

APM Project Management Awards



WINNER'S

CASE STUDY



Category **Project Manager of the Year 2009**

Winner **Kevin Bryson, Turner & Townsend**

The project **Introduction**

Kevin was the lead project manager throughout this £34m new-build project to construct a campus that would replace the three existing campuses at South Lanarkshire College. The project was successfully delivered on time, below budget and achieving the client's key project objectives defined within the project brief:

- The deadline for sale and vacating the existing college sites was 31st March 2008. This was critical as it constituted 33% of the funding. Sale was completed and the college had vacated the sites by 18th March 2008.
- The total budget for the project was £33,818,559 and the total final project cost was £33,749,826.
- The college's full business case identified a preferred option of at least 14,556m² gross internal floor area for the new campus. The final scheme achieved 15,150m² gross internal floor area, plus an additional 3,000m² of mezzanine floors to the construction workshops.
- It was important for the college to have business continuity throughout the new campus project. In 2007 (the mid-way point in the project) South Lanarkshire College was the first and only college in Scotland to have its learning and teaching skills graded "very good" in every subject reviewed by Her Majesty's Inspectorate of Education. Overall, 17 "very good" scores were achieved and four "good" scores achieved.

- The college's objective was to achieve a minimum of "good" BREEAM environmental assessment rating. A "very good" rating was achieved without any budget increase.

People and professional

a) Communication

Kevin's approach on the South Lanarkshire College Project was to define from the outset a communications strategy within the project execution plan so that there was consistency in terms of matters such as:

- project structure (including contractual and reporting relationships);
- organisational structures;
- roles and responsibilities;
- levels of delegated authority for the project;
- acceptable forms of communication and a communication structure;
- reporting procedures (including frequency and content).

He ensured that the project execution plan was a controlled document that was subject to continual updates and improvements. Kevin tailored his communication style to suit the audience, as he was working with a wide range of stakeholders and project team members who not only had a varying degree of technical knowledge, but also had very different levels of involvement with the project. Kevin found photographs depicting site progress to be a very powerful means of communication.

b) Teamwork

The South Lanarkshire College project was an estates rationalisation exercise because the college was split over three campuses, situated several miles apart. The three campuses each delivered the three main college curriculum (care, construction and business) which resulted in the staff and their students for each faculty working in isolation.

The heads of faculty were very familiar with each other but the staff below that level were not. The project presented a challenge because it meant that for the first time the three faculties would be sharing services within the new college and interacting with each other on a daily basis. Kevin's concern was that if he could not get the faculties to work together from the outset then there was a risk that the project would not deliver on key objectives (such as to provide a building with high room utilisation together with increased student numbers). To address this he agreed with the

project sponsor, the college principal, a strategy for involving staff in the purchase of fixtures furniture and fittings for their departments against a pre-defined budget. This proved to be an effective tool for team building within the college from an early stage.

c) Leadership and mentoring

One of the strongest examples of Kevin's leadership skills was evident during the design period. Unforeseen circumstances, such as heated market conditions, meant that significant cost savings needed to be achieved without impacting on programme.

Kevin identified an opportunity for cost savings if existing gas and water services could be diverted and replaced with classrooms, therefore reducing the height of the building. Kevin took control of the situation by leading discussions between the utilities companies, college and the design team, such that diversion routes were successfully agreed.

d) Conflict management

An example of conflict management related to a concern raised to Kevin by his assistant project manager about the application of fire protection paint to the structural steel. Kevin's colleague was adamant that steelwork had not been properly painted prior to being covered up with plasterboard; the main contractor, however, refused to accept this. The team agreed a strategy with the college which meant that the contractor had to undertake spot checks of steelwork, and if the areas inspected were sufficiently protected then they would be reimbursed for opening up areas for inspection. If the steel was deemed to be unprotected then the contractor agreed that they would inspect all areas of steelwork. The contractor consented to this proposal.

e) Negotiation

A key negotiation that Kevin was involved in with the college was in relation to the purchase of the site for the new campus. The site was located within a business park, with the seller of the plot also the owner for the rest of the park. This meant that they were keen to attach a number of conditions to the sale of the site. Once Kevin understood the extent of all the conditions being sought by the seller he investigated potential solutions with the college. He agreed with the college that they would undertake a series of site investigations on the proposed site to achieve a greater understanding of any abnormal costs that may be attributable to the site. When these were reviewed they were able to present these to the seller so that the site as a whole could be assessed in terms of real value, and this proved to be highly beneficial when negotiating the price of the site.

f) Human resource management

Kevin was directly managing a colleague for the latter half of the South Lanarkshire College project. He was keen to avoid a situation where the colleague was only undertaking basic tasks so tried to empower him whenever delegating duties. One example of this was when he delegated authority to his colleague for defining, managing and recording the samples approvals process. This meant that he was working with key members of the college, design team and contractor. This empowerment boosted his motivation and enthusiasm, and with this his confidence increased as the project developed. As he, in turn, developed Kevin was able to delegate more responsibilities to him.

Planning the strategy

a) Project success and benefits management

South Lanarkshire College's original full business case FBC defined their project objectives – these were:

- Improve access to learning in South Lanarkshire.
- Provide accommodation which meets current and future teaching needs and requirements.
- Improve quality of learning experience.
- Improve efficiency of the estate.
- Increase capacity in service.

When appointed, one of Kevin's first tasks was to interrogate the full business case to ensure that the objectives were still current and also to define criteria for measuring project outcomes against these objectives. He did this by developing a strategic brief for the project which allowed him to capture the information he had gathered from the key stakeholders and then relay it back to them for approval. The success criteria for the project were continually monitored.

b) Stakeholder management

Kevin monitored the critical success factors for the project throughout the life cycle of the project. Integral to this was the definition of an effective stakeholder management process for the project, so that objectives could be captured and prioritised.

Once Kevin understood the internal structure of the college he started to develop a stakeholder management plan for the project to define the following:

- Stakeholders and relationship / interface with others.
- Stakeholder roles and responsibilities.
- Approvals process and delegated authority levels.
- Programme for consultation.

There were also a number of stakeholders out-with the college who would play a key role in the successful delivery of the project. Kevin used a "stakeholder mapping" concept as it was an effective tool for agreeing with the college the level of consultation that would be undertaken on the project.

c) Value management

Kevin's strategy for defining best value was to work very closely with the college's end users at the briefing stage. For instance, once the architect had been appointed he encouraged the college to review the proposed accommodation schedule for the new facility.

d) Quality management

To ensure high quality results, Kevin implemented the following activities throughout the project:

- Defining a robust project brief.
- Appointing the right team.
- Defining effective management procedures.
- Implementing strict change control procedures.
- Defining the quality expectations and then monitor the works on a continued basis against these expectations.

Early in the construction period the contractor was instructed to create a number of "mock-ups" for typical areas, such as classrooms. An acceptable level of finish was agreed, which was beneficial for the following reasons:

1. The contractor understood the client team's expectations.
2. The levels of snagging at handover stage were relatively low for a project of this size.
3. The college's expectations were controlled.

Executing the strategy

a) Scheduling and resource management

Before Kevin could begin preparing his master programme for the project it was important that he gained a firm grasp of the key project constraints. The college's ability to maintain business continuity throughout the project was of paramount importance and so this was one of the key considerations in scheduling activities.

Once he had prepared his master programme for the project a priority was to gain buy-in from the project team. Kevin undertook detailed discussions with the team so that they understood his approach when creating the programme, and the project issues which had influenced its development.



During the project it was necessary for Kevin to make a considerable amendment to the programme as the contractors were struggling to complete the entire building by the completion date. As a consequence the date for migrating from the existing campuses was in jeopardy but the college needed to vacate their existing accommodation by a certain date to comply with the land sale agreements. In addition they needed to ensure that any migration did not impact adversely on their curriculum delivery.

To secure this deadline, Kevin developed with the contractor a phased handover strategy, which was agreed with the local council so that the college achieved "beneficial occupation" to areas of the new building in a phased manner.

b) Budgeting and cost management

Kevin devised an income and expenditure spreadsheet, tailored to the college's requirements, which enabled him to report on the financial status of the project at any stage in the programme. He monitored and controlled the actual expenditure on the project, which allowed him to forecast predicted final costs effectively.

c) Change and issue management

Kevin created and implemented strict change control procedures early in the design process, one of the main reasons that the project was delivered below budget. The change control process was in place well in advance of the contractor being appointed.

Kevin's procedures were contained within the project execution plan so that all key stakeholders understood the process to be adopted. This included:

- who could raise a change;
- the levels of delegated authority;
- timescales for each stage of the process;
- proformas to be used.

The project team adopted the procedures and Kevin achieved this by defining the benefit that they would provide to each party. For example, he explained to the design team that formal consideration of proposed changes would reduce their risk of undertaking abortive work.

Kevin reported the status of all changes within his monthly report to the college. He created a log which was circulated through the team so that the current action was clearly defined.

d) Information management and reporting

Kevin worked with the team to develop a design programme that was consistent with his master programme. In tandem with this an information production schedule was produced and agreed so that it was clear:

- what information would be produced;
- who would produce it;
- when they would produce it;
- who it would be issued to;
- what the purpose was (e.g. issued for information or for approval).

The schedule was established early in the project, and continued to be utilised once the contractor was appointed. The importance of the schedule was apparent when the contractor identified the dates they required information for the procurement of sub-contracts.

Kevin prepared a monthly status report for the project sponsor, which in turn was submitted to the college board. He prepared a meeting and reporting schedule so that the contractor and cost manager reports were submitted to him for input to his report.

Business and commercial

a) Business case and marketing

When Turner & Townsend was appointed a full business case had been prepared by the college. Kevin undertook a detailed review of this to ensure that the initial objectives remained consistent with current priorities. A higher than predicted budget had been secured since the original full business case was prepared and so Kevin reviewed certain key objectives with the college. These related primarily to the project scope such as targeted size of the new campus.

The original full business case had been approved by the Scottish Funding Council and it was necessary for the council to approve the design proposals to satisfy themselves that they were consistent with the approved case. It was therefore critical for Kevin to "sell" the revised business case to the funding council and to do this he demonstrated achievability, affordability, demand and benefits. The approach he took was successful because the funding council endorsed the changes to the full business case.

b) Funding and procurement

The project had two major external funding streams – the Scottish Funding Council and the European Regional Development Fund. One of Kevin's first priorities was to understand the conditions associated with the funding so that he could document this in the project execution plan.

The Scottish Funding Council did not have time constraints on their funding, however he needed to provide them with a detailed report each month which defined:

- programme status (planned vs actual) and projection to completion;
- procurement and appointments status;
- cost status and projection to completion;
- project cash flow;
- comparison with full business case and Gateway 3 (approval to tender report).

One of the other significant funding streams was related to the sale of the college's existing campus sites. The conditions of sale had an expiry date by which time the college needed to have vacated their existing properties. As a consequence this was a key date for completion of the new campus and the subsequent decant. The college had also secured a £11 million loan which had to be repaid by a set date.

Kevin's development of the procurement strategy for the main contractor commenced at an early stage when he was preparing the project execution plan. He worked with the college to develop a list of key criteria against which a variety of procurement routes were assessed. He produced a procurement strategy report which defined key aspects of the various procurement routes, including advantages and disadvantages of each.

c) Legal awareness

An example where Kevin was able to demonstrate his legal awareness was when he was defining the procurement strategy for the project. The conclusion of this was his recommendation of a design and build form of procurement. This entailed the college, managed by him, taking the design to a certain stage and then the successful main contractor being responsible for completing the design.

The college was keen to ensure that the knowledge and experience developed by the design team at the front end of the project would be retained – this posed a challenge to the design and build procurement route. As a consequence Kevin worked with the college's legal advisers to incorporate a "novation agreement" within the main contractor terms of appointment. This meant that when the contractor was appointed then the design team's contract was transferred to them. This was very effective at ensuring the contractor benefited from the design team's project knowledge, and helped maintain project momentum. It also had the added benefit of passing all design responsibility to the contractor.

Organisation and governance

a) Life cycle: concept and definition

Kevin reviewed the full business case with the college at an early stage after his appointment. He was keen to ensure that the project brief and subsequent design work reflected current project objectives. The review also enabled him to assess the key project risks and recommend to the college which principal team members would need to be appointed to enable the college to realise their objectives.

He prepared a strategic brief for the project once the interrogation of the full business case was complete. The purpose of this was to expand on the college's objectives by defining how these would be measured.

The document also defined the outline scope of works, project constraints, outline programme, budget information and success criteria.

At the same time Kevin developed the project execution plan which was also very informative to new team members given that it defined issues such as the communication strategy and project team roles and responsibilities.

b) Life cycle: implementation and handover

To move the project successfully into the implementation phase the team needed to be expanded to include the full design team. Kevin led on the appointment process to ensure compliance with European procurement regulations, and once successfully appointed the team began to develop the design by building upon the information developed in the concept and definition stages of the project.

Some of the key disciplines which helped to successfully deliver the implementation phase were:

- identify and manage risks and issues early;
- formal change control procedures;
- information management;
- effective reporting format.

c) Organisational structure and roles

As part of his project execution plan Kevin defined the roles of the college team as well as external parties who were key project stakeholders. He was very conscious of the fact that the majority of the college's internal team were not familiar with construction projects and so this was a new experience to them. He worked with the project sponsor to define roles for the college team, and this was then agreed with the individual parties so that they understood how they fitted into the overall process. The result was that they understood their value to the team and so were confident and proactive in the consultation process.

Similarly, he defined roles and responsibilities for the project team within the project execution plan so that there was a clear understanding by everyone as to what was expected from them and also how they would interface with others.

d) Governance and decision making

In addition to defining roles and responsibilities for team members, Kevin's project execution plan also identified their levels of authority in terms of who would be the decision maker for key deliverables.

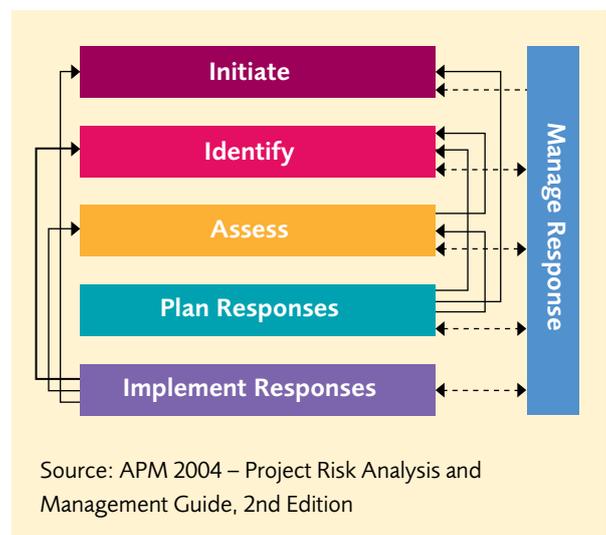
He identified within his master programme the key decision making milestones so that there was openness and clarity in terms of what decisions would need to

be made and when. It also helped to ensure that an appropriate level of resource was available to assist the decision making process.

Risk management – Project Risk Analysis and Management (PRAM) Guide, 2nd edition

a) PRAM process

The Project Risk Analysis and Management (PRAM) process, which Kevin adopted on this project, can be illustrated by the following diagram:



- i. Initiate: Once Kevin had interrogated the full business case to ensure the objectives were correct he considered who needed to be involved in the risk management process. The next step involved identifying the key stages when detailed reviews of the risks would be undertaken with the team. In development of the master programme for the project Kevin therefore defined a series of milestones where he would facilitate risk workshops to review the risk register with the team.
- ii. Identify: Kevin adopted a risk register and used risk workshops in addition to his monthly review of the register with the team at the progress meeting.
- iii. Assess: Once the project risks had been identified in the workshop forum it was necessary to review these for completeness. To assist with this, all risks were categorised into one of the following twelve headings:
 1. Strategic
 2. Design
 3. Stakeholders
 4. Procurement

5. Approvals
6. Construction
7. Financial / funding
8. Environmental / health and safety
9. Client / user brief
10. Commissioning and handover
11. Communications
12. Operations

The assessment of risk ownership was an important aspect of the process.

- iv. Plan responses: In order to focus the project team resource on the key risks only those with a risk level of at least 6 points were assigned a risk champion and a planned response. The remaining risks were still identified on the risk register, so that when the register was reviewed those risks would also be re-assessed in case their risk level increased at a later date.
- v. Implement responses: As project manager, Kevin recognised his accountability for day-to-day risk management and so monitored the effectiveness of the team to address their responsibilities. As a consequence, the risk register was reviewed with the project team at the monthly progress meeting. The risk review process was undertaken over a series of workshops to ensure that project risks were suitably defined and quantified, with champions and actions identified.

b) Tools and techniques

A variety of tools and techniques were adopted on the project, most notably:

- risk register;
- brain storming;
- prompt list;
- impact assessment;
- reduction of threat probability;
- reduction of negative impact of threats;
- enhancement of the positive impact of opportunities;
- risk transfer and share;
- risk acceptance.

c) 'Hard' benefits

The 'hard' benefits that were realised on the project through the risk management process included:

- positive influence on the procurement strategy;
- positive impact on cost reporting and programme development from an early stage;
- suitable assessment and control of contingencies were undertaken early in the project and this was effective at putting the level of available funds into perspective for the college;
- the formal process and risk workshop strategy ensured the most appropriate risk owner was identified for the project;
- the risk register enabled objective comparison of alternative actions for mitigating risks.

d) 'Soft' benefits

The "soft" benefits that were realised on the project through the risk management process included:

- communication within the team was improved;
- the risk workshops were an effective team building mechanism;
- the working environment engendered a discipline within the team, especially the college team, who were not used to a formal risk management process;
- the process provided a focus on the key priorities;
- the risk management process that was adopted enabled risks to be identified early.

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Kevin Bryson, APM Project Manager of the Year

The awards reflect the invaluable contribution project managers make in all sectors of society and the event provides an opportunity for industry professionals to meet with colleagues and entertain guests as well as celebrate at one of the year's most exciting events.

Highly regarded in the project management industry, the awards reflect the dedication and talent that helps to shape the project management community and the world around us. The finalists, winners and sponsors of the awards attract national publicity for their achievement and involvement. Winning an award provides invaluable recognition and kudos to the careers of winners.



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Association for Project Management

Ibis House, Regent Park
Summerleys Road
Princes Risborough
Buckinghamshire, HP27 9LE

Telephone 0845 458 1944
International +44 (0)1844 271640
Facsimile +44 (0)1844 274509

Email info@apm.org.uk
Web www.apm.org.uk