icpm
international centre for programme management at Cranfield

Cranfield UNIVERSITY
School of Management

PROGRAMME ASSESSMENT MATRICES

Developed from longitudinal studies of the real-world challenges involved in major programmes, to help organisations improve their ability to set up, plan, manage and deliver programmes successfully.

Transforming knowledge into action

Programme Assessment Matrices

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1. Introduction and background

The Programme Assessment Matrices (PAMs) were developed during a research project conducted by the International Centre for Programme Management (ICPM) at Cranfield School of Management during 2011/12, to understand better the real-world challenges affecting programme managers and their organisations. The research consisted of a series of longitudinal studies of 8 major programmes of different types in a range of industries. As part of that collaborative study, issues affecting programme performance and success were explored in depth and new tools and techniques to understand, communicate and address many of those issues were developed and tested by the organisations involved.

One of those tools was the set of matrices described in this paper. They were used to identify and analyse key aspects of the programme and the organisation's ability to execute it, leading to greater understanding of factors affecting the performance and likely outcome of the programme and define courses of action to deal with the identified areas of concern. The programmes achieved different levels of success, ranging from abandonment to complete success in meeting the objectives and delivering the intended benefits.

Developing the Matrices

As a starting point for the development, the dimensions of the OGC programme typology matrix from 'Managing Successful Programmes' (MSP, 2007) were used, as a number of the organisations were using the MSP guidelines. The terminology and structure were adjusted to be more generally useful beyond the original target public sector audience. The adapted version is shown in Figure 1.

The matrices were developed in the first 6 months of the study, then tested and refined following initial application in the following 3 months, then used at regular intervals during the following 12 months to assess programme progress and analyse issues arising. The use of the same tools on all programmes enabled findings from each case study to be compared and synthesised.

One conclusion from the organisations was that the matrices had proved very useful and would be used on future programmes. This is already happening in some of them.

Positioning the Programme

To position the programme, the types and extent of the changes involved should be identified from those illustrated in the matrix to give an initial impression of the level of certainty about what the programme is likely to entail and the areas where work, new knowledge or capabilities are needed to reduce uncertainties. This should also give some idea of the complexity and balance of the different types of change involved: technology vs. business vs. people changes.

1. Introduction and background (continued)

Figure 1: Programme Positioning Matrix

Predictability of Outcome

Focus of the Change

Focus of the Change	Low	Medium	High
Technology engineering infrastructure	• Pioneering production techniques • Some unproven technologies • Scale of the implementation – inc geographical reach	• Globalisation of services • Adoption of technologies that are new to the organisation • Complex technical interdependencies	• Specification clear, based on known design • Proven technologies • Technically complex to deliver but experience available
Business process, product and service	• Market, industry or economic volatility • Relies on responses from external trading partners • New products and services or business models or processes	• Changes to organisational competences and capabilities • Challenges to historical working practices • Value chain and core process changes, e.g. outsourcing of services.	• Adoption of approaches used in similar organisations • Adoption of Best Practice or Industry Standards. • Changes to non-core processes
People and behaviour	• Changes to organisational values and behaviour and employee profile • Changes to lifestyles and economic behaviour of external stakeholders • Long-term cultural change	• Responding to new legislation concerning social or economic trends • Legislative or regulatory changes affecting organisational behaviour. • Organisation and role changes	• Change to current regulations or policies • Little structural change and few new roles • Predictable, stable or clearly defined stakeholders

Source: Adapted from the OGC Managing Successful Programmes, 2007

- In Figure 1 the items in red are the types of changes involved in a very large strategic change programme in a pharmaceutical company.
- It shows that although some aspects were well known and the organisation had a clear understanding of what was involved, certainty of the outcome of a few of the changes was low, putting some of the significant benefits at risk.

1. Introduction and background (continued)

Initial positioning will need to consider a number of factors that may influence the level of outcome certainty or the degree of confidence that can be ascribed to the conclusions.

Questions that should be considered include:

1. What is the strategic context of the programme and what are the main drivers for change in the industry and organisation?

External Factors may include:

I. The competitiveness of the industry and market and the economic situation now and expected over the programme life cycle together with the impact on competitive pressures.

II. Potential changes to the industry - boundaries, mergers and acquisitions and any possible external "shocks" (e.g. due to innovation, economic shocks, regulation).

IV. Market demand - predictability and volatility of demand and structural changes in preferences of consumers / end users, etc.

V. Other relevant factors including political, social and environmental issues.

Internal Factors may include:

I. Resource base: availability, flexibility and the relative priority of this programme compared with other programmes or strategic initiatives.

III. Organisation culture (encouragement of fire-fighting mentality, etc.) structure (existing processes, governance structures) and reward systems and the behaviours they encourage.

II. Timing pressures or constraints - if relevant (e.g. fixed timescale within which the programme must be completed).

2. What are the implications for organisational capability development, deployment and the fit with the business strategy? For example:

I. Is the programme's primary purpose to create new competitive capabilities, significantly enhance or modify existing capabilities and / or retire existing capabilities that have become strategic liabilities?
II. How critical are the organisational capabilities affected by the programme in the firms' overall strategy, business performance and competitiveness?
III. How closely is the programme aligned to specific business objectives and elements of business strategy?
IV. Do the new capabilities need to be combined with other resources or capabilities to create a unique, firm-specific capability configuration?

2. How the matrices can be used in practice

From experience during the research programme, the matrices that follow are probably most useful in the following ways:

a. **In the initiation stages of a programme** to give confidence in the approach and/or recognise weaknesses that need further evaluation. They help ensure the discussions think through some of the programme implications: both *desirability and feasibility.* They should be updated regularly, probably monthly – or whenever decisions about any of the variables are made.

b. **They should also be used when circumstances change**: from business strategy right through to staff turnover – to consider the implications for potential benefits and ability to deliver them and help identify alternative courses of action to address the issues arising.

c. **They can be also used as a structured 'pre-mortem'** – 'what might cause this programme to fail to achieve its objectives?' Or as a post-mortem 'what went right, what went wrong and why?' It provides and objective structure for such reviews – to reduce the tendency to allocate or avoid blame.

d. **They are very relevant when comparing the value and viability of programmes** competing for resources or funding, so they can be used in portfolio management and planning processes as well.

e. **The matrices are probably too detailed for top management or governance board, but very practical for programme/operational management**. But the governance board should be aware they are being used and are the source of inputs to its deliberations.

f. **They should be used to augment (rather than replace) current governance reporting mechanisms/gate reviews**. They fit quite naturally with the development of knowledge required in a stage-gate approach to approval and evaluation.

Perhaps most importantly, the matrices can be used to compare and align the different perspectives of individuals or groups regarding the programme, and highlight differences of opinion that need to be resolved or reconciled if the programme is to be successful. This can be important at any stage in the lifecycle.

The matrices should also be used to identify where the programme needs to be in the future and any potential issues, such as other activities competing for resources that could inhibit, or even prohibit, that achievement and define operational actions to achieve the required future position.

2. How the matrices can be used in practice (continued)

Terminology and definitions

The matrices all describe 3 aspects of potential change involved in the programme:

Focus of the Change	Low	Medium	High
Technology engineering infrastructure	**Technology** – refers to the more tangible aspects: resources such as IT systems, production and product technology, as well as facilities and infrastructure.		
Business process, product and service	**Business** – refers to changes to business models, processes and routines and relationships with customers, suppliers and other trading partners, as well as to products and services offered.		
People and behaviour	**People** - includes changes to roles, capabilities and behaviours of stakeholders either inside or outside the organisation, as well as changes to organisation structure and culture.		

For each dimension the degree of certainty of achieving the changes is discussed and estimated resulting in **Low, Medium** or **High** assessment of overall how 'doable' the programme appears, given the current extent of knowledge.

All the others matrices were devised to have a similar structure for consistency and ease of understanding – the technology, business and people dimensions are retained throughout.

The terms resources and capabilities are used frequently throughout the stages of assessment. For clarity these are defined as:

- **Resources** – tangible and intangible factors that an organisation has or controls. Resources include technological, human and financial resources, patents, intellectual property, brand image etc., as well as reputation and values, processes and existing trading partnerships.

- **Capabilities –** perform coordinated sets of tasks utilising organisational resources to create or deliver organisational outputs. Examples might include: new product development, customer relationship management, scenario planning, performance benchmarking or using 'business intelligence' tools.

3. The sequence of the factors considered in the matrices

In addition to the initial positioning matrix the PAMs consist of 6 matrices. All have the same 'rows': technology change, business change and people change. The columns are all headed Low, Medium, High so that each assessment (except one) is of the level of confidence that the changes should be able to be delivered successfully.

- ***Matrix 1: Benefits Certainty*** considers how much is known about the programme benefits and the changes required to realise them.
- ***Matrix 2: Approach Certainty*** addresses the level of knowledge and experience of methods and approaches that are appropriate for the types of changes involved.
- ***Matrix 3: Capability Availability*** describes the extent to which the organisation or other known parties have proven capabilities to apply the methods and approach in the same or a similar context to the changes needed in the programme.
- ***Matrix 4: Capacity Availability*** determines how likely it is that the resources needed are available and deployable in the programme timescale and at the times required.
- ***Matrix 5: Internal Supply: Capability and Capacity*** considers the extent to which the resources and capabilities will be supplied by the organisation, in comparison with those provided by outside suppliers and partners, and the nature of the control the organisation has over the resources involved.
- ***Matrix 6: Deployment or Operational Readiness*** is used prior to implementation or deployment of each phase of the programme to assess any issues likely to affect deployment effectiveness and delivery of benefits.

Figure 2 describes the relationships between the matrices and the links between them.

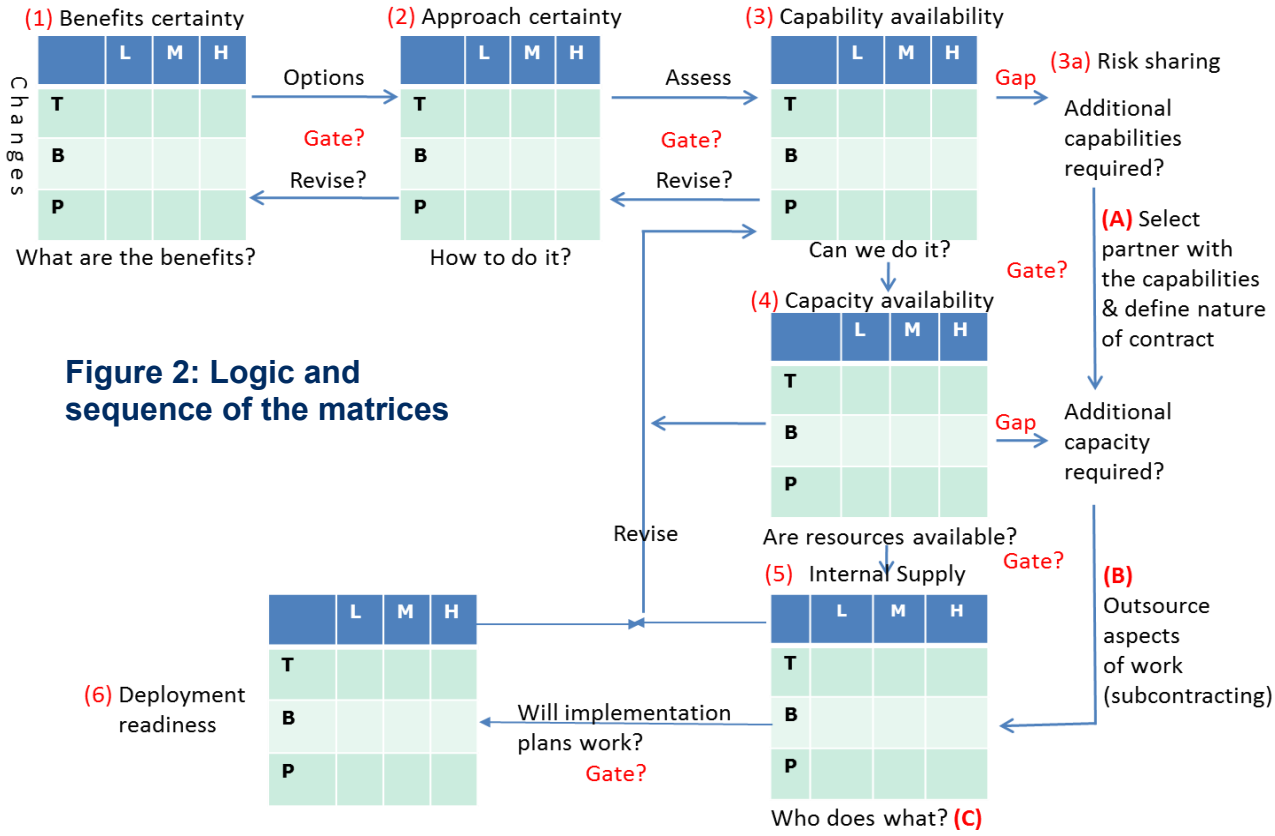


Figure 2: Logic and sequence of the matrices

4. The Matrix Assessments

The following sections describe each matrix in turn and the questions that help in using them. We then consider how the results of the assessments are transferred to the next matrix, along with the feedback loops from one matrix to earlier ones.

In all cases the H/M/L assessments should not be 'tick-box' activities, but the result of discussions amongst the programme team and key stakeholders, so that different perspectives and understandings are shared and a consensus view developed. Or it may identify irreconcilably divergent views that mean the programme scope has to be adjusted. As well as recording the position on the matrix the reasons for that positioning should be recorded along with the potential consequences and any actions identified. Issues raised by the matrix analyses that cannot be addressed by the programme team should be raised with the governance group. Anything assessed as LOW should be highlighted, reported and actions agreed to address the uncertainties or issues causing the LOW rating.

MATRIX 1

Figure 3: Matrix 1 - Benefits Certainty:
(Do we know what we want to achieve? What are the benefits and changes required?)

Benefits certainty

Nature of change	*Low*	*Medium*	*High*
Technology	Technology based benefits are not established, ambiguous, not agreed and/or likely to change considerably.	Benefits resulting from the technology changes are incomplete or partially ambiguous and it is not clear how some could be measured.	Technology based benefits are fully established, evidence-based, measurable, entirely agreed and/or stable.
Business	Benefits of changes to business model or processes are not established, ambiguous, not agreed and changes to achieve them are not clear.	The benefits of business model or process changes are incompletely established or agreed, or are not yet entirely clear.	The business model and process benefits and changes required are fully defined and agreed.
People	The social or organisational impact is not understood or ambiguous, and neither the benefits nor changes are agreed.	The social or organisational impact is partly established, but uncertain in some aspects or some changes are not yet acceptable or agreed by some stakeholders.	The social or organisational benefits nor changes are fully understood, clearly defined and agreed by stakeholders

4. The Matrix Assessments (continued)

MATRIX 1 continued

The main purpose of the matrix is to assess how certain the intended benefits are both in terms of identifying them and considering the ability to make the changes to achieve them.

Questions to help position the programme could include:

- Are the programme objectives clearly stated and agreed?
- Do these objectives satisfy SMART criteria?
- Have all the expected benefits been identified and defined?
- Are the benefits measurable and are estimates evidence-based?
- What types of changes are expected to be required?
- Are the changes needed to deliver each benefit understood?
- Are there any critical dependencies between the technology, business and people-related changes?
- Is responsibility for achievement of the main changes clear?
- Is there a full business case that justifies the programme investment?

If the 'answer' to these or similar assessment questions is **LOW** for any of the change rows, then the strategic rationale for the programme needs to be revisited before continuing.

If none of the rows is **HIGH**, then further work is needed to define or confirm the expected benefits or changes before proceeding.

Otherwise the discussion should move on to the next matrix.

4. The Matrix Assessments (continued)

MATRIX 2

Figure 4: *Matrix 2 - Approach Certainty:* (How can it be done?)

Approach Certainty

Nature of Change	Nature of Change	Low	Medium	High
	Technology	No experience in and / or limited understanding of how to implement the technological / engineering / infrastructure aspects of the changes.	There is limited experience in and understanding of implementing the technological/ engineering / infrastructure aspects of the changes, but there are methodologies available.	Methods of implementing the technology /engineering / infrastructure related aspects of change are clearly understood within the organisation
	Business	New processes and routines need to be put in place to implement the required changes. Some approaches might be novel not only to the organisation but in general. A significant part of the know-how might be tacit.	We are aware of methods that could be used to implement the intended changes, but some of these are untested or have not been previously used in the organisation.	Methods for implementing the process-related aspects of change exist within the organisation and there is experience in implementation of similar changes.
	People	Lack of understanding as to how to secure stakeholders' buy-in and lack of experience in gaining organisational commitment to the types of changes	The approach to secure some stakeholders' buy-in and commitment is identified but there may be resistance or lack of support for the changes from others and these may need a different approach	It is clear how to secure buy-in from all the stakeholders, based on the track record in successfully gaining stakeholders' commitment to these types of changes

The objective of this assessment is to identify whether, and to what extent, the organisation (or its partners) currently understand and have experience of methods appropriate for carrying out such a programme and if not, whether proven methods exist elsewhere and can be acquired or need to be developed for this programme.

4. The Matrix Assessments (continued)

MATRIX 2 continued

Questions which can help this assessment include:

General – applies to all three aspects of change

- Are the decision-makers within the organisation aware of the methods that could be used to implement the intended changes?
- How novel are these methods in general and / or to the organisation.
- Have they been applied before and, if so, was the implementation successful?

Technology and Business changes:

- Do the processes and routines for implementing the programme exist?
- How significant are the changes needed to adapt these processes and routines in order to implement this programme?
- Does the supplier have experience of making the technology changes?

People changes:

- How radical and urgent are the changes to processes, roles and other organisational dimensions needed?
- Are the approaches to gaining key stakeholders' involvement and aligning employees' interests with the programme clear and have these been tried before within the organisation?
- Are the processes and other mechanisms in place for sustaining stakeholder commitment, such as top management involvement and support, responsibility and accountability for implementing changes?

If any row is rated **LOW,** then before proceeding further, a number of options should be considered including :

- whether the benefits can be prioritised,
- scope reduced,
- implementation phased to take on what is known to be achievable and
- provide time to acquire or develop the new approaches needed.

Alternatively work to clarify the nature and extent of the changes and the value of the benefits that would result could help reduce the gap.

If none of the rows is **HIGH,** then time should be spent to identify alternative approaches and consider the real value of the changes where how to achieve them is not sufficiently known. Otherwise move on to the next matrix.

4. The Matrix Assessments (continued)

MATRIX 3

Figure 5: *Matrix 3 – Capability availability*: (Can we do it?)

Benefits certainty

Nature of Change

Nature of Change	Low	Medium	High
Technology	Little of the technology and/or relevant technical expertise are available. There is limited confidence in the ability to achieve the technical solution. Capability needs to be developed or acquired for the solution to be implemented.	Some of the relevant technical expertise is available. The technology is broadly, though not fully, understood and there is moderate confidence in the ability to achieve the technical solution. Further capability needs to be developed or acquired.	Technology and relevant technical expertise is available. The technology is fully understood and there is confidence in the ability to achieve the technical solution
Business	Little of the business change capability is available. There is low confidence in the ability to achieve the process goals. Essential capabilities need to be developed or acquired	Some of the business change capability is available. The requirements are broadly understood, so there is moderate confidence in the ability to achieve the process goals. Further capability may needs to be developed or acquired.	Business change requirements are understood and resources, capabilities and structures are available.
People	Little of the organisational change capability is available. Further resources and capabilities need to be developed or acquired.	Some of the organisational change capability is available, but further resources and capabilities are likely to need to be developed or acquired.	Organisational and cultural change requirements are understood and resources and capabilities are all available.

4. The Matrix Assessments (continued)

MATRIX 3 continued
Figure 5: *Matrix 3 – Capability availability:* (Can we do it?) continued

The intention is to assess the extent to which the capability and resources exist, firstly inside the organisation and secondly with existing partners, to carry out the programme by deploying the approaches defined in the previous matrix.

At this stage it is a question of 'can it be done', without considering the actual availability of the resources required: the assessment is independent of any alternative uses of the resources. If it can be done then its relative priority for resources will be considered.

Some questions that may help are:

- Is it clear what capabilities are needed to implement the changes and manage the programme?
- Is the technology available together with the expertise to use it? Are other facilities and infrastructure capabilities and capacity required to be available or do they need to be acquired?
- What capabilities are needed for designing, carrying out and managing the business changes (e.g. expertise on current and future processes and practices)?
- To what extent is it possible to change trading or other business relationships with external organisations and individuals?
- Do we have the capabilities needed for organisational and culture change (e.g. change managers and their precise roles, etc.)?
- Is it known what capabilities will need to be in place to sustain the use of the new technologies, processes, new ways of working etc, after implementation?
- Are these capabilities available in-house, from an existing partner / supplier or available elsewhere?

For any row that is **LOW,** then it is probably necessary to identify other possible approaches which use existing capabilities or define quite clearly, how the necessary capability can be obtained and deployed. Or once more the value to be delivered from the problematic changes should be reviewed.

If none of the rows is **HIGH**, then time should be spent to find out where the required capabilities exist and how they can be obtained. Otherwise, if the capabilities are available then the programme should be broken down into a first cut set of projects and dependencies and implementation phases.

4. The Matrix Assessments (continued)

MATRIX 4

Figure 6: *Matrix 4 – Capacity availability:* (Are the resources available?)

Capacity Availability

Nature of Change

Nature of Change	Low	Medium	High
Technology	Little of the technology and/or relevant technical resources are currently available. Capacity needs to be found internally or procured externally for the solution to be implemented.	Some of the technology and/or technical resources are available. Further resources need to be reallocated or procured externally to meet the intended schedule.	The technology and relevant technical resource are identified and available for the work, plus contingencies to allow for uncertainties and project risks.
Business	Little resource is available to carry out the business changes. Resources need to be reallocated from other work and/or obtained from external organisations.	Some of the resources required for business changes are available. Further resources are needed either through internal reallocation or via external support.	Business change requirements are understood and the required internal and/or external resources are available.
People	Insufficient available resources to bring about (or accommodate) the people and behavioural change. Reallocation of internal resources is preferable to using external resources due to nature of the change work.	Some of the required resources are available, but further resources are likely to be needed, either externally sourced or preferably internally redeployed. Limited capacity to actually accommodate more change.	Organisational and cultural change requirements are understood and sufficient resources are available to achieve these. Change can be readily accommodated.

4. The Matrix Assessments (continued)

MATRIX 4 continued

This is the first point at which, assuming this programme looks 'doable', its relative priority versus other initiatives together with 'business as usual' pressures are considered in terms of can the required resources be made available and allocated to the programme in the timescale desired.

This assumes that a reasonable estimate can be made of the main resources required throughout the programme lifecycle, which in turn implies that the programme can be broken down into component projects and phases. If this is not possible beyond the first phase then the consideration should be for that phase only at this stage.

Again some questions to help that assessment are:

- Are internally-identified resources required to implement the programme available?
  - Quality and quantity of resources – in total and by location involved?
  - When required by the programme vs. the need to de-scope or delay the programme. If the latter approach is chosen, what are the implications for the programme's role in a firm's overall strategy?
- What are the reasons for the lack of availability of resources (e.g. cannot be released from operations, are assigned to other programmes/projects or don't exist)?
- What further resources need to be made available, developed or acquired to achieve the changes? Which options for securing resources are available (outsourcing, in-house development, acquisition, partnering)?
- What resources need to be put in place to sustain the changes once they have become operational (e.g. on-going training)?

Where resources in any row are currently **insufficient**, the alternatives of acquiring the resources from elsewhere or rescheduling the programme for when resources can be available must be considered before proceeding. Dependencies between technology, business and people changes will influence the options available and trade-offs and compromises between the ideal schedule and scope with what is achievable in a reasonable timescale will probably have to be made. Having a clear statement of the priority for the programme is critical at this stage.

If not all the rows are **HIGH**, then in each it is necessary to identify when the resources could be made available, but at the same time proceed with detailed planning of those projects that can be resourced. Being clear about project dependencies and the implications for resources is critical to avoid incorrect assumptions.

4. The Matrix Assessments (continued)

MATRIX 5

Figure 7: *Matrix 5 – Internal Supply: capability and capacity:* (Who does what?)

Internal supply: capability & capacity

Nature of Change	**Nature of Change**	**Low**	**Medium**	**High**
	Technology	All the critical technology capabilities are being provided by one or more external suppliers	The implementation is dependent on internal resources working with outside suppliers	All the technology related resources and knowledge needed are available in-house.
	Business	The business model and processes and associated expertise are being acquired from one or more external parties	Implementation involves adapting acquired processes etc. to fit the firm's needs by our specialists working with the suppliers	The new processes etc. were designed and are being implemented by internal experts
	People	Changes rely on the advice and skills of external change agents	Changes are the responsibility of managers but based on the advice of external parties	The organisation's existing policies and practices are being used to enable and monitor the changes

This matrix differs from the others in that it considers which parts of the programme delivery can be accomplished by the organisation itself and which require either support from or rely mainly on capabilities and resources from external parties, such as suppliers, partners and specialists.

Hence **High, Medium** and **Low** define how much of the delivery are within the direct control of the organisation and do not imply a level of certainty or confidence in the approach being taken. However, the contractual arrangements with the suppliers should reflect the nature of the contribution they are making to the programme and the level of dependence on them for its success.

4. The Matrix Assessments (continued)

MATRIX 5 continued

Once more, questions that can help describe the situation are:

- Which aspects of the changes can be carried out by internal resources and which by external?
- How critical is the activity being outsourced to the success of the programme?
- To what extent does this activity rely on organisation-specific factors (understanding customer-base, processes, culture, etc.)?
- What has been the rationale for outsourcing a particular part of the programme (cost optimisation, flexibility, complementary resources and capabilities, reputational or political considerations, etc.)?
- Is the external supplier providing a) capabilities and skills we don't have b) management of activities c) proprietary methods d) extra resource capacity?
- Which changes require a collaborative approach with a supplier? How will the shared responsibilities be managed?
- If there are multiple suppliers, how are the relationships amongst suppliers to be managed?

For any aspects where the internal capability/capacity is **LOW** and hence success is heavily dependent on outside parties, some options may be worth considering in order to reduce the risks of the dependence – such as breaking the programme into smaller phases to provide tighter performance management and give flexibility to change arrangements if needed.

Otherwise, the programme's governance structure should be established (or amended) to reflect the role and accountabilities of the parties involved and ensure accurate reporting of performance and co-ordination of activities.

5. Summary of feed-forward and feed-back loops amongst the first 5 matrices

Figure 8: Framework for using the matrices 1 to 5 – summary of the feeds: forward and back

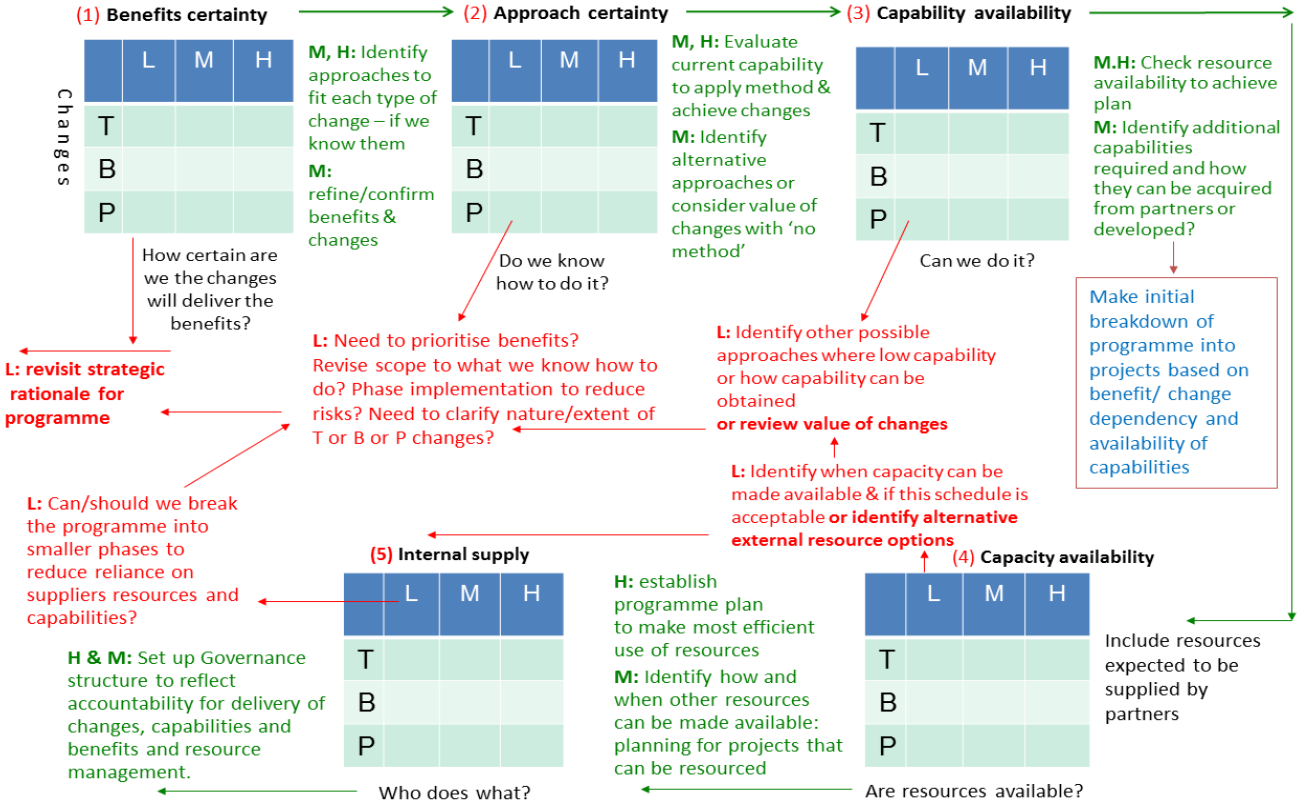


Figure 8 depicts the five matrices discussed so far and summarises the outputs of each that should inform the next matrix assessment or cause a reappraisal of the programme or aspects of it, depending on the agreed levels of certainty of what needs to be done and confidence that enough is known to do it successfully.

As can be seen, assessments made in some of the later matrices can require reconsideration of the conclusions from much earlier ones especially when severe constraints are encountered that jeopardise the achievements of major benefits or invalidate the approach being adopted.

The matrices should be considered as a set and achievements or changes in one can affect any of the others, as can unexpected events or revised priorities for the programme (both higher and lower priority) or parts of it.

5. Summary of feed-forward and feed-back loops amongst the first 5 matrices (continued)

An important finding from our research using these matrices is that although the rationale for a programme approach is that as knowledge is gained and options evaluated uncertainty should decrease, we found that in most of the programmes, at some stage, uncertainty about some aspects actually increased as more was learned or due to factors not considered early enough and false assumptions, as well as new issues emerging from outside the programme itself. This reinforces the need to treat the matrices as an interrelated and interacting set and consider the combinations of assessments, not just each one in isolation.

MATRIX 6

Figure 9: *Matrix 6 - Deployment or Operational Readiness*: (Will the implementation plans work?)

Readiness

Nature of Change	Low	Medium	High
Technology	Technology only partly tested and/or aspects not performing to specification. On-going support arrangements not yet in place.	Some technology testing still needed and ongoing support not fully established. Some staff still require training. Old technology still required for parallel operations for unknown period.	Technology is fully tested, training completed and technical support services and facilities are in place and have been tested. Old technology can be decommissioned.
Business	Process changes not adequately tested and staff training not yet completed. How and when old processes will be removed not agreed.	New processes only partly tested and will need old processes to be retained for back up for longer than anticipated. Process performance uncertain and may be insufficient initially – contingencies being put in place.	New and changed processes and practices have been fully tested and training of staff has been completed. Performance measures for new processes in place and steps to remove old processes agreed.
People	Organisation changes not yet complete and new roles not filled with appropriate and trained staff*. Some resistance to making the changes or releasing staff for training.	Organisation in place but not clear how many staff needed for full operation or not all roles filled by trained staff. Ongoing support arrangements to be finalised. (*Staff may include people in other organisations).	Organisation changes are complete and all roles are filled with trained staff. Responsibility for benefit realisation established. Help desk (or similar) support group in place.

5. Summary of feed-forward and feed-back loops amongst the first 5 matrices (continued)

MATRIX 6 continued

Again this matrix differs slightly from the first 4 although the High, Medium and Low columns have the same purpose: confidence or certainty of achieving a successful implementation. It should be used just prior to the implementation of each phase of the programme to assess the likelihood of all the changes being delivered as planned or understand and agree actions to deal with issues that will need to be addressed during the 'shakedown' period that follows most implementations. The prime rationale is to maximise the chances of the expected benefits being realised at the earliest opportunity and sustained over time.

Some useful questions for this matrix are:

- Are all the changes across technology, business and people equally well tested (or piloted)?
- Has the ability to integrate and synchronise all 3 types of change been adequately tested?
- What contingencies are there for having lower levels of performance following the changes – 'shakedown management'? How long can performance below expectation be tolerated?
- Are resources identified for implementation adequate and if more are required can they be found? Has the effectiveness of the training been measured and how will it be supplemented if needed?
- Are the on-going support services and processes tested and proven to be adequate?
- Are managerial accountabilities for realising the expected benefits and monitoring the new 'business as usual' performance in place?
- Who is responsible for optimisation and identifying further improvements following implementation?
- How does the level of success achieved in this phase affect later stages of the programme (and which ones)?

If any of the rows are **LOW,** the deployment should be postponed until sufficient essential capabilities and resources are in place to avoid failure and, if necessary, the plans for subsequent phases should be revised.

The same option exists if any rows are **medium** but the alternative is to proceed but with contingency plans in place to address issues or recover from problems during the shakedown period after implementation of the changes.

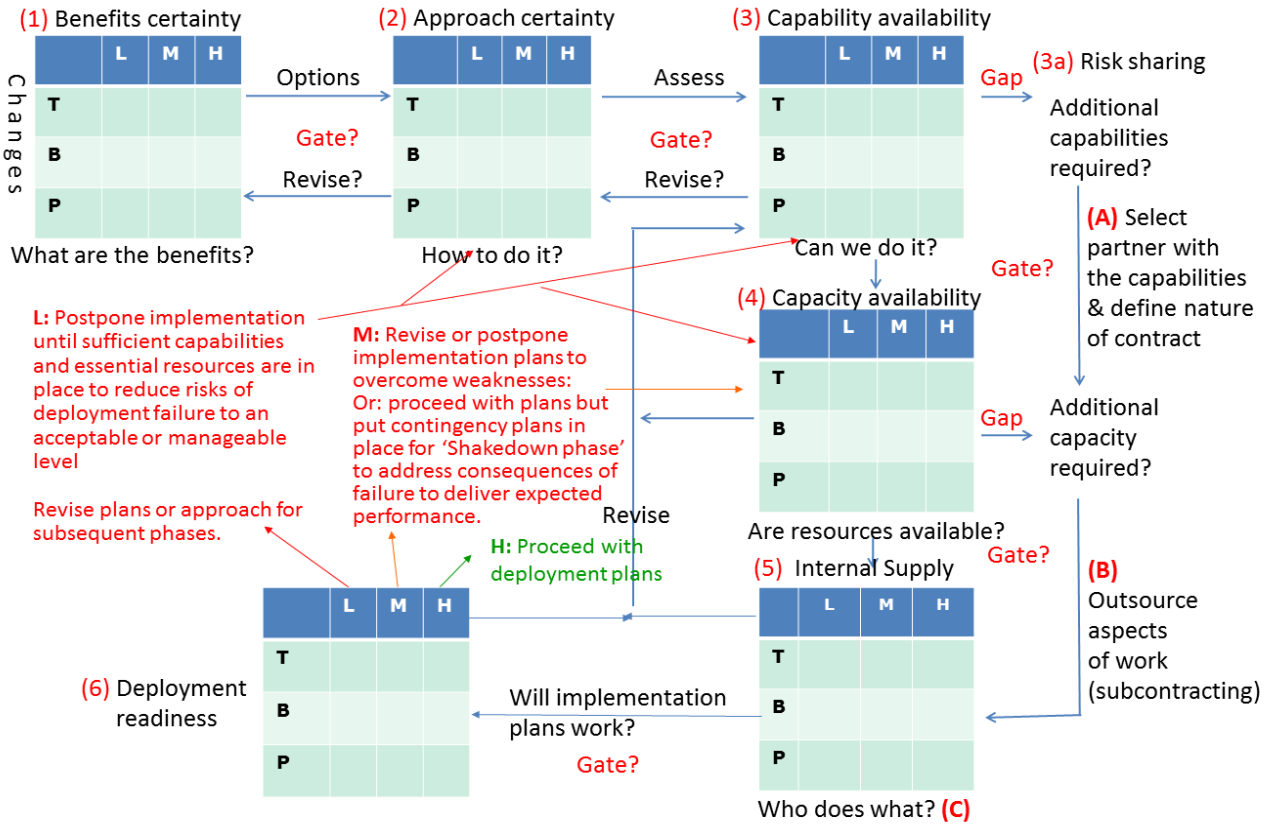
If all rows are **HIGH,** go ahead with the deployment!

Following implementation there must be a comprehensive review of how successful it was and lessons identified for later phases of the programme.

For ease of understanding, Figure 10 shows the outputs from this matrix and how they inform the contents of the other matrices.

5. Summary of feed-forward and feed-back loops amongst the first 5 matrices (continued)

Figure 10: Framework for using the matrices outputs from Deployment Readiness matrix



6. Discussions and Conclusions

Repeated studies have shown that around 70% of programmes do not achieve their initial objectives, failing to deliver the anticipated benefits. We developed these programme assessment matrices in response to these disappointing findings.

Programmes are generally undertaken in complex environments, and it is neither advisable nor feasible to try and promote a 'one-size-fits-all' approach to programme success. In any large organisation, context-dependent issues cause challenges in execution, and 'simple' solutions are unlikely. These matrices are designed to ask straightforward questions, yet the answers are likely to be complicated. We expect programmes to be different from large projects in that there will be uncertainties and emergent issues that preclude full planning of the work. The matrices drive the asking of the right questions that acknowledge this - 'what is it that we need to know?'

The matrices are a qualitative rather than a quantitative technique – they are not intended to produce a red / amber / green dashboard of progress. This could drive inappropriate behaviours, since the desire to be 'green' can reduce the questioning required to fully assess the work. By accepting that uncertainties exist, managers can reflect more fully on the programme, both at an individual level and as part of the management team. Multiple perspectives normally exist amongst different programme participants, and this can lead to erroneous, if well-intentioned, decision-making. The matrix technique is useful for managers to drive the necessary discussions between them so that they can share their views, including significant differences of opinion and reach a consensus on their understanding of the programme and what has to be done to make it successful.

If senior management insist on some form of 'dashboard' summary reporting about programmes, something similar to the consolidated table shown in Appendix 2 might be appropriate, as it gives the reasons for the RAG assessment in each cell, based on the current level of certainty – Low, Medium, High.

The matrices are a way of identifying and describing the degrees of alignment or misalignment between the intent of a programme and what needs to be in place to achieve it at any stage of the programme lifecycle. This can be most easily done by summarising the conclusions that can be drawn from combinations of the matrices. The most useful combinations will vary over the life cycle, for example matrices 1 and 2 (benefits and approach certainties in the early stages) and matrices 3 and 4 (capabilities and capacity available) when planning implementation. An example of a useful summary matrix is shown and discussed in Appendix 1.

The summary matrices can also be used at the portfolio level to compare multiple programmes when deciding priorities for capability and resource development and deployment, options for using external partners and planning the implementation of multiple business changes. Comparing matrices across programmes can provide insight into the effectiveness and consistency (or otherwise) of the multiple streams of work and help transfer lessons, effective practices and solutions across programmes.
By using the matrices regularly over the programme lifecycle, progress can be tracked and reviewed. If upcoming phases present a challenge, they can promote the dialogue required to find sensible and practical solutions. They are a visual, structured method and heuristic device to help managers do what they are there to do – manage their programmes successfully.

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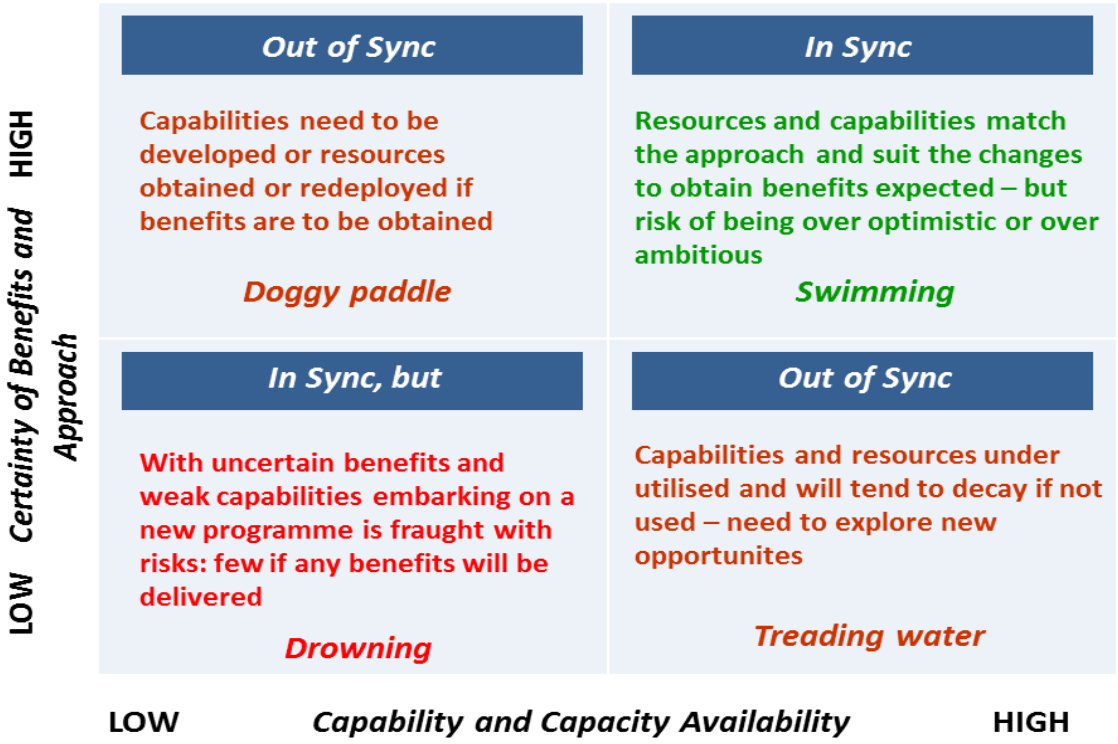
Appendix 1

‘Synchronicity’: Benefits plus Approach and Capability plus Capacity

Figure 11: Synchronisation of Benefits and Approach Certainty with Capability and Capacity Availability (Matrices 1 & 2 with Matrices 3 & 4).



Critical to the success of any programme is the organisation’s ability to deploy the appropriate quality of capabilities and quantity of resources at the required times to carry out the activities defined in the approach that are needed to deliver the changes and benefits. The aim is to ensure the ability to deliver is synchronised with the ideal timing of tasks needed to deliver the benefits throughout the programme lifecycle.

As Figure 11 shows, if the synchronisation is weak then action needs to be taken, either to put the required capabilities in place or modify the programme ambition to what current capabilities and capacity available can achieve.

When using the matrix for either an individual programme or the portfolio of programmes it is helpful to identify the dimension(s) that is/are HIGH and LOW: benefit and/or approach certainty and capability and/or capacity availability.

In most of the cases in the research study, extended periods of asynchronisation were avoided by taking specific actions to address resource constraints in combination with some de-scoping and re-focussing of technology, business and social aspects. In essence, these actions enabled a better fit by adapting the programme schedule etc. to the resource constraints, which resulted in implementation delays and in some cases reductions in the benefits achieved.

Appendix 2 – Summary matrix example

(provided by Bruce van Sloun of Hewlett Packard)

	Predictability of Outcome	Benefits Certainty	Approach Certainty	Capability Availability	Capacity Availability	Internal Supply	Deployment Readiness
Technology engineering infrastructure	•Adoption of technologies which are new to the organisation. •Complex technical interdependencies	**Technology based benefits are fully established, evidence based, measurable, stable.**	There is limited experience in and understanding of implementing the technological / engineering / infrastructure aspects of the changes, but there are methodologies available.	•Some of the relevant technical expertise is available. •The technology is broadly, though not fully understood and there is moderate confidence in the ability to achieve the technical solution. •Further capability needs to be developed or acquired.	**•Little of the technology and/or relevant technical resources are currently available.** **•Capacity needs to be found internally or procured externally for the solution to be implemented.**	The implementation is dependent on internal resources working with outside suppliers	**•Technology not yet tested, not performing to specification.** **•On-going support arrangements not yet in place.**
Business process, product and service	•Changes to organisational competences and capabilities. •Challenges to historical working practices. •Core process changes.	The benefits of business model or process changes are incompletely established or agreed or are not yet entirely clear.	**•New processes & routines need to be put in place to implement the required changes.** **•Some approaches might be novel not only to the organisation but in general.** **• A significant part of the know-how might be tacit.**	•Some of the business change capability is available. •The requirements are broadly, understood, so there is moderate confidence in the ability to achieve the process goals. •Further capability may needs to be developed or acquired.	**•Little resource is available to carry out the business changes.** **•Resources need to be reallocated from other work and/or obtained from external organisations.**	Implementation involves adapting acquired processes etc. to fit the firm's needs by our specialists working with the suppliers.	**•Process changes not tested and staff training not yet completed.** **•How and when old processes will be removed not agreed.**
People and behaviour	•Change to current policies. •Structural change. •New roles	The social or organisational impact is partly established, but uncertain in some aspects or agreed by some stakeholders.	The approach to secure some stakeholders' buy-in and commitment is identified but there may be a lack of support for the changes from others and these may need a different approach.	Some of the organisational change capability is available but further resources and capabilities will need to be developed or acquired.	**•Insufficient available resources to bring about (or accommodate) the people and behavioural change.** **•Reallocation of internal resources is preferable to using external resources due to nature of the change work.**	Changes are the responsibility of managers but based on the advice of external partners	**Organisation changes not complete, new roles not filled with appropriate and trained staff.**