FORUM ON TAX ADMINISTRATION

OECD Tax Administration Maturity Model Series

Enterprise Risk Management Maturity Model

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Forum on Tax Administration

Enterprise Risk Management Maturity Model

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Preface

On behalf of the Organisation for Economic Co-operation and Development's Forum on Tax Administration (OECD FTA), I am pleased to present the Enterprise Risk Management (ERM) Maturity Model. The United States' Internal Revenue Service (IRS) worked closely with our colleagues in the OECD FTA Enterprise Risk Management Community of Interest (COI) and the Secretariat to develop the maturity model set out in this report. This maturity model, the latest in the FTA maturity model series, is a product of the collective expertise and experience of participating FTA members. I would like to extend my gratitude to everyone involved in developing what I believe is an important new resource which I hope will be of use to all tax administrations at whatever stage of maturity they are currently.

I hope that this report is also timely. We are, of course, currently facing the enormous challenges of the global COVID-19 pandemic, which may have lasting impacts on how we operate. We are also living through a period of increasingly rapid changes resulting from the digitalisation of the economy, the emergence of new technologies and the challenges of climate change among other things. These developments will have significant impacts on many aspects of our lives and work and, consequently, on how we operate as tax administrations. The ability to identify, understand and mitigate risks appropriately is more important than ever. My hope is that this new maturity model will help us in understanding our capabilities in this area in an objective and testable manner, to provide staff and senior leadership with an overview of their administration's maturity level, including in comparison to their peers, and to inform decision-making going forward.

I encourage organizations to use this Enterprise Risk Management Maturity Model to help in guiding their risk management efforts and in managing their journey in fostering their ERM capabilities.

Thomas Brandt

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Executive Summary

Maturity models are a relatively common tool, often used on a self-assessment basis, to help organisations understand their current level of capability in a particular functional, strategic or organisational area. In addition, the setting out of different levels and descriptors of maturity can help an organisation achieve a common understanding of the type of changes that would be likely to enable it to reach a higher level of maturity over time, should it so wish.

The OECD Forum on Tax Administration (FTA) first developed a maturity model in 2016 in order to assess digital maturity in the two areas of natural systems/portals and big data. The digital maturity model was introduced in the OECD report *Technologies for Better Tax Administration* (OECD, 2016[1]). Building on this, work began in 2018 to develop a set of stand-alone maturity models over time covering both functional areas of tax administration, such as auditing and human resource management, as well as more specialised areas such as enterprise risk management, analytics and the measurement and minimisation of compliance burdens.

The maturity model contained in this report covers the organisational and operational aspects of enterprise risk management. The aim of the Enterprise Risk Management Maturity Model is to:

- Allow tax administrations to self-assess through internal discussions as to how they see their currently level of maturity in enterprise risk management. There is not a prescribed optimal level of maturity for tax administrations. The level of maturity will depend on each organisation's circumstances, broader objectives, and priorities.
- Provide staff and senior leadership of the tax administration with a good overview of the level of maturity based on input from stakeholders across the organisation. This can help in deciding strategy and identifying areas for further improvement, including areas that require support from other parts of the tax administration or external stakeholders, including other parts of government. A number of administrations have reported that cross-organisational conversations when self-assessing can be useful in joining-up different business areas, helping people see the scope for synergies and identify areas for mutual support.
- Allow tax administrations to compare where they sit compared to their peers. A "heat map" contained in this report shows the reported maturity of the different administrations that have so far conducted a self-assessment. This is set out on an anonymous basis. An administration will know its own level and will be able to compare itself to other tax administrations. It is also possible for tax administrations to reach out, through the Secretariat, to other tax administrations at different levels of maturity for peer-to-peer learning purposes.

This report consists of five parts:

- **Chapter 1**: Using the Enterprise Risk Management Maturity Model. This provides an overview of the model and an explanation of how to use the model, including how to get the most out of discussions within the tax administration.
- **Chapter 2**: Results of self-assessments. This chapter sets out the anonymised results of the self-assessments undertaken by tax administrations that opted to share their record sheets with the

OECD Secretariat. It also comments on the self-assessment process that administrations went through.[1]

- **Chapter 3**: The full Enterprise Risk Management Maturity Model. The chapter contains the model which can be used by tax administrations for self-assessment purposes and, following anonymised collation of results, for the purposes of international comparisons.
- **Chapter 4**: This sets out a definition of some of the terms used in the report which may be less familiar to some of those using, or reviewing the use of the maturity model, for example those outside of the enterprise risk management function.
- **Annex A** to the report contains a record sheet for internal purposes, including to inform repeat use of the model from time to time, and for anonymised comparison purposes when submitted to the Secretariat.

The Enterprise Risk Management Maturity Model was developed by the FTA's Enterprise Risk Management Community of Interest, led by the United States' Internal Revenue Service.

Caveat

Tax administrations operate in varied environments, and the way in which they each administer their taxation system differs in respect to their policy and legislative environment and their administrative practice and culture. As such, a standard approach to tax administration may be neither practical nor desirable in a particular instance. Therefore, this report and the observations it makes need to be interpreted with this in mind. Care should be taken when considering a country's practices to fully appreciate the complex factors that have shaped a particular approach. Similarly, regard needs to be had to the distinct challenges and priorities each administration is managing. In particular, not all parts of this maturity model will be relevant for all tax administrations depending on the way that they undertake enterprise risk management.

[1] Chapter 2 was updated on 27 May 2021 after the OECD Secretariat received the completed record sheet of a tax administration that has not been included previously.

1 Using the Enterprise Risk Management Maturity Model

General background

Maturity models are generally descriptive in nature, with a focus on processes and the broad outcomes of those processes, rather than being heavily based on metrics. This recognises that even where the metrics chosen may indicate a good or less good outcome, they do not by themselves show how that outcome has been achieved, the sustainability of the outcome or its robustness and adaptability to changes in the external environment.

By their nature, maturity models are not prescriptive as to the details of processes nor as to how broad outcomes should be achieved. There is no one-size-fits-all nor any detailed method that should be preferred to another in all circumstances. There is also no judgement within the models themselves as to what the optimal level is for a particular tax administration. This will depend on their own circumstances, objectives and priorities.

What the maturity model will help an administration assess, though, is where they see themselves as to their current level of maturity and the kind of processes and broad outcomes they may wish to consider in order to improve their maturity. In addition, being able to compare themselves to other tax administrations, or to the average level of maturity of other administrations, can be a useful input to the consideration of whether the current level of maturity is the right one for them.

Of course, a maturity model is only one of a range of tools that an administration may wish to use to help it to understand its capabilities and choices. The use of metrics, such as key performance indicators, will also be important to support discussions. For example, a jurisdiction rating its enterprise risk management as “Leading” may lack credibility if there were large numbers of overruns in projects due to unidentified risks materialising. At the very least, this would require the administration to reflect on the proposed rating (which may still be justified, for example, if many of the overruns were due to the materialisation of a single very low probability risk). Some jurisdictions may find value in combining the use of the maturity model with other external assessment tools, for example the International Monetary Fund’s Tax Administration Diagnostic Assessment Tool (TADAT)[2] or with internally generated performance indicators.

Maturity levels

The model sets out five levels of maturity. The reason for choosing five levels is to help make it easier for administrations to take a judgement as to their current level of maturity by providing clear distinctions in the descriptions of maturity levels. This would become more difficult the more maturity levels there are. At

[2] See TADAT (2019), “Overview”, website, www.tadat.org/overview (accessed 10 December 2020).

the same time, having five levels helps to ensure that the distinctions between the levels are not so great that it becomes difficult for administrations to see the pathway to higher levels of maturity.

In designing the maturity model, it was decided to use the middle level, termed “Established”, to provide a description of where, on average, advanced tax administrations may be expected to cluster. Using this as an anchor, the other levels of maturity were fleshed out by trying to describe the pathway from an “Emerging” level to “Established”, and from an “Established” level to what might be possible in the future given expected developments. The five levels are:

1. **Emerging**: this level is intended to represent tax administrations that have already developed to a certain extent but which, at least in the area of enterprise risk management, have significant further progress they could make. The intention is that, in general, the descriptions of this level do focus on what is in place rather than on what is not, while also noting what some of the limitations might be.
2. **Progressing**: this level is intended to represent tax administrations which have made or are undertaking reforms in enterprise risk management as part of progressing towards the average level of advanced tax administrations.
3. **Established**: this level is intended to represent where many advanced tax administrations, such as Forum on Tax Administration (FTA) members, might be expected to cluster. (See Chapter 2 for information on the results of the Enterprise Risk Management Maturity Model.)
4. **Leading**: this level is intended to represent the cutting edge of what is generally possible at the present time through actions by the tax administration itself.
5. **Aspirational**: the intention of this level is to look forward at what might be possible in the medium term as the use of new technology tools develops and as tax administrations move towards more seamless and real-time tax administration. Few tax administrations are expected to be consistently at this level currently, in particular since in some cases it requires cooperation external to the tax administration (such as whole of government approaches, access to a wide range of data sources etc.).

Layout of the maturity model

The Enterprise Risk Management Maturity Model has a single descriptor of tax administration maturity which is a summary description of the overall level of maturity (see Chapter 3, the first row in the maturity model table just below the table header).

To assist in the understanding of what a given level of maturity means, a set of indicative attributes is also contained in the same maturity model table. These seek to break out the elements to be considered when looking at the overall maturity level covering both practical and behavioural aspects. As shown by the term itself, these are indicative attributes and not determinative. They are, though, intended to reflect what might be expected, in general form, to be in place at a particular maturity level which will differ from the level below (for example, they may be of a different nature, or more demanding).

Not all of the indicative attributes under a particular maturity level will necessarily be present in a particular tax administration. A tax administration may also not fit all of the elements of a particular attribute. An issue that may also arise is that the self-assessment group may feel that it in some cases indicative attributes of different maturity levels will be met within a particular theme, for example some “Progressing” attributes and some “Established” attributes.

There is no one-size-fits-all that can work across a large and diverse range of administrations. The attributes are therefore intended to help guide discussions rather than determine the outcomes of the self-assessment in a mechanistic manner. In using the model, tax administrations are asked to consider the best fit for them, taking account of both the descriptors and indicators as far as is practicable.

In some cases, the indicative attributes may be additive across a row of the maturity model and this should hopefully be clear from the context. They will not, though, generally be repeated across the maturity levels in that row in order to avoid repetition. Where a tax administration meets a number of indicative attributes within the same row, then its level of maturity within that row will normally be the highest of the indicative attributes which are met. (For example, if “Progressing”, “Established” and “Leading” indicators in one row are all met, then the level of maturity for that row is likely to be “Leading”.)

Most of the indicative attributes are divided into two (in one case three) elements. In self-assessing the maturity level for that attribute, these elements should be taken together and an overall judgement reached based on the weight attached to the different elements by the administration. The indicative attributes cover the following areas:

- Strategy
- Governance
- Culture
- Risk Identification
- Risk Analysis and Evaluation
- Risk Treatment
- Review and Revision
- Information, Communication, and Reporting

These indicative attributes are a selection of attributes that leading industry frameworks identify as important elements for implementing and sustaining enterprise risk management within any organisation.

Using the maturity model

The Enterprise Risk Management Maturity Model has been designed to be used as a self-assessment tool. To be effective, this self-assessment should be done in a way which makes the process as objective as possible and avoids group-think. Experience with using the model suggests the following key considerations for the self-assessment discussion:

- Sufficient time should be allowed for the self-assessment discussion. Feedback from administrations suggests that it may take from a few hours to more than a day depending on the amount of preparation before the group discussion and the level of detail of the discussion itself.
- Ideally, there should be a range of staff with enterprise risk management responsibilities involved in the self-assessment, across grades. Care should be taken to ensure that the conversations can be frank and open and people should be encouraged to express their views.
- It can be helpful to ask someone outside of the management chain for enterprise risk management to facilitate the discussions. This person should have read this note and understand how to process the self-assessment against the model. As well as facilitating discussions, the person should be able to challenge the views of the self-assessment group, including asking for supporting evidence where appropriate.
- Consideration should be given to how to reach a view where there is a division within the self-assessment group on the appropriate assessment of maturity. The facilitator may, for example, have a tie-break role.
- In addition to the facilitator, consideration should be given to involving staff from other tax administration functions, ideally at a relatively senior level, to assist in the challenge function and

to provide insights from their different perspectives. A number of administrations have reported that cross-organisational conversations when self-assessing can prove highly useful in joining-up different areas of business, helping people to see the scope for synergies and for mutual support in achieving the administration's objectives.

- When decisions are taken on the level of maturity, it can be helpful to record the main reasons behind that decision. This will assist in future use of the model within the tax administration, allowing an easier discussion of what, if anything, has changed.

Recording of self-assessments

Annex A contains a record sheet for tax administrations to record the results of their self-assessment. This also contains a check-list of the considerations for successful self-assessment discussions as described above. At the end of the record sheet there are also open text boxes to help inform the future development of the model. When using the model, administrations are asked to identify:

- where they feel that some of the indicative attributes or descriptors are misplaced or wrong, or whether there are important attributes that they think are missing
- any lack of clarity as regards to the difference between adjacent maturity levels
- any areas where it finds the language is unclear or ambiguous and may need to be added to the glossary.

In order to allow administrations to see where they sit relative to their peers, the results reported to the Secretariat are contained in an anonymised form in the heat map set out in Chapter 2, which will be updated periodically on the FTA website when new record sheets are submitted to the Secretariat. Administrations are identified by a letter within this heat map (with administrations being able to identify themselves based on their record sheet submission).

The reason for keeping the results anonymous is to help ensure that administrations are not influenced in their use of the maturity model by concerns about external perceptions and is intended to reinforce its primary purpose as a self-assessment tool for informing an administration's future strategy. Administrations which wish to speak to peers for knowledge sharing purposes (for example where they are at a "Leading" or "Aspirational" level) can ask the Secretariat to reach out to that peer for agreement to put them in touch.

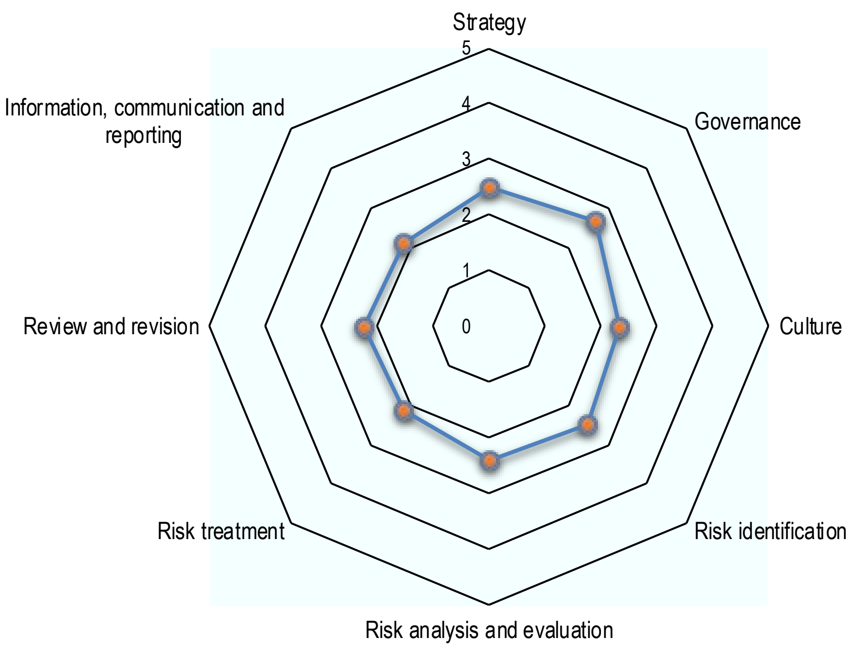
2 Results of Self-Assessments

The Enterprise Risk Management (ERM) Maturity Model was tested in a pilot project that involved self-assessments by members of the ERM Community of Interest. The feedback from the pilot test was then incorporated into the model, which mainly involved the inclusion of additional terms to the glossary and the addition of "risk tolerance" when the subject of "risk appetites" is mentioned in the model. This section summarises the results from the pilot self-assessments as well as from subsequent self-assessments carried out by tax administrations.

Self-assessment results

The self-assessment record sheets received from 29 tax administrations show that the majority of them assesses the maturity of their ERM functions between the "Progressing" and "Established" maturity levels. This can be seen in Figure 2.1. which illustrates the average score for each of the eight indicative attributes of the maturity model.

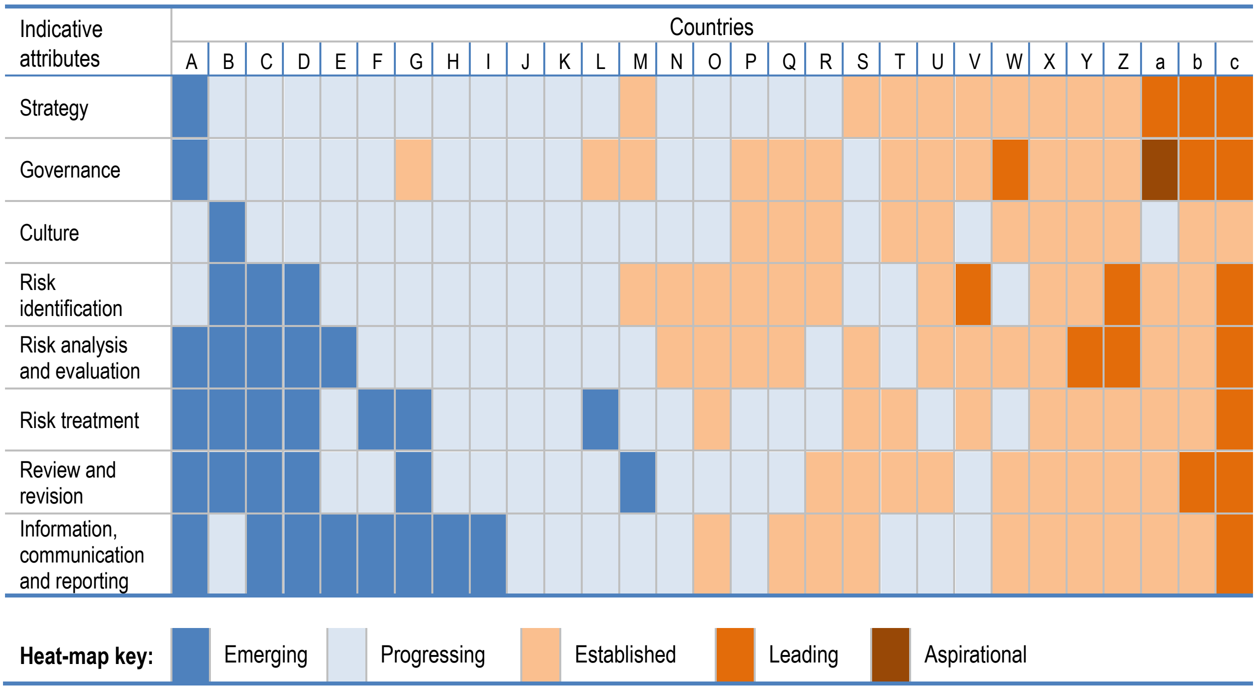
Figure 2.1. Results of self-assessments for the eight indicative attributes of the model



Source: OECD Secretariat analysis based on self-assessment record sheets.

The detailed results contained in the heat map in Table 2.1. show how each of the 29 tax administrations scored across the indicative attributes. The results are anonymised to ensure that administrations are not influenced in their use of the maturity model by concerns about external perceptions. However, administrations that completed the model will be able to identify themselves based on their record sheet submission.

Table 2.1. Results of the self-assessments for the eight indicative attributes of the model



Source: OECD Secretariat analysis based on self-assessment record sheets.

The heat map shows that the "Progressing" level was chosen in 44% of possible instances followed by "Established" with 35%. In 14% of the cases, administrations chose the "Emerging" level and only in 7% of possible instances, administrations chose "Leading" or "Aspirational".

Those results are slightly below the expected clustering around the "Established" category when the maturity model was built. However, for the time being there is no need to adjust the model. This is mainly because many administrations are in the process of implementing and upgrading their ERM function and, therefore, it is expected that administrations will self-assess at a higher level of maturity in the near future. Keeping the current calibration will allow the maturity model to remain unchanged in the medium term. Furthermore, the current calibration aligns with leading international maturity models and it may beneficially serve tax administrations to have this model align with other similarly calibrated models.

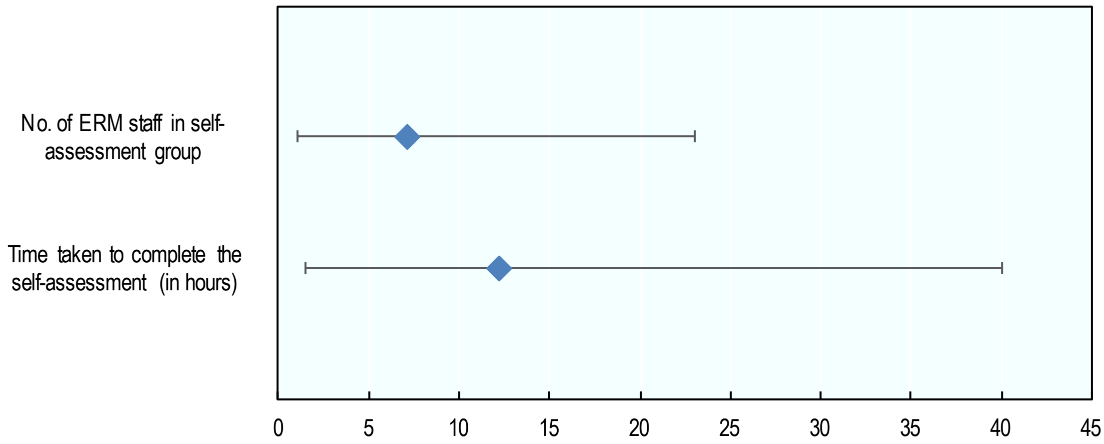
Self-assessment process

The feedback received during the pilot process indicated that the model was easy to use, covered the right areas and that the jumps in maturity levels were sufficiently discrete and understandable. Some changes to language were suggested in a few of the indicative attributes and these have been made in the final version of the model in Chapter 3.

As mentioned in Chapter 1, experience with using maturity models suggests administrations to take into account a few considerations for the self-assessment discussions, including involving a range of staff with ERM responsibilities, across grades, and involving staff from other tax administration functions.

Record sheet submissions from tax administrations show very diverse approaches as regards the self-assessment process. As can be seen in Figure 2.2., the number of ERM staff in the self-assessment group ranged from one (1) to twenty-three (23) with administrations involving seven (7) ERM staff members on average. More than 75% of the administrations indicated that they had an appropriate distribution of grades within the discussion groups and half noted that they involved official(s) from other areas of the tax administration. In addition, half of the administrations indicated using a facilitator to lead the discussions.

Figure 2.2. Self-assessment process: Minimum, median and maximum number of staff in the self-assessment group and time taken to complete the assessment



Source: OECD Secretariat analysis based on self-assessment record sheets.

Figure 2.2. also shows the time it took administrations to complete the self-assessment which includes the preparations for the group discussions. Again, there are significant differences among FTA members with administrations taking as little as one and a half hours (1.5h) to complete the assessment to as much as forty hours (40h). The average time taken to complete the self-assessment was twelve hours (12h) across the administrations.

Understanding that many administrations involved a significant number of staff and spent many hours in the group discussions, it will be interesting to see how administrations' ERM maturity levels will evolve in the future.

3 The Enterprise Risk Management Maturity Model

The Enterprise Risk Management (ERM) Maturity Model has a single descriptor of overall tax administration maturity as regards enterprise risk management. This descriptor is on top of the table below. The set of eight indicative attributes follows below the descriptor. These are intended to facilitate discussions as to the overall level of maturity and as to relative maturity in different areas and are not determinative in themselves of the overall level of maturity.

Maturity levels	Emerging	Progressing	Established	Leading	Aspirational
Descriptor / Indicative	ERM is not well understood or practiced throughout the administration, although pockets of knowledge and good practice may exist depending on the background and experience of individual staff. While there is acknowledgement that risk assessment and management is important for particular high-profile projects and that at the enterprise level it would bring value to the organisation, it is often not delivered consistently or adequately in practice. More generally ERM is undertaken in a reactive and ad hoc manner,	Some ERM capabilities and practices are in place and there is a general understanding in most business areas of the role of risk assessment and risk management at a high level. There is some effort to systematically identify, analyse and treat major risks both at an enterprise level and within large projects, but the extent to which this information informs decision making and resource allocation	ERM capabilities and practices are generally well established in the culture and formal processes of the administration. ERM and business unit risk management are standardised, coordinated and promoted consistently. Risk information is increasingly taken into account in decision making and resource allocation, particularly for higher risk areas, and reflected in	ERM capabilities and practices are well integrated into strategic planning and performance management activities and risk appetites are clearly articulated. A strong culture of effective ERM exists across the administration with a clear understanding of roles and responsibilities. Risk information and outcomes are continuously used to reinforce risk culture, to improve performance and inform decision-making.	ERM capabilities and practices are fully integrated with strategy and performance management and reinforced through the organisational culture at all levels. Increasing use is made of advanced technology tools, including artificial intelligence, in the identification, monitoring and treatment of risk and risk management processes, including in a dynamic way.

Maturity levels / attributes	Emerging	Progressing	Established	Leading	Aspirational
	often after risks have materialised.	across the administration is highly variable.	performance management processes.		
Strategy	Administration strategy and objective setting usually involves adjustments to the previous period's strategy/objectives in the light of experience and is generally backward looking as regards to risks (i.e. with a greater focus on previously realised risks rather than an analysis of how future risks might impact the delivery of the administration's strategy). There is limited consideration of the internal and external environments and stakeholders. There is a limited understanding of risk appetite by senior leadership	Administration strategy and objective setting involves some analysis of potential delivery risks although this may not be done in a joined-up and systematic process. Some aspects of the internal and external environment and stakeholders are considered. There is a basic understanding of risk appetite but is it not yet interconnected with strategy.	When administration strategy is being developed, consideration is given to the potential effects of major changes in the internal and external environments (such as changes to government policy). Adjustments are made as appropriate in accordance with the administration's general risk appetite. This process is supported by structured inputs from business units, risk management experts and governance committees. A risk appetite statement, that considers trade-offs, is in place and communicated appropriately.	Administration strategy is informed by comprehensive horizon scanning and scenario planning involving a wide range of internal and external stakeholders. The detailed objectives for achieving the strategy are adjusted as appropriate in accordance with the administration's different risk appetites and risk tolerances in specific areas. Risk appetite statements are articulated for key areas of administration risk. Risk appetite statements are reviewed periodically by the administration's governance structure in the light of	The strategic planning process is supported by the use of advanced analytics (e.g. artificial intelligence) using a wide range of inputs to forecast different scenarios and their impacts on the achievement of the strategy. This is done on a continuous basis allowing real-time adjustments to strategy, objectives and/or performance measures, including as a result of changing risk appetites and risk tolerances of the administration. Risk appetite statements are incorporated into all business objectives and monitored in real-time through advance analytic techniques with suggestions for changes put forward

Maturity levels	Emerging	Progressing	Established	Leading	Aspirational
				events and appropriate adjustments considered.	automatically for consideration.
Governance	The governance structure for ERM is somewhat unclear and generally uncoordinated between governance bodies.	The administration governance structure considers ERM and exists with some exchange of information between governance bodies and periodic reporting to the Executive Management Team on major risks and risk management actions.	An administration-wide governance structure is responsible for the periodic review and monitoring of key elements of enterprise risk and performance as well as setting general risk appetite.	An administration-wide governance structure regularly reviews enterprise risk and performance administration-wide and approves risk appetite and risk tolerance for major risks.	An administration-wide governance body engages in proactive and, as necessary, real-time decision-making related to risk and performance to achieve the administrations strategies and objectives (including supporting objectives of other government agencies).
	Levels of authority and roles and responsibilities are not well documented, understood or applied consistently across the administration. There is consequently little review and monitoring of many risks and accountability for risk management is unclear.	Levels of authority and roles and responsibilities in some business areas are defined and documented with a focus on reviewing and monitoring major risks and performance indicators. Individual responsibilities as regards to other risks will often not be clear and risk appetite may vary widely across business units.	An operating structure is in place that sets out both levels of authority and individual roles and responsibilities that are consistently applied within most business units.	A comprehensive operating structure is in place to ensure full cooperation between governance bodies. Levels of authority and explicit roles within and across business units are clearly mapped out in operating plans and individual objectives.	The administration has well defined and well understood delineated roles, responsibilities, delegations of authority, and governance structures. These are regularly evaluated by management, including through periodic independent reviews, to determine if they are applied correctly or if changes are needed in the light of changing circumstances.

Maturity levels	Emerging	Progressing	Established	Leading	Aspirational
Culture	There is a general appreciation at senior level of high-level business risks, but risk management is not promoted across the administration as a proactive tool and often issues are only addressed after risks materialise.	The need for effective ERM is promoted at the senior management level although with a primary focus on major foreseen risks and high-profile projects with reputational impacts rather than a matter of general administration culture.	The importance of effective and joined-up ERM across all aspects of the administration is stressed by senior leadership and generally reflected in training material, performance management processes, including reporting and monitoring, and management objectives.	A strong ERM culture is visibly encouraged, supported through ongoing structured professional training, and rewarded in performance management processes. This is reinforced by consistent messaging and management behaviours.	ERM is fully integrated into core administration professional values and is reflected in day-to-day behaviours and an organisational culture focused on innovation. It is supported through a multifaceted approach for continuous training and development.
	The application of ERM in general largely depends on the expertise and risk appetite of individual managers with high variability across the administration. A number of basic training courses are available although not always on a regular basis and most training is done on the job.	In-house risk management expertise exists (which may be centralised or embedded in high risk areas). Some core training can be provided on a reactive basis for those directly accountable for identified high risk projects or issues. ERM in practice may be highly variable across the administration and often undocumented.	Risk informed decision making by managers is encouraged and supported, including through the provision of general guidance and assistance on demand from risk professionals. Periodic reviews are done as to the ERM culture within the administration.	There are well communicated expectations as regards to the incorporation of ERM in decision making at all levels as well as the involvement of risk management professionals. ERM culture is periodically measured against key performance indicators and qualitative assessments and benchmarked with other organisations.	There is real-time monitoring of behaviours and decisions to ensure alignment with core values and risk appetites, including through the use of automated and embedded advanced technology tools and techniques. This also allows the administration to make well informed dynamic changes in risk appetites and processes to respond to environmental changes.

Maturity levels	Emerging	Progressing	Established	Leading	Aspirational
Risk Identification	Outside of major projects, the extent and nature of risk identification and reporting is generally left to the individual managers and business units leading to many risks not being identified other than at a very general level.	While there are standardised reporting requirements for identifying risks, the process for identifying and describing risks and for considering interrelated risks will differ across business units and will be of varying quality.	The main risks to achieving objectives are identified at regular, established intervals using a standardised process (including enterprise and business unit levels).	Risks are identified and validated consistently and in a standardised manner at each level of the administration taking into account lessons learned from prior events.	A wide range of internal and external information sources are used to proactively identify and centrally validate risks to objectives at all levels of the administration using advanced tools such as data analytics, artificial intelligence and gamification.
	The Executive Management Team may sometimes commission risk assessments to be done. This will largely be on a reactive basis where some risks have already materialised and in those cases will be about damage limitation than prevention or mitigation.	Risk identification is integrated into certain activities of business units considered to be of higher risk. In other areas the types of risk to be considered are left to business units resulting in variability in the quality of risk identification.	The level of granularity of risk identification will vary across the administration. Links between different areas are often considered but this is generally done independently by business units and not subject to cross-administration review.	Risk identification is integrated into normal day-to-day operations and this information is supplemented by periodic cross-administration risk identification activities to ensure completeness and accuracy.	New, emerging, or changing risks are proactively identified on a real-time basis including as a result of changing risk appetites and changes in the interrelation of risks across business areas.
	Where risks are identified they are not consistently logged centrally or shared making it difficult to consider interrelated risks or to get a coherent or	The high-level risks identified by the individual business units are reflected at an enterprise level after approval by the appropriate governance bodies. The governance bodies will	A portfolio view of risks to objectives agreed by the governance bodies exists at the enterprise level, including a risk profile for each level of the organisation which is	Enterprise risk identification includes the consideration of risks from across the units and how they interrelate and is done in a joined-up process by the governance bodies and	Identified risks and interrelations are subject to regular peer review and challenge at all levels of the administration and fully integrated into

Maturity levels	Emerging	Progressing	Established	Leading	Aspirational
	consistent picture of enterprise risks.	identify and feedback some common themes and major interrelations between risks for business unit management consideration.	reflected in business unit plans and objectives.	cascaded across the administration for inclusion in plans at all levels.	administration wide objectives.
Risk Analysis and Evaluation	Risks are either not analysed formally or risk analysis is done in an inconsistent manner based on the previous experience and management judgement and without any common format, resulting in an unreliable assessment of enterprise level risk. Risks are largely prioritised on the basis of high-profile/high budget projects which attract significant reputational risks. Most business areas assume a business as usual approach.	Risk analysis is standardised but fairly basic in form, relying on largely subjective and broad brush judgements which can vary considerably between business units and depend heavily on the engagement of management. There is some analysis for high-level risks that span business units on high-profile projects. A broad measure of the magnitude of risks is derived by the governance structure from high level qualitative judgements of likelihood and impact and is used to assess and prioritise risks at the enterprise level.	Standardised quantitative risk analysis techniques are increasingly used where appropriate to supplement qualitative analysis in a broadly consistent manner across the administration. There is increasing use of scenario analysis and/or simulations in high risk areas to test and improve the quality and reliability of risk analysis. The administration has developed a prioritised portfolio of enterprise risks focused on business objectives and risks to, and opportunities for, those objectives both at the business unit level as well as at the enterprise level.	Quantitative approaches are increasingly used to gain actionable insights into risks. Scenario analysis and simulations are used on a consistent and regular basis. Triggers are identified and deployed to detect a need for risk reassessment and to mitigate for potential biases in assessments. The administration maintains a prioritised portfolio of enterprise risks which are assessed in the context of the overall organisation objectives. Risks at the program or process level allow decision making based on a thorough understanding of top-down and bottom-up risks and interrelated risks.	Risk analysis is carried out using an integrated risk assessment system based on a wide range of real-time qualitative and quantitative data, both internal and external, and using advanced technology tools (such as artificial intelligence) to map cause and effect relationships, including the impacts on interrelated risks. The administrations prioritised portfolio is updated in real-time and increasingly takes account of risks to other government agencies and government priorities as well as risks for particular taxpayer segments (for example through unforeseen administrative burdens).

Maturity levels	Emerging	Progressing	Established	Leading	Aspirational
Risk Treatment	Risk treatment plans are not usually in place although high-level contingency plans may be drawn up for how the business unit or administration might to react to a few plausible risks if and when they materialise. Monitoring is only performed through compliance and internal audit activities and most risk treatment information is only collected by individual areas of responsibility with only risk treatment on high profile areas or projects reported to the governance bodies.	Risk treatment plans are developed at the business unit level in a standardised format which requires an assessment of the costs and benefits and an explanation of treatment choices. This will often be done in a subjective manner and will depend heavily on the engagement of senior management. As a result there can be wide variations. Risk treatments are put in place by each business unit and reported to the appropriate governance committees with periodic updating of the committees. There is limited validation outside of major projects or high-profile risks.	Risk treatments plans are developed in a standardised and data-informed manner at multiple levels of the organisation with some degree of coordination across business units. These treatment plans take account of the business context; cost and benefits; obligations and expectations; prioritisation of risks; risk appetite; risk severity and residual risk. There is regular centralised consideration and challenge of risk treatment proposals by the governance bodies with a focus on the enterprise level and higher risk projects. Risk treatment plans for enterprise risks are collected but may not be routinely shared across the administration.	The full range of potential risk treatment options, including for interrelated risks, are considered and tested in a cross-administration process. This includes the analysis and treatment of the risks resulting from a chosen risk treatment. Results are measured and triggers are identified and deployed to detect a need for adjustments to risk treatment approaches. The validation of risk treatment plans from across the units, including how they interrelate, is done in a joined-up process by the governance bodies and business units. The effectiveness of risk treatments is periodically tested. Consideration is given to when treatment may require the revision of a strategy or business objective.	Risk treatment options are identified using an integrated risk assessment system using advanced technology tools (such as artificial intelligence) to calculate cost and benefits against a wide set of risk parameters and data. This system increasingly takes account of risks beyond the administration, including to other government objectives and taxpayer segments. Risk treatment options are continuously monitored in the light of new information, including as to their effectiveness, and recommendations for adjustments can be made in real time, including for suggested changes in objectives and strategy and behaviours.

Maturity levels	Emerging	Progressing	Established	Leading	Aspirational
Review and Revision	Reviews are carried out in a reactive manner in the light of high impact events occurring or where there has been serious reputational damage to the administration. Changes are generally confined to addressing the particular issue or business area rather than more systemic issues.	The effectiveness of ERM practices over the preceding year is assessed regularly in a general way as well as in the event of realised risks with significant adverse impacts. Recommendations for any major improvements in particular business areas are made to the relevant responsible managers.	Reviews are undertaken regularly of higher-risk business areas with detailed recommendations for improvements, including to administration wide processes and capabilities, made to senior management. Action plans are put in place as necessary and monitored by senior administration management.	ERM outcomes are reflected in regular business performance management processes, including in regular reporting to senior management. The effectiveness of administration wide ERM practices and capabilities is periodically assessed in a detailed manner and benchmarked against other organisations.	ERM outcomes are fully integrated into real-time business performance reporting. The effectiveness of ERM practices, capabilities and treatments is assessed by advanced technology tools (e.g. artificial intelligence) and subject to occasional independent review against leading practices.
Information, Communication, and Reporting	Risk information is extracted largely manually at the business unit level and the scope and relevance will depend on management engagement and expertise in particular business areas, leading to high variability across the administration and a largely reactive approach to ERM. In general, risk information outside of periodic high-level	Risk management reporting templates and communication channels are defined, although not always consistently applied across the administration. While data is kept in electronic form, the variability in the quality and timeliness of information can impact the quality of decision making, in particular in areas of interrelated risks. More detailed KPIs and KRIs are in place for all core	The organisation generally uses existing information and technology systems to capture what it needs to understand risk, make risk-aware decisions, and fulfil reporting requirements. Risk information standards and ownership are defined and various channels are available for communicating risk information to those with ERM responsibilities. The format of reporting (including standard analytics,	Categorised risk information, including a wide range of KPIs and KRIs, is integrated into enterprise architecture. High quality, timely and accurate data is integrated into the regular reporting and decision-making tools across the organisation and can be pulled from a common data warehouse on demand by decision makers and risk owners. Management routinely assesses, in close	Advanced data analytics, such as artificial intelligence and data mining is leveraged to collect, convert, and analyse large volumes of data into clear and readily understandable risk management information to inform proactive decision-making. Such information is increasingly available in real-time and to staff across the administration. Increasingly the format of reporting can be tailored

Maturity levels	Emerging	Progressing	Established	Leading	Aspirational
	key performance indicators (KPIs) or key risk indicators (KRIs) are not communicated routinely to governance committees and is usually sent on request or where business unit management chooses to escalate issues, which will often be done inconsistently across the administration.	business processes and are increasingly shared across business areas. Significant adverse changes in KPIs and KRIs will usually be triggers for further investigations and more detailed reporting to management and governance committees.	commentary and the mapping of KPIs and KRIs to individual risks and objectives) enables business units to understand the relationships between risk and performance to improve decision-making. While reporting is consistent, data timeliness, accuracy, and quality vary across the business units.	collaboration with report users, what information is required (both for decision makers and administration staff more generally) how often reports are needed, and presentational preferences, with changes being made as necessary. There are dedicated methods to extract and report meaningful information on culture.	according to the requirements of particular users with functionality to undertake detailed drill-downs into risk parameters and interrelated risks. There is periodic evaluation of the effectiveness of the communication channels and functionality in ensuring that reporting is comprehensive, timely and accurate.

4 Glossary of Key Terms

Business Context: The trends, events, relationships, and other factors that may influence, clarify, or change an entity's current and future strategy and business objectives.

Business Units: Refers to functions, services, and/or groups that make up the entirety of the organisation's operations.

Culture: The attitudes, behaviours, and understanding about risk, both positive and negative that influence the decisions of management and personnel and reflect the mission, vision, and core values of the organisation.

Enterprise Risk Management (ERM): The culture, capabilities, and practices, integrated with strategy-setting and its performance, that organisations rely on to manage risk in creating, preserving, and realising value.

Executive Management Team: This refers to the senior governance body within the administration (which may be a Board, an Executive Committee or some other structure.)

Gamification: A form of scenario analysis that involves participants making decisions in simulated situations to identify the range of different decisions and combinations of decisions may impact outcomes.

Governance: The process of decision-making and the process by which decisions are implemented by a governing body of an organisation.

Granularity: The degree to which something is broken down or explained in respect of its constituent parts, for example a high degree of granularity in risk identification would look at the many individual risks which might impact a particular objective.

Horizon Scanning: A process to identify emerging trends which may bring new risks, opportunities and challenges, in order to help administrations remain prepared for the future.

Key Performance Indicator (KPI): A measurable value that demonstrates how effectively an organisation is achieving key business objectives.

Key Risk Indicator (KRI): An indicator of the possibility of a future adverse impact or upside potential. KRIs provide an early warning to identify potential events that may impact the ability to achieve objectives.

Operating Structure: The way an organization organizes and carries out its day-to-day operations.

Performance Management: When applied to individuals, the process for evaluating and appraising performance against objectives. When applied to business units, the reporting and evaluation of achievement against objectives.

Quantitative Risk Analysis Techniques: Quantitative risk analysis refers to the process of performing a numeric analysis of the overall effect of a risk. Examples of quantitative risk analysis techniques include but are not limited to sensitivity analysis; expected monetary value analysis; decision tree analysis; Monte Carlo simulation, etc.

Portfolio View: A composite view of risk the entity faces, which positions management to consider the types, severity, and interdependencies of risks and how they may affect the entity’s performance relative to its strategy and business objectives.

Risk Appetite: The overall level of risk that an organization is willing to accept in pursuit of its objectives, before action is deemed necessary to reduce the risk.

Risk Tolerance: The boundaries of acceptable variation in performance related to achieving the organisations objectives.

Risk Profile: The composite view of the risk assumed at a particular level of the entity, or aspect of the business that positions management to consider the types, severity, and interdependencies of risks, and how they may affect performance relative to the strategy and business objectives.

Risk Treatment: The options and choices available to respond to or manage a risk. Examples of risk treatments include the mitigation, transfer/sharing, avoidance, acceptance, and pursuit of risk.

Scenario Analysis: A process of examining the different impacts that may come about in a realistic range of future outcomes.

Strategy: The organisation’s plan to achieve its mission and vision and apply its core values.

Triggers: A set of indicators which when reached, individually or collectively, results in actions being taken, for example budgetary impacts over a certain threshold.

Validation (of Risk Treatment): Refers to the checking or proving that a risk treatment plan is designed properly/appropriately and yielding the intended results.

Reference

OECD (2016), *Technologies for Better Tax Administration: A Practical Guide for Revenue Bodies*, OECD Publishing, Paris, https://dx.doi.org/10.1787/9789264256439-en. [1]

Annex A. Enterprise Risk Management Maturity Model: Self-assessment record sheet

Jurisdiction name:

Contact person:

Process check-list

Please complete the appropriate boxes related to process:

Appointment of facilitator	Please choose: Yes / No
Number of ERM professional staff in the self-assessment group	
Appropriate distribution of grades	Please choose: Yes / No
Involvement of official(s) from other areas of the tax administration	Please choose: Yes / No (please comment)
Time taken in hours to complete the self-assessment	

Self-assessment record

Please:

- conduct a self-assessment of the maturity of your organisation's enterprise risk management program using the Enterprise Risk Management Maturity Model in Chapter 3.
- complete the tables below by marking the appropriate boxes with an "X" based on your self-assessment. Please only include one "X" per row.
- send the completed tables to the Forum on Tax Administration Secretariat at FTA@oecd.org.

Please could you also consider the open questions at the end of the document. Your insights and feedback will be invaluable inputs for enhancing this maturity model.

♦♦♦♦♦

Please send the completed Self-Assessment Record Sheet to the Forum on Tax Administration Secretariat at FTA@oecd.org.

Record sheet

Enterprise Risk Management	Emerging	Progressing	Established	Leading	Aspirational
Overall maturity level					
Strategy					
Governance					
Culture					
Risk Identification					
Risk Analysis and Evaluation					
Risk Treatment					
Review and Revision					
Information, Communication, and Reporting					

Supporting commentary on overall mark:

Additional Questions

Question 1. Are there some of the indicative attributes or descriptors which you feel are misplaced or wrong, or are there important attributes that you think are missing?

Question 2. Are there areas where you think there is a lack of clarity with regards to the difference between adjacent maturity levels?

Question 3. Are there areas where you think the language is unclear or ambiguous? If so, please provide specific recommended changes to language.

Question 4. Is there any additional feedback you would like to provide regarding the Enterprise Risk Management Maturity Model?

FORUM ON TAX ADMINISTRATION

OECD Tax Administration Maturity Model Series

Enterprise Risk Management Maturity Model

The OECD Tax Administration Maturity Model Series sets out descriptions of capabilities and performance in particular functions or sets of activities carried out by tax administrations across five discrete maturity levels. The intention of this Series is to provide tax administrations globally with a tool to allow them to self-assess their current level of maturity and to facilitate consideration of future strategy, depending on a tax administration's unique circumstances and priorities.

The Enterprise Risk Management Maturity Model covers the organisational and operational aspects of risk management. The ability to identify, understand and manage risks in a rapidly changing environment is a critical element of successful and resilient tax administration. The model was developed by a group of Forum on Tax Administration (FTA) members and refined through a pilot undertaken by members of the FTA's Enterprise Risk Management Community of Interest. This publication also sets out the results of that pilot which allows administrations using the model to compare their own maturity in the different aspects of enterprise risk management to that of their peers.

www.oecd.org/tax/forum-on-tax-administration/