

## Aircelle Make It Enterprising Challenge 28 March 2007

### Evaluation Report

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## 1.1 Background

To attract the brightest and best new talent into manufacturing, The Manufacturing Institute has recently launched the *Make It* campaign. Make It is designed to raise the profile of the sector and promote manufacturing as an exciting and rewarding career destination for young people.

It is the banner for a whole raft of high profile education and awareness raising activities aimed at introducing teenagers to manufacturing and dispelling the many myths that contribute to a negative public image of the sector.

A key element of Make It is a range of hands-on activities for young people and teachers including an exciting new series of events for 2007 – the *Make It Enterprising Challenges*.

There will be five sub-regional heats of the Challenge and a grand regional final later in the year. Each heat will have a sponsoring manufacturing partner and will be designed to challenge existing negative perceptions of the sector and instead promote a dynamic, exciting image of the many career opportunities manufacturing can offer. The resources developed for the day will support the teaching of enterprise education in an informative and interactive way.

The first of the five heats took place in Lancashire and was jointly sponsored by The Manufacturing Institute and Aircelle, one of Burnley's top employers and a world-leading aerospace manufacturer.

Aircelle, which is part of the SAFRAN group, employs around 650 people at its Burnley site where it manufactures aerospace components. As a large employer, Aircelle is committed to creating strong links with the community and investing in local young people. It is especially interested in helping schools develop a future workforce of highly skilled, highly motivated and enthusiastic youngsters.

## 1.2 Objectives for the event

The overall objectives for the Make It Enterprising Challenges are to:

- Promote a positive image of manufacturing as a vibrant, dynamic and exciting career destination for both girls and boys
- Highlight the range of rewarding and varied careers that the sector can offer young people
- Promote the manufacturing partners as employers of choice
- Raise the profile of The Manufacturing Institute as a charitable organisation and its 'Make It' campaign
- Introduce the young people to enterprise education

As with all Make It initiatives one of the critical success factors is to ensure that the needs of the manufacturers are met. Consequently Aircelle was asked to outline its own objectives for involvement in the event which were described as:

- The desire to create a better skilled future workforce
- Opportunity to raise their profile as an employer of choice
- Local PR

- Staff development – empowering staff to take responsibility for planning and delivering the event
- 'Feel good' factor – improving motivation amongst employees

### 1.3 Planning

Nicola Eagleton took the lead role on planning the event from within The Manufacturing Institute whilst Louise Irving, Organisational Development Manager, took the lead role at Aircelle. A planning group was established which included five young Aircelle engineers who had been identified for the project both as a staff development opportunity and as positive role models from within the sector. The young engineers, who had entered the sector via either an apprenticeship or graduate route, would be acting as ambassadors for manufacturing as an exciting and rewarding career option. It was agreed that the planning group would work together on the development of the programme and activities for the day and that the young engineers would act as facilitators to the teams during the actual event. This process took place over a period of three months and included seven site visits to Aircelle by NE.

It was decided that the most suitable venue for the event was Burnley Football Club and Aircelle agreed to meet the cost of hiring the venue and catering whilst The Manufacturing Institute would lead the project and meet the costs of resources and materials. Similarly The Manufacturing Institute would take responsibility for invitations to, and liaison with, the schools whilst Aircelle would make arrangements regarding room hire and catering with Burnley FC.

It was agreed that places would be allocated on a first come first served basis to schools within a 10-mile radius of the Aircelle site of which there are 35. All 35 schools were contacted by telephone in the first instance to check the name of the most appropriate contact and then personalised invitations were sent out four weeks before the event.

The response from schools was initially slow and so the geographical area was widened to include schools outside the 10-mile area. Two local Burnley schools declined to send a team citing the reason that all their Y9 pupils were revising for their SATs in May; other schools sent their apologies because of issues with staffing.

Twelve teams, consisting of eight Year 9 pupils (aged 13-14), were scheduled to attend although one school cancelled on the morning of the event. In addition to the pupil teams the accompanying teachers were asked to make up their own teams and to complete the same activities as the children. The total number of participating teams therefore was thirteen.

### 1.4 Participants

The following schools took part in the challenge:

	<b>Name of School</b>
1.	Hameldon Community College, Burnley (x2 teams)
2.	Blakewater College, Blackburn
3.	Norden High School & Sports College, Blackburn
4.	Shuttleworth College, Burnley
5.	Unity College, Burnley

6.	Rhyddings Business & Enterprise School, Accrington
7.	Colne Park High School, Colne
8.	Turton High School Media Arts College, Bolton
9.	Colne Primet High School, Colne
10.	Bishop Rawstone C of E Language College, Preston

The following Aircelle staff were involved:

Name	Position	Role in the Challenge
Brendan Carney	Technical Apprentice	Planning group member & facilitator
Darren Mitcheson	Operations Director	Champion
Iain Minton	Concurrent Engineering Director	Champion
Jim Geoghegan	Operations Manager	Presenter & Dragon
Louise Irving	Organisational Development Manager	Planning group lead & Dragon
Matt Herterick	Technical Apprentice	Planning group member & facilitator
Neil Clark	Stress Engineer	Planning group member & facilitator
Scott Lucas	Technical Apprentice	Planning group member & facilitator
Tom Wormleighton	Project and Data Control Team Leader	Planning group member & facilitator
Janet Frost	Organisational Development Advisor	Facilitator

### 1.5 Pre-Event Questionnaire Findings

The young people were asked to complete a perceptions questionnaire upon arrival. The results from the 84 completed forms are as follows:

#### 1. What job would you like to do when you finish school?

Pilot, retail, musician, poet, plumber, police, fashion designer, doctor, DJ, vet, forensic scientist, computers, woodwork, psychology, midwife, nursery nurse, actress, car designer, nurse, snooker player, building trade, footballer, lawyer, architect, PA, infant teacher, estate agent, mechanical engineer, psychiatrist, joiner, car mechanic, barrister, graphic designer, brain surgeon, interior designer, investment analyst, journalist, architect, banker, music journalist, scientist, accountant, physiotherapist, animator, tv presenter, farmer, artist, counsellor.

		YES*	NO	DON'T KNOW	NO ANS
2.	Have you heard of the company Aircelle?	20	80	-	-
3.	Do you know what Aircelle do?	33	-	-	67
4.	Have you ever visited a manufacturing company?	32	68	-	-
5.	Do you know anyone who works in manufacturing?	30	33	31	-
6.	Would you like to work in manufacturing or engineering when you leave school?	3	55	42	-

**\*All answers are in percentages unless stated**

**7. Do you know what Aircelle do?**

Make engines & aeroplanes, make aircelles, they're a French company, manufacture, make things that fly in the air, design flying things, plane company, make aeroplane engines, making and engineering aeroplanes, manufacturing company.

**8. What 3 words come into your mind when you think of manufacturing?**

Dirty, building, design, conveyor belt, paperwork, making things, construction, machines, colour, product, teamwork, cars, selling things, factories, money, creating, art, box, packets, cardboard boxes, materials, advertisements, engineering, practical, fixing, bricks, metal, business, mass produce, motor bikes, making stuff, models, oil, mending things, men, boring, common, dull, food, wood, production, constructing, advertising.



**The winning team from Bishop Rawstorne Church of England Language College**

**2.1 Format of the Day**

The programme needed to allow for pupil transportation to and from the schools and so the day began with refreshments from 9.30am and closed at 3pm.

The day was designed to ensure that the young people were given a greater understanding of the range of jobs available within the sector and so each team of pupils became a manufacturing company for the purposes of the challenge. Each member of the team was asked to match their own skills and qualities to those covered by a choice of job roles including Managing Director, Design Engineers, Production Managers, Finance Director and/or Sales & Marketing).

Through the course of the day each team had to design, cost, build and market an aeroplane ensuring that it met the needs of their chosen customer. Each team was also required to pitch their ideas to a panel of investors in a 'Dragon's Den' style presentation.

The judging of the event was extremely stringent; the Dragon's, or judges, monitored the teams progress throughout the day. The teams were not just measured on their completion of the key tasks but also on teamwork, use of initiative, problem solving and other enterprising qualities.

The Dragons were as follows:

1. Rachel Brickell – North West Aerospace Alliance
2. Louise Irving – Aircelle
3. Jim Geoghegan – Aircelle
4. Mike Barker - Burnley College

All schools that took part in the challenge will receive their scores from the day along with a copy of this report.

## 2.2 Prizes

All of the pupils and teachers who participated were given an individualised certificate which included the logos of both The Manufacturing Institute and Aircelle.

In addition the top two teams have been given the unique opportunity to take part in a flight simulator trip thanks to the support of Alteon Training in Cheadle, Manchester and the University of Liverpool. These trips will be arranged to take part after the Y9 SATs in May.

## 3.1 Pupil Feedback

At the end of the day the pupils were asked to complete an evaluation form about the event; 83 forms were received.

### 1. What did you think of the day overall?

Excellent	Very good	Good	Average	Poor
15%	66%	16%	1%	2%

### 2. After today which 3 words come into your mind when you think of manufacturing?

Teamwork, creativity, decision-making, making, factory, manufacture, designing, hardwork, creating, planning, money, building, managing, organising, Aircelle, planes, deadlines, Dragons, products, global, metal, fixing, imagination, communication, completion, thinking, helping, business, risk-taking, profit, good money, stress, boring, modern, opportunities, machines, presentation, effort, strategy, listening, imaginative, problem-solving, selling, wood, bricks, communicating, budget, pitches, creative
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### 3. Do you now have a better idea of the different jobs available in manufacturing?

Yes	A little	No
81%	15%	4%

#### 4. After today would you now consider a career in manufacturing or engineering?

Yes 49%	No 51%
<p>For what reason?</p> <ul style="list-style-type: none"> <li>• It's a very interesting job</li> <li>• You can be creative and work as a team</li> <li>• Helps make you more confident in practical activities</li> <li>• Sounds fun</li> <li>• I understand more about it now</li> <li>• The money is good and I liked the teamwork</li> <li>• Because I like science</li> <li>• Because it's interesting and I want a communicating job</li> <li>• I enjoyed the activities that we did today</li> <li>• Because the designing side of manufacturing is really good</li> <li>• Yes because it involves teamwork</li> <li>• I think having a job in manufacturing is exciting and involves a good salary</li> <li>• I like fixing things</li> <li>• Because I'm good at designing</li> <li>• It's fun and opens new doors</li> </ul>	<p>For what reason?</p> <ul style="list-style-type: none"> <li>• I don't think it's my thing</li> <li>• I want to do forensic science</li> <li>• Because I want to be a doctor</li> <li>• I want to become a vet</li> <li>• No, I already know what I'm doing when I leave school</li> <li>• I want to be a footballer</li> <li>• It's not my thing – I enjoyed it though</li> <li>• I want to work in a bank</li> <li>• It's not the type of job I would choose because I'm not good at deadlines</li> <li>• It's hard and boring</li> <li>• I want to be an animator</li> <li>• Doesn't appeal to me</li> <li>• No, too hard</li> <li>• I want to be something better paid</li> <li>• I want to work with children</li> <li>• I want to be an accountant</li> <li>• More interested in media</li> <li>• I want to go into acting</li> </ul>

### 3.2 Teacher Feedback

The thirteen teachers that attended the event were also asked to complete evaluation forms:

#### 1. Please tell us what you thought of the following:

	Excellent	Good	Satisfactory	Poor
Pre-event information	46%	54%	-	-
Contact with The Manufacturing Institute	54%	46%	-	-
Venue location & facilities	62%	31%	-	7%
Catering	16%	7%	77%	-
The event overall	62%	38%	-	-

#### 2. In what ways, if any, do you think the event has been beneficial to your pupils?

- Confidence building, teamwork, organisational skills and design strengths and weaknesses
- Very helpful for the delivery of Enterprise; pitched at a very good level
- Opportunity to work as a group on a totally different type of activity to normal school work
- It will have expanded their knowledge of manufacturing and the processes involved
- Taught them to work both as a team and independently without any adult help
- New, exciting mixture of tasks requiring many enterprising skills. It was good to throw them in at the 'deep end' with a real challenge from industry
- Working as a team and giving them confidence; considering industry jobs
- Focus on how design and technology in schools relates to industry
- Participating in events with other schools, team work and thinking about the future
- Demonstrating how design has to be focused upon customer requirements and the limitations and compromise related to good design
- Given the pupils a unique opportunity to work as a team and working to deadlines. It has provided them with insight into the processes involved in industry and promoted many skills
- Team work, self-esteem, problem solving, leadership qualities, awareness of all aspects of manufacturing process

**3. Do you think it has improved their understanding of the World of Work and Enterprise?**

Yes	No	Somewhat
100%	-	-

**4. Do you think it has improved their perceptions of manufacturing?**

Yes	No	Somewhat
85%	-	15%

**5. Has it improved *your* perceptions of manufacturing?**

Yes	No	Somewhat
77%	8%	15%

**6. Had you heard of Aircelle before you were invited to this event?**

Yes	No
23%	77%

**7. Would you now recommend Aircelle as an employer?**

To all pupils	To the high achievers	To the less able	No
75%	25%	-	-

**8. Any additional comments about the day?**

- Thank you for a well organised event
- Thank you to Aircelle and The Manufacturing Institute. It would be great if more employers such as Aircelle and other manufacturing companies could get involved in these things, too often it's the service industry and this needs to change to give students a broader picture
- Good designers need more info to make decisions – you had to choose the plane before you knew what could go in it; need to provide the info needed for considered design
- Great, fun day
- Need to select the aircraft using further information (which is provided later) and the food could be improved
- Well organised and presented
- A wonderful day enjoyed by pupils and teachers, thank you very much
- Excellent organisation of the activities
- Excellent day from start to finish, thanks



**A group of suitably nervous looking teachers presenting their ideas to the Dragons**

### **3.3 Manufacturer Feedback**

The financial investment made by Aircelle amounted to approximately **£1,500.00**. This figure includes the catering at Burnley Football Club (room hire was gratis) and 'goody bags' for pupils and teachers consisting of branded Aircelle mugs, pens and novelty bugs. In addition to this there was the added investment of in-kind support through employee time.

The immediate return on this investment can be seen though the local PR generated by the event. Two articles and three photographs (using a pre-event press release put out by TMI) appeared in the Lancashire Telegraph and also the Burnley Express. These publications have an average combined circulation of 36,500 people and the equivalent advertising value (AVE) of these articles amounts to **£4955.00**.

In addition to this very tangible three-fold return there have been a number of additional benefits to Aircelle:

- All secondary schools within a 10-mile radius of the Aircelle site were invited to attend the event thereby increasing awareness of the company as a local employer
- 84 pupils and 13 teachers (the majority of whom had not heard of Aircelle prior to the event) received a very positive, hands-on introduction to the company
- These positive messages will be repeated to many hundreds of peers, colleagues and parents
- The project increased the breadth of experience and improved the confidence of existing Aircelle employees and also helped support team building
- All Aircelle employees were notified of the company's involvement in the Make It Enterprising event thereby raising awareness amongst all staff members of Aircelle's involvement in, and commitment to, the local community
- There has also been a raised awareness amongst local stakeholders (including the North West Aerospace Alliance, Burnley College and Burnley Vision) of Aircelle's commitment to the local community

### **Aircelle Employee Comments**

"Working in conjunction with The Manufacturing Institute provided a perfect partnership for our manufacturing challenge. They guided us through the complexities of the educational elements of our project and helped us to design a quality experience for the pupils that developed a variety of skills critical for the success of manufacturers in this region. We could not have done this alone.

The business benefits have been wide ranging. The five key individuals involved in the event have developed new skills and this development opportunity is priceless. We have also developed new links with local schools and potential employees of the future. Feedback has been extremely positive and indicates the event will have a lasting impact. All in all this has raised the profile of Aircelle in this area which in turn supports our Business Strategy".

**Louise Irving, Organisational Development Manager**

"I felt the event was very successful and was pleased to see the level of involvement and enthusiasm shown by the students, who I believe enjoyed the event and got some good experience out of it. Personally this is the first time I have been involved in organising a challenge type event and the first time I have worked with school children and it was certainly an interesting experience and a valuable one in terms of increasing my own breadth of knowledge. The preparation did take considerably more time out of my working day than was initially anticipated and I think it is important that this is recognised if/when arranging other similar events in the future.

Hopefully Aircelle will be able to support your activities in the future and, time allowing, I would certainly be willing to help out again. Lastly I'd like to say thanks for what I felt was a genuinely valuable experience and it's always nice to do something different now and again".

**Neil Clark, Stress Engineer**

"I think the students really enjoyed themselves - I was very surprised that most of them still worked through their lunch (I'm not sure I would have done at their age!!). I was very happy with the way it all ran and I would enjoy doing it again.

I think the company and manufacturing as a whole have gained a great deal from this activity, I definitely think all the hard work was worth it and would encourage other manufacturing companies to do the same".

**Scott Lucas, Technical Apprentice**

"Everyone involved has said how much they enjoyed the day and also how rewarding it was, especially facilitating closely with the teams. I for one enjoyed it a great deal, and was very impressed in how much the kids bought into it and with the quality of the work they produced.

"With regards to benefits to Aircelle the obvious one is publicity on a local awareness level, especially with the amount of different parties involved, but also in potential later recruitment as well, especially for apprentices. Secondly, I think there is some advantage in terms of internal team building as well for the company employees who get involved.

I would tell other manufacturers to definitely get involved, apart from the company advantages above, I think all businesses in the sector have an obligation towards maintaining a steady flow of new recruits otherwise the employment pool will dry up and the companies will not be able to compete".

**Tom Wormleighton, Project and Data Control Team Leader**

"I feel that the event was very successful and the kids seemed to enjoy the challenge, I was surprised at how well they got on with the work given as I expected to have to help more but it was more the teachers that seemed to struggle!

I have thoroughly enjoyed the entire process and as far as company image goes I think that because the pupils enjoyed the day they will talk about it and so it has provided a solid foundation for us to build on.

I was impressed by the quality of pitches that the teams presented and felt a sense of pride when 'my' teams were stood doing theirs (just a shame they didn't win!)".

**Matt Herterick, Technical Apprentice**

"I saw a great team spirit from everyone involved. It made me very proud to see the young engineers create this event and go to such effort so as to present a positive picture to prospective new engineers for the future.

The feedback I have had from the attendees was very positive, and to me that shows that the job was well done. If anything, this confirms that our people are caring and willing to share their skills and knowledge with others, which should stand the industry in good stead going forward.

Thank you for all your effort and long may these links continue".

**Iain Minton, Concurrent Engineering Director**

## 4.1 Recommendations for Improvement

- 1 Although the target number of participating schools was attained, the recruitment of teams was difficult at times. It is important to manage the expectations of schools (as there are limited places available), and to respect the understandable desire of the manufacturing partners to work with local schools, however the number of schools invited to attend the other heats will be increased.
- 2 With particular regards to the materials developed for the day there were four minor suggestions for improvements:
  - a) Some teams completed all their tasks well ahead of the deadline set and needed to be prompted to work on optional extras in order to gain more points e.g. designing promotional leaflets, airline tickets etc. It would be useful to include these ways of extending the tasks on the written instructions at the outset.
  - b) Some teams struggled when building the aircraft because they had not read the Master Layout document. Another suggestion then is to give this to them before they are given the net (the template from which the aeroplane is built) and to encourage them to pay closer attention to these instructions.
  - c) The nature of events such as this means there will always be a gap in activity whilst the judges finalise their scores. Although this can be partially filled with the completion of evaluation forms and the handing out of certificates, it might also be useful to include an on-the-spot task where the young people could win a prize but which doesn't affect their overall score.
  - d) The order of the tasks may need to be amended as two teachers felt that the pupils needed all the information (including what options there were for furnishing the aeroplane) before they had to choose a type of aircraft

## 4.2 Summary

Verbal feedback on the day, along with the completed evaluation forms; show that this was an extremely successful event which met the original objectives agreed by The Manufacturing Institute and Aircelle.

### Key Points

- 81% of pupils felt the day had improved their understanding of the range of careers available within the sector
- 96% of pupils rated the day as between good and excellent
- The numbers of pupils interested in a career in manufacturing or engineering rose from 3% at the start of the day to 48% by the end of the challenge – a sixteen-fold increase!
- Most of the pupils who said they would still not be interested in a career within the sector stated that they already had an alternative career in mind
- 100% of the teachers would now recommend Aircelle as an employer of choice to their pupils
- Aircelle employees feel that this was a highly valuable activity which supported their Business Strategy and offered extremely good value for money

- 100% of teachers felt the day had improved the pupils understanding of the World of Work and Enterprise; 85% felt the day had improved the pupils perceptions of manufacturing and 77% felt the day had improved their own perceptions of the sector
- A number of teachers, both on the day and subsequently, were so impressed by the quality of the materials that they have asked to be sent copies so they can deliver the activity themselves in school



**Planning group members and Dragons**

For more information about the Make It Enterprising Challenge or the Make It campaign please contact Nicola Eagleton at [nicolae@manufacturinginstitute.co.uk](mailto:nicolae@manufacturinginstitute.co.uk) or on 0161 874 3261.