

# **PROJECT MANAGEMENT TOOLS AND TECHNIQUES IN HIGH-TECH SMES IN IRELAND**

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## ***Abstract***

In Ireland today and across Europe, Small-to-Medium Enterprises (SMEs) account for 99% of activity on the market (European Communities 2003). However, with particular emphasis on manufacturing in Ireland, it is widely accepted that economic changes are leading to increased international competition from Asia and Eastern Europe. This fact added to issues of increasing globalisation and customer demands changing ever more rapidly has resulted in increased pressure on the SME. Organisations need the ability to manage projects on time, within budget and to specification in order to remain competitive and survive.

Project management is a well-established discipline defining in considerable detail the tools and techniques that are required to define, plan and implement any project. However, while many researchers have addressed the issues surrounding the management of projects within large firms (White and Fortune (2002); Bryde (2003)) there has not been a lot published to date about the management of projects in SMEs.

This paper examines previous empirical studies on Project Management implementation in various industry sectors and the criteria and factors most frequently adopted. The paper also examines the results of a survey distributed to over 100 Owner / Managers of High-Tech SMEs in Ireland that attempts to recognise the general characteristics of projects undertaken by SMEs, the issues they encounter and their opinions on how SMEs can achieve greater efficiency and competitiveness. The results will contribute to the development of a simplified process of Project Management suited to the needs of the SME.

### ***1.0 Introduction***

SMEs ranging from the dynamic, innovative and growth-oriented to the traditional enterprises satisfied to remain static are imperative to the economy as the engine of economic and social development Hallberg (1999). Floyd and McManus (2005) while examining the increasing significance of small firms in the EU, highlighted this fact by stating that increased importance has been given to SMEs with regards to industrial policy of the EU. According to the European Competitiveness report of 2003, SMEs account for 99 per cent of activity in the EU.

The potential threat to existence of SMEs leads to the conclusion that they need to increase their competitiveness and quality to match the competition. One innovative step that can enhance the chances of progression in SMEs is the introduction of the process of Project Management.

Project management is well established with White and Fortune (2002) describing it as a well developed and well accepted area of professional expertise and an area for academic research aimed at encouraging improvement in a system. Project Management offers a systematic approach to all stages of a project by ensuring that every step is carefully planned, monitored and accounted for.

Although initially intended for application in large organisations with complex systems that require such a process Baccarini (1999), modern methods of project management can be adapted and altered to suit the needs of the smaller organisations.

It is not only a process but a mindset also. Owners or senior management of SMEs must be open to its potential towards progression before it can be introduced as a beneficial process within the organisation.

This paper aims to provide the necessary information, gathered through a survey of over 100 SMEs, to develop a Project Management system based on existing tools and techniques to meet the needs of SMEs in producing and achieving credible project management plans.

## ***2.0 SMEs: Characteristics and impact on the economy***

The definition of SMEs has varied over time with some believing there has been a lack of homogeneity in their categorisation, (McAdam, Reid et al. 2005). For the purpose of this research, reference will be made to the definition set out following the European Commission recommendation on May 6<sup>th</sup> 2003 and that took effect on January 1<sup>st</sup> 2005. Table 1 below outlines the key aspects of the new definition as recommended by the European Commission.

**Table 2.1: The new thresholds implemented by the European Commission on January 1<sup>st</sup> 2005**

<b>Enterprise Category</b>	<b>Headcount: Staff</b>	<b>Annual Turnover</b>	<b>Annual Balance Sheet Total</b>
<i>Medium – Sized</i>	< 250	≤ €50 million	≤ €43 million
<b>Small</b>	< 50	≤ €10 million	≤ €10 million
<b>Micro</b>	< 10	≤ €2 million	≤ €2 million

When researching the general characteristics of SMEs, comparative analysis with larger organisations helps to provide a clearer image of their standing in the market. SMEs exhibit both advantages and disadvantages when compared to larger organisations. Audretsch, Prince et al. (1998) in their comparative paper examining small and large firms identified key issues surrounding the SME. Small firms have a greater potential flexibility and closeness to the customer and an edge towards customisation and innovation. They seek out markets where their advantages count and they are not in direct competition with their larger counterparts.

However, they continue to state that despite these key advantages, SMEs lack economies of scale, scope and learning. Edwards, Delbridge et al. (2001), outline that SMEs exhibit behavioural features that give them an innovative advantage over large firms that include the ability to respond rapidly to external threats or opportunities, have more efficient internal communications and exhibit interactive management cycles. Rothwell (1992) makes reference to SMEs in their attempts to progress by stating that, ‘SMEs are thought to lack the material and technological resources that enable large firms to ‘spread risk over a portfolio of new products’ and ‘fund longer-term R&D’.

Table 2 highlights some of the key differences between SMEs and large organisations as suggested by (Ghobadian and Gallear 1997).

**Table 2.2: Key differences between SMEs and Large organisations (adapted from Ghobadian & Gallear, 1997)**

<b>Characteristics</b>	<b>SMEs</b>	<b>Large organisations</b>
<b>Structure</b>	Few or no layers of management Top Management close to the point of delivery Low degree of specialisation High incidence of innovativeness	Several layers of management Top Management far from point of delivery High degree of specialisation Low incidence of innovativeness
<b>Procedure</b>	Low degree of standardisation Low degree of formalisation People dominated Idealist decision making	High degree of standardisation High degree of formalisation System dominated Fact-based decision making
<b>Processes</b>	Simple Planning & Control system Informal evaluations & reporting Result orientated	Complex planning & control system Formal evaluation & reporting Control orientated
<b>People</b>	High degree of resistance to change Corporate mindset Modest capital & financial resources	Low degree of resistance to change Departmental mindset Abundant capital & financial resources

An examination of the skills of project managers in small and large electronics firms in Ireland (Ledwith 2004), showed that project managers in small firm were weak in the areas of motivation, marketing and management. Small Irish firms demonstrated limited use of project management techniques and were not benefiting from project management in terms of increased new product success. Despite this it was observed that by improving project planning, establishing clear priorities and setting clear objectives, small Irish firms could improve NPD performance by reducing project delivery times

Statistics gathered by the Programme for Industrial Interface (PUII) in the University of Limerick shows that 95% of the trading entities and 80% of employment are made up by the SME. Günter Verheugen of the European Commission declared that: 'Micro, small and medium-sized enterprises (SMEs) are the engine of the European economy. They are the essential source of jobs, create entrepreneurial spirit and innovation in the EU and are thus crucial for fostering competitiveness and employment.' European Commission Publication (2005).

The economical importance of SMEs is also highlighted by (Floyd and McManus 2005) who identified examples of SMEs improving the competitive position of the EU:

- Small firms have fewer problems with labour relations than their larger counterparts.
- Small firms offer the benefit of being able to change production quickly.
- Small firms can offer personalised service, differentiating business activity.

Despite their strong potential as a driving force within Europe, SMEs are suffering from the effects of inflating running costs and external competition. Due to the lack of depth they possess in comparison to large organisations, the rising international economic threat posed by Asia and Eastern Europe can have overwhelming consequences for SMEs.

The Irish Small-to-Medium Enterprise Association (ISME) trends surveys reflect the economic effects on SMEs in Ireland over the last two years:

➤ **4<sup>th</sup> Quarter 2004**

- Manufacturing sector reporting a significant recovery with one fifth of companies anticipating future job creation.
- Business Optimism, employment creation and investment levels provide a positive platform for future development and growth in the SME sector.
- Business costs continue to be a burden for SMEs
- 19.3% of businesses report that sales/order books were below normal for the period.
- Labour costs identified as the biggest threat to SME development and growth as confirmed by 23% of companies.

➤ **3<sup>rd</sup> Quarter 2005**

- A report on areas of concern for SMEs shows the following breakdown:
  1. Labour Costs – 25%
  2. Erosion of competitiveness – 19%
  3. Economic uncertainty – 12%
  4. Reduced orders – 11%
- A net decrease of 3% in exports represents a sharp reduction on previous quarters and indicates that the reduction in competitiveness is starting to impinge.
- Reality on the ground shows that companies are finding it increasingly difficult to operate due to the high cost environment and external competition.

Issues seen in the trends surveys along with other issues mentioned sufficiently justify the need for SMEs to consider new methods to enhance their ability to compete and to grow.

### ***3.0 Projects and Project Management:***

#### **3.1 Projects**

Any task undertaken that is specific, unique and with a specific aim to achieve it can be considered a project. PMI (2000) define projects as ‘a temporary (definitive beginning and definitive end) endeavour undertaken to create a unique (projects involve doing something that has not been done before) product or service.’ Kerzner (2001), through his book on Project Management outlined the key characteristics of projects:

- Projects are the change efforts of society and the survival of organisations in the modern environment is through effective management of change efforts.
- The Project is not synonymous with the product of the project. The project is the process by which the product is produced and has a finite life.
- Projects comprise of activities that are usually non-repetitive and inter-related.
- Projects involve multiple resources (human and non-human) that require close co-ordination.

Projects can be considered as the achievement of a specific objective and involve the utilisation of resources on a series of activities or tasks. (Munns and Bjeirmi 1996) in their paper on how to achieve project success, differentiate between project success and project management success. The definition of a project suggests an orientation towards higher and longer-term goals such as return on investment, profitability and competition, while project management focuses on short-term goals and a more specific context for success. Cooke-Davies (2002) proposes the distinction between project success and project management success:

- **Project Success** is measured against the overall objectives of the project,
- **Project Management Success** is measured against the widespread and traditional measures of time, cost and quality.

Munns and Bjeirmi (1996) conclude that despite the differences between project success and project management success they compliment each other. A project can succeed despite the failure of project management but successful project management implementation can increase the potential for success on an overall project scale.

### **3.2 Project Management: Definition and Principles**

Project Management has existed, in theory, for centuries with its informal application by the Chinese and Egyptians with such feats as the Great Wall of China and the Pyramids. However, modern Project Management is a recent phenomenon gaining initial acceptance in the rapid development of the Information Technology industry, (Fox 2004).

Cicmil (1997), in a paper on critical factors of effective project management suggested the following:

‘In any project situation, there is a client/customer who has a unique need which requires knowledge and resources to conduct the realisation of the concept within the specific constraints of time, money and specification. The effective management processes of planning, monitoring and control are required to translate the idea of change into tangible deliverables.’

PMI (2000) supplied a simplified definition as ‘the application of knowledge, skills, tools and techniques to project requirements.’

The emergence of modern project management owes to three core stimuli, (Baccarini 1999):

1. **Complexity** – Growing complexity of tasks and a need for a greater degree of specialisation.
2. **Change** – Increasingly dynamic environments with constant pressure within organisations to implement change due to global competition.
3. **Time** – Demand for tasks to be completed as quickly as possible.

Project Management is an innovative process whose implementation is increasingly necessary in today’s competitive market. Undertaking any project now involves overcoming many obstacles (Kerzner 2001) that include project complexity, client special requirements, organisational restructuring and project risks. With a systematic process in place, such as Project Management, obstacles can be accounted for and actions or measures taken to either prevent or overcome them. Some of the many potential benefits project management provides as proposed by (Kerzner 2001) include:

- Identification of functional responsibilities ensuring that all activities are accounted for.
- Identification of time limits for scheduling
- Measurement of accomplishment against plans
- Early identification of problems
- Improved estimating capability

Essentially, project management is the planning, organising, directing and controlling of an organisation's resources to achieve a relatively short-term objective. Over its course, modern Project Management as a discipline has emerged and has been constantly remoulding itself to allow for expansion in its practice. A valuable conclusion was made by (Crawford, Pollack et al. 2005) who carried out a study of the International Journal of Project Management and the Project Management Journal over the last ten years to try to uncover the trends in project management:

'As a field, project management is regularly facing new challenges, as the tools, methods and approaches to management that comprise the discipline are applied to different areas, for different ends, in different cultures.'

### **3.3 Project Management: Success Criteria and Success Factors**

A second distinction to be recognised when studying projects and their management is the distinction between critical success criteria and critical success factors.

Cooke-Davies (2002) defined the difference as follows:

**Success Criteria** are the measures by which success or failure of a project will be judged. **Success Factors** are the inputs to the management system that lead directly or indirectly to the success of the project.

This distinction is supported by (Belassi and Tukul 1996) who recommend that sound research on critical success factors have to:

1. Distinguish between success factors and success criteria.
2. Distinguish success factors within the control of the project manager and factors outside his/her control.

Determination of a project's success criteria has become far more complex in recent times (Belassi and Tukul 1996) with the three criteria of Time, Cost and Performance no longer sufficient. On any project, there are numerous parties involved with their own perception of success. These can include the Project Manager, Project Team, Top Management, the Client and external parties from the Political and Economical environments. A project perceived as a success by a project manager and his team, might be perceived as a failure by the client. In contrast, top management might deem a project to be a failure for not meeting specifications but may still satisfy the client. Pinto and Slevin (1989) recognised this ambiguity in determining project success by stating that it is still not clear how to measure success because the parties who are involved in projects perceive project success or failure differently.

From the perspective of developing a simplified method of project management for SMEs, it might be necessary to consider the perception of success from one party, namely senior management based on their overwhelming influence in SME procedures.

Research has contributed to a significant quantity of factors that could be described as critical to a projects outcome. But projects are individual and unique and lead to the understanding that success factors can differ between them. Belassi and Tukel (1996) proposed that, ‘a combination of many factors, at different stages of project life cycle, result in project success or failure’.

Table 3 outlines the key success criteria and success factors seen to be most significant from previous empirical studies.

**Table 3.1: Critical Success Criteria and Success Factors**

<b>Author</b>	<b>Success Criteria</b>	<b>Success Factors</b>
<b>White &amp; Fortune (2002)</b>	Complete within Schedule Complete within Budget Meet Client Requirements	Clear Goals / Objectives Realistic Schedule Top Management Support Adequate Resources Effective Risk Management Clear Communication Channels
<b>Belassi and Tukel (1996)</b>	Cost Time Quality Client Satisfaction	Clear Goals / Objectives Top Management Support Scheduling Sufficient Resources Planning & Control Monitoring & Feedback Client Consultation
<b>Cooke-Davies (2002)</b>	Not addressed	Risk Management Responsibilities Plan Scope Change Control Process Line of Sight Feedback Learning from Experience
<b>Fortune &amp; White (2006)</b>	Not addressed	Top Management Support Clear and Realistic Objectives Efficient Plan Performance Monitoring Communications Resources
<b>Westerveld (2003)</b>	Budget, Schedule, Quality Appreciation by Client Appreciation by Project Personnel Appreciation by users Appreciation by contracting partners Appreciation by stakeholders	Leadership and Team Policy and Strategy Resources Stakeholder Management Schedule Risks
<b>Crawford et al (2005)</b>	Not addressed	Relationship Management Resource Management Time Management Cost Management Risk Management

A trend emerges in Table 3, the three basic criteria of time, cost and quality appear regularly. Additionally, client satisfaction was deemed as significant and must be an objective to achieving overall project success. Westerveld (2003) factored in the appreciation of the various parties involved both directly and indirectly on the project but may lead to issues of conflict when determining whether a project was successful or not. The critical success factors uncovered many varying factors that could be implemented and used as a tool for success. Before considering these factors, it is important to reiterate that SMEs are generally characterised as having basic organisational structures with simple planning and control systems in place. Therefore, a new process of project management for SMEs would be more beneficial as a simplified methodology with specific reference to selected focus on key factors. Having reviewed the factors considered above, six were highlighted as having the greatest potential influence:

- Top Management Support
- Clear Goals / Objectives
- Planning, Monitoring & Control
- Resource Allocation
- Risk Management
- Client Consultation

The factors above are considered to be ‘critical’ to successful implementation of project management on projects and can be with the correct approach, can form part of a process suited to SMEs. All six factors form a question in the empirical study to seek the opinions of SME owner – managers as to their significance or importance in undertaking a successful project.

## ***4.0 Empirical Study Methodology***

### **4.1 Questionnaire Design**

A questionnaire was developed as the first stage towards the development of a new project management framework for SMEs in Ireland. The main objectives in developing the questionnaire were to explore the following:

1. Current structures in place such as organisational structure and decision-making authority.
2. The level of importance placed on projects, the basic characteristics of projects (level of investment, duration and staff delegation) and perceived success of projects to date.
3. The level of recognition of Project Management as a process in SMEs that includes implementation and associated techniques, and general opinions of its potential as a process.
4. Criteria used to base success upon and factors implemented to achieve success on projects.
5. Opinions towards future methods of project improvement in SMEs and reasons behind lack of research in the area.

With the focus being placed primarily on High-Tech SMEs, organisations in the industry sectors of Medical Devices, Electronics and Telecommunications were sought. High-

Tech SMEs were considered more relevant to the survey as they are more likely to contain relatively complex production systems and would find the process of project management beneficial and in some cases, necessary.

The Kompas website, providing general information on organisations across Ireland was used as the source for the collection of organisations to be included in the distribution list. Selection of SMEs from the database was dependent on two factors: Number of Employees and Industry Sector. With reference to Table 1, any organisation with an employment level of less than 250 people was considered for inclusion. The questionnaire was piloted with two SME owner-managers. These pilot tests lead to improvements in wording, and the removal and addition of some questions.

The questionnaire was distributed to over 100 organisations via email. The questionnaire was sent to the attention of owner-managers because their opinions would be most influential in SMEs. By directing it to owner-managers, it could confirm or not, the opinions that they tend to be traditional in their ways and lack openness to new and innovative processes.

## **5.0 Results & Discussion**

The research is at an early stage; only 12 responses have been retrieved to date. This section highlights the critical results found and discusses their significance.

### **SME Characteristics**

Tables 4.1 and 4.2 present the key results of the research. Results show that the majority of SMEs operate under a matrix structure signifying recognition of the need to have a strong structure in place. This is supported by the strong agreement to the statement that organisational structure affects the management of projects.

As expected, owner-managers are most influential in the decision-making processes followed by functional managers and projects steering groups. These trends suggest the existence of traditional methods of management. Added to that, only 50% of the respondents claimed that there is a full-time project manager in their organisation. These findings put weight to the belief that owner-managers are close to all aspects of company actions and back the literature findings (Ghobadian and Gallear 1997) that little or no layers of management are in place.

### **Project Characteristics**

The results highlight that projects undertaken by SMEs are generally small in nature with the majority of the respondent organisations spending between 0-20 percent, as a percentage of turn-over, on projects, have only 1-10 staff working on projects and project durations varying between 0-12 months but no more. However, there was majority agreement on the statement that projects undertaken are complex in nature.

Regarding the Project Life Cycle phases, most organisations are involved in all stages with the phases of Conceptual, Planning and Implementation considered most important in that order. The significance of the Conceptual phase is highlighted by the respondent organisations belief that sufficient research and analysis is carried out before undertaking a new project.

**Table 5.1 Breakdown of findings from Project-based questions**

<i>Respondent</i>	<b>Sector</b>	<b>No. of Staff</b>	<b>Organisation Structure</b>	<b>Project Management</b>	<b>Project Manager</b>	<b>Project Expenditure (as % of Turnover)</b>	<b>Project Staffing</b>	<b>Project Durations</b>	<b>Project Success</b>
<b>1</b>	Medical Devices	32	Matrix	Yes	Yes	0-20%	1-10	3-6 months	3.66
<b>2</b>	Medical Devices	50	Matrix-Functional	Yes	Yes	0-20%	1-10	6-12 months	4.00
<b>3</b>	Medical Devices	110	Matrix	Yes	Yes	20-40%	1-10	6-12 months	4.33
<b>4</b>	Electronics	130	Matrix-Functional	Yes	Yes	20-40%	10-30	6-12 months	4.00
<b>5</b>	Manufacturing	34	Matrix	No	No	0-20%	1-10	3-6 months	2.00
<b>6</b>	Telecommunications	32	Matrix	Yes	Yes	60-80%	10-30	3-6 months	3
<b>7</b>	Engineering	60	Functional	No	No	0-20%	1-10	>3 months	3
<b>8</b>	Manufacturing	30	Matrix-Functional	No	No	0-20%	1-10	6-12 months	4
<b>9</b>	Telecommunications	130	Functional	No	No	0-20%	1-10	>3 months	3.33
<b>10</b>	Manufacturing	85	Functional	Yes	No	0-20%	1-10	3-6 months	3.33
<b>11</b>	Electronics	42	Matrix-Functional	No	No	0-20%	1-10	>3 months	3.33
<b>12</b>	Manufacturing	50	Matrix	Yes	Yes	20-40%	1-10	>3 months	3.33

Note:

The scores displayed under 'Project Success' are the average of ratings for project success under the headings of Budget, Schedule and Performance.

**Table 5.2 Tabulated Result Sets**

<b>Table of Results</b>							
<b>Influential Decision Makers</b>		<b>Level of Importance of Project Life Cycle Phases</b>		<b>Most significant success criteria</b>		<b>Most Influential Success Factors</b>	
<b>TITLE</b>	<b>Res Av.</b>	<b>PHASES</b>	<b>Res Av.</b>	<b>CRITERIA</b>	<b>Res Av.</b>	<b>FACTORS</b>	<b>Res Av.</b>
Project Manager	<b>3.25</b>	Conceptual	<b>3.80</b>	Completed within Budget	<b>4.30</b>	Clear Goals / Objectives	<b>4.56</b>
Owner - Manager	<b>4.73</b>	Planning	<b>3.70</b>	Completed within Schedule	<b>4.20</b>	Senior Management Support	<b>4.56</b>
Project Steering Group	<b>3.88</b>	Testing	<b>3.20</b>	Meets required quality standard	<b>4.80</b>	Planning, Monitoring & Control	<b>4.00</b>
Board of Directors	<b>2.88</b>	Implementation	<b>3.80</b>	Meets specification	<b>4.70</b>	Resource Allocation	<b>4.22</b>
Functional Managers	<b>3.91</b>	Closure	<b>3.00</b>	Appreciation by users	<b>4.30</b>	Risk Management	<b>3.22</b>
Others	<b>2.67</b>			Appreciation by stakeholders	<b>3.78</b>	Client Consultation	<b>3.63</b>
				Appreciation by project personnel	<b>3.44</b>	Other	<b>2.50</b>
				Others	<b>2.40</b>		

Note:

Res. Av = The average response to the factors seen above.

Table 5.3 Levels of agreement to statements

STATEMENTS	Response Average	STATEMENTS	Response Average
Organisational Structure affects the management of projects	4.00	Project Management can be applied in similar fashion in SMEs as in large organisations	3.63
A change of organisational structure would have a positive impact on project execution in my organisation	3.38	Previous experience is a key factor to implementing an effective system of project management	4.13
Projects undertaken by my organisation are generally complex in nature	3.38	Sufficient research and analysis is carried out before undertaking a new project within my organisation	3.38
Projects undertaken by my organisation involve close collaboration with client organisations	3.63	A project can be successful despite the failure of project management	2.38
Projects undertaken by my organisation involve close collaboration with the suppliers	3.75	Success of projects within my organisation is mainly dependent on external factors (e.g. market demand, government regulations)	3.25
Large organisations approach projects in a different manner to SMEs	4.00	Success of projects within my organisation is mainly dependent on internal factors (e.g. project management, proficiency)	3.38
Large organisations possess advantages over SMEs in project implementation	3.50	A well defined project management process is a necessity for successful implementation of projects	4.25
Adequate research and facilities on best practice in the field of project management are available to SMEs	3.00	Success criteria measures used by my organisation are sufficient to determine project success	3.63
Note: A 1-5 scale was used for the statements where: 1= Strongly Disagree; 2 = Disagree; 3 = Neutral; 4 = Agree; 5 = Strongly Agree			

Table 5.4 Open question responses

<p><b>How can project performance be improved?</b></p> <ul style="list-style-type: none"> <li>• Prioritisation of project tasks over other work</li> <li>• Reviewing EVMS methods and honing CPI and SPI introduction of a strong matrix management structure</li> <li>• By people being trained to understand the principles and benefits of same                             <ol style="list-style-type: none"> <li>1. Training of Project Managers.</li> <li>2. Clearer Goals being set and communicated to all staff involved.</li> <li>3. Better client or fact finding on site at conception stage</li> </ol> </li> <li>• More control of project team</li> </ul>
<p><b>The conception among SMEs that Project Management is too complex a process / technique to implement and is more suited to larger organisations</b></p> <ul style="list-style-type: none"> <li>• No, it can actually be easier to implement in a smaller organisation.</li> <li>• No, I have worked in industries of various sizes – the approach is different but the tools are the same</li> <li>• You would want to be clearly identify the benefits of it and then it may not be that complex to achieving the implementation of same.</li> <li>• No, I do not agree, it is as easy to implement. It is just that in SMEs it is very difficult to afford the time and the resources.....it is a growing issue for a company and a mindset.</li> <li>• No, if adequate time and resources are given then there should not be any problems</li> </ul>

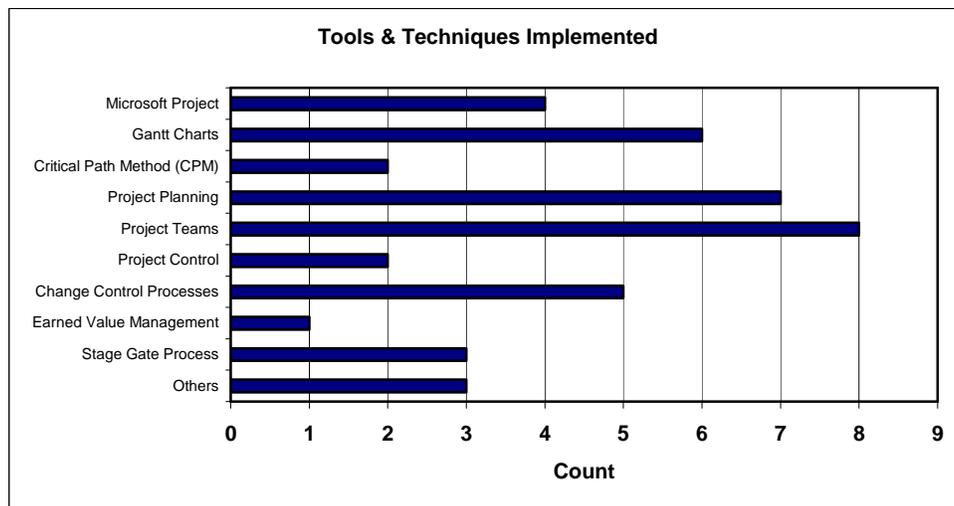
Success of projects is based more on internal factors than external based on trends in statement results. ‘Clear Goals/Objectives’ and ‘Senior Management Support’ were both considered most important as factors towards success and again supports the literature. Other factors, in order of importance included, ‘Resource Allocation’, ‘Planning Monitoring and Controlling’ and ‘Client Consultation’. These results would not be considered as unusual. Resources are always an issue for SMEs and must be managed effectively, planning and controlling of projects is vital, particularly on complex projects and client consultation is critical in both the implementation and planning phases of a projects life cycle.

When compared to large organisations, SMEs agreed that there is a different approach made to projects and that large organisations possess advantages over SMEs in project implementation. These results are expected with large organisations possessing greater capital and resources and a greater degree of specialisation than their SME counterparts, (Ghobadian and Gallear 1997). When asked how they could improve project performance, respondents suggested prioritisation of project tasks over other work, more control of project team, clearer goals and communication channels and better client or fact-finding at conception stage.

### **Project Management**

One interesting finding was the disagreement to the statement that projects can be successful despite the failure of project management. This signifies a belief in project management as a process of improvement and is backed by the agreement to a well-defined project management process being a necessity for successful implementation of projects. Of the respondents, 60% consider project management an identifiable process in their organisation, a substantial quantity considering the lack of research and facilities available to SMEs on project management. A variety of tools and techniques are being used (see figure 4.4) with Project Planning, Project Teams and Gantt Charts featuring most regularly. However, these tools would be considered as fundamental tools to implement and possibly show that although a system of project management is in place, it may only provide basic planning abilities.

**Figure 5.1 Project Management Tools & Techniques implemented**



Despite considering that SMEs approach projects differently to large organisations, a significant proportion of respondents believed that project management could be implemented in similar fashion to large organisations. The open-ended question on the subject of project management being too complex a process to implement in SMEs showed sufficient disagreement to summarise that with the right approach and allowable time, project management could be incorporated with maximum effect.

## **6.0 Conclusion**

The findings of the questionnaire are an initial attempt to understand the current practices in SMEs in Ireland and the opinions of SMEs to the potential of project management as a process of improvement. From initial findings it is clear that despite the lack of research and facilities available to them, SMEs are clearly aware of project management and the benefits it offers but obstacles of time, money and resources can prevent its implementation. With respect to the development of a methodology suited to the needs of SMEs, experiences of respondents have shown that understanding the tools and techniques being used by larger organisations and tailoring them to suit the SME environment is the best approach to take.

Further investigation will include case studies in selected organisations to expand the existing information on SME practices required for a new framework of Project Management to be developed.

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