Personal and career development in engineering

Employing and Managing Engineers

This audio track is an interview with Rod Taylor who talks to George Videman of the Open University. Rod is managing director of an electronics company in the UK and is well placed to comment upon the skills and qualifications required of engineers in today's professional world. He began with a brief description of his companies.

Rod Taylor
It's a small group of businesses. There are round about 120 people in total with around about a third of that number based on the south coast in the business, which is an engineering company, with around about 80 people here in the north-east, and we have a small office in Tampa, Florida. We manufacture electrical instrumentation which is used to ensure that products conform to the different electrical safety standards. We have an engineering function in the south and also one here in the north-east, but we recognise that we can't really bring all the different types of technology into a small company, and therefore we use quite a lot of external organisations, whether they be universities or sub-contract design houses. Of around about 120 employees we would have about 25% of that would be classified as engineering in one form or another, and about half of that would be graduate engineers, and again probably 50% of that would actually be a member of an engineering institution.

I/V
I gather you have quite an active programme of encouraging people to develop their careers and membership of institutions?

Rod Taylor
Irrespective of whether they're engineers or not, we do try and encourage development, self development, and the company's willing to invest in that, so we don't just single out engineers for that particular support. However, engineers are extremely important to us and we do find here in the north-east that we need to make sure that we're putting in place development programmes firstly to raise the competence of engineers on a broad front, and secondly to put something in place which will enable them to identify that there is a career development going on for them, and hopefully we will be able to retain them for longer than we would otherwise be able to do so.

I/V
Could you say something about the nature of these programmes?

Rod Taylor
As a business we would not normally reward people for gaining a particular qualification, or gaining some other recognition. Their rewards would come through the contribution to the business, and their standing within the organisation, and we would therefore try to be putting in place salary, bonus schemes, etcetera, which would reward them for their contribution to the company, and I believe that qualifications of whatever form would enable you to gain experience more quickly, and therefore be able to gain those rewards more readily. We do have different training and development programmes where we will actually support time that's needed and make 100% contributions towards the cost of their training, but again that would depend on the individual programme and as to how directly or related it may be to the business.

I/V
Some parts of these programmes involve people working towards institutional membership.

Rod Taylor

If I was to look at the staff in the company who are engineers, then some of those people will be working within the company through programmes such as teaching company schemes, or possibly case studentships, and then we'll have other people in the company who are direct employees involved in design and development project engineering, and all the rest of it. So certainly the people who have joined us through different programmes would all be working towards some form of professional membership of an institution, and as many as possible of our other internal staff we would be encouraging to do so as well.

I/V

Do you then as a managing director of an engineering company regard the role of the institutions as important to your industry?

Rod Taylor

Yes, I think they're probably of significant importance in a number of areas. They obviously set a benchmark in terms of standards, levels, and etcetera. For us to be able to assess engineers I think it's very important also that engineers as individuals have the opportunity to aspire to certain professional standards which gives them the credibility and status within an organisation, or within the industry as a whole, so I think from that point of view there's a value. On a more general front we find it extremely difficult to compete on cost these days, and therefore we need to be able to put into our price as much as innovation and technical superiority as we possibly can, and therefore we need to be bringing people into the business who can help us to do that. We are a business which has design, development, manufacturing, marketing, sales, all those different functions, but this business is driven by new product development and practically every individual in the company, we're part of a new product development programme or project team. One of the difficulties we have is making sure we can actually hit our targets, bring new products to market in time, and acquire the necessary resources, whether it be financial or otherwise, to make sure those projects come through. So the engineers will quite often be in a position where they're asked to not only be possibly the project manager of those teams, but they also have to develop skills to interface with individuals from different functions. We spend a lot of time with customers, having a very broad role indeed, well everybody has their own aspirations and they have their own views as to how they want to see their careers develop, but we would like to encourage our engineers to take a much, much broader approach. We don't want to take them away if necessary from pure technicalities of the product itself, but the real value to this business is making sure that at the end of the day we can produce world-beating products in the appropriate time, so it's very broad the way we see our engineers working.

I/V

How do you spot an innovator, where does this driving force come from?

Rod Taylor

A lot of the engineers, we will try and make sure that they're interfacing with other organisations, either other universities, we try and use various DTI programmes for inside British industry, etcetera, just so that we can actually expose them to the benchmarks of other businesses or organisations, and give them some idea of best practice, some of the areas they may want to follow, rather than keeping it all within the business itself.

I/V

But do you think you grow the innovators or do you try and select them at interview?

Rod Taylor

Attitude is very important. We use a number of different recruitment techniques to try and identify people with the right approach to the company. On the other hand, you can't get away from the fact that a small business has to have people, in a lot of cases, who've got expertise in different disciplines, and therefore you need to make sure that you have a software engineer who has the necessary embedded software skills, etcetera, so that is the number one requirement, but then our job after that is to give that person the opportunity to grow and develop, should they wish to take a broader approach to engineering.