All know that risk management is essential for project success, and that in order to manage risks effectively we first need to identify them and assess their importance. The key factor linking the identification and assessment of risks with their management is understanding.

The value of the WBS lies in its structure lists of risks identified by sources of risk to the project. The RBS can be an invaluable aid to understanding the risks faced by the project, just as the WBS forms the basis for many aspects of the project management process, so the RBS can be used to structure and guide the risk management process. RBS structures – generic or specific?

Presentation
In the same way, risk data can be organised and structured, to provide a standard presentation of project risks, which facilitates understanding, communication and management, and we might call this a Risk Breakdown Structure or RBS. We can define this in the same terms as the WBS, as: “A source-oriented grouping of project risks that organises and defines the total risk exposure of the project. Each descending level represents an increasingly detailed definition of sources of risk to the project.” The RBS is therefore a hierarchical structure of potential risk sources.

The value of the WBS lies in its ability to scope and define the work to be done on the project. Similarly, the RBS can be an invaluable aid to understanding the risks faced by the project, just as the WBS forms the basis for many aspects of the project management process, so the RBS can be used to structure and guide the risk management process.

How to use the RBS
Once the RBS has been defined, it can be used in a variety of ways. Some of these facilitate the risk management process on a particular project, while others are relevant across projects. The main uses and benefits of the RBS are as follows:

Risk identification aid - the higher levels of the RBS can be used as a prompt list to ensure complete coverage of risk identification, or lower levels can be used as a checklist. In addition, the RBS can be used to structure lists of risks identified by other methods. This exposes gaps or blind spots in risk identification to be seen and addressed, and reveals any double counting or duplication.

Risk assessment – identified risks can be mapped into the RBS and can be compared directly if the same RBS is used to structure their associated risks.

Risk response development can then be focused on high-risk areas, with generic responses for root causes or dependent groups of risks. Risk response development can then be focused on high-risk areas, with generic responses for root causes or dependent groups of risks.

Comparison of alternatives – risks associated with competing bids and tenders can be compared directly if the same RBS is used to structure their associated risks.

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This can also provide input to trade-off studies examining alternative development options or investment decisions. Risk exposure on different projects within a programme or portfolio can also be directly compared, since the RBS presents a common structure and terminology to describe the risks. This can help in the development of a risk-balanced portfolio.

**Risk reporting** - different project stakeholders need different levels of reporting, and the RBS can be used to roll-up risk information to a higher level for senior management, as well as drilling down into the detail required to report on project team actions. It also provides a consistent reporting language for risk, reducing the potential for misunderstanding, even when used for cross-project reporting.

**Lessons learned for future projects** - risk management on completed projects could be performed using an RBS as a common framework. This can reveal common or generic risks, allowing the development of preventative responses, and feed-forward of effective actions into future projects.

Successful and effective risk management requires a clear understanding of the risks faced by the project and business. This involves more than simply listing identified risks and prioritising them by their probability of occurrence and impact on objectives. The large amount of risk data produced during the risk process must be structured so that we can understand it and use it as a basis for action.

**Hierarchical**

A hierarchical Risk Breakdown Structure framework similar to the WBS provides a number of benefits, by decomposing potential sources of risk into layers of increasing detail. The RBS is a powerful aid to risk identification, assessment and reporting, and the ability to roll-up or drill-down to the appropriate level provides new insights into overall risk exposure on the project. It also provides a common language and terminology to facilitate comparison of alternatives, cross-project reporting and lessons learned.

Used in these ways, the RBS has the potential to become the most valuable single tool in assisting the project manager to understand and manage risks to the project.

- Dr David Hillson PMP FAPM MIRM MCMI is recognised for his pioneering and practical contributions to risk management, both through his work as a consultant and trainer, and through his regular conference presentations and papers.

A director of Project Management Professional Solutions Limited, he is active in APM and PMI. He is past chairman of the APM Risk SIG and was a founder member of the PMI Specific Interest Group on Risk Management. He is also an elected member of the UK Institute of Risk Management (IRM), and is active in the Risk Management Working Group of the International Council On Systems Engineering (INCOSE RMWG).