# ASSET MANAGEMENT

Improving Cost / Income Ratios Through Technology

**December 2003**

## IMPROVING COST / INCOME RATIOS THROUGH TECHNOLOGY

### Introduction

Asset managers have experienced significant downturn over the past three years. Equity markets, globally, have fallen relentlessly leading to lower asset values and reduced transaction volumes, putting enormous pressure on the bottom line. The balance of the cost/income ratio can, however, be corrected by streamlining operations, lowering costs and increasing the productivity of relationship managers through investment in technology.

How can technology help improve the cost/income ratio? Here are a number of well established ways:

| Business Change | Impact |
|---|---|
| Creating enhanced customer experiences through "knowing your customer" | Reduces customer attrition and enables customer growth |
| Ensuring service levels provided are consistent with client profitability | Enables the value of the client relationship to be maximised |
| Delivery of the service through multiple channels with consistent content and presentation | Reduces operational costs by providing quality services through lower cost channels |
| Increase product ranges and introduce sophisticated investment strategies | Maintains /increases 'wallet' value and may provide additional revenue streams |
| Improved, timely and accurate reporting of investment performance | Improves relationship manager efficiency by reducing administration overheads and allowing the RM to focus on managing the relationship |
| Operational efficiency from front to back office | Reduction of operational costs by streamlining processes |

**Table 1 - Methods for improving the cost / income ratio**

### Challenges faced by senior managers

Investment in technology will have appeared on management agendas on a number of occasions. Few organisations have the luxury to start a 'greenfield' operation and so most will need to work within the constraints of existing, and perhaps legacy, technology solutions. This is not a trivial exercise. It also raises a number of important questions:

- How much will it cost?
- When will it pay back?
- Do we build, buy or outsource?
- How can new technology integrate with existing technology?
- What solution design options are available?
- Which one is best for us?

## Objectives of this paper

This paper takes a close look at the asset management business, discusses the architectural design options and proposes a process for arriving at the optimum architecture for the business. The architecture is optimised to ensure that cost / income ratios are improved not just for current operations but also for future strategic changes.

The paper uses the following structure:
1. Asset management business functions (using a generic business model to describe the business)
2. Solution options:
   o System architecture choices
   o Build, buy or outsource
3. Determining the optimum architecture framework
4. Putting it all together

## 1. Asset Management Business Model

Figure 1 below shows a generic, high level, business function model of an asset management business segregated into front office, middle office and back office functional areas (definitions of front, middle and back office vary between organisations). The model applies to various types of asset managers including private banks, fund managers and insurers. It is no coincidence that software vendors have also provided a similar breakdown of functions in constructing their systems – typically providing business functionality by way of specialist modules. Quite often these can be sold and then implemented independently of any other software the vendor may provide. Examples include order management, client reporting and decision support (or portfolio modelling) and these off-the-shelf solutions are highlighted in blue.
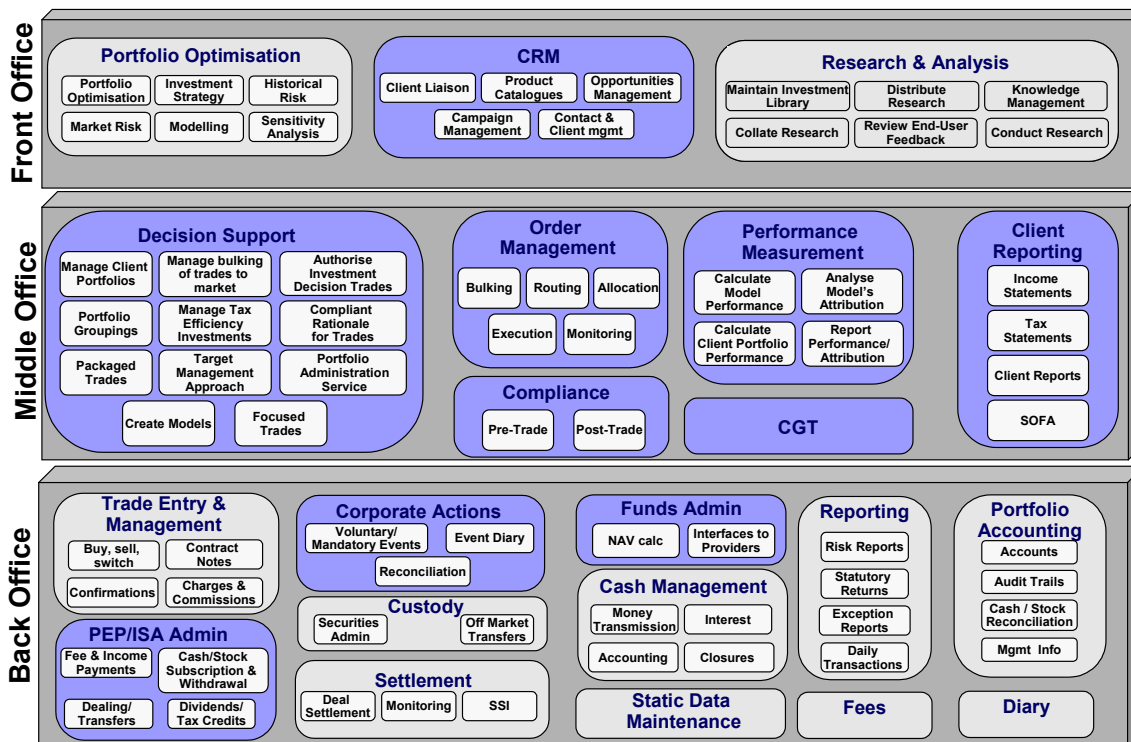


**Figure 1 - Asset Management Functional Model**

Based on the number of standalone high level functions available there are a large number of combinations possible for 'architecting' an asset management business.   Add into the pot the option of either developing or outsourcing these functions and the possibilities are multiplied.

How then do you choose what is right for your organisation?

## 2. Solution options

Below are discussions on two key choices that have to be made.  These relate to:

- System architecture types
- Buy, build or outsource

**Systems architecture choices**

In practice, the solutions which have been implemented in asset management institutions can be categorised into a number of systems architecture types, each with their own pros and cons.

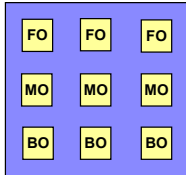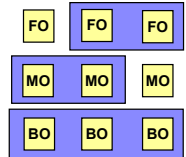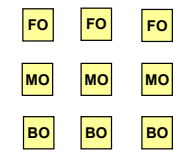The table below describes each of them in more detail:

| Architecture Types | Characteristics | Pros | Cons |
|---|---|---|---|
| Integrated | **Single integrated solution from one supplier  (usually external and individual business components not available standalone)** | No bespoke interface build within the transaction flow<br><br>Database maintenance easier<br><br>Single vendor relationship<br><br>Common hardware platform | Overall functionality coverage is weaker<br><br>May still require specialised system<br><br>Reliant on one supplier |
| Hybrid | **Mix of solutions from single or multiple vendors (will have a track record of integrating their solutions with each other)** | Advanced functionality<br><br>Inter-system interfaces and control of database consistency in place<br><br>Not wholly dependent on a single supplier | Overall costs will be higher<br><br>Multiple vendor relationships<br><br>Integration / reconciliation overhead<br><br>Tight vendor SLAs required to allocate responsibilities<br><br>Mix of hardware platforms / technologies |
| Best of Breed | **Multiple independent vendor solutions (internal and external)** | Advanced functionality<br><br>Lower costs to replace parts of the systems architecture<br><br>Less dependence on a single supplier | Implementation, integration, reconciliation and maintenance is complex<br><br>Overall costs are higher<br><br>Multiple vendor relationships (each with own SLA)<br><br>Multiple databases cause inconsistencies<br><br>Mix of hardware platforms / technologies |

**Figure 2 – System Architecture Types**

Although a 'pure' best-of-breed architectural solution is presented above, in practice this is viewed as a theoretical solution which is rarely achieved. Most organisations will either look for an integrated solution or a hybrid solution. However, many asset management organisations will have hybrid solutions as a result of a history of mergers and acquisitions.

In addition, some of these business functions can be processed through an outsourcing arrangement. However, looking at the business function model, outsourcing arrangements tend to be implemented from the bottom of the model up i.e. from back office to front office. This is because the outsourcing market is not yet mature enough to handle isolated pieces of the value chain, say, for the middle office only. Middle office functionality would generally only be available (and cost effective) if the back office was being outsourced as well. Also, asset managers will generally not outsource the front office functions as this is where they purport to add value and demonstrate their unique selling proposition through:

- Managing the customer relationship
- Setting and implementing investment strategies
- Optimising risk / reward profiles
- Providing research and analysis

For this reason any outsourcing arrangement can be viewed as being part of a hybrid solution.

There are reasons for adopting each approach. The reasons may now be out of date for some institutions, due to changes in business strategy, but nevertheless it is interesting to note the drivers as they will influence the architectural blueprint. The table below summarises the systems architecture types and associated high level drivers.

| Systems Architecture Type | Business strategy / drivers influencing systems architecture choice |
|---|---|
| Integrated | Standard asset management product and service offering, single country solution, smaller client portfolio, standard reporting requirements |
| Hybrid | Specialised trading, high volume of trading, large and varied portfolio of clients ranging from sophisticated to standard investment requirements, global rollout requiring high degree of configuration per country (solutions must be supported in these countries), complex client reporting |

Table 2 - Characteristics of system architecture types

**Buy, build or outsource**

Another important choice which needs to be made is how to source the solution(s). The options are buy, build or outsource (or insource if the business unit is part of a larger organisation). Each of these has its own pros and cons, summarised in the table below.

| | Pros | Cons |
|---|---|---|
| **Build** | Fit for Purpose | High risk of project failure |
| | Control own destiny | Costly to build and long delivery timescales |
| | Potentially create a competitive advantage through customised solution | Not a core activity for an asset manager |
| | | Not a tried and tested product |
| | | Need to have a dedicated 24 x 7 support & maintenance team - costly |
| **Buy** | Time to market faster than build option | Enhancements take longer as they are tied in to software release cycles |
| | Best practice processes adopted | Reliant on the vendor product strategy fitting in to your requirements |
| | Legislative and market changes handled more efficiently and cheaper by package vendors through economies of scale | On going maintenance fees and cost of ownership. |
| | Can capitalise the investment over time | Potentially poor service quality (due to vendor's other client priorities) |
| | Growing functionality as user base increases - pooled cost of ownership | |
| **Outsource** | Reduce and control operating costs | Contract employees less company oriented |
| | Improved company focus | Lengthy bid process |
| | Accelerated reengineering benefits | Longer response time to problems |
| | Shared risks | Time-consuming to supervise contract |
| | Free resources for other purposes | Costs increase with volume |
| | | Immaturity of outsourcing options for some business functions |

**Figure 3 - Pros and Cons for Build, Buy and Outsource options**

In today's market, where there is an established vendor community with mature products, the buy option will normally prevail over the build unless there are specific reasons for doing otherwise. For example, where there is a lack of maturity in the vendor market for a specific business area, or where the development can be undertaken in-house with limited risk due to its size or availability of cheap and abundant technology resources.

On the other hand, the choice of whether to buy or outsource involves a more complex decision process. For example, the fund management outsourcing business is increasingly mature which enables a strategic change to be effected by those fund managers who would now like to focus on either product distribution or product manufacturing, or perhaps both.

Figure 4 discusses how to decide which business areas are strong candidates for outsourcing.

**How do you decide which business areas / functions are strong candidates for outsourcing?**

A two-step process is recommended, which first of all develops the strategic intent and then develops the business case.

*Step One - Developing Your Strategic Intent* assesses the options and opportunities that outsourcing can and cannot provide your business. It identifies and verifies your core competencies, business critical activities, processes that add value and those that erode value. It provides senior management with a 'map' of the business showing your 'Options for Sourcing'; whether that is to Outsource, Insource (selling services to other companies) or maintain the status quo.
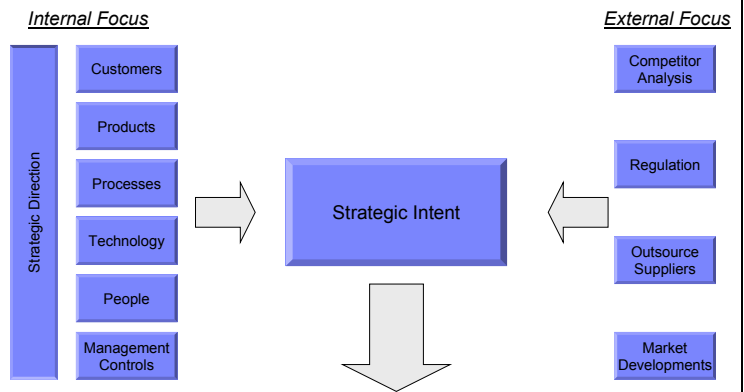
To achieve this holistic view the following model is used to assess both the internal and external factors facing the business.

This assessment – both Internal and External – provides the data necessary to develop the strategic intent which will answer the key questions; What can I outsource? What should I outsource? What are the benefits to my business? What are the risks I face?



✓ What *can* I outsource?
✓ What *should* I outsource?
✓ What are the benefits?
✓ What are the risks?

*Step 2 - Developing the Business Case for Sourcing*

Your Strategic Intent identified areas that you could outsource. Before committing to a supplier you need to develop your own business case, without undertaking a large scale operational review.

This step focuses all questions on developing a business case in order to decide whether the benefits outweigh the costs.

The Future State ("To Be") offered by the potential outsource providers is assessed together with the existing Current State ("As Is") definition, in terms of processes, technology and people. This is performed at a detailed level to enable a tight scope to be defined around the function/product area being assessed and also to identify exceptions in the process. Critical to this is a comprehensive view of the hand-over points between the area being assessed and the remaining business.
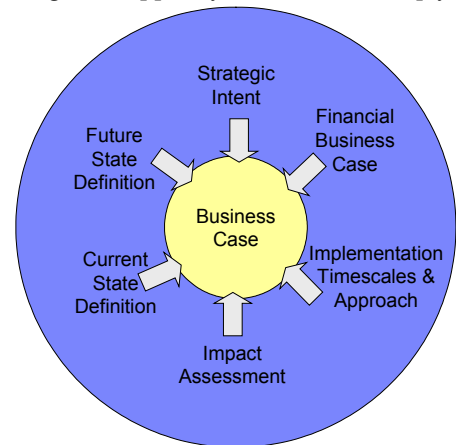


Once the Current and Future states have been defined an impact assessment can be performed that clearly identifies the changes required to move to the future business model. The changes identified will then feed into the overall indicative timescales and approach. This is required to manage senior management and sponsor expectations of the timescales, resources required and costs to implement.

The financial business case, covering implementation and on-going costs, proposed savings and return on investment, is then developed and fed into the overall business case that will in turn make recommendations as to whether the opportunities and benefits outweigh the cost of implementation.

**Figure 4 - Determining candidates for outsourcing**

## 3. Determining the optimum architectural framework

The previous section looked at the solution options (system architecture types and the choice of build, buy or outsource) which must be considered in order to create the systems architecture blueprint.  However, in order to arrive at this stage it is essential that a four step process (described in figure 5 below) is followed.   The objective of this exercise is to determine:

1.  What your business functions are
2.  How they are organised and inter-relate
3.  What types of solution will be necessary
4.  What actual software components will be used (new and /or existing)

The consequence of by-passing any of these steps is serious and could result in the wrong solution being designed and then built.  Even if the steps are followed sequentially from 1 to 4 there is often still a need to refine some of the earlier design decisions as clarity of the solution is gained. Therefore, the process below may require a number of iterations.
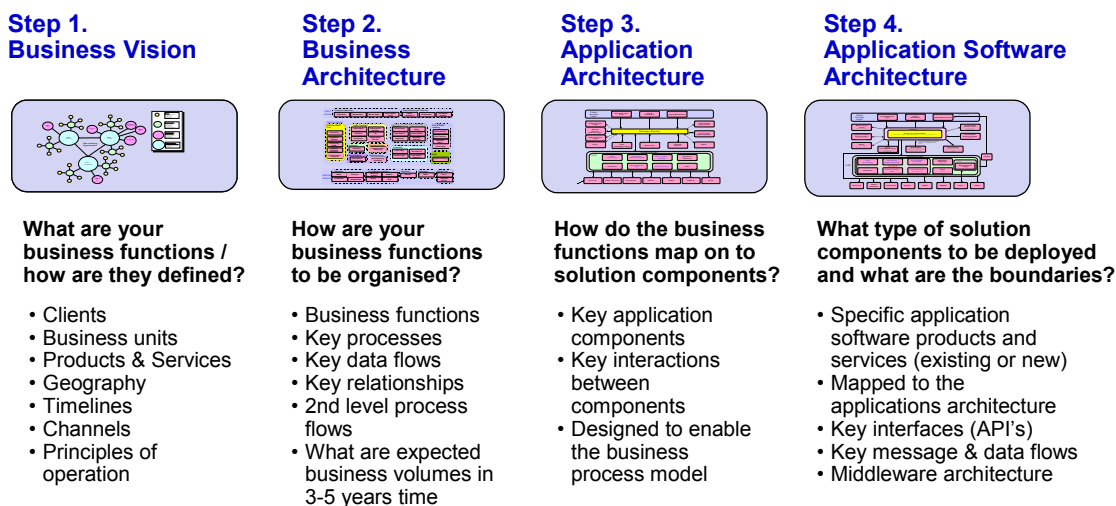
| Step 1. Business Vision | Step 2. Business Architecture | Step 3. Application Architecture | Step 4. Application Software Architecture |
|---|---|---|---|
| **What are your business functions / how are they defined?** | **How are your business functions to be organised?** | **How do the business functions map on to solution components?** | **What type of solution components to be deployed and what are the boundaries?** |
| • Clients<br>• Business units<br>• Products & Services<br>• Geography<br>• Timelines<br>• Channels<br>• Principles of operation | • Business functions<br>• Key processes<br>• Key data flows<br>• Key relationships<br>• 2nd level process flows<br>• What are expected business volumes in 3-5 years time | • Key application components<br>• Key interactions between components<br>• Designed to enable the business process model | • Specific application software products and services (existing or new)<br>• Mapped to the applications architecture<br>• Key interfaces (API's)<br>• Key message & data flows<br>• Middleware architecture |

 **Figure 5 - Establishing an architectural framework**

The step from 3 to 4 involves detailed analysis and perhaps an iterative process since it is only by step 4 when consideration is given to specific software solutions.   Going through this process ensures that the right application will be deployed to meet the business vision.  This analysis will require:

- Conducting research on vendor solutions to establish suitability (possibly through a Request for Information); and,
- Reviewing the current technical architecture to ensure that technology standards are maintained (these are normally constraints and will include key areas such as databases, hardware platforms, connectivity, deskop); and,
- Undergoing a feasibility study to establish financial viability (through the construction of a business case).

Clearly at this point there will need to be a view as to which systems architecture type is the preferred way forward, i.e. best of breed, integrated or hybrid, to limit the scope of analysis. This will already be inferred, to a large extent, from the business strategy drivers discussed earlier.

The table below (Table 4) shows a list of key vendors operating in the UK with solutions in the asset management business (it clearly demonstrates the architectural solutions available for the buy option). The colour coding indicates solutions which are linked or can operate independently of any other solution provided by the software vendor. For example, DSTi has a number of product offerings which can be sold and operated separately or can be implemented as an integrated solution.

It is worth revisiting Table 1 which listed a number of ways in which the cost / income ratio can be improved in an asset management organisation. The business function components can now be mapped on to this table to demonstrate how the benefits can be delivered.

| Business Change | Impact | Influenced by which components? |
|---|---|---|
| Creating enhanced customer experiences through "knowing your customer" | Reduces customer attrition and enables customer growth | CRM |
| Ensuring service levels provided are consistent with client profitability | Enables the value of the client relationship to be maximised | CRM<br>Client Reporting<br>Back Office (management information) |
| Delivery of the service through multiple channels with consistent content and presentation | Reduces operational costs by providing quality services through lower cost channels | Middleware (this technology solution is not included in the component model)<br>CRM<br>Client Reporting |
| Increase product ranges and introduce sophisticated investment strategies | Maintains /increases 'wallet' value and may provide additional revenue streams | CRM<br>Decision Support<br>Order Management<br>Back Office |
| Improved, timely and accurate reporting of investment performance | Improves relationship manager efficiency by reducing administration overheads and allowing the RM to focus on managing the relationship | CRM<br>Client Reporting |
| Operational efficiency from front to back office | Reduction of operational costs by streamlining processes | Decision Support<br>Order Management<br>Client Reporting<br>Back Office<br>Corporate Actions |

**Table 3 - How the implementation of automated business component solutions can improve the cost / income ratio**

| | FO | MO | | | | | | BO | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Client Relationship Mgmt | Decision Support | Order Management | Compliance | Performance Measurement | CGT | Client Reporting | Back Office | Corporate Actions | PEPs/ISAs | Fund Accounting |
| **Actuate** (Actuate) | | | | | | | ✔ | | | | |
| **Advent Solutions** (Moxy/Axys/Qube/Geneva) | ✔ | ✔ | ✔ | ✔ | ✔ | | ✔ | ✔ | ✔ | | ✔ |
| **Charles River Development** (CRTS) | | | ✔ | ✔ | | | | | | | |
| **DST International** (HiInvest/HiPerformance/ HiReporting/HiPortfolio/ OpenCGT) | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | ✔ | | ✔ |
| **Eagle Investment Systems** (PACE/STAR) | | | | | ✔ | | ✔ | ✔ | | | |
| **ERI Bancaire** (Olympic) | ✔ | ✔ | ✔ | ✔ | ✔ | | ✔ | ✔ | ✔ | | ✔ |
| **Financial Software Ltd** (CGix) | | | | | | ✔ | | | | | |
| **Finantix** (OneWealth) | ✔ | | | | | | | | | | |
| **FMC Financial Models** (Model/Trade/Pacer/Sylvan/Pages/ Genvest) | | ✔ | ✔ | ✔ | ✔ | | ✔ | ✔ | ✔ | | ✔ |
| **Global Investment Systems** (MFACT) | | | | | | | | | | | ✔ |
| **Heliograph** (eVent) | | | | | | | | | ✔ | | |
| **MacGregor** (MFTP) | | | ✔ | ✔ | | | | | | | |
| **Milvus** (G3) | | ✔ | | | | | ✔ | ✔ | | | |
| **Misys** (Apollo/Eagleye/Altimis/Quasar) | | ✔ | ✔ | ✔ | ✔ | | | ✔ | ✔ | | ✔ |
| **Odyssey** (Triple A) | | ✔ | | ✔ | | | | | | | |
| **SS&C** (Antares/CAMRA) | | ✔ | ✔ | ✔ | | | | ✔ | ✔ | | ✔ |
| **Temenos** (Globus) | ✔ | ✔ | ✔ | ✔ | ✔ | | ✔ | ✔ | ✔ | | ✔ |
| **Thomson Financial** (PreView/Icon/Oneva/Portia) | | ✔ | ✔ | ✔ | | | | ✔ | ✔ | | ✔ |
| **Wealth Management** (LISA) | | | | | | | | | | ✔ | ✔ |

**Table 4 - Examples of key asset management package solutions**

Please note that the above table shows the back office as a single component. However, there are also specialist vendors who supply specific back office components for corporate actions, funds accounting and PEPs/ISAs processing. These are normally included within the back office solutions. For example, DSTi has corporate action functionality within HiPortfolio but does not sell a standalone corporate action solution.

## 4. Putting it all together

Organisations change, and as they do they need to have a systems infrastructure which is aligned to the evolving business and is optimised to deliver the best cost / income ratios. This may not always be easy to accomplish, perhaps due to the configuration of legacy systems, and so a more radical approach may be necessary. Defining a new systems architecture is not a trivial task as there are many options available and perhaps not all the required information is at hand. Investment decisions may need to be made and these must ensure that cost / income ratios are improved and that the payback on the investments is rapid. This white paper has looked at the options available, defined a process for arriving at the application software architecture and presented a mix of vendor solutions (for the buy option).

Square Mile can support this whole process having successfully managed and implemented business and IT strategies. What is also important is that there is independence and market knowledge applied to the decisioning process. Square Mile is an independent management consultancy which has considerable knowledge of the asset management business and the vendor systems which operate in this business area. Figure 6, below, summarises the Square Mile approach for building / revising the architecture framework for asset management businesses.
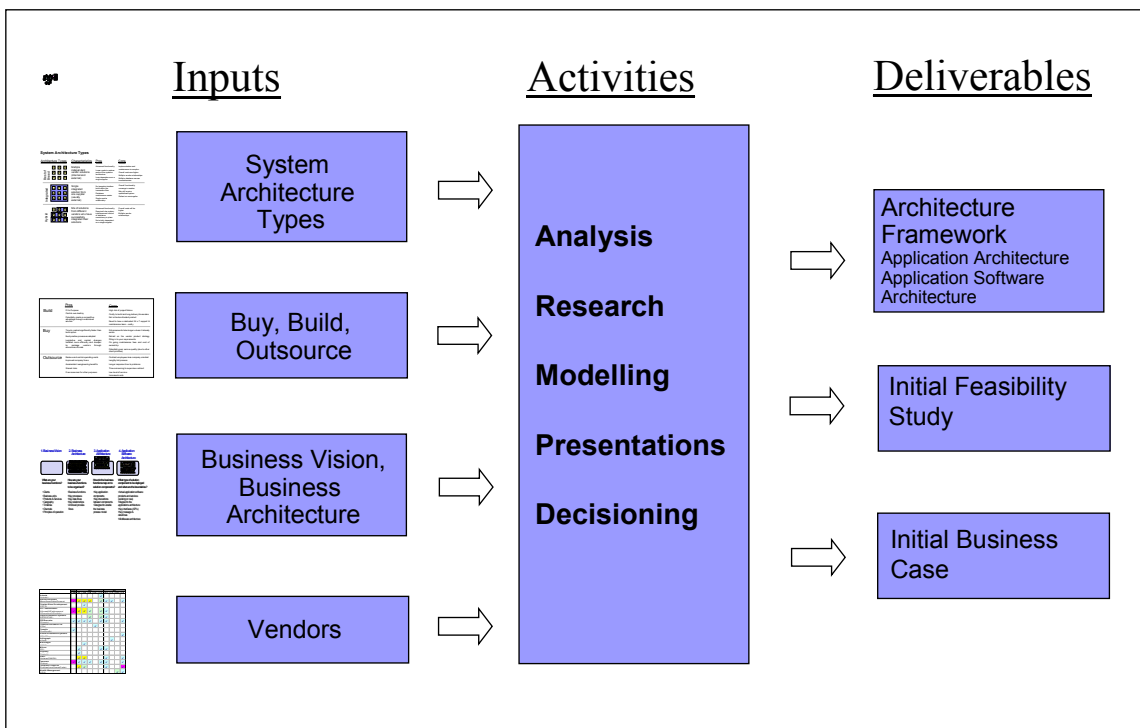


**Figure 6 - The Square Mile approach to creating an architectural framework**

It is only when the architecture has been defined that the main effort of work to implement the change (people, processes and technology) can begin. A roadmap will need to be defined to move from the current state to the future planned state. This is likely to be phased to reduce risk, especially where hybrid solutions are to be implemented.

## About Square Mile Consulting

Square Mile Consulting was formed in 2002 and specialises in providing consulting services to the financial services sector.  Our consultants have considerable experience of working with financial services institutions. Consequently, each Square Mile consultant brings to assignments in-depth business knowledge and a proven track record.

Square Mile's approach to assignments is to work with our clients and focus on the success that they want to accomplish and not to prolong our assignment.  We feel that managing change can only be achieved through focus, which means being clear about which services we offer and within which sectors. Only through such specialisation can we maintain the depth of expertise and awareness needed to add real value to our clients' businesses, covering the full spectrum from strategic thinking right through to practical delivery of change.

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