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It's A Risky World

**Training In Risk Management
For ICT Projects**

1 - 199 00096


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Learning Outcomes

- *Understand risk management cycle*
- *Be able to apply the risk tools*

- *Duration: 4 hours*
- *Audience: Current & future project managers*



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Brief Overview

- *The purpose of the Risk Management Process is to ensure that:*
 - *program risks are identified early and their potential impact is minimised*
 - *program opportunities are identified, their realisation favoured, and their potential effect is maximised*
- *Risk Management is a continuous process during a project, starting at the bid phase and ending at the completion of a program.*
- *The Risk Management process is normally controlled by the Project Manager*


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Why manage risk?

- *Jetfighter inverts when crossing the equator*
- *Mars Lander crashed because of conversion between metric/imperial*
- *A survey of 600 companies showed that 35% had at least one runaway project*
- *Checkout stories at www.softwareality.com*



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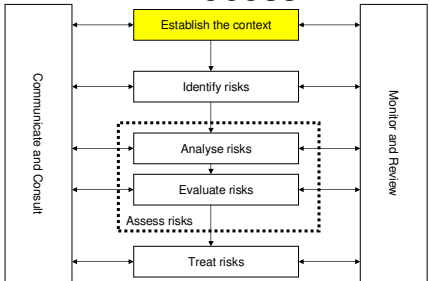
Different Types of Risk Management

- *Project Risk Management: The control of uncertainties that will have significant impact on the performance of projects in achieving targets.*
- *Financial Risk Management: The control of financial uncertainty normally managed through financial instruments to hedge uncertainty on future financial arrangements.*
- *Hazardous Materials Risk Management*
- *Terrorism Risk Management*
- *Natural Disasters Risk Management*
- *etc, etc, ...*

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Process

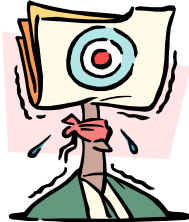


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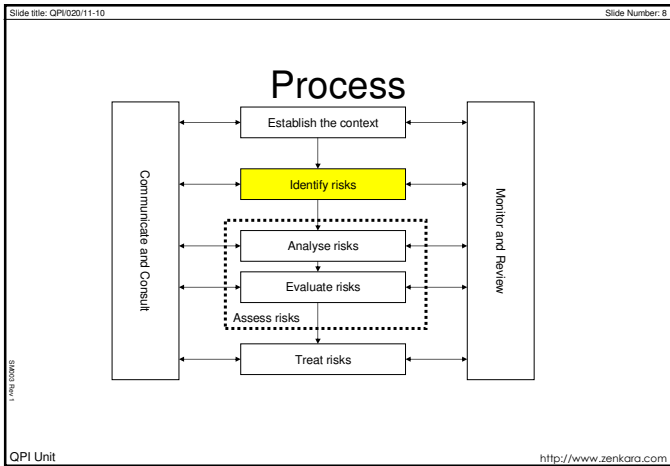
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Establish the Context

- Define the scope
- What targets or objectives exist
 - For project?
 - For department?
- Are any studies needed to assist in risk management



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Identify Risks

- Identify the risks that can be managed
- What can happen?
- How and why can it happen?
- Use tools such as
 - Checklists, judgements based on experience
 - Use of risk taxonomy
 - Brainstorming

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Who can help identify risks?

- IT Mgt Contract Mgt Doco Support
- System test Customer
- System eng Subcontractor
- CM QA End-users estimating

And YOU!

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Exercise 1 - Technical Risk

- Project A is to deliver a new accounting package. The package to be sold to the general public is to be implemented on a new Shazam workstation. The Shazam was recently displayed at a trade fair, and is expected to be released to software houses and similar firms soon. Whilst it is not supported with the current software, it should be not problem to obtain a patch from another supplier. Programmers that were recently hired would like to use OO and reuse on the project and seem very enthusiastic. The company was supporting character-based terminals, but have been encouraged by Shazam to go to GUI workstations which should be much faster and easier to use.

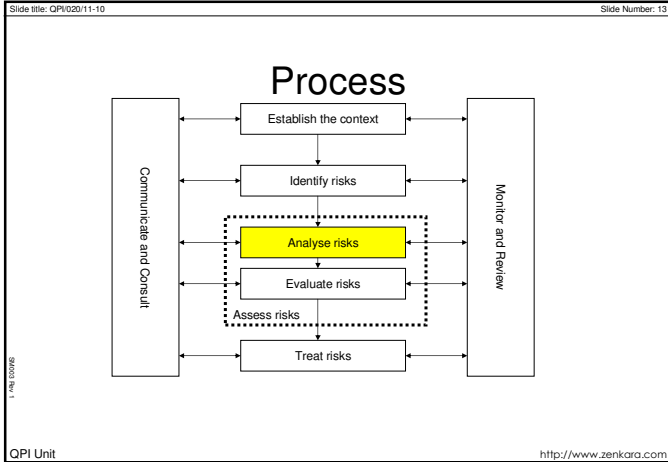
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Exercise 1

- The project finally took delivery of the new workstation, but have since discovered that they will need an additional piece of software to provide an extension to the new BIOS which will improve the poor performance that has been experienced to date.
- A problem has been experienced by the new development team with the new middleware layer that the datawarehouse team were working on. It would seem that there is not enough memory to handle both the patch from the vendor and the new access module from the datawarehouse vendor.

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Analyse Risk Impact

- *Identify:*
- *Schedule*
- *Cost*
- *Performance*

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Analyse Risk Likelihood

- *Identify:*
- *Probability of occurrence*

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Analyse Risks

Impact Assessment	Schedule	Cost	Performance	Probability of risk occurring
3	Large slip to key milestone of contractual importance	Large increase in total cost	Major shortfall in operational performance	> 50%
2	Small slip to key milestone of contractual importance	Significant increase in total cost	Minor shortfall in operational performance, which impacts upon the customer	25-50%
1	Small slip to an internal milestone	Small increase in total cost	Minor shortfall in operational performance, which does not impact the customer	10-25%
0	No impact on schedule	No increase in total cost	No impact on operational performance	<10%

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Determine risk level

- *Multiply highest risk impact number with probability number*
- *e.g. A risk has a cost impact of '3' i.e. significant impact, a schedule impact of '1' i.e. minimal impact on schedule, and a likelihood of 90% (extremely likely to happen) (level '3')*
- *Calculate risk thus*
- *3 x 3 = 9*
- *Therefore this risk definitely needs an action plan and owner*

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Documenting the risks

- *Risk Sheet - for each risk or opportunity having a significant impact on the program, a risk sheet or an opportunity sheet **MUST** be prepared by the risk manager. It describes in detail the risk and its impact, the solution decided and the related action plan.*

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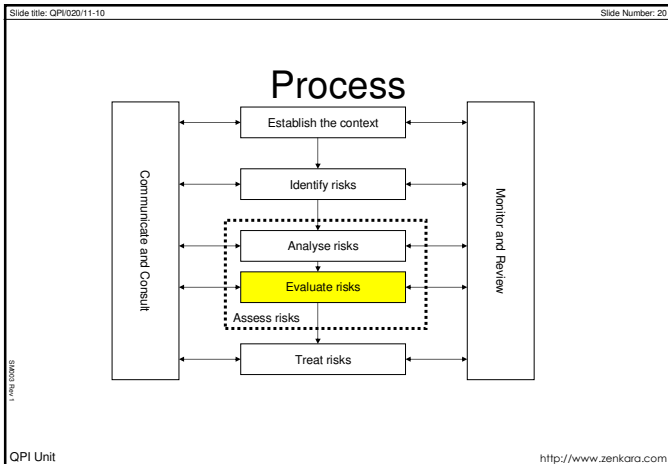
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Risk Sheet

- The Risk Sheet includes:
 - description of risk or opportunity;
 - the current risk or opportunity assessment (level) and trend;
 - the current estimate of the impact;
 - the Action Plan (including dates, action cost and responsibilities);
 - the name of the originator;
 - the date at which it was originally identified.
- The risk sheets must be maintained throughout a project to ensure that the complete history (and trend) of every risk can be tracked.

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Evaluate Risks

- Prioritise risks
- All risks ≥ 6 must have a risk plan (risk sheet) and a risk owner
- Enter the risks being monitored in the risk register:
 - Risk Register - all risks and opportunities which have been identified **MUST** be recorded in a project Risk Register, which is updated at regular intervals. The register should include all relevant risks from any product activities which support the project.

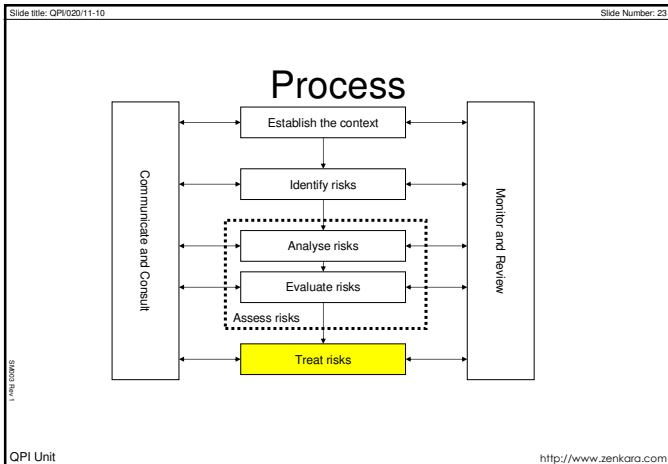
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Risk / Opportunity Register

- **The Risk Register presents on a single table each risk as one line of the table. It includes:**
 - **identification of the risk (title, description)**
 - **risk characteristics (probability of occurrence, trend, level, cost impact, weighted financial impact)**
 - **action plan (summary of the action plan, action cost, target date, progress status)**
 - **the total amount of uncleared risks**

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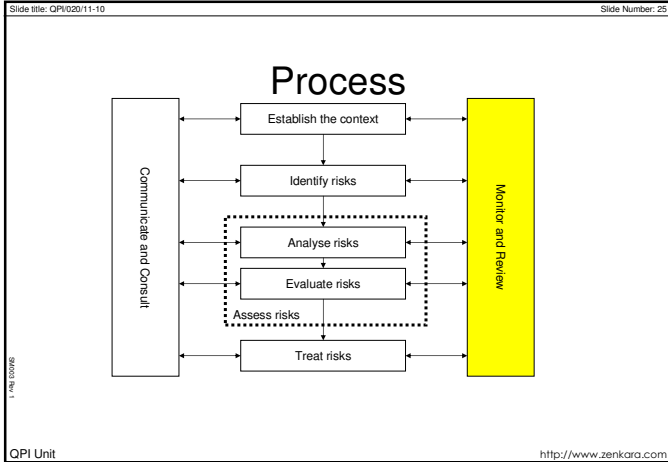


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Treat Risks

- Avoid the risk by deciding not to proceed with the activity which has created the risk*
- perform some mitigating activity to reduce the likelihood of occurrence*
- perform some mitigating activity to reduce the impact (e.g. delay) if the risk does happen*
- transfer*

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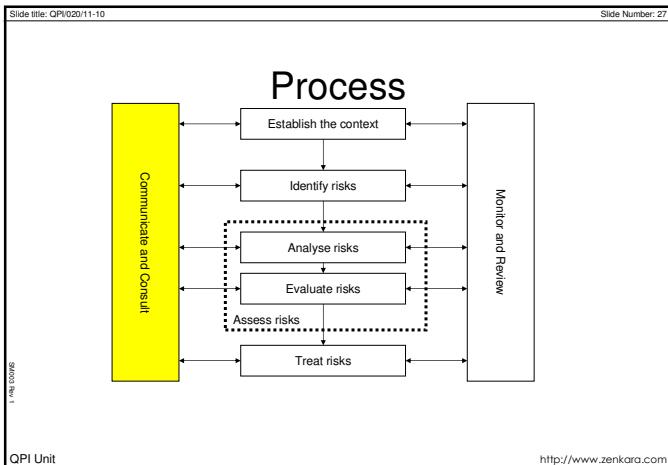
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Monitor and Review

Monthly:

- Review activities performed over the past month - what can we learn
- Which risks are no longer likely?
- Which risks have occurred? - Move them to action plan/schedule and close them on the risk register
- During a project, risk reviews are part of the progress and reporting process and would normally be carried out on a monthly basis

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Communicate and Consult

- *Develop a communication plan for all stakeholders to be kept aware of the top 10 risks*
- *Make sure your team understands which are risks and which are problems (i.e. risks that have a probability of 100%)*
- *Don't just assume something may be a problem (or that you can close a risk) - make sure you have all the facts - ask others!*
- *Make sure the risk register is kept up to date*

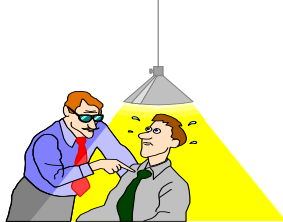
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Types of Risk

- *Organisational*
- *User/Customer Environment*
- *Project Environment*
- *Team Environment*
- *Technical / System - complexity*



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Exercise 2 - Team Risk

- *Project B was started over 9 months ago. Since it is a critical project to support a new service that the business wants to promote, additional help was hired in the form of contractors and a few consultants. As most of the permanent staff were programmers, the contractors were performing Business & Systems Analysis roles.*
- *The firm also wants to start 2 more projects that would help the new service progress.*

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Exercise 2

- *The Project Manager had a clash with senior management about the priority of the project and has resigned. Several of the contractors also left in support.*
- *Several members of the project team have been working only part-time because of their other commitments to other projects.*
- *The Managing Director of the company has just requested cost-benefit analyses of all major projects.*

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Exercise 3 - Customer Risk

- *Project C has had an 8 month life so far, and the users have just decided the final format of the screens that they need in State Offices. The programmers have started to incorporate the designs in the new release.*
- *With much discussion with the other user sites, a common look and feel to the system has been agreed upon.*
- *Unfortunately for the business, the half-yearly financial report has just come in and the company has recorded increased revenue, but a much smaller profit.*

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Exercise 3

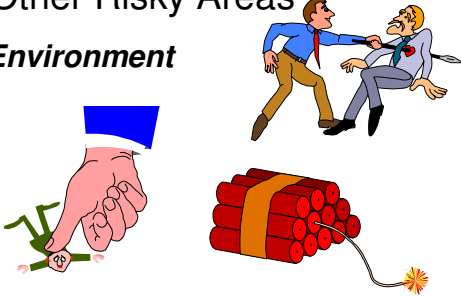
- *At an emergency meeting of the senior management, the Project Manager has opted for an early retirement to the Gold Coast*
- *A new Project Manager has been selected. She is well-known for her project and risk management skills*
- *As part of her review of the current operations, each project has been asked to justify it's existence and to provide a consolidated project and risk plan for management review.*

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Other Risky Areas

- **Political Environment**
- **HR**
- **Financial**
- **Security**
- **Legal**
- **Market**



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Risk Provision and Action cost

- *Each Risk MUST have a probability of occurrence and two costs associated with it:*
 - the cost implication if the Risk occurs
 - the cost of the Risk Action Plan to mitigate the Risk
- *Risk provision is put aside (at Project Startup) and the action costs is funded out of this provision (does not affect Estimate at Completion)*
- *When a risk occurs in spite of the action plan, the impact of the risk is charged to the project*

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Three steps to better risk management

- *Know the stage of the project and manage it accordingly*
- *Assess risks early and often*
- *Conduct serious project audits*



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We help you improve your bottom line by focusing on:

- Streamlining and renewing business processes and quality systems
- Accelerating decision making through OODA (Observe, Orient, Decide, Act) and metrics systems
- Assessing and getting value from your critical business and technology practices
- Providing a focus on solving your underlying problems and delivering results that are relevant to your customers.

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