

EMPLOYER/HUB ENGAGEMENT – CAL INTERNATIONAL



STEM Ambassador Hub Merseyside & Cheshire

Context and Overview

This report seeks to illustrate the journey taken by one company following initial contact with its local STEM Ambassador Hub, highlighting:

- The formative work that is often required in establishing and nurturing a new company/ Hub relationship.
- The support STEM Ambassador Hubs can provide in enabling companies to move from non-engagement with schools to active support.
- The benefits that can ensue.

CAL International is a concept to production engineering company based in Knowsley, Merseyside, which has worked on a number of projects for 3M Scott, a company that has been engaged with the STEM Ambassador Programme both locally and nationally for some time. CAL International's CEO Cliff Kirby sits on the Board of Knowsley Chamber of Commerce, where initial connections were made with All About STEM's (HUBMC) Managing Director, **Michelle Dow**. The company's position as an Associate of the Liverpool City Region (LCR) Local Enterprise Partnership (LEP) for Engineering and Manufacturing, and All About STEM's active engagement with the LEP, also helped lay the foundations for an effective working relationship to develop with CAL International.

Since 2011, All About STEM has facilitated regional Engineering Your Future (EYF) events in Liverpool and Warrington, on behalf of the **North West Joint Institutions Group** (JIG). The events are supported by a range of companies and their STEM Ambassadors, who deliver a series of workshops and a careers marketplace and provide host engineers to support the groups of 6th formers during the event.

3M Scott, a premier manufacturer of innovative respiratory and personal protective equipment and safety devices, regularly supports the event by taking responsibility for the delivery of one of the five workshops. In 2018, due to unforeseen circumstances, the company had to pull out of the event, and with just three days' notice, called on CAL International to step in to cover them.

Group Engineering Manager, **Andy Miller**, had some distant previous teaching experience and was called upon by the CAL team to plan their workshop! On the day, Andy himself, **Lee Fogg**, the company's Technical Director, and a team of CAL apprentices delivered five workshops introducing the company and the varied types of engineering work they do, including automotive, oil and gas and rapid prototyping engineering. They gave an insight into the life of an engineer and explained the different routes that can be taken in order to get into an engineering career. The workshops also consisted of a challenge that the children completed in groups. The overall team with the highest score from the day won a selection of engineering-based prizes including a metal 300ml ruler, engineering reference pocket book, engineer's reference handbook, digital Vernier calliper and a CAL International time-zone device; worth over £60 for each member of the winning team!

During the course of the EYF event, All About STEM staff were able spend some time with the CAL staff, explaining the work of the Hub and outlining the wider STEM Learning offering and discussing the opportunities open to the company from across the various contracts managed by the Hub.





At the time, the Hub was facilitating the **Make It Work** challenge, a series of events, supported by the Liverpool City Region Combined Authority and co-funded by the Metro Mayor, Steve Rotherham. Simon Reid, Sector Manager for Advanced Manufacturing at the LCR LEP was charged with identifying local companies to sponsor each of the local authority heats. On the back of their previous engagement with All About STEM at the Engineering Your Future event, CAL stepped up to support the **St Helen's heat**.

Hosted by St Helen's College, the event saw ten teams from St Helen's local authority schools take part in a robotics challenge designed to enable them to practise their team-building, problem-solving, communication and creative skills. Input from company sponsors helped frame the activities in a real-world context and give insight into STEM careers and entry routes. **CAL International** gave a presentation at the start of the day and their staff team, again including Andy, Lee and their apprentices, each supported the school teams with their builds, enabling them to provide practical advice and guidance as well as sharing more informally about the company and their own careers.

These positive experiences at EYF and Make It Work, have given the company an insight into the value, for young people, company staff and business generally, of schools engagement work. Building on the start made, the company has decided to exhibit at the Big Bang North West event in July 2019 and has begun the process of registering a cohort of STEM Ambassadors with Andy, leading by example, as the first sign-up.

Impact on young people

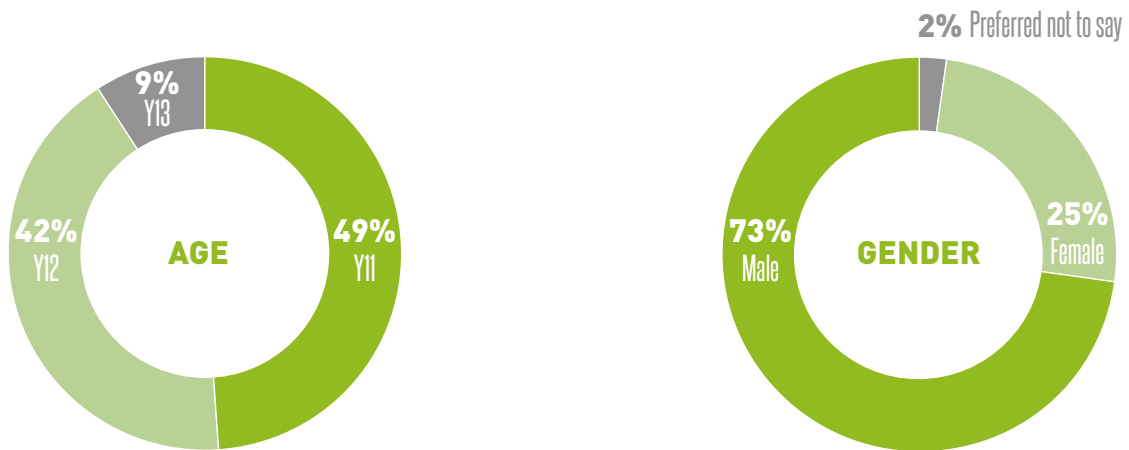
The work CAL has undertaken has had a positive impact on young people. Evaluation data collected at the EYF event indicates that the event was enjoyable and met students' expectations.

- **82.45%** of students reported the two highest ratings when asked if the event met their expectations.
- **79.13%** of students reported the two highest ratings when asked if the event was enjoyable.
- **78.16%** of students reported the two highest ratings when asked if they would recommend the event to friends.

The data also illustrates the effectiveness of the activities that formed the content of the event in positively shaping the students' attitudes to engineering and knowledge about options and routes into a career.

- **95.35%** of students reported the two highest ratings when asked if engineering was a suitable career for both males and females.
- **73.26%** of students reported the two highest ratings when asked if the event had affected their choice of career (it is worth noting that many students opted to attend the event as they were already interested in engineering in its broadest sense. The event had helped some students identify specific sectors in which they may wish to work).
- **79.07%** of students reported the two highest ratings when asked if they knew what to do next in order to become an engineer.
- **80.24%** of students reported the two highest ratings when asked if the event had made them more interested in exploring an apprenticeship route into engineering.
- **74.42%** of students reported the two highest ratings when asked if the event had made them more interested in an undergraduate route into engineering.
- **82.14%** of students reported the two highest ratings when asked if the event had inspired them to work in engineering in the future.

Engineering Your Future Evaluation Data



Please tick one answer for each of the following questions: 1 is the lowest 5 the highest...

	1	2	3	4	5
Did EYF event meet your expectations?	2.3%	2.3%	12.64%	51.72%	31.03%
How enjoyable did you find the event overall?	2.3%	4.6%	13.79%	47.13%	32.18%
How likely would you be to recommend this event to friends?	4.6%	4.6%	12.64%	39.08%	39.08%

To What extent do you agree or disagree with the following statements? (1 disagree, 5 agree)

	1	2	3	4	5
Engineering is suitable for both females and males	1.16%	1.16%	2.33%	9.3%	86.05%
The EYF event has influenced my choice of career pathway	2.33%	4.65%	19.77%	41.86%	31.4%
I know what to do next in order to become an engineer	0%	2.33%	18.6%	40.7%	38.37%
The EYF event has made me more interested in exploring an apprenticeship in Engineering	3.49%	2.33%	13.95%	36.05%	44.19%
The EYF event has made me more interested in exploring an Undergraduate degree in Engineering.	0%	4.65%	20.93%	37.21%	37.21%
Taking part in the EYF event has inspired me to want to work in engineering in the future.	0%	2.38%	15.48%	30.95%	51.19%

'Make It Work' Robotics Challenge Data

The evaluation data collected at the Make It Work event clearly illustrates the enjoyment, engagement and interest of the students who took part.

- **100%** of students reported the two highest ratings when asked about their enjoyment of the event. **87%** gave the top rating.

Additional comments from the students included:

- It was a lot of fun and was worth all of the school day. The staff really helped and were very kind about it as they motivated me to keep trying.
- The day was amazing and I wish I could do it again.
- I learnt new skills like team work and problem solving.
- Rather good to be honest.
- The day was fun and I did enjoy it.
- Great fun! We won undefeated!
- Lots of fun. We ended up second. Big up apprentice Nigel! CAL were very good for funding the event.
- Great experience for anyone who wants a career in engineering or mechanics.
- An educational but also amazing adventure!
- One of the fun-est days of my life!
- Best day I've had learning new things. Brilliant it was free. Totally worth coming.
- It was amazing!

Students also reported that the event had positively impacted their knowledge of and potential future progression into STEM careers.

- **89%** of students stated that the event had definitely or maybe made them consider a career in engineering, manufacturing or robotics
- **100%** of students stated that they had learned at least a little about STEM careers at the event
- **100%** of students had received some help or advice from the STEM Ambassadors at the event

What year are you?

Y8	57%
Y9	43%

Rate today for enjoyment (5 high, 1 low)

5	87%
4	13%
3	0%
2	0%
1	0%

Has the day made you think about a career in engineering, manufacturing or robotics?

Yes	48%
Maybe	42%
No	10%

Have you learned new skills today?

Yes	77%
Maybe	20%
No	3%

Have you learned anything new about STEM careers?

Yes	70%
A little	30%
No	0%

Did you get any help or advice from our STEM Ambassadors?

Yes	83%
A little	17%
No	0%

If you got any help or advice from our staff was it useful?

Yes	73%
A little	23%
No	3%
I didn't get any	0%



Tweet



CAL International
@CALenquiries



Chloe with @Rainford_High
@allaboutstem @StHelensCollege
#LCRMakeltWork #schools #STEM
#Robotics #Engineering



The team from CAL were really complimentary about their experience supporting the two events and working with the students in different contexts. Lee Fogg stated:

It's great to be able to attend these kinds of events and to try and inspire these students who have an interest in the field. Engineering is an absolutely fantastic career to be in, is always changing and has endless possibilities as to where it can take you. All the children at the event were very receptive and showed real promise to be the engineers of the future!

Impact on employers

The company's journey to engaging staff directly in the STEM Ambassador Programme has taken time. However, along their journey, their relationship with the local STEM Ambassador Hub helped to provide an insight into:

- The importance of schools and community engagement.
- The advice, support and facilitation available.
- The concrete business benefits of fully-fledged commitment to the national programme.

The company's very first involvement in schools' engagement at the EYF event showed clearly the impact that such activity can have on the company's workforce in terms of enjoyment, enthusiasm and staff morale.

The event was a totally new experience to the whole CAL team and they confessed to having felt quite apprehensive at the start of the day, uncertain about what was expected of them and how students might receive what they had planned.

However, Andy said:

At the end of the day, the feedback we received from the Hub, teachers, students and other STEM Ambassadors was amazing! We had such a fantastic day! We all came out absolutely buzzing! We just knew we had to do more of this kind of stuff. We'd seen the difference it made. How could we not get more involved?

It was clear to the team that what they had presented was of value and the satisfaction they experienced as a result of this had only encouraged and motivated them to do more to promote the engineering sector and support young people in making informed career choices.

The company also benefited from their fledgling relationship with the Hub and the partnerships and opportunities this can open up. At the EYF event, Hub staff were able to take some time to explain to the CAL team the workings of the STEM Ambassador Programme and to introduce them to teachers, companies and individuals present who were already involved. This resulted in CAL beginning to benefit from the network that develops around the work of a STEM Ambassador Hub in various concrete ways.

For example, having been introduced to another STEM Ambassador, employed with a large local company, Lee had a conversation about an engineering issue on their site, which led to CAL being invited to quote on a large contract, opening up a new income source as well as potential future business and new networks.

In addition, teachers at schools such as Helsby High, who had taken part in the company's workshop, took staff contact details and followed up with invitations for CAL to attend their careers events. Such events provide the opportunity for the company to meet and influence a larger number of young people, as well as follow-up in more detail with those students who were present at the EYF event. Developing these relationships with teachers will enable the company to access a pool of interested and engaged young people, who could be potential future employees.

The CAL team highlighted that their involvement with the STEM Ambassador Hub had also brought additional benefits around social media presence. **Laura Radcliffe** from Pinch of Salts, CAL's media and marketing company said:

All About STEM's social media coverage is definitely seen as being of additional value to CAL International. All About STEM have a large twitter following and their projects/ events relate to a very current and worthwhile cause which CAL stand behind. CAL and All About STEM tagging each other in tweets and retweeting each other's posts is fantastic and means more engagement and more potential to work with other groups of children.

When CAL International took part in the EYF event, they were doing so out of goodwill, to help out a business partner. Little did they know that the experience would see the start of something much bigger for them as company. Though not a STEM Ambassador at that stage, following the event, Andy was able to articulate the evident benefits of engaging with the STEM Ambassador Programme and developing a working relationship with the local Hub.

Taking part in the day's events had helped Andy understand the benefits of such activities on staff personal development. He commented that:

The interaction between our staff and the students in the workshops has helped them to gain a better understanding of themselves. Talking with the young people about their role in the company has required them to think about their communication skills. Breaking processes down, in order to explain them in a way that is easily understandable, has helped them get a clearer understanding of what they do and how it fits into the bigger company picture. Even within the day I can see the impact on their confidence.

He could also see the potential benefits in terms of business development and recruitment stating that,

Being involved in an event where there is such a wide range of companies present helps staff to develop their own understanding of engineering and provides us with an insight into the work of other companies, widening our knowledge base. It also enables us to engage with audiences traditionally under-represented in the engineering sector, enabling us to promote the sector generally but also supporting our own recruitment.

Summary

In less than six months, engagement with their local STEM Ambassador Hub has brought a range of benefits for the company and encouraged and supported the development of increased, and effective, schools' engagement.

Feedback from one of the students provides clear evidence of the impact of CALs involvement in the events and provides a clear justification for the investment of companies in schools' engagement.

When asked to sum up the Make It Work event in one sentence the student stated:

Today was inspiring and I can't wait to work for CAL because I love engineering!

