 years**.
- Dips in growth have been experienced on the way, not least during the economic recession and then the Covid-19 pandemic. **But the recovery, particularly to Covid, stands out and is reflective of the resilience and dynamism of A&M as a company**.

A&M EDM Annual Sales:



- A&M has sold products to almost **400 West Midlands based customers** during this time. Since 2011, **29% of sales were to companies based in the local economy, totalling £16m.**
- The map on the following page highlights that almost **one-third of the value of A&M's customer base is located in the West Midlands Combined Authority area (Birmingham, the Black Country, Coventry, and Solihull).**
- A&M EDM is clearly **rooted in West Midlands supply chains**, providing products to key regional customers (including OEMs); and yet the **national and global customer base have been important growing markets for many years – reflecting interconnected global supply chains.**
- Customers are from a variety of sectors reflecting A&M's **varied product range.**



+ DID YOU KNOW?

Components manufactured by A&M are used in products across the world.



A&M EDM: Regional Customers



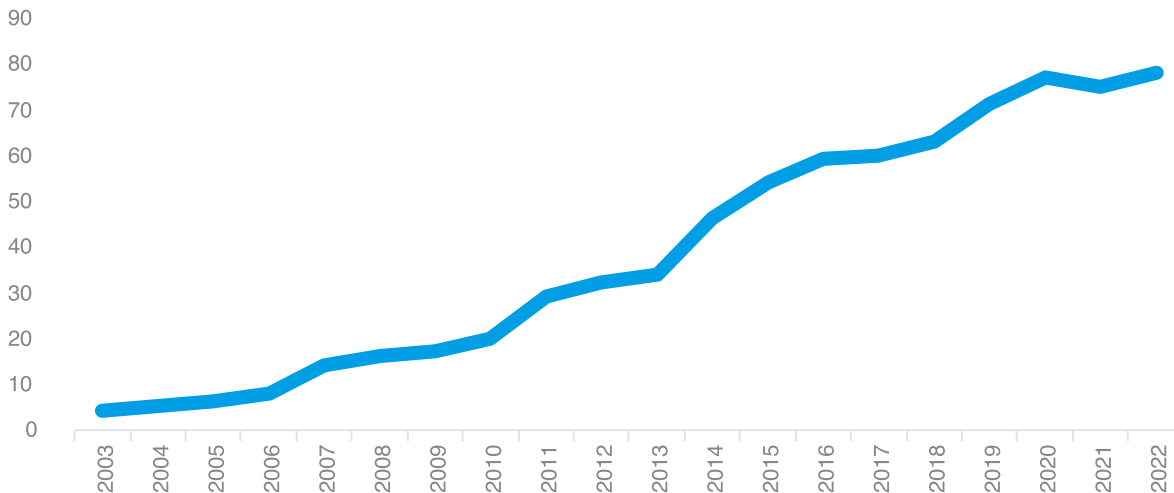
Regional Customers by Spend (£)

- 2,230,000 to 4,820,000
- 280,000 to 2,230,000
- 70,000 to 280,000
- 10,000 to 70,000
- 1 to 10,000

Workforce

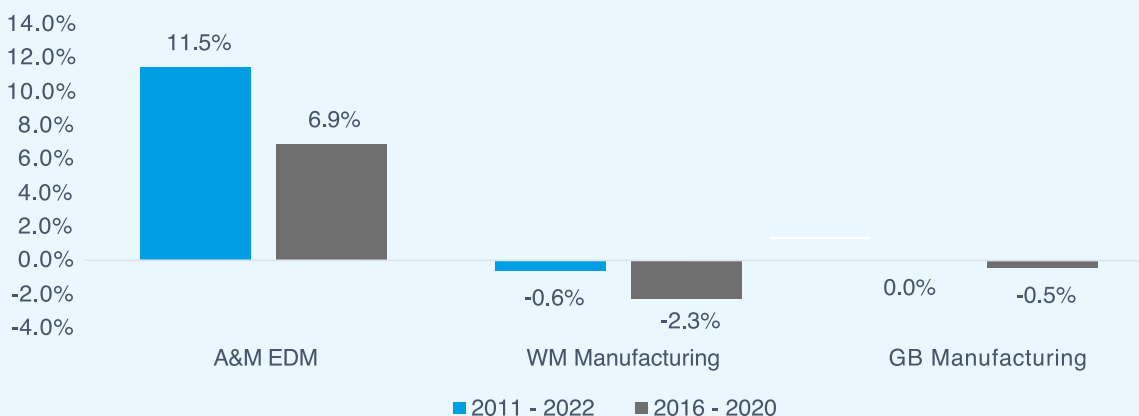
Upskilling and Developing Local People

A&M EDM Number of Employees



- The **workforce at A&M EDM has grown substantially in the last two decades, from 4 employees in 2003 to 76 now**. 176 people overall have been employed by the company since its incorporation.
- The growth of employees between 2003 and 2022 represents an **1800% increase overall**, while there has been **138% growth since 2012**.
- **A&M EDM report an 8% annual average growth rate in jobs over the last 10 years, above the regional and national averages** which have stagnated compared to A&M's expansion.
- A&M's growth has been in contrast to stagnation regionally and nationally: for example, between 2011 and 2020, A&M's workforce grew by an average **annual growth rate of 11.5%**, compared to -0.6% in the West Midlands and -0.04% nationally.

Jobs Annual Average Growth (%):



A&M EDM: Local Employees

A&M EDM's workforce is drawn from the local economy with employees living across the Black Country and parts of Birmingham, as illustrated in the below map.

61% of employees live within 5 miles



● A&M EDM Ltd Employee Residence

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- Helping secure the future of the company and its skillsets, **almost half of A&M's workforce are aged 45 or under, with 20 employees under the age of 35 (30%).**
- Importantly, diversity of age is reflected in more experienced workers able to pass down their skillsets, which will reduce the impact of the generational skills gap in manufacturing (too few middle-aged workers). In this sense, **A&M EDM is preparing a workforce for the future.**

Case Study

Apprenticeship Development

A&M EDM is committed to employee growth and training the next generation of engineers. Demonstrating the ability for manufacturing SMEs to invest in attracting, training and retaining young people, the company currently has **4 apprentices, with 9 other staff that have advanced from apprentice level.**

This reflects that upskilling the workforce is a key ethos of the company, characterised further by A&M's commitment to forging relationships with local colleges and the new **Black Country Institute of Technology, including participation in the members of its Employers Group** - advising on course development from an SME perspective.

Working with **Dudley College as their major apprentice training provider, A&M has delivered an Advanced Engineering Apprenticeship since 2014,** focusing on both the technical aspects of the job but importantly soft skills too. Apprentices continue to be an integral part of the A&M team and future planning of the company, retaining these skilled workers through their careers.



Apprentices in 2017

Employee Wellbeing:

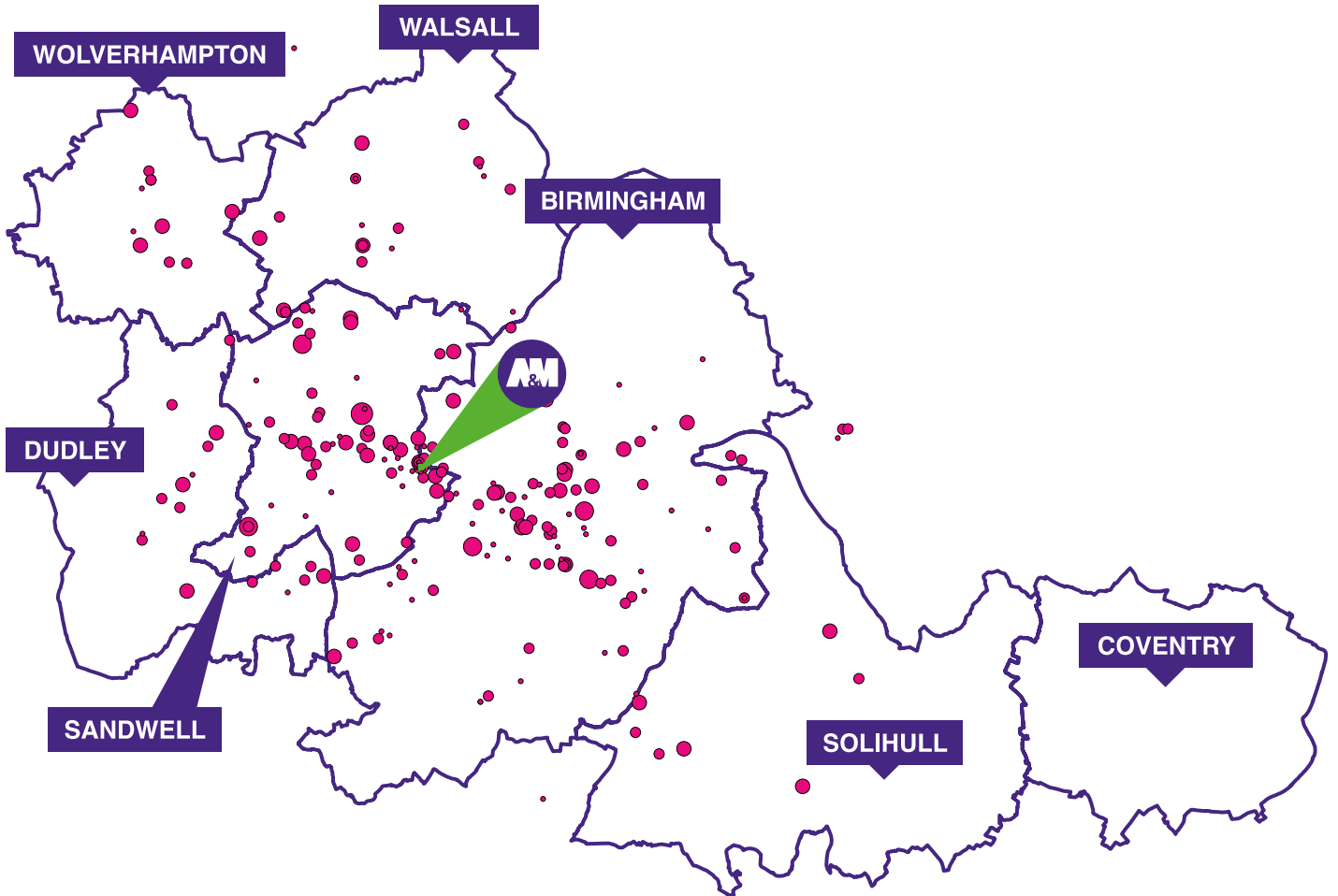
- A&M EDM is committed to the development of its workforce wellbeing, becoming one of the first manufacturing SMEs to receive the **Thrive at Work bronze award for workplace wellbeing in 2021**. The West Midlands Combined Authority developed the Thrive at Work programme to encourage employers to take an active role in supporting their employee health and wellbeing.
- The programme became the catalyst for A&M developing a healthier, more productive workforce. Policies were documented including return to work interviews after absences, and a Staff Forum and successful Cycle to Work scheme introduced. Employees felt valued as individuals, with one becoming a Mental Health champion and sharing his own experiences with mental health challenges.

Supplier Base: Local Supply Chain Growth

- **Over 900 companies have supplied goods and services to A&M EDM in the last 20 years.** This has equaled a spend by the company of **£27.3m since 2011, including £5.4 million spent with over 230 suppliers in the local West Midlands Combined Authority economy.**
- **One-fifth (20%) of the total A&M spend was with local suppliers.** The company is committed to retaining investment and value in the local economy where possible, but also functions as **part of globalised supply and value chains.**
- Local expenditure has been used to purchase **enabling services such as insurance, infrastructure and construction, as well as key inputs such as raw materials (e.g. steel) and machinery.**

A&M EDM

Local Supply Chain Spend



Regional Suppliers by Spend (£)

- 750,000 to 784,000
- 250,000 to 750,000
- 10,000 to 250,000
- 1 to 10,000
- N/A

Investment and Partnerships: Driving Innovation and Growth

- Committed to continued **innovation, diversification and growth**, A&M EDM has continuously shown its credentials through targeted investment and the leveraging of relevant support and collaborations, including with **Catapult centres Warwick Manufacturing Group (WMG) and the Advanced Manufacturing Research Centre (AMRC)**.
- The company is an active innovator, **engaging with R&D tax credits and other sources of investment to support its development of new products** – for example next generation propulsion systems (such as electric motors), multi-fuel **generators and automated systems like unmanned aerial vehicles (UAVs)**.
- This reflects a successful blend of meeting current demand while **also diversifying and innovating for new and, importantly, future markets** – of which there are many opportunities for further growth. **A&M EDM demonstrate that West Midlands manufacturing SMEs can successfully undertake R&D and innovate**, as well as maintaining growth and existing orders.
- Among other sources of funding, the company has made **£4m of investments since 2010 through R&D tax credits**, while receiving **over £600,000 in grants since 2015** for activity such as investment in machinery, innovation projects and digital marketing.
- A critical juncture was in 2013 / 2014 when A&M purchased a second factory close to their existing site. **Investment in the factory and new machinery was supported by £250,000 funding from the Regional Growth Fund via the Black Country Local Enterprise Partnership**, providing A&M with a key stepping stone for further growth. This is an example of A&M leveraging private and public investment and support **resources** to bolster growth.
- After starting with one hired machine, the company has **spent over £10m on capital expenditure, including its now 80 CNC / EDM machines**.
- This evidence also reflects **A&M's open and proactive approach to external support** from local and national government, innovation support and industry trade bodies.

Aerospace UP

In 2021, A&M were awarded a £103,000 Aerospace UP unlocking potential grant by the Midlands Aerospace Alliance towards investment in a £250,000 project developing their own design prototype rotary engine system with a high power to weight ratio and bespoke cooling technology. Building on their previous experience manufacturing small UAV rotary engines; A&M designed, manufactured, assembled, tested and inspected hundreds of components for this bespoke larger engine.

Andrew Mair, CEO Midlands Aerospace Alliance visited and said the following:

I enjoyed my visit to A&M; it is very encouraging to see a supplier consistently investing in new equipment to deliver manufacturing innovation. I look forward to the completion of their exciting Aerospace UP project.



Andrew Mair, MAA with Mark Wingfield and UAV rotary engines



**“A&M is a
example of
the world-class
engineering in
our region”**

Andy Street,
Mayor of the
West Midlands



**“A&M is a
fantastic example
of an SME committed
to continuous investment
and working
in partnership”**

Charlotte Horobin
Make UK Region Director
Midlands and East

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