

Informing & Consulting your Workforce: AWE plc

AWE plc manages and operates the United Kingdom's Atomic Weapons Establishment (AWE) on behalf of the Ministry of Defence. It employs 3600 members of staff in the maintenance of the country's nuclear deterrent.

Over the last two and a half years, AWE plc has driven an interesting bottom-up approach to the introduction of partnership ways of working, resulting in nearly 200 continuous improvement projects initiated directly by employees that have brought benefits for both the workforce and the wider organisation.

A highly regulated industry, faced with cuts in defence spending and the introduction of competition through contractor management, AWE plc has invested in partnership workshops and a cultural change designed to build trust, establish better internal communication and increase direct employee participation in continuous improvement through interest-based problem-solving and consensus-based decision-making.

AWE has reduced costs, increased productivity and made continuous improvement the centrepiece of organisational change by completely rethinking its approach to employee information, consultation and problem-solving.

Unlike conventional management and union arrangements, at AWE there are few explicit rules and regulations governing the structures and processes of partnership, and currently no formal partnership agreement.

AWE plc employees include scientists, engineers, skilled craftspeople and administrative staff involved in the concept and design, manufacture and assembly, service support, decommissioning and disposal of nuclear warheads. Staff and shop floor operatives are represented by Amicus-AEEU, the Transport and General Workers Union (T&G) and Prospect.

AWE is located at three sites in the Berkshire countryside at Aldermaston, Burghfield and Blacknest. Interviews were conducted with managers, trade union representatives and shop floor operatives from facilities A and B at Aldermaston and Site C at Burghfield.

Events leading to partnership

Since the introduction of contractor-management, reductions in national defence spending have required AWE to take measures to reduce its operating costs. During the 1990s these measures included the closure of its component

factory at AWE Cardiff and an open range site at AWE Foulness in Essex, together with significant voluntary redundancies and a recruitment freeze at the remaining sites. Changes in work organisation have also occurred, including multi-tasking, teamworking and continuous improvement.

During 1999 a joint management/union consultative project was set up to develop a "partnering agreement" for the harmonisation of terms and conditions for the weekly paid industrial operatives and salaried staff. Under the MoD, industrial relations between AWE and the trade unions were arms-length, but not overtly antagonistic, however, the introduction of contractor-management, cost saving measures, job losses, the intensification of work for the remaining staff and the realisation that a "job-for-life" was no longer assured, challenged this relationship.

Unusually tense exchanges between the management and industrial trade unions (Amicus-AEEU and T&G) revealed that relations between AWE and the unions were wearing thin. As a T&G representative explained; *"The single status project revealed three different cultures operating at AWE; around the non-*

The Atomic Weapons Establishment (AWE)

[Box 1]

The Atomic Weapons Establishment (AWE) has been central to the defence of the United Kingdom for more than 50 years, providing the warheads for the nation's nuclear deterrent.

It was in 1947 that the Labour Prime Minister Clement Attlee authorized the development of an atom bomb. A team of scientists under Dr. William (later Lord) Penney was urgently assembled for the task. In 1950 Penney moved his team to the former wartime airfield at Aldermaston in Berkshire, which today remains as AWE's headquarters. On 3 October 1952, the first nuclear trial device was tested and soon afterwards Britain's first nuclear bomb was delivered to the Royal Air Force.

Since then AWE has retained responsibility for the complete life-cycle of the United Kingdom's nuclear warheads, From design, manufacture and in-service support through to final decommissioning and dismantling. Today its principal role is to maintain the nuclear warhead stockpile for the Trident submarine-launched ballistic missile system, which is now the United Kingdom's sole nuclear deterrent.

AWE was variously managed by the Ministry of Supply, the United Kingdom Atomic Energy Authority, and the Ministry of Defence until 1993 when the management and operations of AWE passed to a private company under a Government-owned/contractor operated arrangements. Under this arrangement the AWE sites and facilities remained in the ownership of the Ministry of Defence but the responsibility for day-to-day operations passed to a contractor. At the same time Crown Immunity was lifted from AWE and it became subject to the same regulatory controls as the civil nuclear industry.

Originally the contract was held by Hunting-BRAE Ltd. On 1 April 2000, following a competition, a new contract for a period of ten years (with an option to extend to 25 years) was awarded to AWE Management Ltd, a consortium of Lockheed Martin, British Nuclear Fuels and Serco.

With the award of the contract, AWE Management Ltd became the owners of AWE plc, the company that employs the AWE workforce, holds the nuclear site licences and is responsible for the safe operations of AWE and the delivery and maintenance of the UK nuclear warhead stockpile.

industrial trade unions, the industrial trade unions and the management”.

Anxious to overcome these differences, the management/union team were introduced to consultancy Incahoots, whose Principal, as personnel Director of Blue Circle Cement, had been instrumental in successfully developing and implementing partnership within a large organisation. The approach he adopted focuses on “*growing partnership from within*” and from the bottom-up, by generating trust and a shared commitment to the success of the organisation on the shop floor.

In March 1999 Incahoots gave a presentation about the benefits that Investors in People and partnership had brought to Blue

Circle. They proposed introducing partnership as a way of improving the industrial relations climate at AWE and invited the management and unions to attend a three-day workshop. For the managers, partnership offered a practical way of building employee commitment around the necessary changes and embedding continuous improvement on the shop floor. For the unions, partnership promised them a voice on a wider range of workplace issues.

The workforce was already sceptical about “*yet another new initiative*” and support from the trade unions at this stage was instrumental in moving the debate forward. As a result of positive discussions during the initial workshop, the Head of Manufacturing offered Facility A

as a pilot for introduction of partnership training and activities.

Partnership (interest-based problem-solving) structures

Both the management and the unions recognised that negotiating a formal written partnership agreement at this stage would not significantly improve the understanding that they had already reached, nor would an agreement, in itself, substantially help grow partnership among the workforce. As the Head of Manufacturing explained, “*We needed a cultural change. We didn't want it to be a formal arrangement involving senior managers and union officials, which we would have to try to drive down through the organisation. We wanted it to be a bottom-up process, finding its expression in*

the changed attitudes and behaviours of staff" (DTI, 2002).

Instead, the management and unions agreed to establish a partnership framework at AWE, which would nurture more extensive employee participation, at a local level, and also at facility and company levels, with responsibility for solving problems and exercising decision-making processes.

These forums are described in more detail below and in diagrammatical form to demonstrate how they fit together:

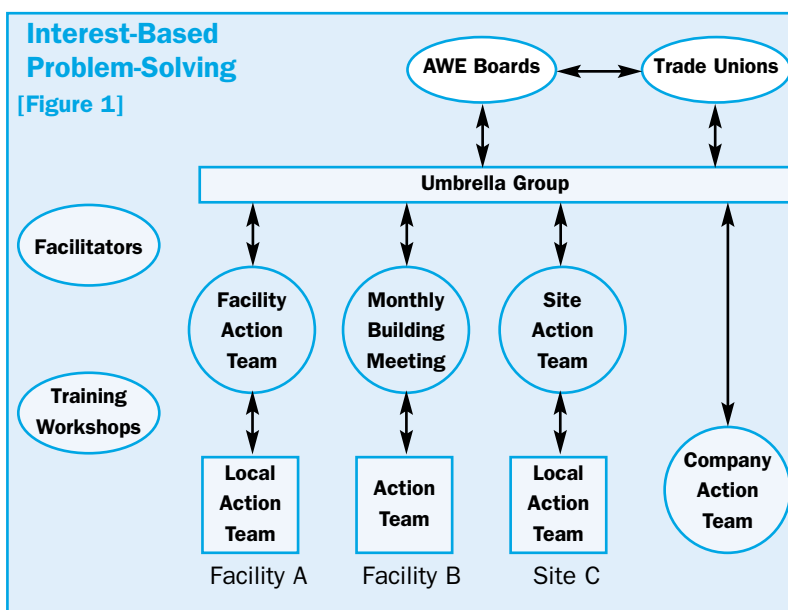
- The Umbrella Group** – is a team of people from across the company, working together to represent the interests of trade unions, management and employees. Its purpose is to promote and guide partnership throughout the company. The Umbrella Group has about 25 members, which meet once a month. Meetings are co-ordinated and run by a 'floating' chair, which alternates between the management and the trade unions.
- Local Action Teams (LATs)** – are made up of people who share an interest in resolving a problem in their local area. They work together to come to a consensus decision on the resolution of local issues.
- Company Action Teams (CATs)** – operate like Local Action Teams but deal with company-wide issues. They are normally initiated via the Umbrella Group and make recommendations back to the group. Members represent all the parties with a direct interest in the outcome. Issues for CATs may be suggested to the Umbrella Group by staff, the company or the trade unions. Currently three CATs are in operation,

dealing with smoking policy, shift work, reward and recognition.

- Facility Action Teams (FATs)** – are formed to provide the focus for, and retain an overview of, the local action teams. They provide guidance and support for those teams and act as the conduit to the Umbrella Group when necessary.

Only then can you start to formulate a response and move towards a consensus opinion around what exactly is to be done".

A programme of three-day workshops was arranged for employees from Facility A to learn, among other things, how to identify the difference between ones' own interests and those of



- Site Action Teams (SATs)** – are similar to the Facility Action Teams, providing a focus, drive, support and resources for partnership activities in an area larger than a facility.

others and how to approach problem-solving as a team of individuals with different interests. Interest-based problem-solving encourages participants to: focus on broad issues rather than specific solutions; to express their needs, desires and concerns and not make demands or claims; and to do so based on values and principles and not tactics or strategies.

The AWE partnership model

At the heart of partnership working at AWE are the twin concepts of interest-based problem-solving and consensus decision-making. The problem-solving process itself involves the identification and clarification of an issue and engagement of all the relevant people concerned with or potentially affected by the solution. "In partnership, you never start with the solution", explained a process operative from Facility C, "you need to work the issue back, asking 'why,? why,? why,? why,?' all the time until you reach the core of the problem.

These attitudes and behaviours rarely come naturally to individuals and the partnership workshops introduced the participants to a variety of techniques including brainstorming and cause and effect (fishbone) analysis, designed to encourage the group to discuss their respective view points and "think outside the box". These techniques also provide a structure for holding meetings and produce a substantive paper trail,

which is useful when it comes to auditing the problem-solving process.

Consensus is about all the participants being able to say, “though this may not be the decision I would have liked, I respect the way in which it was reached and will endeavor to make it work”. Consensus is reached when all the members of a team can honestly say that they understand each others’ point of view.

It would be unrealistic to suggest that all problem-solving groups at AWE have the authority to make the final decision on implementing their own recommendations. Consensus decisions are also subject to the same strict economic tests and health and safety procedures applied to any other proposed change at AWE. However, the production managers and the workforce both recognise that when it comes to convincing senior management, solutions developed through consensus-based decision-making are a powerful endorsement for a new approach or idea.

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“Growing partnership from within”

In 2000 the partnership training was rolled out to over 300 employees, or 80 per cent of the workforce in Facility A. In 2001 the workshops were also rolled out to a similar proportion of staff in Facility B and at Site C. The roll out was supported by an award from the DTI Partnership at Work Fund. This was, as the Head of Manufacturing explains, “an important endorsement to the workforce and the board of the valuable work being done”. Infrastructure and Assurance are now also taking part in partnership workshops and in time it is anticipated that AWE staff will start providing the workshops in-house as partnership is introduced throughout the rest of the organisation.

At the workshops, the participants are encouraged to put their training into practice by identifying existing problems within their own workplaces that they could solve through a Local Action Team (LAT). In Facility A a full-time partnership co-ordinator

was appointed from within the workforce to oversee the projects. It is the responsibility of the co-ordinator to ensure that all the relevant people are involved in the problem-solving process, that the LATs are not duplicated and that there is a record of all LAT meetings.

Not long after the first partnership workshops, a training needs analysis exercise identified the need for independent facilitation to improve the effectiveness of LAT activities. Since then, about 30 AWE employees have been trained in facilitation and received additional training in the processes of interest-based problem-solving and consensus decision-making. Although facilitation is not obligatory, it is regarded as an example of ‘good practice’ by the Umbrella Group, and recommended by the partnership co-ordinators in each facility to all new LATs. (See Box 2).

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Impact and benefits

Since the first partnership workshops were held in Facility A, more than a hundred LATs have been established. According to

Facilitation of problem-solving and consensus decision-making [Box 2]

The role of the facilitator is to:

- observe the LAT;
- ensure that the group has clear aims, is representative and is well informed.
- ensure that individual’s ideas are recognised;

The facilitator must only intervene when:

- individuals are dominating the group;
- individuals are unclear about specific action points.
- the group fails to seek consensus;

In order to undertake this role, facilitators are trained in a range of techniques including:

- group development and behaviour;
- conflict recognition, management and resolution;
- intervention techniques;
- non-verbal communication;
- intervention techniques; coaching and mentoring;
- giving positive feedback;
- creating an environment which stimulates two-way communication;
- presentation skills;
- listening.

Although AWE initially invested in facilitation training from an experienced facilitator, this training is now provided in-house and has been used to train facilitators in several facilities to ensure that impartial facilitation is always available to anybody who requires it.

the Head of Manufacturing, “sixty per cent deal with real business matters. The other forty per cent are hygiene (often literally tea and toilets) issues, but also very important to the people within the facility”. However, health and safety issues now account for over a third of all the new LATs. One particularly successful example relates to the safety checks applied to the protective gloves used by the operatives to handle fissile material, through sealed glove boxes. (See Box 3).

The work of the LATs is not only concerned with technical or health and safety issues. Others have also tackled issues which would previously have been regarded as the sole prerogative of management. These include an induction pack for new starters and the introduction of regular team briefings. To date the largest and most far-reaching LAT to be set up is the “Alternative Working Patterns Group”, responsible for developing a new working pattern to improve equipment utilisation and increase productivity within facility A. (See Box 4).

A further example of the extent to which employees are being involved in what would previously have been described as management issues, relates to their participation in assessing applications for voluntary redundancy as part of AWE’s on-going commitment to reduce the size of the workforce. Increasingly, the incumbent’s co-workers are responsible for assessing the feasibility of such requests and managing the change. The principle is supported by AWE, although voluntary redundancy cases must demonstrate that the additional workload can be shared fairly, without compromising safety. An added benefit of this has been that voluntary redundancies are discussed

earlier, with all staff concerned, enabling the whole team to prepare for the change. It has also reduced the loss of knowledge and experience from staff leaving the organisation.

The success of partnership, interest-based problem-solving and consensus decision-making in Facility A was recognised by other facilities, which have subsequently invested in partnership workshops. At Facility B, over 80% of the workforce went through the partnership workshops in 2001. A Facility Action Team (FAT) of ten people was formed, with staff and trade union representation at all levels of the facility. Since then, more than 40 LATs have been established. Right from the start, “everybody got together to agree who would be on the facility action team”, explained a manager. Managers and employees were nominated onto the FAT at a meeting attended by the entire facility. Initially the FAT meetings were held on a fortnightly basis. However, attendance was low, especially from managers, and apathy in the FAT was reflected in the LATs, where early enthusiasm from the staff for partnership also quickly waned.

In early 2002 the facility management began an urgent “review” of partnership and again approached Incahoots to facilitate. Middle managers, supervisors and process workers attended the review and Roger Hopkinson, Head of Manufacturing and Jim Stout, Director of Manufacturing provided senior management support. The review process revealed at the core of the facility’s problems a fundamental lack of trust in partnership, stemming from a sense that the partnership structures, the workshops and the LATs were a

Glove Failure

[Box 3]

During 2001 operatives reported a rising number of “glove failures”, i.e. gloves with defects that might indicate a weakness in the protective capability of the glove. A LAT was formed and a team of operatives visited the supplier, North Safety Products (NSP) in the United States, to learn how the gloves were made. They discovered that many of the failures being reported were an unavoidable consequence of the production process and did not impact on the integrity of the glove or its safety. In addition NSP trained and certified several operatives in glove box inspection techniques, which upon their return to the UK, were used to develop a new training package for glove inspections. The key benefit has been that AWE operatives are now better trained in glove safety and have greater confidence in the product, but it is also estimated that these improvements will annually save AWE around £15,000. In addition AWE staff have shared their knowledge with other glove users in the UK and are subsequently regarded as world-leading experts in this area.

mirror image of that which had occurred in Facility A, and did not reflect the specific culture and requirements of the smaller facility.

In May 2002 the FAT concept was re-launched as the “Monthly Building Meeting”, with a new fixed agenda and a ‘floating’ chair and secretary shared between the management and

staff. Stricter procedures were also introduced to encourage better record keeping, the greater involvement of trade unions, and more formal communications between the action teams and the Monthly Building Meeting. Although the facility was satisfied

with the role of the LATs, they were renamed as “Action Teams”. A manager described the review process as a “renaissance”.

Partnership at Facility B has produced valuable benefits for

the workforce and the organisation. Benefits for the workforce include a LAT organised by the female operatives to paint and decorate their changing facilities, the publication of a weekly newsletter, and a successful bid

Alternative Working Patterns Group [Box 4]

“Alternative working”, has been the most radical example of problem-solving at Facility A. As part of the drive to reduce costs and improve productivity the executive board had been considering the introduction of a four-day working week. “They could have pushed it through”, an operative explained but, “we were given a choice... either do it yourselves or have it done to you”.

In September 2001 a LAT represented by volunteers from each group of affected workers, trade union representatives, management and two independent facilitators was formed. In the first weeks, over 30 people were involved in a “lively open debate”. However the capacity of the participants to engage in effective joint problem-solving was undermined by the sheer size of the group and the emergence of dominant and vociferous individuals who monopolised the meetings.

The facilitators recognised that the size of the group had rendered it unmanageable and recommended separating the LAT into three task-groups of about eight people, responsible for: work patterns; efficiency (including multi-skilling); and organisation (capacity building). The three task-groups were also

given access to previously confidential financial information in order to support their recommendations and demonstrate cost efficiency.

Their work revealed four preferred options for flexible working. These were presented to the board and the relevant workforce. 160 employees were invited to indicate their preference on a “preference sheet”, supported by an information pack describing the options. Although the response rate was over ninety per cent, almost half of these indicated a preference for a “fifth option” or “none of the above”, which indicated deep dissatisfaction with the findings of the LAT.

Although the workforce broadly accepted that change was inevitable, opinion hardened against possible changes to holiday entitlement and reward. The LAT appreciated this, but without boardroom level agreement, they could not sanction such changes. Equally, the board did not want to start applying terms without the broad support of the workforce. A presentation was arranged by the LAT and attended by the entire workforce of Facility A, where employees were invited to see the work that had been put into the project by the LAT teams.

The meeting revealed to the LAT that the majority of the

workforce were not in fact categorically opposed to the proposed changes, but that they felt remote from the decision-making process and ill-equipped to make a choice, without clarification from the board on two key issues: reward and holidays. The meeting did however enable the LAT to narrow the final selection to two key options, which was sufficient for the board to present its final terms.

A second “preference sheet” was presented to the workforce, along with a “re-enforced” information pack. Of 133 preference sheets set out, 120 came back, with a clear majority in favour of one option. The preferred option enabled two groups of workers to adopt separate working arrangements based on a four-day week, from Monday to Thursday or Tuesday to Friday on an alternating cycle, with measurable savings of over £500,000.

Although the option was marginally less cost effective than the alternative, the executive board accepted the workforce’s decision. They also agreed to pay £1000 to every member of staff who adopted the new arrangements in recognition of the savings that they have “already” made, which included: more intensive use of equipment; reduced overtime; fewer bottlenecks and increased productivity.

to save the facility canteen from closure, by making the workers responsible for running the service. There have also been some important benefits for the organisation including a shop floor initiative to design a new casting process that has saved AWE over £100,000 in the first year alone. [See Box 5]

Site C, a facility located at Burghfield, also ran partnership workshops in 2001 and set up a Site Action Team (SAT), represented by management, trade unionists and employees. Site C has tried to introduce a more formal representative element. As one employee explained, *“the site action team tries to attract individuals from throughout the facility, representing a cross-section of opinion”*. The SAT also welcomes volunteers, although regular attendance by the core members is taken very seriously and any absent party is expected to send a representative in their place. Guests from other facilities are also welcome to attend SAT meetings and during difficult times these have been particularly helpful in maintaining the momentum of partnership.

To date 50 LATs have been set up at the site. The successful LATs have included issues as diverse as waste processing, the telephone system, catering facilities, team briefing, the design and furnishing of a new reception and exhibition space, contracts with a new protective clothing supplier and a project to utilise derelict equipment from workplaces that have been closed as part of restructuring. The latter project alone has already saved AWE over £100,000. As in Facility A, employees are already being involved in managing voluntary redundancies and it is also likely that parts of Site C will adopt *“alternative working”*.

Casting Process Action Team

[Box 5]

AWE supplies uranium metal plates to its customers. Traditionally these were cast as a square plate to be guillotined into three separate plates of equal size. When the guillotine, which dated back to the 1950s finally broke down, it was found that the cost of the repair and bringing the equipment up to new safety standards would cost AWE over £70,000.

Previously if such a problem arose, the management team would decide what to do. This time it was also presented to the operatives working on the process. They formed a LAT and used interest-based problem-solving to work back the problem and come up with a solution. They decided that they could remove the guillotining process altogether, by casting the plates directly to their customer’s requirements.

The team designed a mould to recast the part and put together a scale cardboard mock-up. They also got engineering drawings produced and drew up a procedure, which had to be approved by health and safety. Finally they received permission to build the mould and cast the new component, which was successfully tested by operatives.

By reducing the number of stages in the production process, the LAT effectively saved AWE the equivalent of eight days of labour per batch of plates. The new procedure has also reduced waste, reduced the cost of recycling and improved the quality of the plate, producing about £100,000 worth of savings, this year alone.

Sustainability

The Head of Manufacturing believes that *“more problems are being solved, more quickly and to a higher standard as a result of partnership... equivalent to a 40-60 per cent improvement in productivity in Facility A”*. This view is supported by evidence of employee participation in nearly 200 Local Action Teams, presented at a partnership conference which was itself organised itself by a Company Action Team. As one operative explained, working in partnership has *“give[n] the staff a voice... one that managers will actually listen to”*. Perhaps surprisingly, some managers also shared this feeling. *“Partnership”*, considered one junior manager *“is about everybody being able to contribute*

without being inhibited by others present”.

Trade union support for partnership at AWE has also been critical to the sustainability of the partnership model and its structures. The unions initially played a critical role in setting these up and subsequently in the design of the partnership workshops. Amicus-AEEU and the T&G are also long-standing *“partners”* in AWE’s award winning health and safety and assurance systems. According to the T&G Deputy Convenor, *“partnership has helped get everybody working together and getting to know one another... it has brought a lot of people out of their shells”*. The Deputy Convenor for Amicus-AEEU, also comments that *“partnership has*

had an important role in drawing together and co-ordinating isolated teamwork activities”.

Support for partnership is not however universal. Some managers believe that partnership has compromised their right to manage. One manager commented, *“there are plenty of people who want to be on partnership LATs, but not so many who want to solve problems. There are too many LATs, that have gone on too long, with no sign of closure”.*

Consensus decision-making appears to work best when focused on specific issues, dealt with by small teams of predominantly like-minded people. The larger and more heterogeneous the group and the issues being faced, the more difficult it becomes to engage in effective problem-solving and meaningful consensus decision-making.

There are however two key areas in which AWE is aware of the need for change, if partnership is to be taken forward:

Firstly to establish a new approach to the reward and recognition of staff as individuals, as groups and as facilities in partnership activity. *“Reward is the cornerstone to sustaining partnership, we are trying to motivate people and need to be more sensitive to the reward angle... it is all about becoming a more professional partnership organisation”, explained a manager.*

The financial benefits of partnership have undoubtedly

favoured AWE. This is something both the staff and management appreciate must be resolved if partnership is to sustainably develop.

Secondly, to consider whether voluntary participation on local action teams is sufficiently representative of all staff for effective problem-solving and consensus decision-making to take place. This is an issue that is likely to become more important with the introduction of the EU employee consultation directive in March 2005, and one that has led some employees and FAT members to request a more active role from the trade unions in some of the more complex LATs.

With the runaway success of bottom-up partnership, the company level structures, including the role of the company action teams and the Umbrella Group have some catching up to do.

Again, this is something that AWE, the trade unions and the workforce intend to develop jointly.

Conclusion

By engaging the *willing contribution* of the workforce, partnership activity at AWE has developed at a remarkable speed. The partnership champions, including the partnership facility co-ordinators (one in each site), action team members and facilitators have successfully managed the expectations placed on partnership, while continuing to grow support from the bottom to the top of the

organisation with practical benefits for the employees and the organisation. As the Director for Manufacturing explains, *“AWE is full of talented individuals and it is they who are making such a significant difference in the company. Partnership at AWE is truly being carried by the employees”.* To a large extent this has been made possible by the open and honest sharing of information with the workforce and by encouraging them to engage in problem-solving and consensus-based decision-making on issues that previously would have been the prerogative of management alone.

Having taken stock of the initial burst of partnership activity, a process symbolised by the partnership conference to which the entire workforce were invited, AWE recognise the need to put partnership on a more measured and sustainable basis. In early 2002 a Director of Continuous Improvement was appointed, with direct responsibility for continuous improvement, including leadership development, process and quality improvement and partnership. Her challenge is to demonstrate that given all the investment the organisation has made, partnership really does make business sense. Nevertheless, she remains focused on the one key question which underlines how thus far partnership at AWE has been so successful: *“How do we make these things work if we do not develop interest and passion from the bottom up?”*

The views in this case study are those of the participants and may not reflect those of the IPA.



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