



## How good is your business really?

### **Preparing for future business challenges by enhancing workforce skills and capabilities: BAE Systems' Military Air & Information business**

BAE Systems Military Air & Information (MA&I) business is a world leader in the design, manufacture and support of combat and trainer aircraft. With customers across the globe, it is also the principle supplier to the UK MOD for its combat and fast jet training aircraft and their in-service support. BAE Systems' sites at Warton and Samlesbury (together known as Warton Unit), Lancashire, represent the UK Centre of Excellence for military aircraft manufacture. They are home to the production of Eurofighter Typhoon and the UK's major contribution to the Lockheed Martin led F-35 Lightning II, the world's largest defence programme. The sites also undertake, together with BAE Systems' site at Brough, East Yorkshire, the manufacture of the Hawk jet trainer.

BAE Systems' MA&I business employs approximately 13,500 employees across over 20 sites around the UK with c10,000 employed at Warton and Samlesbury. The principle trade union across the MA&I business is Unite.

The UK defence industry is undergoing significant change, in part in response to the government's recent Strategic Defence and Security Review, but BAE Systems' MA&I division has been moving from primarily meeting the requirements of the UK MOD to becoming a business increasingly focussed on securing international business in what is an extremely competitive global market. It is therefore developing a more export-led, through-life support and service approach. This has had, and is having, a major impact on the workforce and the way it works.



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Due to the pace that the external market is evolving, new technologies and ways of working are being adopted and deployed across the multiple manufacturing platforms, and the organisation recognises that to maintain its leading class status, it needs to be able to respond to business opportunities by adopting and deploying new capabilities in an agile but cost effective manner.

The existing 'Manufacturing System' (people, process, technology, facilities etc.) are not necessarily aligned to meet the challenges of tomorrow and beyond, it recognises that investment is required in not only plant and equipment but in developing a fit for purpose culture with effective and appropriately skilled people.

The desire to compete in a global market place is increasing pressure on the company to improve productivity, find more effective ways of working, and to better use the skills and knowledge of the workforce.

In 2008 at the Warton Unit, discussions took place between the managers and unions. Managers accepted that it was necessary to restore trust between employees and managers in order to create the environment for employee engagement - the key to unleashing the full potential of the workforce and gaining their participation in continuous improvement and efforts to reduce costs. The trade union wanted to secure progression opportunities for shop floor employees. The progression scheme enabled productivity improvements that had previously been held back by demarcation between trades. Production flows were often halted as one trade waited for another to complete their task before the first could continue with theirs. The



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management were also aware of the tacit knowledge and informal skills of the workforce that were not being used to their fullest potential.

Key to improving engagement was the more effective use of skills and involvement with continuous improvement activities, working on the principle that those doing the jobs were best placed to understand what they entailed.

By widening the skills of the front line workforce and creating more flexibility in their deployment, and by engaging the workforce in continuous improvement, BAE Systems has seen significant improvements in productivity. Over the first two years of the scheme, the employee hours required to complete one unit of the Eurofighter reduced by almost 20 per cent. The workforce also identified many millions of pounds worth of cost savings.

The company has continued its focus on embedding a culture of lifelong learning, continuous improvement, collaboration and partnership, with a wide range of support for leaders and managers in the new ways of working, as well as a renewed emphasis on communication and engagement.

'Inspire and develop people to drive success' is central to BAE Systems' company strategy. This is evident in the Military Air business with the planned opening of its £15 million state-of-the-art Training Academy at the Samlesbury site in September 2016, which will coincide with the annual intake of c140 apprentices.



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Dave Holmes, MA&I Manufacturing Operations Director, said: "I am extremely proud of our apprenticeship programme and the role it plays in ensuring we continue to develop world-class skills to create world-class technology."

The academy will accommodate more than 200 apprentices at any one time and it will also be a hub for training for all employees throughout their careers. Investment in new technologies such as augmented reality and 3D printing along with learning programmes inclusive of Lean Principles and 6 Sigma mean that BAE Systems will have 'factory ready' apprentices, entering their second year out on the shop floor more prepared and effectively deploying the required technical skills and mind-set.

Recognising that their first line supervisors have over 2,500 team members to engage with, in 2015 a learning programme for supervisors was introduced. The Senior Operations Management wanted to ensure the consistency of approach and create a new standard in people management. This approach would remove frustration caused by inconsistency in interpreting and deploying company mandated policies and procedures, but also provide a consistent toolset that would enable invigoration of team members in a consistent way. This approach would therefore un-tap latent talent and skills at all levels and further aiding MA&I's drive for improved efficiency, safety and cost across all its operational activities.

The nine month programme has been awarded NVQ accreditation, which has proved attractive to many supervisors who may have progressed internally with no formal qualifications since completing their apprenticeship. The introduction of the programme has infected the organisation with a different culture and energy that



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generates continuous improvement both in terms of the tangible production deliverables and in encouraging networking, sharing experiences and storytelling and a feel good factor in achieving success with an externally recognised qualification.

To date over 100 supervisors have attended the programme, which has now been extended across the BAE Systems enterprise.

Matt Heritage, Operations Manager, said: “Engagement, relationship building, influencing and effective networking, are all behaviours I have witnessed from the alumni of the supervisor development programme. These behaviours, coupled to the knowledge and skills around lean principles and policy deployment learned through the programme, bring manifest improvement in team performance. Improved utilisation of the team, flexibility and productivity. These improvements are measurable and there is a tangible link between the performance of the leader and that of the team.”

Continuing to improve skills is central to the Manufacturing Operations function. A new Aspiring Leaders programme is under development which will identify a talent pipeline of capable, trained and qualified individuals who can become first line leaders from across the manufacturing function. The site has also developed an NVQ in Business Improvement Techniques for front line staff; these include effective team working, problem solving, safety, project management and value stream mapping. By April 2014 the programme had already resulted in more than £700,000 in savings; by June 2015, 42 people had gained the qualification, including eight people qualifying as NVQ assessors.



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The MA&I business has faced a number of challenges over the last few years, including several consultations on redundancy, but change has been managed effectively, with no deterioration in the management-union relationship or impact on morale. A detailed programme of engagement with union representatives at every level up to the MA&I Board, including offsite meetings, sustains this approach.

For both parties, a significant gain has been the improved relationship between employees, unions and managers, higher levels of engagement, and a more co-operative way of working, which has been sustained.

Building an aircraft takes time, expertise and watertight processes, but it also takes people. Effective employee relations and employee engagement have provided the essential underpinning, which has been particularly relevant to the transfer of Hawk trainer aircraft production from the Brough Site in Yorkshire to the Warton Unit in Lancashire.

Hawk construction is a skilled, hands-on process, less automated than other aircraft production by the nature of the aircraft. As a result, transferring the skills of the Brough workforce, integrating them with the Lancashire workforce and transferring plant and equipment became a priority.

A major engagement with both the trade unions and the workforce at Brough was undertaken. An agreement was reached that as well as the transfer of the production facilities, around 70 Brough staff would transfer to Warton to bring their knowledge



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and to support the development of skills. Equipment was transferred from Brough with the full involvement of the local workforce. Strong and effective efforts were made to integrate the teams at Warton, with social events and football tournaments, and a hands-on, highly engaging management style established at every level to such good effect that the first Hawk to go through the final assembly process at Warton made its maiden test flight in September 2015.

As Andy Leahy, DIT&S Operations Director and Warton site director puts it: "The transfer of Hawk production from Brough to Lancashire was always going to be a challenge, moving a product with a 30-year history from its home site with a legacy workforce. Huge engagement effort was invested by teams and managers at all three sites, so that employees could see that the way forward was going to secure a longer future for Hawk, and for highly skilled jobs.

"Because we painstakingly worked through every single angle with our employees and their representatives, we have been able to safeguard jobs in Brough and Warton and scale up production to meet new orders. In fact, it quickly became difficult to tell from which site an individual employee hailed. Hawk is now a major success story, and that is down to the culture of involvement we have created."

"Another key factor has been recruiting managers at every level who have people skills, can motivate and involve their teams, and are comfortable with a participatory culture, rather than the old command and control methods."



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Warton Site Trade union representative Paul Fleming concurs: "The way a very difficult transfer was carried out meant the company kept the confidence of employees; their engagement is clear to see as everyone celebrates the roll out and test flights of Hawk. It has been a tremendous collaborative effort, and an example of how working together we can secure highly skilled jobs for generations to come."

The engagement has been sustained with support and training for line managers and trade union representatives in employee relations problem solving and a focus on increasing trust through building effective relationships. This has enabled more issues to be dealt with at front line level, enabling union representatives and managers to focus on strategic issues rather than day-to-day matters. As a result, major pressures on cost and lead times in the Hawk construction are being met by the workforce.

Sustained engagement is also enabling the company to meet the substantial cost and delivery pressures for the Typhoon and F-35 aircraft; for example the 2013 cost per unit for the F-35 aircraft will be reduced by 48 per cent by 2017. This will be achieved by utilising the full range of skills and expertise of the workforce as well as the introduction of new technologies and production techniques.

"We will meet our targets by harnessing the innovation, the enthusiasm and the energy of our workforce," explained Dave Holmes, MA&I Manufacturing Operations Director.



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The next four years will see F-35 build rates rise from one unit per week to one unit every working day.

Employees working on the F-35 programme have set up a 'People Enabler Group', with a focus on implementing employee suggestions such as workplace improvements, social events, photography competitions, changes to amenity areas which have involved the employees painting these areas in colour schemes they have chosen, and comfy seating. Proposals identified for 2016 range from more best practice visits outside Samlesbury, to improved shop floor displays, to basic CPR training.

A recent Pulse survey across the F-35 workforce indicated very high levels of trust in senior management (89 per cent) with 93 per cent stating that 'my immediate supervisor does a good job in communicating why important changes are made.' The same survey indicated that employees want to see more efficient work process and better access to the resources they need to do their jobs, and these have been identified for particular focus in 2016.

### Learnings

- Developing a strong partnership with employee representatives enables a cultural shift from demarcation and silo working to a flexible and agile workforce confident in the company strategy and mission and committed to its success
- A mutual gains agenda is critical in establishing trust



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- Highly charged strategic decisions such as site run downs can be carried through provided the engagement with representatives and the workforce is timely, authentic, sustained and meaningful
- Sustaining the new culture is key; this required strong support for an engaging management style across all functions
- Establishing strong team working and esprit de corps is also vital, with opportunities for significant successes – such as the Hawk flight trials – to be celebrated