Focusing on the

Jamil Rashid of leadership and management consultants JARA explains why the aerospace and defence industry needs to focus on core management skills if it wants to improve new product development performance

The on time delivery of innovative, world class products is perhaps nowhere more strategically important than in the aerospace and defence industry. The development of new ideas and technologies and the sharing of knowledge is certainly something that governments worldwide are promoting strongly in order to boost the growth and productivity of their economies. Despite this, problems continue to happen. So, why do major projects still continue to encounter difficulties?

The most significant reason is that most businesses that are trying to improve their performance with respect to new product development programmes are not examining the control of their day-to-day work closely enough or understanding how daily problems actually link to overall programme performance. So, despite the already massive cost of development programmes and the huge resource invested in them, especially in project management training, the industry is still missing schedules and overrunning budgets by vast margins because businesses do not tackle the basics of leadership and management.

The blame is typically laid at someone else's door: project managers blame sales for lack of clarity on requirements and the engineers for not doing what they've been asked to do; engineers blame the sales team for not being firm enough with customers and failing to secure enough time or the right price for the job, and project managers for getting in the way; the sales team blames the business for not responding well enough to market pressures and for taking too long to give them the information they need; line managers blame their managers for setting unrealistic targets and suppliers for poor performance.

Unfortunately, the industry is labouring under the misconception that its project management is pretty good. Indeed, top level project planning is generally effective: headline strategies focused on delivering profitable projects by hitting customer milestones and delivering projects on-cost – with the necessary financial tracking measures to back them up – make sense, of course. But it's when businesses start looking at what is happening on a day to day basis to achieve the targets set that the cracks start to appear.

Typically, to find out what is going wrong and how to fix it, a business will carry out a number of assessments – may be against PMBOK (Project Management Book of Knowledge) or CMMI (Capability Maturity Model Integration) – look at data collected about previous projects and factor in opinions and perceptions (usually based on gut feel, rather than hard data). Then it will come up with a raft of improvement activities and projects around skills development, processes, procedures and policies, supply chain management, cost control, requirements management – and these are seen as key issues to address.

Indeed they may be, but the mistake that so many businesses make is that they haven't understood the extent to which any of these actually contribute to the problem... therefore they don't actually know how 'fixing' them will improve milestone achievement or adherence to budgetary targets. Take skills improvement – were people really doing things wrong and if so, was it really because they didn't have the technical ability? Take process improvement – was the process really at fault or was it that people weren't following it? Take project management – did people really not know how to project plan, and if so, will yet more training actually make a difference?

The prevailing response to performance improvement is "let's use best practice to fix all our problems". And the result?... the same core mistakes keep being made: a whole bunch of unnecessary activities are taking place that are not linked to project objectives, people are taking too much time to get things done (for example due to over-engineering) and monitoring is not picking up these core issues.

So, what should businesses be doing if they are serious about making step changes in new product development performance?

1. Spend time looking at the tasks people are actually doing (however frustrating that might seem) to get clarity about the problem – that means gathering, monitoring, analysing performance data on a daily, or at worst weekly, basis.
2. Involve the whole team in reviewing performance and finding solutions for themselves based on their own analysis... only then will they really take ownership and change their behaviours.
3. Prioritise problem fixes, broken down into a number of small, manageable tasks.

This process will almost certainly lead to a realisation that the team already has the answers – in fact, they don't need more training, they don't need to reorganise, they don't need a new process, they don't need to get their customers to change. Instead they need to stop doing unnecessary things, stop spending time over-engineering the product and stop changing priorities.

In other words, focus on leadership and management: involve people within a structure in

future

which real data is used to identify real problems and then create a strategy and detailed, multi-levels plans and measurement systems that ensure that strategy will be delivered.

If, through leadership, you can help employees truly understand the issues, avoid relying on best practice solutions and enable them to implement structure and discipline, the results can be truly dramatic: in the short term, substantial reductions in cost overruns and increases in delivery performance are easily achievable. But it is the long-term, sustainable improvement that is the real prize: teams focusing on real problems, managers being able to identify and resolve problems sooner and an organisation that outperforms its competitors – in an increasingly competitive world.

> If, through leadership, you can help employees truly understand the issues, avoid relying on best practice solutions and enable them to implement structure and discipline, the results can be truly dramatic

CASE STUDY

JARA's client, a UK-based aerospace manufacturer employing around 200 staff, manages a number of multi-million pound engineering development programmes, but despite investing £3m developing and deploying a new product development (NPD) process, it overspent its annual development budget by over £1m and still missed over half its programme milestones.

ANALYSIS

Responsibility for the problems was confused, with teams blaming each other as well as customers for the problems they faced. So, weekly plans were created for all the engineers that included a number of measurable tasks every single day. Individual teams then measured themselves against their plans every day, documenting reason codes for failure to achieve time or cost targets, over a period of several months. The validity of these codes, such as 'customer not managed', 'did not have skills', was tested using a decision tree technique.

The analysis showed that:

- The original plans were inadequate because they lacked detail.
- Many tasks were unnecessary.
- Plans were never reviewed or updated.
- Team members routinely took more time to complete tasks than necessary.

SOLUTION

- The team introduced a multi-level performance improvement plan linking top level project plans to low level daily tasks.
- Project managers focused on ensuring that low level plans were correctly designed and followed.
- Senior managers took responsibility for reviewing plans and allocating appropriate resources.
- All unvalidated activities were stopped.
- Everyone measured their own performance on a daily basis to understand the reasons for poor performance and ensure that actions were completed on time.

RESULTS

- Customer milestone adherence increased by 35 per cent.
- Cost overruns were reduced by 50 per cent.
- Many perceived causes of failure were disproved, enabling the team to focus on the real problems and understand that they could impact on financial performance by being more structured and disciplined.
- Internal processes were adapted to cope more effectively with an environment of design changes.
- Prices for future new products could be set far more accurately, based on past NPD performance.