This overview provides a basis to identify key characteristics of countries that have achieved early, intermediate and advanced stages of development for this principle, and the practices and policies that should be considered to progress in its implementation.

CHARACTERISTICS OF EARLY STAGE DEVELOPMENT

- *Has low capacity to produce, collect, share and analyse data in a way that actively supports evidence-based policy-making and re-use of data to strengthen predictive intelligence and design better policies and services*
- *Lacks a legal framework enabling interoperability (e.g. semantic, technical) and data sharing across the administration*
- *Un-harmonised administrative data sets and data platforms are not interoperable*
- *No unit in charge of data governance and management in the public sector*
- *Does not have the basic competencies enabling a data-driven public sector*

Policies and practices to be considered

☐ Develop an government data management strategy, legal framework and central one-stop portal for government data

☐ Develop standards and guidelines for public sector data use, management and sharing

☐ Establish an interoperability framework for the public sector.

CHARACTERISTICS OF INTERMEDIATE STAGE DEVELOPMENT

- *Has developed a legal framework, data processes and data analysis skills in the public sector to support the policy cycle*
- *Government data is open by default and data sets are published regularly through the government's central repository in a machine-readable format*
- *Has developed standards and guidelines for government data and platform interoperability*
- *Has recognised the once only principle in its legal framework*

Policies and practices to be considered

☐ Develop training programmes to develop, attract and retain data analysis skills across the public sector

☐ Develop programmes to engage with the community of data producers and re-users on the usefulness and re-use of open government data to find innovative solutions to public issues

☐ Identify a clear governance for the government data management strategy   the public sector working to make effective key enablers (e.g. the *once only principle)*

☐ Identify a unit in charge for designing and co-ordinating the implementation of the open government data strategy

CHARACTERISTICS OF ADVANCED STAGE DEVELOPMENT

> - *Has a civil service able to perform sophisticated data analysis across the public sector that effectively supports policy-making and service delivery*
> - *Regularly publishes useful and high quality data sets through the central government open data portal and regularly consults with key stakeholders*
> - *Has a unit or body in charge of data management in the public sector*
> - *Has achieved a high degree of interoperability in systems of registers and/or datasets (both technical and semantic interoperability)*
> - *Has developed or adopted a "fees model" to enable a sustainable model of data production, free access and re-use across the administration*

Policies and practices to be considered

☐ Develop a national public sector data management strategy to strengthen a strategic use of data (e.g. foster predictive analytics) in the public sector to improve policy-making and performance

☐ Develop the required data infrastructure to enhance data sharing across the public sector, e.g. making fully effective the *once only principle* and ensuring decision-makers have all the data they need at hand in a timely manner.

☐ Establish a Chief Data Officer to co-ordinate the data governance at the central government level, ensuring data is embedded throughout the policy cycle and continuous service improvement strategies. The CDO and supporting unit should indeed have the mandate to improve data governance, sharing and use as a strategic asset for the public sector and society as whole and improving the public sector's ability to use data analytics (e.g. predictive analytics) for evidence based decision-making and in line with the digital government strategy

☐ Develop close collaboration with local governments on data management issues

☐ Develop data analytics skills inside and outside government to improve effectiveness and efficiency of government's activities, e.g. foresight, implementation and performance management).

☐ Provide incentives (e.g. developing a clear business case articulating advantages) for data sharing and data re-use across the public sector