Harnessing the staged approach to projects

Robert Buttrick

- ***Understanding whose project it is and why this makes a difference***
- ***Choosing the stages that will make you more effective***
- ***The importance of designing your gates and choosing your decision makers***
- ***The need for quality reviews at the right time.***
- ***Distinguishing between project stages and systems methodologies***
- ***Dealing with hundreds of projects! How a staged approach helps.***

It's all about performance and benefit

"Projects" are rapidly becoming the way organizations should manage change. This applies not only to traditional activities such as large construction projects, but also to any change initiative aimed at putting a part of a business strategy into action. Projects, in the modern sense, are strategic management tools and you ignore the newly reborn discipline of enterprise-wide project management at your peril. Most organisations are never short of good ideas or opportunities for improvement and growth; your own is probably no exception. Ideas can come from anywhere within the organisation or even outside it: from users, competitors, customers or suppliers. However, deciding which of all these good ideas you should actually spend time and money on is not easy. You must take care in choosing which projects you do, as:

- you probably don't have enough money, manpower, or management energy to pursue all of your ideas and opportunities;
- ·undertaking projects which you cannot easily reconcile with your organisation's strategy will, almost certainly, create internal conflicts, confuse the direction of the business, and, ultimately, reduce the return on investment.

You should consider for selection only those projects which, will realize real benefits, meet defined organisational needs, are derived from gaps identified in business plans and have a firm root in your strategy.

Having created a shortlist of "possible projects" it is important you work on them in the right order, recognizing interdependencies, sharing scarce resources and bringing the benefits forward whenever possible. Figure 1 shows this in a diagram. Selecting the right projects will help you achieve your business objectives by realizing benefits which support your strategy. Two key roles are associated with projects:

The project sponsor is the person who wants the benefits the project will realise.
The project manager is the person who manages the project on a day-today basis, ensuring that its deliverables are presented on time, at the right quality and to budget.

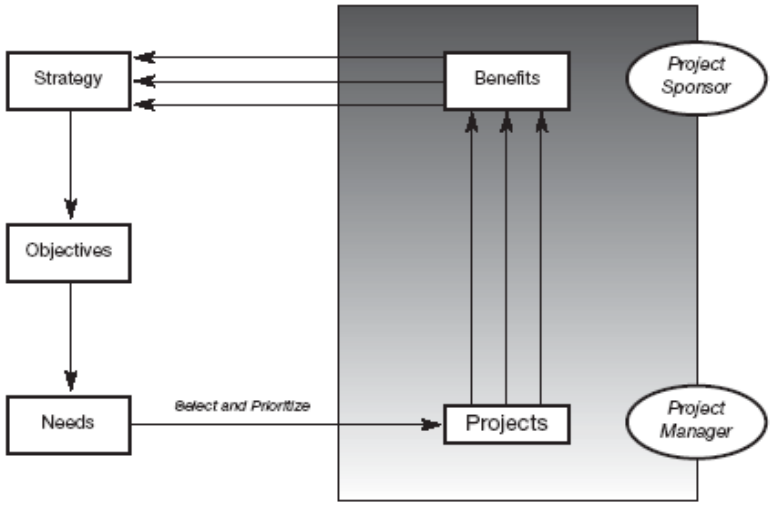


Figure 1 – Selecting the right projects

The framework for managing benefits-led projects is aimed at making the results of projects more predictable by:

- being benefits focussed;
- building in quality;
- managing risks and exposure;
- exploiting the skills in your organisation.

As a project proceeds over time, the amount of money invested in it increases. If none of this money is spent on reducing the risks associated with the project then it is poorly spent. You should aim to drive down risks as the project moves from being an idea to becoming a reality. Figure 2 demonstrates this.

The investigative stages are crucial and you should hold back any development work until your investigations confirm why you are doing the project and show

Figure 2 - Reducing the risk

you know what you are doing, how you will do it and have proved that the risks are acceptable. You do this by using a staged approach where each stage serves as a launch pad for the subsequent stage. In this paper I have used five stages, but other models are equally acceptable if they suit the environment and culture of your organisation.

Stages explained

Stages are specific periods during which work on the project takes place. These are when information is collected and outputs created. For each stage in the project, you should carry out the full range of work covering the entire scope of functional inputs required to achieve the benefits, including commercial, technical and operational aspects. If it's for a product or service, then marketing will also be involved. These functions should not work on the project in isolation but in a continuous dialog with each other, thus enabling the best overall solution to be developed. In this way your knowledge develops and increases on all fronts at a similar pace and solutions are designed, built and tested in an integrated way. No one area of work should advance ahead of the others. Your solution will not be what is merely optimal for one function but will be an effective solution which is best for your organisation as a whole. Further, you should limit the work undertaken in any stage to that which is needed at the next gate: there is little point in spending effort and money until you need to. During each stage it is essential for the project manager to continuously forecast and reforecast the benefits, resources and costs needed to complete the project. He/she should always keep the relevant functions informed and check on behalf of the sponsor that the project still makes sound business sense.

Before you start work on any stage, you should always know what you are going to do next in order to increase your confidence and decrease risks; you should have a project plan for at least the next stage in detail and for the full project in summary.

Gates explained

Gates are business oriented decision points which precede every stage. Unless specific criteria have been met, as evidenced by certain approved deliverables, the subsequent stage should not be started. Gates serve as points to:

- check that the project is still required and the risks are acceptable;
- confirm its priority relative to other projects;
- agree the plans for the remainder of the project;
- make a go/no go decision regarding continuing the project.

As such, gates are forward looking and are the preserve of the Project Sponsor or "higher management". They not only take into account information from the project team, but also from the wider environment within which the project will be undertaken and its outputs operate. At each gate you will need to answer three distinct questions:

- Is there a real need for this project and, in its own right, is it viable?
- What is its priority relative to other projects?
- Do you have the funding to continue the project?

It is convenient to think in terms of these questions because, in many organizations, discrete people or groups are needed to address each of them.

The first question concerns the viability of the project assuming no other constraints. Does it fit your strategy? Does it make business sense? Are the risks acceptable? Do you have the resources? This question is addressed by the "project sponsor."

The second question (priority) concerns the project in its context. It may be a very worthy project but how does it measure against all the other projects you want to do or are currently doing? Are there more worthwhile projects to address? Is it just "one more risk too far," bearing in mind what you are already committed to? This question is dealt with by "higher management".

The third question involves funding. Traditionally, organisations have discrete and very formal rules concerning the allocation of funds and which are generally controlled by a finance function, especially since Sarbanes Oxley legislation was introduced. So, you might have a viable project, it may be the best of those proposed BUT have you the funds to pay for it?

Gates have traditionally been defined as end-points to the preceding stage. The logic is that the work in the stage culminates in a review (viz. end of stage assessment) where a check is done to ensure everything is complete before starting the next stage. However, due to time pressures, it is often necessary to start the next stage before everything in the previous stage has been fully finalized. For example, in the typical framework in Figure 3, we see that it is sound sense to undertake a trial operation of our new output before all the work is completed. What is essential is that we have sufficient work done to enable us to start the next stage with confidence. We are, therefore, left with the difficulty of having a "rule" that common sense encourages us to break. The solution to this dilemma is to treat gates as entry points to the next stage. In this way you can start the next stage as soon as you are ready, regardless of whether or not the full work scope of the previous stage has been completed. In this way, stages can overlap, reducing timescales, without unknowingly increasing the risk associated with the project. This approach also opens another powerful characteristic of the staged framework. Gates are linked to the stage that follows. If a stage is omitted, the preceding gate is also omitted. (Try working out how to omit a

stage if the gate is attached to its end point – you'll find it gets very muddled.) This allows you to follow the strict principles of the gated approach even if a stage is omitted.

The project framework

Project Managers need to draw on many resources from a wide range of functions within an organization. Ensuring these are focussed on achieving specific, identified benefits for the organisation is a key management challenge. You can increase the likelihood of success for your projects, and hence of your organisation, by following an approach which:

- is benefit driven;
- is user and customer focussed;
- capitalizes on the skills and resources in the organisation;
- builds "quality" into the project deliverables;
- helps manage risk;
- allows many activities to proceed in parallel (hence greater velocity);
- is used by people across your whole organization.

An example project framework is shown in Figure 3 as a bar chart and in Figure 4 as a diagrammatic overview. The stages are, briefly, as follows:

Identify the need – Proposal: a need or opportunity is first formally recognized by describing it (i.e. say why you want to initiate a project). If known, you should also describe what you believe the project will produce (i.e. its output but don't jump to conclusions too soon).

Have a quick look – Initial Investigation Stage: the first stage in the project – a quick study of the proposal, to outline the scope and make a rough assessment of the possible ways of meeting the need, benefits, resources and costs needed to complete it. At the end of this stage you should be sure of why you are doing it. You may also know what you are doing, although this may comprise a range of defined possibilities. You will know how to go about at least the next stage, if not the full project.

Have a closer look – Detailed Investigation Stage: a feasibility study, definition, and a full investment appraisal culminating in a decision to proceed with development work. At the end of this stage you will have high confidence in all aspects of the project and "What you wanted to do" becomes "What you are going to do!"

Do it! – Develop and Test Stage: the actual development, implementation and testing work associated with the project.

Try it – Trial Stage: validation of all aspects of the development in the users' or customers' operational and working environment. What has been created may work very well under "test conditions," but does it work under normal operational conditions?

Use it – Release Stage: the last stage in the project when you unleash your creation on the world! This is when products are launched, new computer systems used, new manufacturing plant goes into production, new organization units start operating to the "new rules," new processes are invoked, acquisitions sealed and disposals shed. The on-going operational aspects are embedded in the organisation and the project is formally recognized as complete.

Check it did what you wanted – Post Implementation Review - About three to six months after completion, a check is done to see if the project is achieving the business objectives and its outputs are performing or operating to the standards expected.

Some key questions

How many stages should I have?
Some organisations are taking an "enterprise" view of projects and prescribe a defined framework either for the complete portfolio or for individual sub-portfolios. If taking this approach, consider the types of project you undertake in your organisation. Do they fit the generic stages described earlier? Are there some modifications you would like to make? Some organizations have only four stages, others six or more. Generally, the fewer the better, but they must be meaningful to you and fit every project you are likely have. My experience is that three is too few and five or six will fit most purposes, so if in doubt try five. Of the five stages used in this paper, it is the Trial Stage which is often either left out or merged in with the Develop and Test Stage. Even if not taking an enterprise approach, the stages need to be chosen to represent a real change of state for the project. Consider what decisions you would expect senior management to make. These are clues to your gates and, in this approach, it is the gates which drive the need for stages. Finally do not mix different "states"; for example, "initial investigation" and "build" or "develop" should be reflected in separate stages.

What should I call the stages and gates?
The stage and gate names I have used in this paper are based on my experience of working in several organisations on many hundreds of projects. What you choose to call them is up to you but that decision is not trivial. Words are emotive and hence can be both very powerful movers for change or inhibitors of change. In all organisations there are words which mean something particular to everyone; and mean different things to different people. You can build on the former by exploiting them in your project framework, provided the meaning is compatible with what you wish to achieve when using the words. You should avoid the latter and choose different words, even making up new words if the dictionary cannot help you. For example, working in one organisation I found the word "concept" problematic, despite its being very well defined and in the dictionary. "Concept" to some people was a high level statement of an idea (the meaning I wanted to convey), but to others it meant a detailed assessment of what has been decided should be done (this was not what I wanted). Rather than try to re-educate people in their everyday language, I found a word (proposal) which had no strong linkages to current use of language. There were similar problems with the word "implement": it has so many preconceived meanings that it is better not to use it at all! If you look at the list of possible names, you will notice that certain words appear in more than one place: this is a sure sign that they might be misunderstood.

The same issues apply to the naming of the gates. For these, however, it is better to name each one according to the stage it precedes. This emphasizes the "gate as an entry point" concept. An alternative approach is to name the gate after the document which is used as the control on the gate. You will see I have mixed these. Again this is your choice, but make the same terminology apply across the whole organization. I do, however, strongly suggest you do not refer to the stages and gates by a number or letter. It will cause difficulties later (including significant cost) if you need to revise your framework. You will not believe the number of times a "Gate 0" or "Stage 0" has had to be added to the front of a framework! Using proper names is simpler, more obvious, and will not box you in for the future.

Stage	Alternatives
(Proposal)1	Concept; Initiation; Ideation; Idea generation; Start up
Initial investigation	Initiation; Pre-feasibility; Initial assessment; Preliminary Investigation; Evaluation; Research; Study
Detailed investigation	Feasibility; Appraisal; Definition; Design; Business Case; Evaluation; Authorisation; Design; Specify
Develop and Test	Implementation; Execution; Realisation; Development; Production; Construction; Build
Trial	Beta Test; Pilot; Commissioning, Validation
Launch/Close	Finalisation; Launch; Completion; Implementation; Operation; Operation & Closure; Acceptance; Handover;
(Post Implementation Review)[1]	Business review; Audit; Post-project review

Avoid poor front and back ends to your projects

In designing their frameworks, I have found people make mistakes in two key areas, the front end and the back end. All too often, I see frameworks with minimal start-up activity, immediately followed by the Develop and Test Stage. They have in effect gone from "idea" to "build" in one small step. In all but the simplest projects such a leap is naive and may account for why so many projects are ill-defined and doomed to failure. By all means make it easy to start the project off (i.e. pass through
the Initial Investigation Gate), but do ensure there is rigor in the actual investigations themselves. At the back end, people often confuse Project Closure with Post-Implementation Review. The former looks at project efficiency and delivery, whilst the latter looks at benefits realization and operational effectiveness. These two views cannot be combined as the measurement points are separated by time. Also note that "Proposal" and "Post-Implementation Review" are not stages of the project. They are activities which happen before and after the project, respectively; that is why they are shown as a circle and not an arrow in Figures 3 and 4 (at the end of this paper).

Don't mix business and quality issues

Another common mistake is to confuse gating, which is concerned with business risk and whether a project should continue, with quality checks. Quality checks are concerned with determining whether the outputs from the project are likely to be fit for purpose. In some organisations you hear of the term "quality gates". I recommend you do not use this term, as it tends to lead people to confuse these two aspects. Gating is solely about business matters; the minimum level authority to make a decision would be that held by the project sponsor. In practice, gate decisions are often made by a much higher authority in the organisation. For example, if the project is part of the programme, gating is often the accountability of the programme manager. Those involved at a gate review meeting have to take account not only of the status of the project itself, but also the context within which the organisation is operating and more importantly, the context within which the outputs of the project will be used. Many perfectly good products rightly never see the light of day, simply because an alternative has already been launched by a competitor, thereby making the product development project unviable. Typically, a gate review could take one to two hours, often far less. On the other hand, quality checks can take far longer. In classic systems engineering, such reviews often have names such as "system design review", "preliminary design review" and "critical design review". To be effective, these reviews often take days. Unlike gate reviews, quality reviews should include the suppliers, contractors, customers and users. It is therefore apparent that the people attending gate reviews and quality checks are different groups of people with different skill sets. There is however often a connection between the quality reviews and the gates. In the example using the development framework in figure 3, we would expect the design review to have been completed towards the end of the detailed investigation stage. The outcome of such a review would provide information and an assessment of technical risk to those making the business decision at the development gate.

Don't get confused by IT

Another mistake frequently made by organisations is to confuse frameworks for projects with IT development methodologies. The confusion is very understandable, as many IT methodologies take a life cycle approach which resembles that of the project. However it must be understood that such methodologies are solely looking at one set of deliverables, those relating to the IT products. The project on the other hand has to include all the deliverables required to realise the benefits. In practice, an IT life cycle could sit solely within the single stage of a higher level project. In addition, design and development activities for IT outputs are often don in an iterative way; processes can be used iteratively, but activities on projects can only be done sequentially as time only moves in one direction. By separating the two aspects you can have single project activities which encompass iterative process based activities. Because this misconception is so widespread, I would recommend that any stage names do not resemble those in any known IT methodology or system development lifecycle and thereby add to the confusion!

The promoter-contractor relationship.

Whose project is it?

When designing the project framework, it is imperative that the relationship between the promoter of a project and any contractors or suppliers is fully understood. This can become very complex, as in many cases, the promoter's project is supported by a number of contractors, each of whom see their part of the project as "their project" in its own right. This is understandable as each party is a separate entity and has to look after its own business interests. The promoter of a project will be looking for the benefits their organisation will reap from the outcomes that will result from the project. The contractors will be looking to make a profit on the work that they undertake. Matters can be made even more complex as the contractors often have numbers of suppliers who also see their part of the project as "their project". This has significant implications on gating. At gates, business decisions are made in light of the business context of the

1 These are not strictly stages of the project as they happen before the project starts and after the project is completed.

organisation which owns the project. No organisation can interfere in the governance of another organisation except through the medium of an agreed contract. It is therefore entirely acceptable that the different parties in such a complex relationship may be working to different project frameworks as each needs to address its own interests. In contracts, the relationship between contractors and promoters is often dealt with by means of "certification". In certification, the customer requires certain work undertaken by a contractor, assesses the quality of the work and, if acceptable, grants a certificate, which often leads to payment. Such certificates are usually backward looking, as they require evidence that contracted work has been undertaken to the right quality. Again, just like quality reviews, to which they are often aligned, certification points should not be confused with gates. But unlike quality reviews they have always contractual significance.

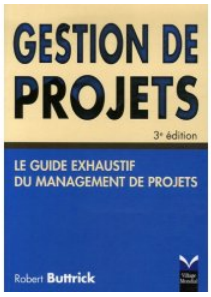
Partnering requires a less complex approach

Whilst a traditional promoter-contractor relationship can lead to a number of different project frameworks, each as perceived by the constituent organisations, a different approach happens for true partnering or joint ventures. In partnering, the constituent organisations act as a single entity. In other words, their business interests are directed towards a single business objective and they work together to achieve that objective. In such a situation, any projects undertaken should follow exactly the same project framework; there is no need for the constituent organisations to have different gating and frameworks to meet their individual needs as in a partnership, they organisations are indivisible. The governance arrangements around business decisions (gates) and quality (quality checks) should take into account a shared approach. There will be no need for a certification between the parties. If such an approach was used to test whether partnering is or is not happening, I would suspect that many so-called partnering arrangements between organisations are not in fact partnering, but merely an ever-closer working relationship built on familiarity or a tendency towards sole supplier status.

For more information on business-led project contact:

English

Russian



French

Chinese

This paper is adapted from Part 2 of The Project Workout, 3rd edition, Robert Buttrick, Financial Times/Prentice Hall, 2005.

See projectworkout.com for more articles on this approach.

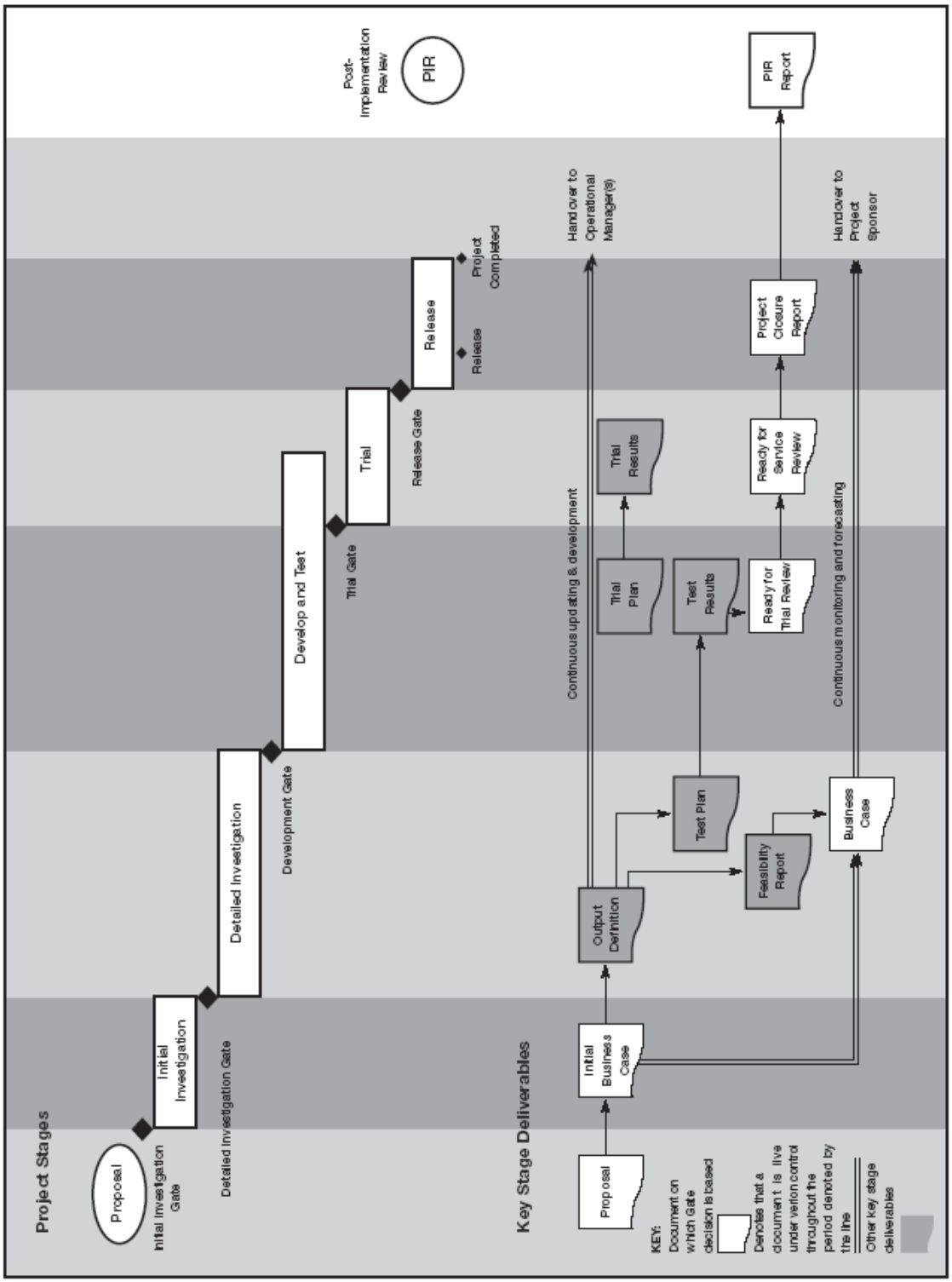


Figure 3 – A typical project framework in bar chart format, with key deliverables

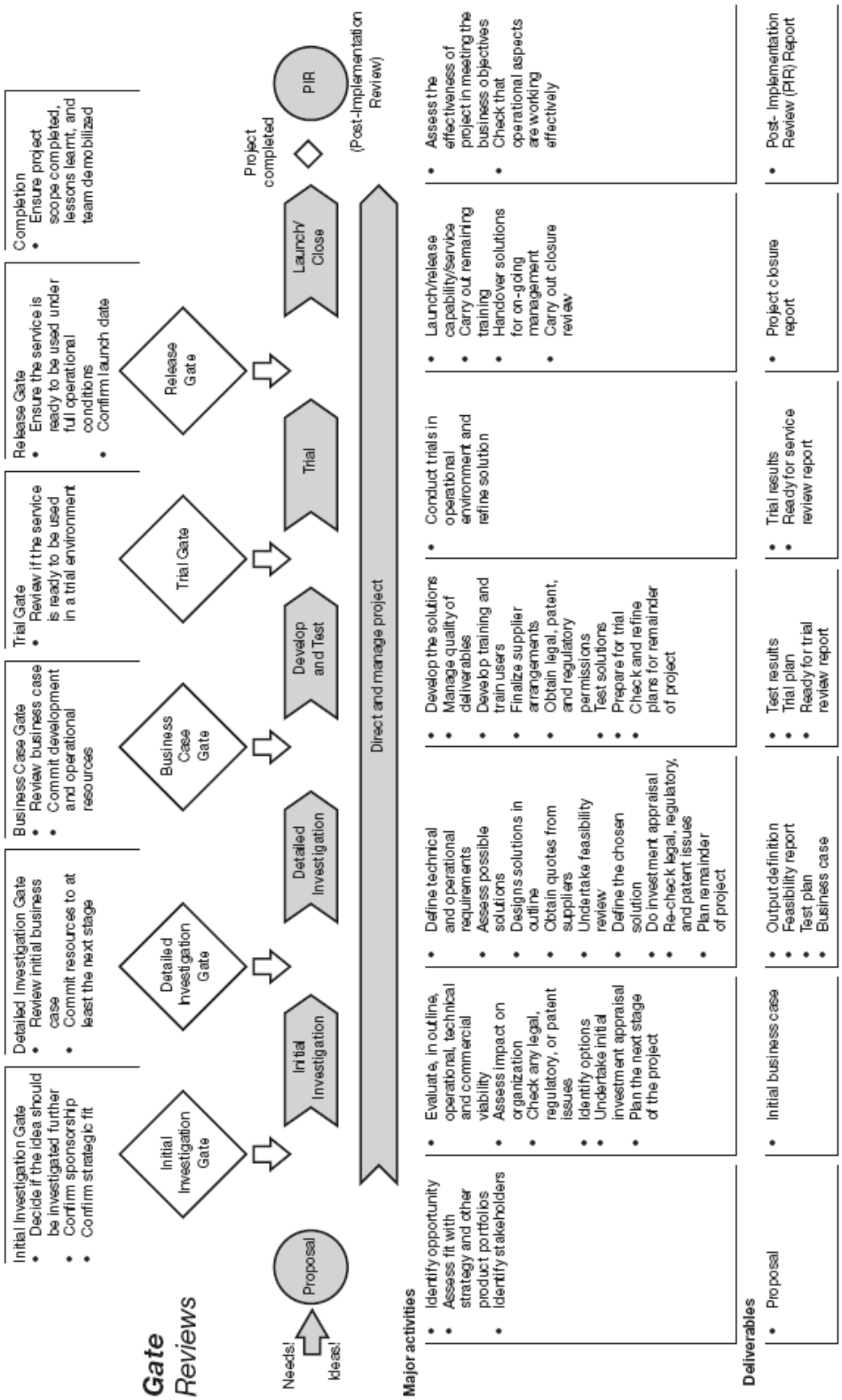


Figure 4 – A typical project framework diagram format, with key activities and deliverables

