



UK Government

Portfolio Risk Management Guidance

Orange Book Annex

This guidance contains both mandatory and advisory elements, described in consistent language as per Part I of the Orange Book (see the table below).

Term	Intention
shall	denotes a requirement: a mandatory element
should	denotes a recommendation: an advisory element
may	denotes approval
might	denotes a possibility
can	denotes both capability and possibility
is/are	denotes a description

The meaning of words is as defined in the Shorter Oxford English Dictionary.

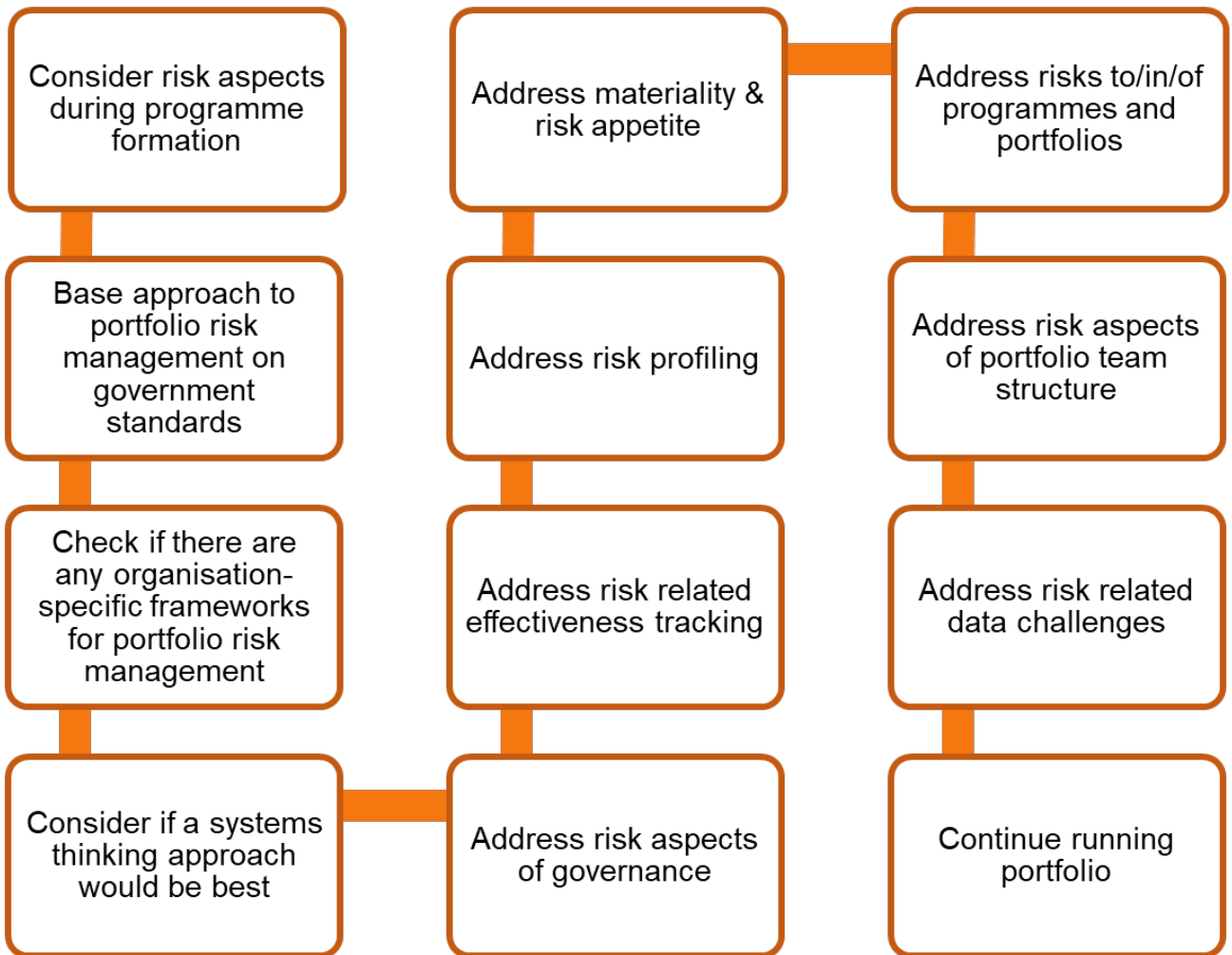
The term “riskiness” is used throughout this document and intended to mean “potential variability in outcomes and the chances of those different degrees of outcomes as a result of the aggregate exposure from individual risks”.

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Refining Portfolio Management for Risk

Quick start guide to “Portfolio Risk Management Guidance”



1. Introduction and General Points

- 1.1.** The management of risk in portfolios is addressed in Government Standard GovS 002: Project Delivery (portfolio, programme and project management). This guidance is intended to supplement that standard, not replace anything within it.
- 1.2.** The purpose of this document is to provide more direction and guidance on risk-related aspects of portfolios than is currently contained in government programme/ portfolio standards and the main Orange Book and should be helpful to the same user group as outlined in GovS 002 and any others with an interest in optimising risk management effectiveness in portfolios.
- 1.3.** Taking well-considered risks in pursuit of domestic and international opportunity is as relevant at portfolio level as at any other level in an organisation. Using information on riskiness and risk management effectiveness at this level can help ensure that options are well developed and considered and that decisions are taken with due regard to the probability of success.
- 1.4.** This guidance is not written as a “one size fits all” and should be used in conjunction with the other documents which are referenced. It is not intended to be prescriptive or exhaustive and each portfolio should adopt the most appropriate approach for its needs as determined by the Ministers, Permanent Secretaries and Boards who direct, manage and control their departments.
- 1.5.** The guidance does not change overall responsibility for managing portfolios. However, in situations where responsibility could be unclear as a result of lack of precedent or challenges which at first might appear to be incompatible with underlying government governance structures, this guidance is intended to help bring resolution on roles.
- 1.6.** The guidance outlined in this document can be used at portfolio level to direct decision making at the point spending/ investment and prioritisation choices are made and reviewed. The good practices detailed in this guide have been gathered from experience across the Civil Service and intended to be particularly beneficial in times of heightened uncertainty and/or rapid change where decisions need to be made quickly and often with incomplete information.

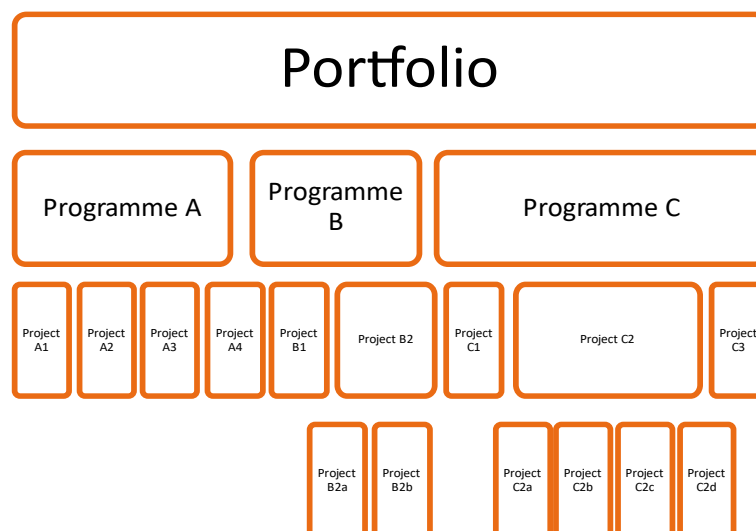
2. What portfolios should this apply to?

- 2.1.** This guidance should be useful to most types of domestic and/or international portfolios in government including those defined in GovS 002.
- 2.2.** In practice, definitions of what constitutes a portfolio can and do vary but examples of the types of portfolios that this guidance should help include:

- Cross-departmental initiatives of scale where significant risk levels may not be acute in the short term but could have significant impact over the medium/longer term, such as cost reduction, organisational transformation, functional transformation, inflationary pressures, environmental/ climate protection.
- Cross-departmental crisis situations where significant risk levels can be immediate and acute, for example pandemics and/or multiple civil contingency type events happening at once. In some of these situations, the services and training provided by COBR (Civil Contingencies Committees), and the Resilience Directorate will be of direct relevance and should be utilised.
- Bundles of cross-departmental initiatives which collectively bring significant uncertainty/ variability of outcomes meriting proactive risk management at portfolio level. This can include specific, continually evolving initiatives where an overall change is required from the effective collaboration of departments over time, as well as the BAU aggregate risk exposures from all departmental activities.
- The totality of a department's (including Arm's Length Bodies/ Public Bodies) strategic objectives that are achieved through a mix of organisational change and business as usual.
- Other situations where an approach to managing risk in a more holistic/ whole-of-system way would be helpful.

2.3. Portfolio risk management tends to be more strategic in nature (focusing more on overall strategic objectives/ returns) compared to the programme management within it. If some portfolios represent the totality of an organisation's investment (or segment thereof) in the changes required to achieve its strategic objectives, then the anchor point for risk management within it will relate to those strategic objectives.

Typical Portfolio, Programme and Project Structure



2.4. Whatever the reasons for the portfolio, this guidance is aimed at groups of domestic and/or international programmes with complex objectives where the programmes individually and collectively contribute to the overall riskiness of a portfolio.

3. Risk Management in Portfolios

- 3.1. Government standards and guidance should be adopted and adapted at portfolio level and leaders should have a clear understanding of the factors driving riskiness.**
- 3.2.** The management of risk in portfolios should be in alignment with the principles and technical requirements of government standards and guidance:
- **GovS 002: Project Delivery (portfolio, programme and project management) Functional Standard.** This is a key document for how portfolios, programmes and projects should be managed in government. The standard addresses aspects of risk (including risk related to interdependencies) and issues management and requires that contingency be retained at an appropriate level in the work hierarchy. It also cross-references the Orange Book so users of the standard should arrive at this further guidance for portfolio risk management, which is intended to supplement, not replace, the items in the standard.
 - **Infrastructure and Projects Authority Portfolio Management guidance.** A series of guidance designed at helping project delivery professionals with managing portfolios.
 - **Infrastructure and Projects Authority Project and Programme Management Guide.** This is referenced in the GovS 002 standard.
- 3.3.** Portfolio leaders should take quantitative information where possible and form it into broader qualitative data to understand risk to outcomes and objectives. This guidance works upon the assumption that Critical Path Analysis and Schedule Risk Analysis (Planning, scheduling, monitoring, and control: the practical project management of time, cost and risk – APM 2015) have been undertaken at programme & project levels. Use of data in this way will also aid in the determination of key gateways (time and performance) and the evaluation of cost.
- 3.4.** Senior leaders should have a clear, overall picture of events and risks that may prevent the delivery of strategic objectives of a portfolio. To help portfolio owners anticipate and deal with these challenges and complexities, the steps in each of the following sections should be followed as part of adapting programme management standards for use at portfolio level.

Risk aspects to consider in Portfolios



Portfolio Formation – Risk Aspects

- 3.5. The logic for the creation/change of a portfolio from constituent programmes should be considered with due regard to risk implications when the investment is being appraised.**
- 3.6.** Decisions to confirm investment at different gates/decision points and portfolio reviews should encompass consideration of return/attractiveness in the context of risk/achievability, the objective being to achieve the optimal balance between risk and return. There is variability in the type and nature of risks arising at different points in portfolio and programme lifecycles, the use of risk identification techniques (such as pre-mortem analysis) at initiation and at key points in the delivery lifecycle can help better anticipate and manage emerging threats. This information should be helpful at gates/decision points relating to initial investment decisions and continued investment.
- 3.7.** When portfolios are created or when changes occur (including new emergent

opportunities, the need to deliver additional savings or a shift in organisational priorities), it can be helpful to consider the risk implications of bringing together the constituent parts. There could be occasions when a decision is taken to form a portfolio from a collection of otherwise disconnected and discrete programmes, purely because of the balancing risk effect on the overall portfolio.

- 3.8.** At the point at which such decisions are being made and/or options considered, it should be helpful to consider the other risk aspects listed in the following sections, because it might influence the initial choices on what and why programmes should be bundled together. In some cases, this could result in an agreement not to incorporate particular programmes into specific portfolios. Balancing programmes with due regard to risk levels should help with optimisation of portfolio management, as the potential for disruption and overall variability of outcomes will be better understood, thus helping with allocation of resources and contingency arrangements for opportunities as well as threats.
- 3.9.** After decisions are made on what should constitute each portfolio, the following aspects can be considered as required for the ongoing management of the portfolio.

Portfolio Governance – Risk Aspects

- 3.10. Portfolio governance should be designed and operated as part of effective portfolio risk management, building on the underlying governance arrangements of government and addressing particular portfolio-level challenges.**
- 3.11.** Portfolios can be cross-boundary (organisational, departmental, functional, technical, geographic) in nature. It is therefore important that the mechanisms for making cross-boundary decisions, including decisions on prioritisation, are clarified in advance taking possible factions/ lobbies into account. This can be particularly important in non-business as usual situations where stakes can be high with considerable real-time or post-event external scrutiny from ministers, officials and others. In some cases, this could be clarified through the terms of reference of a relevant strategic governance group but however it is done, there should be identifiable central oversight of each portfolio.
- 3.12.** As portfolios may have been formed in particularly stressful, complex and potentially fast-moving situations (sometimes with the involvement of COBR and the Resilience Directorate), it is important that governance arrangements are flexible to allow key decisions to be made with authority and at pace. This can involve pre-identification of possible exceptions to a particular governance step for the purposes of effective and efficient decision making. Identification of such situations might (but not necessarily) result in changes to governance arrangements.

- 3.13.** In particular, it is important to be clear on the extent to which the Senior Responsible Owner (SRO) is given delegated authority (by an empowered person/body) to make cross-boundary decisions (potentially with different objective “trade-offs”) for the benefit of the portfolio which may or may not be for the individual benefit of programmes, departments, other organisational units and/or factions/lobbies which emerge. The SRO needs to have their own authority grounded in the underlying governance structures of government. For complex portfolios, this activity will span the work of ministers, policy officials and accounting officers and this guidance presumes that the underlying governance structure can/will accommodate such activity.
- 3.14.** The scale and complexity of portfolios may at times lead programme owners and other leaders to consider circumventing portfolio governance to benefit their own areas, to the detriment of the overall portfolio. To discourage such behaviour, this should be anticipated at the establishment of the portfolio, when expectations and ways of working protocols are clarified, and regular risk prioritisation assessments should be included throughout the portfolio’s life cycle.
- 3.15.** The importance of portfolio governance should be emphasised and demonstrated throughout relevant programme and project governance processes. This includes ensuring a clear governance route for absorption of external reactions to the portfolio so that these can be considered in a focused manner rather than potentially impacting the portfolio in an ad hoc way at many different levels.
- 3.16.** In order to support good governance, an effective risk culture in portfolios should embrace openness, support transparency, welcome constructive challenge and promote collaboration, consultation, co-operation, and continual improvement.

Effectiveness Tracking Mechanisms – Risk Aspects

- 3.17. The effectiveness of interventions in managing risk should be tracked and the information used to shape future action as part of ensuring portfolios are balanced and rebalanced in pursuit of organisational goals.**
- 3.18.** At different times in the running of a portfolio, initiatives may be launched which are designed to directly impact the riskiness of the portfolio (and or the risk management effectiveness which underpins the riskiness). Usually, this is to de-risk the portfolio somehow in order to achieve an overall objective, but it is possible that sometimes they would be designed to take more risk in pursuit of opportunity.
- 3.19.** When such initiatives are launched, which might typically introduce new work into each programme of the portfolio, a mechanism needs to be established to track the effectiveness of that initiative in influencing risk levels as intended. These should use the same governance structures and risk profiling/scoring approaches described below

but are likely to require the provision of new management information. The provision, interpretation and use of that new data should be specifically considered for each such initiative in order that the effect on overall portfolio riskiness continues to be understood at portfolio level.

Risk Profiling

3.20. At Portfolio level, where scale and complexity are generally much higher than in programmes, more sophisticated approaches to profiling riskiness are encouraged as a way to improve synthesis of large amounts of risk related data.

3.21. Existing programme management standards define the ways in which risk should be defined in programmes. Typically, this relates to individual risk assessment plus overall delivery confidence RAG rating of the extent to which individual programmes are on-track. As a minimum, these programme level risk and control assessments (sometimes in the form of risk registers) should be collated for consideration in aggregate, at portfolio level as part of the portfolio risk register and management performance dashboards. This could involve reassessment of individual (and aggregate) risks at portfolio level as otherwise it could be difficult to understand the combined effect of risks previously only assessed at individual programme level.

3.22. While programme-level information can be useful at portfolio level for understanding particular risks or issues, it can also be possible to enhance the understanding of the impact of uncertainty in more holistic ways.

3.23. At portfolio level, the chances of degrees of variation in intended outcomes relating to cost, time, benefits and other objectives should be profiled in a more sophisticated way. More statistically based (“stochastic”) approaches, using statistical distributions and modelling, to understanding overall variability are encouraged as a way to illustrate:

- The most likely outcomes for cost/ benefit/ time/ other objectives and the probability of those most likely outcomes.
- The reasonable worst-case outcomes for cost/ benefit/ time/ other objectives and the probability of those outcomes.
- The reasonable best-case outcomes for cost/ benefit/ time/ other objectives and the probability of those outcomes.
- The probability of other degrees of success and failure.

3.24. For some aspects of variability and uncertainty, the lack of quantitative data might make it challenging to provide quantitative assessments of the above statistical distributions, although there are ways to deal with imperfect data when producing risk distributions. This is true for the management of risk more broadly, not just in portfolios, and good practice seems to be to move towards more quantitative assessments, even

where data is imperfect.

- 3.25.** Even part quantitative/ part qualitative conversations structured in this way can result in enriched dialogue about what is driving levels of riskiness in the overall portfolio and help portfolio leaders understand the relative impact of decisions on overall riskiness even if the absolute levels of overall riskiness are not clear. For example, it can help bring focus to a particular course of action which is most likely to bring moderate benefit but could, with much less likelihood, also result in very significant benefit or detriment.
- 3.26.** This form of profiling should enrich consideration of balancing different types of portfolio objectives (e.g., protecting health and protecting the economy) as it can help better understand the degrees of riskiness associated with different, possibly conflicting, success measures. This profiling can also help with evaluation of new opportunities on a program, assessing the risk implications of emergent benefits and disbenefits.

Materiality and Risk Appetite

- 3.27. Dynamics associated with differences in materiality and acceptability of risk levels, for different aspects of the portfolio should be identified and understood.**
- 3.28.** Portfolio Senior Leaders should set the levels of materiality – the levels at which the chances of different degrees of variability matters – and associated risk appetite which are appropriate for the overall portfolio, with due regard to the risk appetite of the parent organisation. This is likely to mean that the nature of aggregate risk which might be deemed unacceptable or “out of appetite” at individual programme levels could be within aggregate appetite at portfolio level (where a contingency might be formally held). It is important to reconcile this at the start of the programme and throughout as, for example, it may be necessary to accept a higher risk to one programme for the greater good of the portfolio.
- 3.29.** In addition to considerations of materiality and risk appetite differences between programme and portfolio levels, it is also important to anticipate that risks deemed acceptable to one programme within a portfolio might not be acceptable to another. The effect of that programme on other programmes in the portfolio could be unacceptable to those other programmes, even if the overall effect on the portfolio is acceptable. The reconciliation of risk appetite therefore needs to include the potential for programme-to-programme effects.
- 3.30.** A key aspect of escalation to consider is that programme owners may not consider something to be worthy of escalation in itself, but be unaware that their programme’s contribution would contribute to something which is significant in aggregate across the portfolio, as individual risks can stack up to form larger exposures at portfolio level.

- 3.31.** When risks are managed through portfolio lifecycles, responsibility for execution of actions can move upwards, downwards and across the portfolio, the programmes within it, and the departments/functions involved in delivery. Formally anticipating, setting criteria for, and tracking these handovers should help ensure risk is managed effectively and ownership remains clear.
- 3.32.** For further guidance on the setting of risk appetite and tolerance, see the [Risk Appetite Guidance Note](#).

Risks to/in/of Programmes and Portfolios

- 3.33. Comprehensive consideration of risk should address the risks to, in and of the portfolio.**
- 3.34.** In projects and programmes, risks in delivery of the project are typically considered in a structured way. However, external risks and dependencies to the programme/project and risks and dependencies of the programme/ project to others can sometimes be less well understood. Ineffective management of these risks and dependencies between initiatives could result in significant delivery delays, additional costs and delayed benefits realisation. At portfolio level this also applies. Are there other portfolios posing a risk to this portfolio and vice versa? What is the impact of such cross-cutting risks?
- 3.35.** As owners of different portfolios could have potentially conflicting objectives, understanding and monitoring the potential effects of their decisions on others is an important step for optimised risk management, and therefore this should be considered by all portfolio owners. Portfolio owners may be able to resolve conflicts between themselves, but, if necessary, the underlying governance structures of government may need to be leveraged to make authoritative decisions on inter-portfolio matters.
- 3.36.** In addition to the “portfolio-to-portfolio” risk considerations, portfolio owners should also consider the extent to which the risks to/in/of individual programmes within it are understood by individuals running those programmes in order that local reporting (including against outcome delivery plans) and escalation can take those exposures/dependencies into account.
- 3.37.** Additionally, changes to underlying business operations and priorities can have previously unplanned impacts on portfolios. These potential impacts should also be anticipated and addressed by portfolio owners.
- 3.38.** The nature of this to/in/of risk profiling should follow the same approach as other aspects of risk profiling in the portfolio.

Portfolio Management Team Structure – Risk Aspects

3.39. From a risk management perspective, portfolios should be able to demonstrate that specific roles have been allocated to and executed by individuals and in some cases teams and committees e.g., Portfolio Boards.

3.40. All portfolios should have specific roles and defined accountabilities assigned in order that those responsible for the overall portfolio can demonstrate that they are operating in alignment with this guidance. From a risk management perspective, all portfolios should ensure that the following risk management responsibilities are in place (note that the roles may be undertaken by individuals/teams/offices with other responsibilities and/or different job titles).

Risk management responsibilities as applied to examples of portfolio and programme management roles:

Example Portfolio Role	Example Risk Management responsibilities
<p>Portfolio Owner (PO) whether an individual such as an Accounting Officer, or a team/ committee/ board such as a Senior Portfolio/Investment/Strategy Committee, or the Joint Senior Official Delivery Board</p>	<ul style="list-style-type: none"> ▪ Responsible and accountable for the overall management of the portfolio, they are therefore responsible for the overall management of portfolio risk and the strategic narrative that is placed before senior government officials. ▪ At this level, responsibilities in government for cross-departmental activities can become quite complex. The Joint Senior Official Delivery Board is an example of how this was navigated for the purposes of cross-cutting Outcome Delivery Plan Governance. ▪ If functions take ownership of parts of a portfolio away from (as opposed to still reporting to) the prima facie PO, then it implies that there must be a further PO role being performed at a higher organisational level (by an individual or committee) to bring the different strands together. This should be clarified in advance as it might not otherwise be clear from underlying governance structures who/where that higher role would fall to. In some cases this could be Permanent Secretaries, Ministers or others at the most senior levels of government
<p>Senior Leader (SL)/Senior Responsible Officer (SRO)</p>	<ul style="list-style-type: none"> ▪ There should be a single point of contact in each programme (within the portfolio) that is responsible to the Portfolio Owner for the management and reporting of their programme’s contribution to the overall portfolio risk levels.
<p>Senior Risk Manager (SRM)</p>	<ul style="list-style-type: none"> ▪ There should be a Senior Risk Manager at portfolio level who assists the PO with setting risk management strategy/plans and shaping the nature of (templates for) risk information required as part of programme-portfolio updates. The Senior Risk Manager would also help devise effectiveness tracking mechanisms for any cross-portfolio initiatives designed to influence risk levels.

<p>Risk Owner (RO) (and/or control owners)</p>	<ul style="list-style-type: none"> ▪ At portfolio and at programme level, there may be risk owners who manage the risk on behalf of the SL/SRO/PO and are held to account to managing and assuring the performance of the risk. Where such roles exist, the individuals need to have express authority to support their responsibilities. Sometimes, ownership may be narrowed to particular controls to enable more precise accountability.
<p>Other roles and responsibilities may be established as the PO/SL/SRO's see fit</p>	<ul style="list-style-type: none"> ▪ These should be clearly defined with suitable Terms of Reference (ToRs) and set out in the risk management strategy/plans.

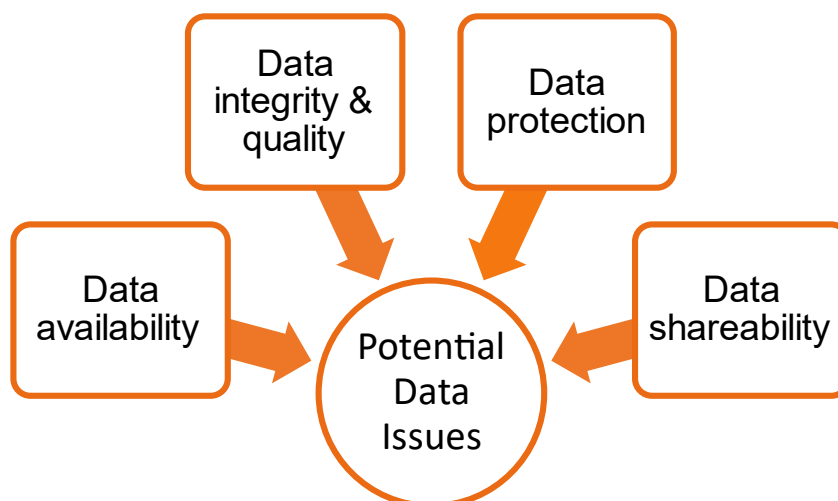
3.41. There are several key tasks that the PO/SL/SRO/ and SRM should undertake in order to deliver a balanced and informed Portfolio Risk Management profile. A PO/SL/SRO and SRM “check list” is at Annex B, this list is a guide and not intended to be definitive.

3.42. In addition to the standard roles, portfolios are likely to have leaders with particular technical expertise in the nature of the challenges being addressed by the portfolio. The nature of that leadership and input might vary considerably depending on the topic and is encouraged where appropriate. However, the standard roles should apply to all portfolios in alignment with whatever technical leadership is deemed appropriate.

Data – Risk Aspects

3.43. Riskiness associated with risk and non-risk data quality and flow should be anticipated and addressed.

Potential risk data challenges



3.44. Cross-boundary (of any sort, including international) portfolios can amplify the challenges associated with risk-related data. Therefore, at the start of the programme when designing the governance and reporting arrangements, the SRO should anticipate and address potential issues relating to:

- **Data availability** – will the data you require for portfolio risk management (including governance) actually exist and reflect the timeframes you need? If it is not available, then do you really need it?
- **Data integrity & quality** – is the risk data robust and reliable? This could be particularly challenging where information is being gathered for the first time and risks-related decisions are being made from it. It is likely that in many cases the information will be imperfect, so governance and decision-making arrangements need to reflect this uncertainty.
- **Data protection** – although information could be available, the willingness of others to share it might be constrained by anxiety in relation to risk factors such as compliance with data protection regulations. The programme should find ways to clarify up front that the sharing of key data is in compliance with data protection regulations so that operators can proceed with confidence.
- **Data shareability** – even if data (risk data or other data) is of good quality and there is no reason why it should not be shared, the practical aspects of exchanging data between government systems can prove challenging. “Whole of Government”- type portfolios could be particularly challenging because they rely on information feeds from all departments which may have the data stored on different types of IT systems which might not be compatible.

3.45. The lack of complete data and data flows is likely to have an impact on the overall riskiness of portfolios, so it is important that this is understood and reflected in terms of reference (including objectives and targets) for the portfolio overall as well as programmes within it.

4. Systems Thinking in Portfolios – Managing Complex, Wicked Risks

“Systems thinking is a framework for seeing the interconnections in a system and a discipline for seeing and understanding the whole system; the ‘structures’ that underlie complex situations”

- Introduction to Systems Thinking for Civil Servants Driving Improved Outcomes in Complex Situations, by the Government Office for Science

4.1. Systems thinking lends itself well to the complex nature of the challenges that government faces. Departments often need to operate effectively across organisational boundaries to achieve a range of objectives whilst engaging multiple stakeholders. Understanding and managing these interdependencies and relationships (the “system”) can help to improve how resources – both tangible and intangible – are used to articulate policy intentions and achieve sustainable results. Following the steps outlined in the [introductory systems thinking toolkit for civil servants](#) can bring greater clarity and structure to complex portfolios.

When to use systems thinking

4.2. The toolkit includes the checklist and extract below, this is included in this guidance to help with earlier identification of whether a systems thinking approach is right or not.

Systems thinking is particularly powerful when applied to complex problems. Problems are complex when they cannot be solved in a simple linear fashion and require an understanding of the interactions between multiple different elements.

Deciding if systems thinking is the right approach for your work (Adapted from Systems Practice by Omidyar group).

Which of the two is more relevant for your portfolio?		
	Statement 1 (non-complex)	Statement 2 (Complex)
The problem	The problem is well understood. We know what causes it, and there is solid evidence that our proposed actions will have the intended effects.	We are not really sure we understand the problem, let alone the solution.
The stakeholders	There is a high level of consensus among stakeholders and experts about what to do.	There is significant diversity of opinion and even conflict among stakeholders and experts about what to do.
Predictability of policy	The problem is relatively self-contained and not intertwined with its broader	There are many diverse and dynamic interconnections between the

setting	environment which is stable and predictable.	problem and the broader environment which itself is unstable and dynamic (political, economic etc).
Ambition	It is a short-term goal.	We are aiming to make sustained change at a broad scale.
Add it all up - is systems thinking the right approach?	I can probably apply other approaches to this problem.	Systems thinking could be highly useful for helping my team grapple with this messy problem.

From <<https://www.gov.uk/government/publications/systems-thinking-for-civil-servants/toolkit>>

- 4.3. It is likely that this guidance will evolve in the future to reflect broader progress made to incorporate systems thinking in how government addresses complex challenges. This will be helpful in addressing the variability and nature of risk in portfolio outcomes across government.

Publications and Websites

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EXAMPLES OF RISK-RELATED TASKS WHICH MIGHT BE BUILT INTO THE BROADER ACTIVITIES OF OWNERS SHOWN

Note: The checklist below is neither prescriptive nor exhaustive. Instead, it suggests actions that might be taken at a portfolio's initiation to ensure a consistent approach in set up, delivery and governance. Some organisations may choose to alter the sequence of actions in line with their existing practice and protocols.

N ^o .	Action	Owner (illustrative)	Action Outcome
1	Use the "Portfolio Risk Management Guidance" to consider different risk aspects during portfolio formation	SL/PO/SRO	Proper consideration of risk aspects as portfolios are formed.
2	Use the Portfolio Risk Management Guidance to help manage risk during the lifetime of the portfolio	SL/PO/SRO	Proper consideration of risk aspects as portfolios are managed.
3	Create an overarching Portfolio Risk Management Strategy and Risk Management Plan	SRM	This will set out how risk is governed and managed within the portfolio, using all relevant additional information to set out clear roles and responsibilities as well as capturing all the above elements in detail – the "What" and the "How". This activity, ideally, should be carried out by the SRM and their team and approved by the relevant SL/PO/SRO. This is also a key stage when capability and training needs should be reviewed and addressed for both technical and soft skills.
4	Undertake Critical Path Analysis & Schedule Risk Analysis	SL/PO/SRO & SRM	Critical Path Analysis helps projects and programmes identify the longest sequence of activities for completion (activities with zero 'float') and supports prioritisation decisions. Schedule Risk Analysis complements Critical Path Analysis by estimating the uncertainty in activity durations and evaluating the riskiness of the overall schedule.
5	Establish regular meetings between key Programme leads (govt. department SL/PO/SRO & RMs) and the Portfolio SL/PO/SRO and RMs	SL/PO/SRO & SRM	This might result in establishing a separate Working Group to allow for cross-cutting risks to be understood, challenge to be managed and key options to be developed in order that information can be used in Portfolio Board meetings as part of a clear, focused reporting system.
6	Setting Portfolio Risk Appetite (and Tolerance levels) in line with the organisation's overall risk	SL/PO/SRO & SRM	This will allow SL/PO/SRO and seniors to take risks that are within agreed parameters and also understand dependencies & linkages

Nº.	Action	Owner (illustrative)	Action Outcome
	appetite		
7	Establish agreed risk reporting and escalation mechanisms	SRM	This will be the backbone of managing risk in pursuit of opportunity. The SRM will draft the relevant guidelines and these will be agreed by Programme & Portfolio SL/PO/SRO.
8	Establish agreed risk reporting templates	SL/PO/SRO & SRM	This will set the tone for managing risk at all levels by setting the expectation of the type and standard of data required at different levels in the portfolio. It will also be an indicator of the maturity of risk management in the portfolio with more integrated risk data generally being an indicator of more maturity than standalone risk sections which could appear disconnected from other programme updates and key decisions made.
9	Establish and maintain a Portfolio Risk & Issue register that incorporates clear risk mitigation action plans	SRM	This is the record of identified risks impacting the overall portfolio with mitigating actions and risk owners.
10	Risk Assessment – Establish a consistent scoring matrix & parameters	SL/PO/SRO & SRM	Setting a common scoring baseline for Portfolio Risks will allow for reporting of risks that is cohesive and clear. It will also aid in the discussions for mitigation and control.
11	Outcome variability, impact & likelihood parameters and a common language for the portfolio	SL/PO/SRO & SRM	Setting the parameters early (i.e., establishing a common language for the particular portfolio) will allow all participating departments to score & grade risks to a common baseline influencing the probabilities of different degrees of portfolio success/failure - thus helping make reasoned options around funding, resourcing etc more realistic and proportionate.
12	Setting risk categories/ themes/ functions (i.e., People, Finance, Supply Chain, Contracts etc)	SL/PO/SRO & SRM	The setting of these groupings will allow for detailed analytics and aggregation to be carried out at a portfolio level in a structured and cohesive way.
13	Develop and use other tools/guidance that may be of use	SRM	SRM using their knowledge to suggest tools for the identification, assessment, control and monitoring such as Bow-Tie analysis, Ishikawa etc.

Annex C: Acknowledgements

The Government Risk Profession and Centre of Excellence extends thanks to colleagues from the following organisations who were particularly instrumental in compiling this guide:

- Ministry of Defence
- Infrastructure and Projects Authority
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- Ministry of Justice
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- Department for Work & Pensions
- Department for Education
- Department for Environment, Food and Rural Affairs
- Department for International Trade
- Office for National Statistics
- Government Internal Audit Agency
- National Audit Office

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