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Experts in Safety

Personal Protective Equipment and the Government's Response to the Covid-19 Pandemic

The Arco experience and 10 recommendations for future UK PPE supply strategy

Foreword from the chairman of Arco

As the UK's leading provider of PPE, our experience, expertise and logistics capabilities meant we were able to step up immediately to help with the national effort to control the Covid-19 pandemic.



Our Board committed to continue to work with, and support, the Government just as we had done with previous national and international crises of SARS, Swine Flu and Ebola. Our expert knowledge of the global PPE supply chain was offered, and with our established logistical capabilities, we were best positioned to provide a robust PPE supply for this pandemic, just as we had in the past.

The outbreak and rapid spread of the novel coronavirus in early 2020, when understanding about its transmissibility and mortality was limited, presented Governments around the world with a challenge that was unprecedented in scope.

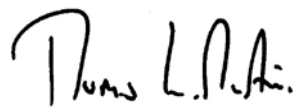
Sourcing, allocation and fulfilment of PPE at a time of severe global shortages and exceptional demand represent a significant challenge for any Government. During the peak of the crisis there were too many reports of hospital and care workers left with insufficient masks, gloves and gowns – and often without any equipment at all. At the same time, suppliers holding stocks were unable to get an indication from the Government of where their PPE was most needed, and then non-compliant stock had to be identified, isolated and replaced: often by ourselves as our expertise was accessed too late. In the end, we dealt directly with over 290 NHS Trusts to supply urgently needed PPE and other protective equipment, as the central supply chains were oversubscribed with products not suitable for the job.

The National Audit Office report on the Investigation into Government Procurement during the Covid-19 Pandemic has uncovered situations where contracts for the provision of PPE were awarded to organisations with no history of PPE manufacture or supply, who were ultimately unable to fulfil orders, and who supplied non-compliant products that increased, rather than mitigated, the risk to wearers. There were serious flaws in how public bodies sourced protective equipment, and difficulties in coordinating the strategic distribution of PPE at the national level. Much tax-payers money was wasted, and we expect further examples to surface as the enquiries continue.

The Government has recently published its updated PPE Strategy setting out their plan for the distribution and supply of protective equipment in the future. Arco welcomes its publication, and the work being done to learn lessons from the crisis. It is only by understanding what went wrong, that preparations can be made for the future.

Our experience, expertise and capabilities, together with our recent response to the pandemic give us the right and the responsibility to comment. This position paper is our contribution to the debate. It outlines our experience as a crucial part of the supply chain during the pandemic and sets out our recommendations on what needs to happen to prevent a repeat of the PPE crisis in the months ahead and to strengthen resilience over the long-term.

Arco is in the business of safety for everyone. By taking stock and learning lessons, we will support the work to resolve the shortcomings which became all too evident during the initial outbreak. Our resources to assist in this are available, just as they have been throughout this pandemic.



Thomas Martin Arco Chairman



About Arco

Arco is the UK's leading products and services company in health & safety. Founded in 1884, we are a family-owned business committed to delivering our core purpose of keeping people safe at work.

Arco has a team of experts with specialist knowledge dedicated to keeping people safe at work. Our experts are involved at every stage in the PPE supply chain. From our product experts who ensure the correct product specification, sourcing and procurement specialists, including a dedicated team based in Xiamen, China, through to our quality assurance team who ensure compliance in our own independently accredited laboratory. All underpinned with expertise in warehousing and logistics.

Product Expertise

Our experts have a deep knowledge of safety, hazards and of personal protective equipment, this allows us to provide expert advice on complex issues to corporate clients, governments and public bodies. We have a presence on the board of the British Safety Industry Federation (BSIF) and senior staff represent the BSIF at the European Committee for Standardisation and the International Standards Organisation. They are also chair or are members of several British Standards Institute (BSI) protective equipment committees.

Quality Assurance

We are committed to providing safety equipment that is genuine and compliant with relevant standards and regulations. We have invested in our own product assurance laboratory, which is both UKAS and SATRA independently accredited and our five-step product assurance process provides confidence to our customers that the products we sell are fully compliant. Our team in China assist with sourcing, plus they audit and inspect our own brand manufacturers. As a member of the Ethical Trade Initiative (ETI) we only work with suppliers who share our standards when it comes to ethical sourcing and modern-day slavery.

Supply Experience

We work with 110,000 customers of all sizes, across sectors and industries in both the public and private sectors. We help businesses understand the risks that they face and provide the right solutions for them. We have a strong heritage and expertise in supplying the public sector and are proud to hold many key framework agreements including NHS Supply Chain, Crown Commercial Service (CCS) and in Scotland, Scotland Excel. In times of crisis, we are experienced in the provision of expert advice and appropriate and compliant PPE, examples include, foot and mouth, mad cow disease, swine flu and Ebola.

Logistics Excellence

Our National Distribution Centre holds stock of more than 22,000 products and recently underwent a £30 million expansion to double our stockholding capacity and enhance our service levels. We despatch orders to over 50,000 sites, everyday despatching over 8,000 parcels and 150 pallets to the UK and Ireland.

Arco's Response and Contribution

A responsible approach to unprecedented demand

In the face of unprecedented demand as the crisis took hold, we took the decision to prioritise our existing public sector clients and key businesses who were critical to the functioning of the country and society, such as healthcare institutions and food production industries. Any additional products we could source were then directed to the frontline. This was in contrast to other suppliers who took a firesale, "first come, first served" approach.

In addition, Arco did not over-inflate prices, and pricing policies remained the same across all customers. However, in some instances it was necessary to pass on some increased purchasing or freight costs,

Supply chain protection in the face of global shortage

Arco responded immediately to the global supply chain constrictions that led to an international shortage of specific types of PPE. We mobilised a team to ensure we could protect our supply, particularly for products coming out of China. We placed forward orders with key vendors to give them advance notice of what was needed, and to identify any potential shortfalls. This gave us time to put mitigating measures in place.

Our product and purchasing specialists worked with our supply chain to purchase PPE setting up a spot buy process to access additional PPE above and beyond business as usual processes.



Arco NDC illuminated blue to support the NHS

To respond to the urgent requirements for the PPE, the teams also worked to expedite delivery to the UK. This required 10 chartered aircraft and 35 special airfreight shipments full of vital equipment, such as 140 million medical masks, 7.5 million FFP2 masks, 18 million gloves and over 600,000 medical type coveralls.

On 10th February 2020, we completed a £30 million investment project doubling the capacity of our National Distribution Centre, this additional capacity enabled us to receive these large scale deliveries of the critical supplies into our warehouse and quickly despatch them to where they were needed the most.



Face masks and other critical PPE in Arco NDC

Logistical Response

The resulting demand from the pandemic significantly changed the order profile that needed to be delivered, from predominantly parcel despatches to a higher proportion of pallet deliveries.

The logistics team responded by doubling the size of the nightshift, moving from 24/5 to 24/7 operation and doubling the size of the pallet despatch area. This transition within 48 hours demonstrates agility and flexibility in responding to dramatic changes in circumstances.

This was done under strict control measures: social distancing, increased cleaning regimes and 30-minute gaps between shifts to reduce exposure and contact.

In May alone we sent out 2,231 pallets and 91,370 parcels.

Expert Advice

The Covid-19 virus presented a new risk that had to be managed in the workplace. We offered advice and guidance to those purchasing specific types of PPE such as face masks and coverings to protect their workers and customers for the first time.

During the pandemic the market was flooded with fake product and products that did not comply with relevant safety standards. Our experts played a leading role, advising customers including public health bodies, utilities, and many major blue-chip companies in critical industries such as those involved in food supply. Our team also supported the UK product safety framework, advising the Office for Product Safety Standards (OPSS), the Health and Safety Executive (HSE) and Trading Standards.

Our contribution

Arco played an important contribution in the supply of critical PPE to frontline responders throughout the pandemic. Our team in Xiamen played a key role on the ground in China, securing fully compliant product for the UK. Our knowledge was called on extensively as we joined the national effort to reduce the spread and shield those who were most at risk from the virus. Over 291 NHS Trusts placed orders directly with Arco, with an average of 108 orders per day. We sourced and distributed over 140 million face masks, 18 million gloves, over 50,000 coveralls and 500,000 hygiene products to the NHS, ambulance services, local authorities, and other public health bodies and critical industries.

Some of our biggest requests were £20 million worth of powered respirators and filters for the new NHS Nightingale hospitals, as well as orders for thousands of FFP2 and FFP3 respirators masks.



Arco's team in China with chartered plane holding face masks



Arco's Neil Hewitt and Thomas Martin brief on PPE to protect against Covid 19



Organisational failures in the PPE supply chain during the pandemic

A slow start

As early as January 2020 there were indications that the outbreak of Covid-19 in Wuhan might lead to a situation which would see a heightened demand for PPE as the virus spread around the world and the global effort to combat it began to build speed.

Involvement in the EU Joint Procurement Agreement

The EU launched its first joint procurement of £1.2m worth of gloves, gowns and overalls in late February. However, it was not until 19th March, by which time the virus was endemic in the UK, that the Government joined the steering committee of the Joint Procurement Agreement, which makes decisions on mass purchases at the European level. The Government subsequently chose not to participate in joint procurement exercises at the European level, although the rationale and correctness of this decision is subject to debate.

Recognition and acknowledgment of supply shortage

By the middle of March there were anecdotal reports of shortages in hospitals despite NHS officials telling the Health Select Committee that the country had an adequate supply to keep people safe in the months ahead. It took until 13th April for the Government to publicly acknowledge problems with the supply of the appropriate PPE, rather than its distribution.

It is possible that the Government may have had a misjudged sense of reassurance since at this point there was less known about Covid-19 and most of the UK's pandemic stockpile was designed for an influenza style outbreak, rather than a virus which can survive for longer periods outside the body. However, as it became clearer that this virus was different, it became evident there would be shortages of supply.

Revisions and inconsistencies in PPE guidelines

Further complicating matters, on several occasions throughout the crisis Public Health England was compelled to issue revised guidelines about what equipment health workers should wear. This has led to media speculation that the guidance was initially downgraded to fit what was available, rather than based on best medical practice. Initial guidance was often contradictory to both the PPE and medical devices regulations, creating further complications for those procuring equipment.



Sudden, unprecedented demand

At the start of the pandemic the industry experienced sudden high demand for PPE that would protect against Covid-19. It was evident that this, coupled with supply chain constrictions would lead to shortages.

Sudden, unprecedented demand

At the start of lockdown, PPE suppliers, saw a sudden and substantial increase in orders for specific types of PPE, with a particular focus on products such as masks, gloves and coveralls. There was also major demand for cleaning and hygiene products such as hand sanitisers and wipes.

Media coverage and growing public awareness

The scale of demand from institutional operators was also accompanied by a growing public awareness of the need for PPE, with more media coverage of the different types of equipment available but which were unnecessary at that stage for public use.

New, consumer demand for private use

There was also a significant increase in enquiries from consumers as well as businesses and public sector bodies, in

particular relation to the supply of specialist face masks (such as to the FFP3 and FFP2 standards) following coverage of their benefit.

Competition with corporate overseas donations

Another factor which exacerbated shortages in the early stages was that the NHS and other public sector organisations were competing with big corporates who were buying PPE to donate overseas. Before the scale of the outbreak in Europe had become apparent, companies were being encouraged to procure PPE to donate to China – at the same time as suppliers were struggling to obtain products from China for use in the UK. Several large corporations bought huge quantities of masks to donate to other countries where they had operations. While some of this product was purchased for their own staff to keep them operational, often it was to make a donation for corporate citizenship purposes.



Images of PPE and workers are for representation only.

A global shortage

Constrictions in the global manufacture and supply of PPE were further impacted by controls and restrictions.



Lockdown in China

Initially there was a scramble by all suppliers to fulfil existing orders as shortages were already becoming evident. Many products which would have been supplied under normal circumstances came from China, which by the time the pandemic spread to Europe had been under lockdown for several weeks. This significantly reduced the quantities that were being manufactured and put major constraints on the products that could be sourced and delivered on time to meet immediate demand.

Export Controls

As demand for PPE intensified, the Government copied many other countries by introducing export controls. While this started to impose some restraint on what products remained in-country, it further contributed to the seizing up of international supply chains as other countries did the same.

To give an example, after Taiwan limited exports of face masks, we had 2 million masks sourced from there which were destined for NHS Scotland but could no longer leave the country. Whilst the Government sought to encourage increased domestic production, in the immediate term the UK was at a disadvantage in this environment due to the imbalance between what we import and what we export.

Restrictive white lists

Other restrictions served to keep legitimate products out of the country while at the same time allowing non-compliant materials to enter the market. The NHS has a white list of factories in China that can be used to supply material and equipment. However, it is unclear what the process is for reviewing or updating this list, and during the fast-moving crisis the list served as a barrier to getting PPE to hospitals that most needed them.

To give an example, we were working on a proposal to supply tens of millions of surgical masks via our direct supplier in China at a time when there was a significant shortage. The product passed all the requisite quality assurance and technical approval processes and the factory was on the Chinese Government's list of organisations permitted to export PPE to the UK. However, at the final stage, the supply process was brought to a halt because the factory hadn't been added to the NHS approved list. The Republic of Ireland would procure 20 million of these masks instead.

NHS procurement and supply challenges

The initial stages of the crisis were immensely difficult for both public sector organisations – many of whom had little or no previous direct experience in procuring PPE – and for suppliers.

NHS Procurement quickly overwhelmed

NHS Supply Chain's existing structures failed to cope with the increased demand necessitated by the spiralling healthcare crisis.

Restructure of supply chain and processes during pandemic

To manage demand, the NHS set up an entirely new chain and set of processes, drawing on the Cabinet Office and Deloitte to provide a procurement and commercial perspective. However, the process of setting up new procurement structures at the onset of the crisis meant that suppliers lacked information and clarity about who they should be working with. As a commercial organisation that had stocks of needed equipment that we knew was required, our sales leads found it difficult to get a decision from anyone, and many inquiries simply did not get completed due to a lack of final sign-off.

New online portal is indiscriminate and quickly flooded

The Government then set up an online portal system so that suppliers with a product or service they wanted to offer could register their interest, along with a single email address for all enquiries. However, the portal did not require suppliers to provide information about their expertise, experience or record in sourcing or providing safety equipment, or proof of

ability to meet their obligations under the PPE regulations. This meant that it was swamped with offers and genuine suppliers were crowded out.

Lack of understanding and inexperience of purchasing PPE

Those sourcing PPE and making procurement decisions were neither experienced in PPE purchasing nor had the right level of understanding around compliance and quality assurance to make a decision on whether the products they were ordering met the right standards. This was particularly the case in care homes and councils, which had previously no experience in the procurement of medical-grade PPE – let alone in the middle of a global crisis.

Local NHS trusts begin 'parallel sourcing'

The decision to bring the Ministry of Defence in to coordinate distribution eased matters by creating two teams – an opportunities team which did the necessary assurance tests, and a closing team to manage contracts for approval and sign-off by the DHSC. However, by this time, faced with delays and overly complex procedures, many NHS trusts had lost faith with the centralised system and began "parallel sourcing". While this helped complete orders more quickly it created confusion and a lack of joined up planning, with local NHS Trusts not knowing and sometimes duplicating what was being done at the national level.



Images of PPE and workers are for representation only.

Non-compliant products

Demand pressure started to ease in May as China gradually returned to work and as new manufacturers and suppliers emerged in response to the crisis. By early June, there were 22,000 more mask suppliers in China than there had been in February.

The big increase in new entrants into the market created an additional challenge in terms of monitoring the quality of and preventing non-compliant products entering the UK, particularly from start-ups. This became especially pronounced given the decision to allow a loosening of conformity assessment and market assessment regulations designed to speed up the supply pipeline.

Following recommendation EU 2020/403 from the European Commission, the Government temporarily implemented a limited relaxation to the PPE Regulations to allow more products to enter the market through fast-track product safety assessments, allowing products that offered protection against Covid-19 to be sold into the healthcare sector. While this was the right thing to do in the circumstances – and was mirrored by action from EU Member States – it did increase the scope and potential for poor quality products to be sold, particularly on online marketplaces where products were often advertised as offering protection from Covid-19 even when it did not hold a relevant approval and there was no technical evidence to back this up.

Arco's experience of non-compliant products

In our engagement with public sector bodies we frequently came across local authorities that been offered or indicated a willingness to buy products from overseas suppliers that our market awareness and conformity testing had demonstrated were non-compliant. Despite offering our advice and in each instance reporting these products to the British Safety Industry Federation, we are aware of several instances where local authorities purchased PPE that was not fit for purpose and ineffective against Covid-19 on cost grounds, rather than quality.

One specific example was a consortium of six local authorities. We offered Type II surgical masks to the consortium, which were declined on the grounds that another brand of mask could be found elsewhere more cheaply. We asked to review a copy of the data sheet and it was evident to us that the product was non-compliant. We convened a call with the relevant contacts at the local authorities, provided evidence that the product was non-compliant, and demonstrated why it would not offer the necessary protection. Despite this, the council went ahead with the order, to be used in social care settings.

We are aware of other examples – for example, a local authority which purchased non-compliant 5B gowns from Turkey which had been approved by a notified body without accreditation for biological hazards.

Much of this happened due to the elongated and bureaucratic nature of the central procurement process, which was unresponsive and slow, and did not allow NHS Trusts to find the products they needed. While this was going on, and faced with immediate requirements, many simply went and did their own thing despite not having the capacity, knowledge or expertise to do any technical checks and without applying the appropriate standards of due diligence on quality.



Arco's Product Assurance Laboratory

The product safety framework

The crisis exposed broader issues with the UK's product oversight framework, some of which had become evident before the outbreak.

Responsibility for product safety is currently divided between the Office for Product Safety and Standards (OPSS), which is responsible for the product as it enters the market, local authority Trading Standards teams, which protect consumers from non-compliant products at the point of sale, and the Health and Safety Executive (HSE), which monitors product safety in the workplace. However, all three functions are fragmented, under-resourced and hold overlapping responsibilities, despite being the last line of defence for workers and consumers.

Lack of resources and funding for functions

Trading Standards teams in particular have struggled as local authority budgets came under pressure following the financial crisis at the end of the last decade.

Between 2009 and 2016, total spending on Trading Standards fell from £213m to £123m, and according to the National Audit Office, the vast majority of local authorities have scaled back monitoring and enforcement as a result.

Divided responsibility for product safety

The overlapping responsibilities of three parts of government means that there is no single body responsible for ensuring that all PPE on the market is safe and to standard and utilised correctly in the workplace. The issue is further complicated by the growth of digital marketplaces out of the scope of local trading standards teams.

Publication of the PPE Strategy and the processes put in place reduce the likelihood that the surveillance systems designed to frustrate less ethical operators and protect consumers will break down as the virus peaks again.



Testing in the Arco Product Assurance laboratory



Moving Forward

At present the situation remains uncertain, and there is a lack of confidence about the future supply of PPE during this and future pandemics.

Arco are playing our part and have made a substantial investment in stockholding and are working towards on-shoring more PPE manufacture to ensure continuity of supply in the UK.

We are continuing to support UK public health authorities, most recently sourcing local manufacture of surgical masks and visors and entering into a contract with the Scottish Health and Care Trust for stock holding and supply of surgical masks and FFP3 respirators plus face fit testing support for over 100,000 respiratory equipment wearers.

We also continue to play a leading role, advising and supporting the OPSS, HSE, HM Revenue & Customs and other public bodies, as well as blue-chip customers in critical industries, on the testing, provision and supply of PPE.

The Prime Minister has said that in due course there will be a public inquiry into the Government's handling of the pandemic. This is the right course of action, since it is only by understanding what happened that we can draw the necessary lessons to be better prepared for the future.

The PPE Strategy published in September also lays the foundation for better coordination and engagement with external stakeholders, including suppliers and those procuring equipment. However, the crucial work will take place over the coming months and the evidence of success may not be seen for some time.

We also applaud the work of the Health and Social Care Select Committee, the House of Commons Science and Technology Committee, and the All Party Parliamentary Group for Coronavirus, who have begun their own inquiries into related matters, and we would encourage the Government to engage seriously with the substance of their findings.

Arco is committed to continue to work with and support the Government. Our core purpose is to help to keep people safe at work and we will continue to help the UK to manage the pandemic. We have therefore developed the following recommendations based on our experience throughout the pandemic.

Images of PPE and workers are for representation only.

Arco's 10 recommendations

For future pandemic preparedness to ensure supply of Personal Protective Equipment (PPE)

Formal registration of competent PPE suppliers

- 1 The Government should **consult on whether PPE suppliers should be formally registered** to be allowed to supply Category II and III products. Registration would ensure that a supplier is capable of providing compliant product, while market surveillance by an empowered OPSS would ensure suppliers live up to these commitments.

PPE Stockpile

- 2 The Government should **clarify how the PPE stockpile was risk assessed at the start of the crisis**, particularly from the perspective of supply chain risk.
- 3 The Government should ensure that its review of its pandemic stockpile is transparent and that the **evidence behind its assumptions is made public** and can be challenged

Purchasing

- 4 The Department of Health and Social Care should conduct a **thorough review and stress test of its purchasing framework** from the perspective of procurer and supplier. As part of this process, the department should clarify ownership of the white list of factories from China which are approved to supply the NHS, and whether it should be updated more often. To ensure that only companies which can realistically fulfil orders to the right quantity and standard are able to provide services, the coronavirus support business portal and registration should include a more detailed pre-qualifying questionnaire to weed out speculative or non-serious offers.
- 5 NHS Trusts, local authority and social care procurement officers should be **trained or upskilled in PPE standards**.

Manufacture and supply

- 6 During the pandemic many countries halted exports of both final products and the materials used to create them. **The Government should clarify whether its target for 70% of UK PPE needs to be produced domestically by the end of 2020 applies only to finished goods**, or to processes completed outside the UK and raw materials from elsewhere. Supply chain vulnerabilities will remain if the focus is only on finished goods.

International Trade Agreements

- 7 In the future the Government should **better explain any decision not to participate in common purchase arrangements**. Given the politicised environment around the Brexit process, the decision not to participate in the EU Joint Procurement Agreement, should have been explained. Even if this was the correct decision, a clear explanation of the reason would provide public reassurance.
- 8 The Government should **explore international agreements to maintain 'liquidity' in cross-border trade in PPE** at times of crisis, since the imposition of export controls caused much of the supply chain to seize up. This should include drawing on the expertise of UK suppliers and distributors as part of the FCDO's work on strengthening relationships with overseas markets.

Product safety and compliance

- 9 The Government should set a **roadmap for the full reimplementing of the PPE Regulations** to reduce the likelihood of poorer quality products entering the market.
- 10 The Office for Product Safety and Standards should be **empowered and properly funded as the UK's independent product safety regulator**, from production to sale and use, and encompassing PPE within its remit. As an interim solution trading standards funding should be reviewed and a public consultation on the role and scope of OPSS should be brought forward.



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