The Manchester Association of Engineers

Lecture on 20th February 2001 - Roger Swain

I would like to talk to you here tonight about AMEC view of project management which we think is strategic to furthering our business around the globe so within the portfolio of AMEC we have got the traditional civil engineering and construction companies but we have also got some quite smart things like computer technology particularly Internet based technology and we have got oil and gas petrochemicals and mechanical electrical as well as the civils business.

So that's AMEC; as for myself, I've had 13 years of AMEC overall, not continuous years - I spent some time somewhere else and came back again. My background is very much in project management, of which I have got 23 years experience, mainly in the oil and gas sector, multi-disciplined projects of all sorts of sizes in the North Sea and the South Atlantic and offshore Newfoundland, but in addition to that I have done some infrastructure projects for London Underground, Thames Water, some building projects, so I have a varied background in the discipline of project management through all sorts of contracting mechanisms as well, for example, partnering and alienating, which I am going to talk about, lump-sum, turn-key contracting, really the whole gamut of project management and for some of you recent graduates or younger people here from AMEC, just to say that if you are interested in project management as a career path, we do now have a project management development programme working in AMEC in conjunction with UMIST and one or two other companies like Rolls Royce, BRW and there are entries onto that course every 6 months and that can lead you into a career in project management - it can also lead you to an MSC and behind that we can develop training programmes to make sure you get the right experience on the way.

So I think that's enough of the background; just before I continue, I can talk on this for hours, but no doubt you don't want to be here for hours and hours. I think we will finish about 8.30 - it depends on questions or any points that you may want me to clarify and I am quite welcome to take any questions at any time from the audience but if you really do have other commitments later tonight, and its going on a bit later on I don't mind if you actually have to leave, you know, if its getting towards 8.30 or something, I don't mind if one or two of you have to go, but lets just be flexible about this and see where we get to.

So, on with the subject; first of all, are you familiar with the expression that there's no such thing as a free supper? (laughter) - well, I would like to spend just a couple of minutes just Notting down here what you think are the key attributes of a successful project. I am sure we have all got project experience in the room; you know, I am not intending to make huge lists of what we think but anything you think makes a successful project, just should it out and I'll write it down.

Satisfy Customer - any others, shout it out,
Make a profit - OK, more,
Complete on time
Achievable plan
Enhanced reputation, any more
On time
To budget
Inspect
Teamwork
Milestones, what, achieved or just milestones in general, OK, milestone straight measurement I'll put if you let me
Correct scope definition, right any more
Successful co-ordination with others
Innovation - a few more
I'm going to put that as HSE record, OK
Any more?

Happy people - an unstressed project manager (laughter - we won't put that) - right, 2 more and I'll get on with this.
Quality product- good one - one more
Happy sub-contractors - I'll put that down for you.

Right, now you're probably thinking, where am I going with this and I hope it's going to work out at the end, we'll see, but every single one of those things you've said are definitely attributes of successful projects but what I am going to try and demonstrate here is what these single aspects, these single attributes, were they sit within a sort of strategic overview of project management.

So, this is not about tools and techniques like prima vera, cost control planning, procedures for sub-contract management, this, what I am going to present to you now, are AMEC's thoughts, it's the direction we're going in, of what strategic project management is all about, which from this sort of level drives the tools and techniques and behaviours and technologies, that we need to apply in projects of any size, whether they be single discipline projects, say worth £50,000 to the multi-discipline 2 million pound, lets say, Terminal 5 job, something like that.

OK - happy so far? OK? A little bit further background information; back in '94 there were a lot of questions being asked across the industry by Government bodies, management institutes, professions etc., as to how could we improve our performance as an industry, and these were the sort of things that were coming out; that we face increasing challenges on costs, contractors like ourselves would see diminishing returns, more competition etc., that the way we do things in projects sometimes brings us into sort of mistrustful environment, lots of confrontation because we conventionally work on an adversarial basis - it's the way that democracy works - you know, it's bred in the Government and we'll follow suit - adversarial behaviour. But what was required was a step change in order to make things different, manage things in a different way and create better results - better results for the customer and at the same time, better results for the supplier.

So around about the same time, AMEC were participating already in these discussions about what the industry needed to do to make things better and (you can't see the logos there I'm sorry) but in particular in two areas CRINE???, which is this one over here in the oil and gas sector, offshore particularly - that's cost reduction in the new era, there was a whole industry body formed with a remit, a Government sponsored remit - how can we do things differently - and we were, as it says there, we were involved in that.

A few years later ACTIVE came along, which I am sure you will I'm sure most people in this room are familiar with "Achieving Competitiveness through Innovative Value Engineering" that really took some of what had been preached and developed in crime into a more broader industry context in order for us to look at working in different ways and particularly managing projects in a different way where we interact with the customer all the time.
So AMEC had an input into that as you can see by the names mentioned there, right from the highest level in the company at the time.

Now since '94, and since ACTIVE's got going and CRINE??? and other things like that, the UK has achieved some extraordinary things, through taking on board what theses, let's just say, pressure groups, what these industry bodies have recommended - in other words, putting into practice the theory, and today, about 80% (slight exaggeration), about 80% of all AMEC's business is in some form of aligned arrangement with the customer, delivering projects through alliances, or delivering products and services through longer term partnering arrangements. In other words, working in a different way in an environment where the way we interact with each other is different.

So what I'm really beginning to talk about here is this part of a two part strategic equation , if you want to call it that. I'm beginning to talk about behaving differently in the way we execute projects and the way we interact with our supply chain and our clients in order to create some different results.

But what we've noticed, and it comes out of our experience, as well as what the industry's telling us, is that it's really a two part strategy. If you want to be excellent at delivering projects, there's really two main components to it.

One is the behaviour in how we do our business and the other is the technology that we can apply within the project and at this level of strategy, I'm talking about technology in the broadest sense, such as project management systems or the tools we use for planning and cost control; office communication systems, video conferencing, net based systems, the new stuff that a lot of us are just beginning to grapple with.

Now if you consider this and if you think back to your own experience, I'm sure some of you have been involved in projects that have delivered some extraordinary results, you know, something better than you expected when you went to entered into the contract; and if you think about it you'll probably find that if you behaved in a different way, if it was a very teamy project, you might have seen an incrementally better result. If you apply some good technology, whether it be engineering technology like new piling methods or new welding, whatever, you may also have seen just an incremental difference in the outcome.

But what the industry is now demanding and what we are lining up to do, and have done on a number of occasions, is combine the two and see a real step change in performance - an extraordinary outcome for the customer and of course to our own bottom line.

So, from this point onwards, I am just going to split this into two and discuss some attributes of behaviour and some attributes of technology, which added together create the climate within the project environment to create something different, and this simply is strategic project management. Any questions so far?

(Stunned into silence, let me know if it's boring 'cause I can tell a few jokes if you like).

Right, first attribute then of delivering something extraordinary or strategic project management,
Is to get the right behaviour between the supply chain and particularly the contractor and the customer, but also within the team such that there is alignment with objectives.

Now a lot of these slides that are coming up talk about partnering and alienating, and there's probably quite a bit of knowledge in the room about partnering and alliancing as contractual mechanisms which try and encourage the right behaviour, but if you ignore where it says partnering and alliancing and just think alignment, everyone pulling as a team in the same direction - a lined objective type contracting then its all the same because whilst with alliances and partnering there are particular commercial frameworks which underpin that type of philosophy, the right behaviour is equally important in delivering a lump sum project for example, where the money at stake is clearly in the contractor's domain.

Right, who recognises this as being a description of a project? No? OK, this is, ehm, we've all had experience of that haven't we. Its the job that everybody's really gung-ho about and then it starts to go wrong and then even the rest of the company walk away from it and leave it alone until someone magically makes it a success and then they claim the glory at the end; so the bosses get promoted but the project team are in some way penalised or disadvantaged.

OK, well this is what we're trying to work to dispel, because we, AMEC and companies like us, - I think there's some people from Fairclough here, was it Fairclough? No?, yes?. I mean your in business to deliver projects just as we are, so the whole thrust of our business needs to be project orientated, and that's a change that AMEC are making, such that we get rid of this and people get really excited and want to work on our projects because that's the thing that delivers satisfaction to them and the bottom line result for the company.

So, why do we need to change from that sort of jaundiced view of how projects usually out-turn? Well, here's a few reasons. As I said, the industry has identified that we need to do things differently and the need to do things in a different way compared to our, lets just say, adversarial past, is because of some of these things.

There's more knowledge now, threes more inference on shareholder value in companies like us or any other company that people work for here whether in the private sector or the public. Some parts of industry are seeing a squeeze on the reasons why they do projects, on the economic out-turns for them particularly on oil and gas but that also stretches now to perhaps the PPP or PFI market where people are beginning to wonder why are we spending this CAPEX when we have 20 years of operating costs to think about and that puts the squeeze on some projects, especially is they're funded by Government, and as business gets more and more global, the companies that we work for, the client companies are having to compete internally more and more to fund various projects, so threes definitely a need to do something different and behaviour is one of the keys for making things different.

So as I say, its all about trying to create a step change within the project, and that, if you accumulate all the results of projects together, then you've got a step change for the business overall, as long as you can repeat the formula one job to the next.

So, the behavioural aspects of doing things differently are simply this:-
To release the inherent power of all parties working together for a successful outcome - everyone aligned to the project - not aligned to the diversity of different corporate needs, and within that different way of behaving - I don't actually like that work behaviour, I prefer attitude - threes the opportunity to create contractual frameworks or commercial mechanisms, which will help to deliver the step change. So its about the power of teamwork, underpinned by some form of mutually agreeable commercial arrangement and to go with that rather flippant picture of disenchantment and eagerness etc., a few slides again.

This may be a different way of looking at the conventional project. This actually has got six phases to it although obviously beyond operations and maintenance threes a decommissioning phase and it depends on how you view the project life-cycle as to whether that's in or out. Clearly in PFI type work its in - the projects' for 20 years (or 30 or 35, whatever it might be) but the conventional turn-key business and this one is like an off-shore platform, or even an on-shore chemical plant, tends to be the way we do things.

We separate the scope of work into nice neat packages, and then we force people to bid for each package, so we put contractual walls around the workscope which separates the interaction of the different parties who should all have an interest in delivering the same result, so we create if you like, pockets of protectionism where this fellow may have a lump sum contract to deliver, in this case a module for an oil rig, and because he's on a lump sum he's very protective of that, he makes demands on the designers who know he's got to deliver to somebody else, and it all gets a bit fraught, and when these designers have problems, not necessarily taking into account constructability, the problems are thrown over these contractual walls and this is where the adversarial, traditional behaviour clicks in, and before we know where we are, we've got people running around, writing variations, we've got claim scenarios, we've got armies of quantity surveyors checking up on each other and it all begins to go pear shaped.

And this is just a summary of what I've just said.

In an environment like that, in a project set up like that, which I'm sure we're all used to, threes real no alignment to the overall project objectives, threes only alignment to "how can I deliver this scope without being put upon by these other parties that either need my input or I need input from them". So, if you like, within that whole project life-cycle threes no proper supply of customer relationships which lead to some form of alignment to the overall goal and in particular, when we work in an environment like that, the workscope elements tend to get sub-optimised and threes no feedback or feed forward of learning from one part of the project to the next.

A typical example is doing a detailed design for some sort of plant or building, but not having any construction input, not having any commissioning input, in other words not making it easy to build, not making it easy to operate.

So our conventional behaviour for our conventional framework for putting projects or contracts together prevents us from getting an extraordinary outcome. So, if we look at the project more holistically, and put

in place some attitudes or behaviour such that people can interact freely, without putting them at commercial risk then we can gain some alignment that is good for the project, good for customer, good for the supply chain and good for the contractor.
Again, I'm sure your pretty familiar with this sort of picture for conventional type projects. Don't get too hung up about these descriptions, an because an aligned objectives project could be a lump sum job - it's just the attitudes and the way we work together that's different but certainly in the alliancing and partnering world, where this is achieved by lots of communication and interaction, threes evidence, real hard evidence to show that after contract award, costs come down, whereas conventionally you can almost bet your life they'll go up.

Is this OK? If anyone's got any alternative points of view I'm quite willing to listen (laughter).

So if we put together our projects with the separate scopes and contractual walls, then I think we can recognise that the outcome is almost predictable - not always because there are some very successful conventional jobs and some jobs are absolutely made to do in a conventional way and can't be improved, by, lets just say, new methods; but generally speaking, if its a complex project, with tight targets, schedule and cost and quality, then the outcome is summarised here really.

When things go wrong, we get protectionism within the contractual framework, we tend to pass on our behaviour to those that supply to us, so equipment, material supplies, we beat them up just as the client beats us up