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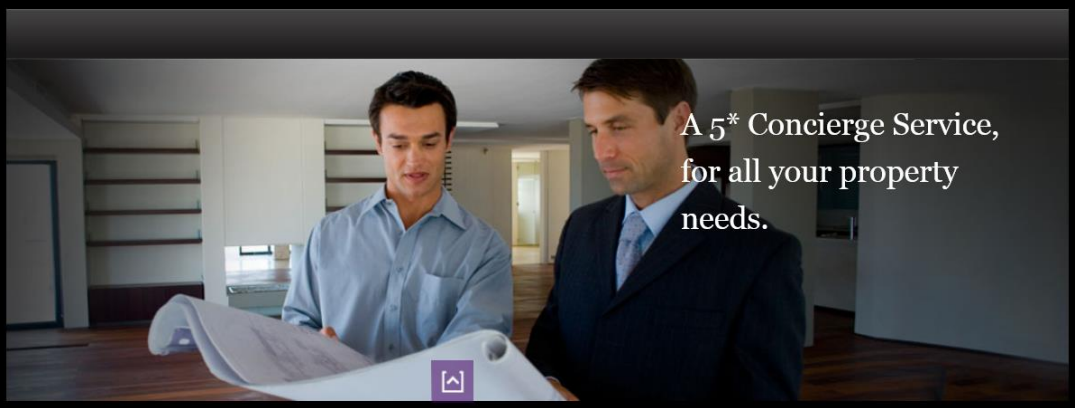
Project Management Requirements & Obstacles



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Consider the 'Project Environment' and evaluate general project requirements.

- *I.E. What does a project need, to be effective?*

Within the 'Project Environment', consider the obstacles to effective Project Management.

The Project Environment

1. To understand the 'Project Environment', it must first be differentiated and disengaged from the permanent structure of the organisation it appertains to. Day to day running of any organisation, is overarched by 'Classical Management'[1], where lines of communication are well established; almost entrenched, working within known variables combined with stable and continuous processes, producing activity oriented outcomes, however, this stable environment has poor inertia to change. Hence, the need to establish a 'Project Environment', overseen by an accredited 'Project Manager' (PM), who becomes the CEO of the project, on behalf of the Client, is imperative for ventures that are unique, novel and transient in nature.

Project Management

2. There are numerous industry recognised definitions for 'Project Management' and thus no one exemplar, is used unilaterally. Definitions include;

- **The British Standard for Project Management BS6079[2], 1996.**

  "The planning, monitoring and control of all aspects of a project and the motivation of all those involved in it to achieve the project objectives on time and to the specified cost, quality and performance."[2]

- **The UK Association of Project Management (APM)** [3] **have produced a UK Body of Knowledge UK (BoK), 2000** [4]**.**

  "The planning, organisation, monitoring and control of all aspects of a project and the motivation of all involved to achieve the project objectives safely and within agreed time, cost and performance criteria. The project manager is the single point of responsibility for achieving this."[3]

- **Turner JR – 'The Handbook of Project Based Management'[5], 2003.**

  "A project is a temporary organisation to which resources are assigned to undertake a unique, novel and transient endeavour managing the inherent uncertainty and need for integration in order to deliver beneficial objectives of change"[5]

3. Whilst all three industry definitions highlight the **'Iron Triangle'**[6], that of adhering to **Cost, Time and Quality**, it is accepted that Turner[5] goes further and defines it as ever changing and ever adapting, thus not constrained by the 'Iron Triangle'[6], which if used solely, has the potential to lead to overruns and failure.

4. Thus Turner's definition produces more characteristics, above and beyond that of the 'Iron Triangle'[6] and can be summarized as; A **Specific Purpose**, **Transient** (Defined Start and End), **Unique**, the formation of **Temporary Groupings**, thus allowing **Interdependencies**, and effective **Resource Planning** through a **Holistic Approach**.

5. This is reinforced by **Cleland and King**[7] whom purport 'Project Management' criteria as; **Unique**, requiring **Substantial Resources**, in ever **Changing Environments**, whilst heavily **Interdependent** and for which the project is **Critical** to the success of the organisation.

Life Cycle of the Project

6. 'Project Management' is formulated by a systematic approach, utilising the same principles of management; **Planning, Organising, Staffing, Directing** and **Controlling**, with phases that are sequential, interrelated and dependant (mutually supporting) and whilst no industry standard exists, due to the complex change projects encountered by organisations, four basic phases have been acknowledged;

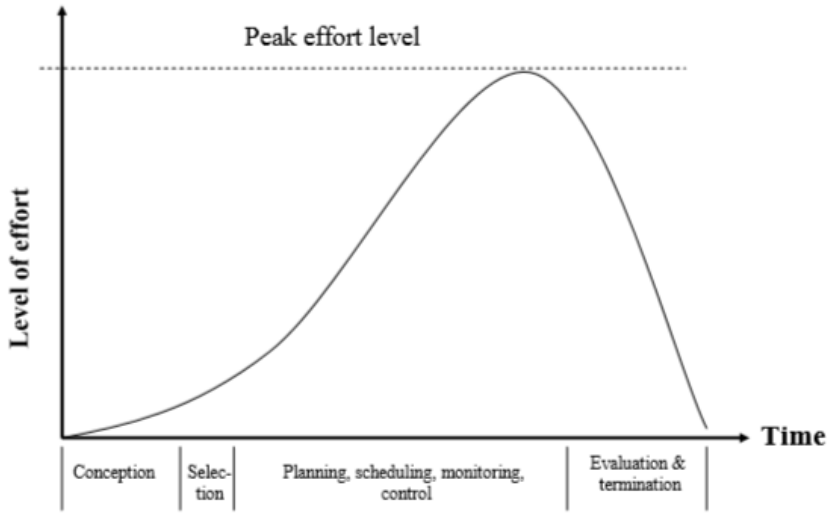
- **Concept and Initiation**.
- **Design and Development**.
- **Implementation and Construction**.
- **Commissioning and Handover**.

The table below falling from the Chartered Institute of Building (CIOB)[8], Code of Practice 4th Edition, demonstrates cross party variations;

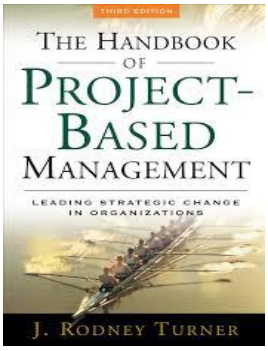
CIOB Code of Practice for Project Management for Construction and Development	Office of Government Commerce (OGC)	British Standards BS6079-4:2006	British Property Federation (BPF)	Royal Institute of British Architects (RIBA)
1 Inception	Gate 0 Strategic assessment	1 Conception	1 Concept	A Appraisal
2 Feasibility	Gate 1 Business justification	2 Feasibility	2 Preparation of the brief	B Design brief
3 Strategy	Gate 2 Procurement strategy Gate 3 Investment decision		3 Design development	C Concept
4 Pre-construction		3 Realisation	4 Tender documentation and tendering	D Design development E Technical design F Production information G Tender documentation H Tender action J Mobilisation
5 Construction	Gate 4 Readiness for service		5 Construction	K Construction to practical completion
6 Engineering Services Commissioning				
7 Completion, handover and occupation		4 Operation		
8 Post-completion review/project close-out report	Gate 5 Benefits evaluation	5 Termination		L Post-practical completion
	Disposal			

Figure 0.2 Project lifecycle.

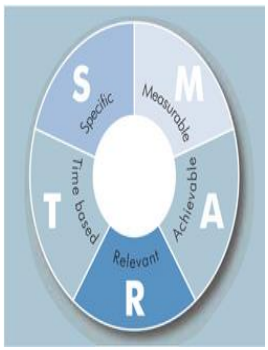
7. The following graph compares Time with Effort over the Life Cycle of the Project;



Time Distribution of Project Effort



Analysis and interpretation of which, through meta-knowledge, demonstrates that the effort level peaks, not at a constant, throughout the construction phase of the cycle, but towards the end (right), thus demonstrating a phenomenon of 'Ground Rush' encountered on construction sites and good PM's should mitigate for this, which can be attributed to 'Ground Truth' rather than Wall Charts, Scalars, Job Priority Lists, or Cascading Work Flows.



Project Requirements

8. Project requirements, or objectives are influenced by all interested parties, as laid down in the CIOB[8] Code of Practice 4th Edition, ranging from the Client and the Clients Team; Investment Decision Maker, Project Sponsor and Client Advisor, through to the PM and Contract Administrator. Ultimately, it will be the Client that directs at the Grand Strategic Level and the PM to implement at the Tactical Level, through the use of Team Managers at the Operational Level. However, as in all good 'Best Practice', these objectives must conform to the **SMART** principles, that of; **Specific, Measurable, Achievable, Realistic** and **Time Bound**.

The recommended CIOB[8] Template for a Project Brief, can be found below;

PROJECT TITLE
PROJECT REF
CUSTOMER: *(internal/external)*
PROJECT SPONSOR:
PROJECT MANAGER:

GOAL
THIS NEEDS TO BE SPECIFIC AND INCLUDE THE JUSTIFICATION FOR THE PROJECT
It should spell out: ***what*** *will be done and by* ***when****;*

OBJECTIVES
It is essential these cover the OUTCOMES expected of the project and that preferably they are:
Specific – i.e. clear and relevant
Measurable – i.e. so it is feasible to see when it is happening
Achievable/agreed to – helpful to use positive language and that others 'buy-in' to the objectives
Realistic – this depends on three factors: resources/time/outcome or aim
Time bound – have a time limit: without this they are wishes

APPROACH
The project plan should include the key milestones for the review, i.e. set a target date for agreeing the project brief and target dates for completing key stages of the project.

SCOPE
THIS SETS THE PROJECT BOUNDARIES AND IT CAN BE USEFUL TO ADD WHAT IS NOT COVERED.
It can be a useful reference point if the project changes in due course

CONSTRAINTS
Could add 'start' date and 'end' dates here
It is particularly important in the context of best value, to identify here genuine constraints rather than customer preconceived ideas about the solution

DEPENDENCIES
This identifies factors outside the control of the project manager, and may include:
- Supply of information
- Decisions being taken at the right time
- Other supporting projects

RESOURCE REQUIREMENTS
Include estimate of project days and costs

AGREED

Signature: Date:
Project manager:
Project sponsor:

Note: The above example of the possible template of an outline project brief is for guidance purposes only.

Figure 2.1 Outline project brief.

Project Effectiveness

9. Project effectiveness is driven by the PM and should conform to the CIOB[8] 'Project Handbook', this handy template or Check List to success should overarch the complete 'Project Environment' and considers some of the following;

- Defining Parties and Third Parties.
- Establishing Aims, Roles and Responsibilities.
- Document and Communication Passage and Control.
- Contractual Administration, Tendering and Appointment.
- Variation Orders (VOs) – Assessment and Management.
- Time Constraints.
- Indemnities, Insurances and Warranties.
- Design and Change Management.
- Cost Control and Capture
- HSE and CDM.
- Quality Control and Assurance.
- Method Statements.
- Signing Off Procedures and Handover / Handback.

Whilst this list is not exhaustive, it provides a pathway for an effective 'Project Environment'. To reinforce project effectiveness, Kerzner[9] proposes sixteen points, falling from Project Management: A Systems Approach to Planning, Scheduling, and Controlling.

Dr. Kerzner's 16 Points to Project Management Maturity

1. Adopt a project management methodology and use it consistently.
2. Implement a philosophy that drives the company toward project management maturity and communicate it to everyone.
3. Commit to developing effective plans at the beginning of each project.
4. Minimize scope changes by committing to realistic objectives.
5. Recognize that cost and schedule management are inseparable.
6. Select the right person as the project manager.
7. Provide executives with project sponsor information, not project management information.
8. Strengthen involvement and support of line management.
9. Focus on deliverables rather than resources.
10. Cultivate effective communication, cooperation, and trust to achieve rapid project management maturity.
11. Share recognition for project success with the entire project team and line management.
12. Eliminate nonproductive meetings.
13. Focus on identifying and solving problems early, quickly, and cost effectively.
14. Measure progress periodically.
15. Use project management software as a tool—not as a substitute for effective planning or interpersonal skills.
16. Institute an all-employee training program with periodic updates based upon documented lessons learned.

Obstacles to Effective Project Management

10. If 'Best Practice' is followed by the accredited PM, then any obstacles to Project Management should be mitigated, however issues may still exist including, but not solely;

- **Project Ambiguity**. If the relationship between Client and PM and more importantly between their objectives, is in conflict, then the project may be poorly defined.
- **Poor Cross-Functional Cooperation**. The PM relies on Team Managers at the Operational Level, which may be internal or external to the organisation, if lines of communication are poor, then functionality will be impaired or significantly reduced, leading to time and cost overruns.
- **Poor Deadline Management**. The PM is ultimately responsible to the Client, for the delivery of the construction within the allotted time frame. Minor deadlines mist, may snowball and push to the right major deadlines.
- **Poor Communication**. The Project Environment, whilst a temporary environment, relies heavily on cross department and interdepartmental communications, with all disciplines fertilizing the others. Poor or limited communications will ensure the project becomes protracted.
- **Poor Project Staffing**. All PM's must have the right individual, professionally qualified and correctly contracted (JCT), embedded in the relevant discipline/team. This also eludes to under resourcing a project.
- **Poor Cost Control**. The PM should remain in budgets, as the Clients CEO for the project. Cost, like all these obstacles, should be subject to 'Due Diligence' and a second extant tier of individuals, should oversee this function to mitigate both parties. At the Operational Level, great emphasis should be placed upon 'Variation Orders' and the cost impact that will result.
- **Poor Resource Control**. The 'Built Environment' is leaning more towards 'Just In Time' (JIT) Resourcing and as such the procurement and delivery strands within the project, must remain open and accountable to the PM, on behalf of the Client.

Analysis

11. Given the above, the following analysis is forthcoming;

- How disengaged is the 'Project Environment' from its parent organisation? Whilst many organisations do have slow inertia to change, there is a fine line between establishing an internal/external change project, headed by a PM, organic or not, against the external 'Consultant'.
- Is every 'Project Environment' different in the construction industry sphere? Whilst the delivered product, will vary, it is still constructed and conforms to regulations, benchmarks and standards, which are immoveable and as such, is one product different from another, given the requirement falling from The Latham Report[10] for a more joined up approach.
- Does the PM work in a unique, novel and transient environment and by definition is the PM's work, as such the same? There may be legs in suggesting that over the last 50 years of 'Project Management', development and evolution that the culminating point has been reached and that now, due to accreditation, industry standards, risk

mitigation and liable, that all 'Project Environments', 'Project Management' and PMs actually conform to a norm and as such are not now unique and novel. However, it is agreed that they are transient in nature.

- Why, in the Project Lifecycle, is maximum effort always exerted towards the end of the construction/build phase? This is attributed to 'Ground Rush' and as such it is the increase in tempo to ensure the final deadline is met and goes some way to suggest the importance of Deadline Management, as stated above.

Summary

12. Traditionally, the 'Project Environment', either internal or external to the parent organisation, is remoted and controlled by a temporary organisation, headed by a Project Manager (Professionally Qualified), on behalf of the Client. The project requirements MUST be clearly defined and conform to the CIOB 'Best Practice' or other industry standard, whilst still being unique, novel and transient in nature. Whilst no industry exemplar exists for the definition of 'Project Management', Turner 2003[5] offers the most flexible approach and is regarded as the forerunner to quantify this skill set. Project Lifecycles also differ between controlling bodies, but can be overarched by four main phases; Concept, Design, Construction, Handover.

To achieve project effectiveness the PM should utilise the CIOB 'Project Handbook', in combination with a detailed 'Project Brief' in conjunction with Kerzner's sixteen point to success, whilst mitigating poor; Communication, Cooperation, Deadline Management, Cost Control, Resource Control, Staffing and tie down any project ambiguity, to achieve project accomplishment.

[E Signed]

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