



Cultural Heritage Agency
 Ministry of Education, Culture and Science

Risk Management:
 so many choices.....
 so many methods..
 so many choices.

Agnes W. Brokerhof
 Sector Moveable Heritage Research

Reducing Risks to Heritage
 Amersfoort 28-30 November 2012

Dear colleagues, dear friends,

Risk Management

There are so many choices to make when you manage a collection, so many methods to choose from to help you make those choices, so many choices from all those methods to help you make choices.... Where do you start and where do you end?

When you think life is difficult while you wonder what to wear in the morning – wait until you have to set off on a risk management project!



2003

- Rob Waller
- CPRAM
- Method
- Approach
- Philosophy of collection management

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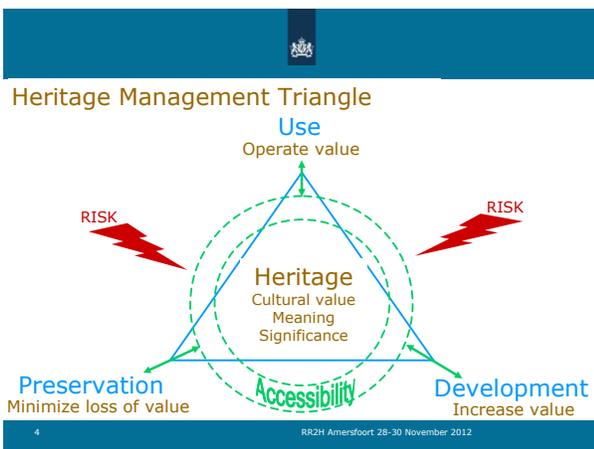
At ICN we set off in 2003, when Bart Ankersmit and I participated in the ICCROM-CCI 'Preventive Conservation' course, where Rob Waller introduced risk assessment to us. Back then we were struggling with something we called 'integrated preventive conservation', not quite knowing how to go about it. Rob showed the way to go! Not just for us at ICN but also for ICCROM and CCI who included us in the preparation of the next course, which would be structured entirely around the risk management process.

We brought Rob and one of his 'Waller girls' to Amsterdam, organized a workshop after which we embarked on application of what we learned at museum 'Our Lord in the Attic'.

Back then life was easy. There was only one method for cultural heritage: CPRAM. Rob taught us that method and we were in heaven – well at least in Our Lord's attic.

Even though Rob had developed the method for collections, we applied it to a historic house and its collections – and it worked well!

Rob was a very good teacher. He taught us a method. He taught us an approach. He taught us a philosophy of collection management.



From this we developed the 'collection management triangle' which has been our compass for the past 8 years at ICN and now we are working on its introduction at RCE as the 'heritage management triangle'.

CRM Program

- Conquer the world, spread the word
- Workshops, courses, 'Reducing risks'
- People liked it, but doing it themselves...
- Why?
 - Too much work, time, effort
 - Too little information and data
- Generate data - accessible and useable



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We had seen the light and like all fresh believers we became fanatics and rode out to conquer the world, spread the word, convince others. We organised workshops in The Netherlands and abroad. All state museums were invited to participate in our workshops. Whether they wanted or not, they simply had to participate. The ICCROM-CCI-ICN courses were our laboratory for which we develop new concepts and materials and tested them. We also learned a lot from each other in the teaching team and from the participants. A source of knowledge. Our colleagues in the Dutch organisations and abroad liked the approach and ideas, but only few applied them in their work practice. Why? 'Too much work, too much time, too much effort'. 'Not enough knowledge, information, and data to assess all possible risks'. Despite libraries full with books and journals on conservation, despite more than 50 years of scientific conservation research, it was hard to find data that supported predicting the future. How fast does paint crack? How many vibrations can it withstand? How many books do bookworms eat in a year? What is the probability of fire in a museum? There were no simple answers to such simple questions. At ICN we started a program on Collection Risk Management (CRM), to try to develop information and methods and make them easy, accessible and useable for others.

Challenges

- How do you do it?
- Data on...?
- Plough the field:
 - Lightlines
 - Climate guidelines
- Value assessment
- Managing data



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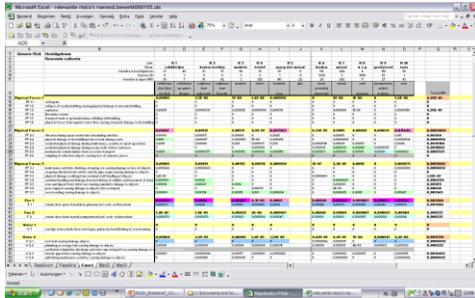
We faced a few challenges:

There was Martijn de Ruijter asking – Do you already have a publication on how to do a risk assessment? We could only say 'read Rob's book' which was obviously not the user-friendly answer someone expects from the state service that knows all.

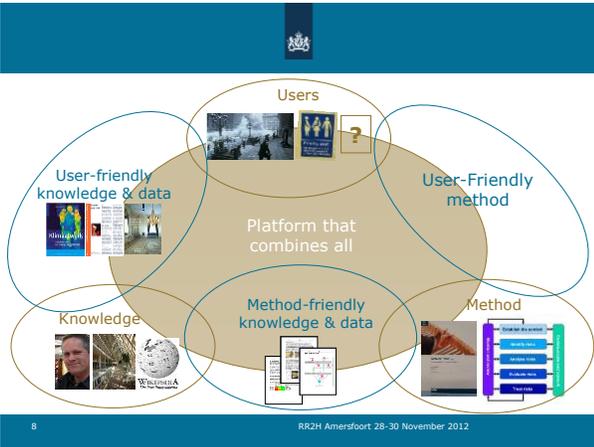
There was Feroza Verberne asking for data – on vibrations, climate, dust? All those conservation science publications..... They did not say what she wanted to know, so we started our own research. You will hear Frank Ligterink, Bill Wei and Marja Peek present their work on Air pollution, Vibrations and Theft this afternoon.

We ploughed the field and introduced risk based guidelines for light and the museum climate. We needed to relate 'change' to 'loss of value' which required a method for value assessment. Our colleague Tessa Luger started a program on the topic. You will hear more about values in the workshop tomorrow and the session on Friday. And we had to manage data....

Challenge of managing data for the dyslectic

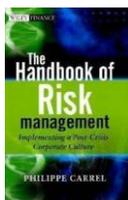


We had to deal with lots of data. That is something you can manage with Excel. But I have a problem with seeing how many zeros there are behind the decimal dot. So Bart and I had a system where I would count zeros and '5 zeros 839' was obviously a smaller risk than '2 zeros 766'. We felt this could be done easier.....



We also had to come up with answers for Martijn, Feroza and all the others who turned to us to provide data. We had Users, Knowledge and a Method. We thought we had user-friendly knowledge if the form of guidelines. In the ICCROM-CCI-ICN courses we worked on a more user-friendly method. We definitely needed method-friendly knowledge and data. For that we developed the 'scenario schemes'. Bart Ankersmit will tell you more about them this afternoon. And we wanted it all in a platform that combines it all.

Digital Handbook Collection Risk Management

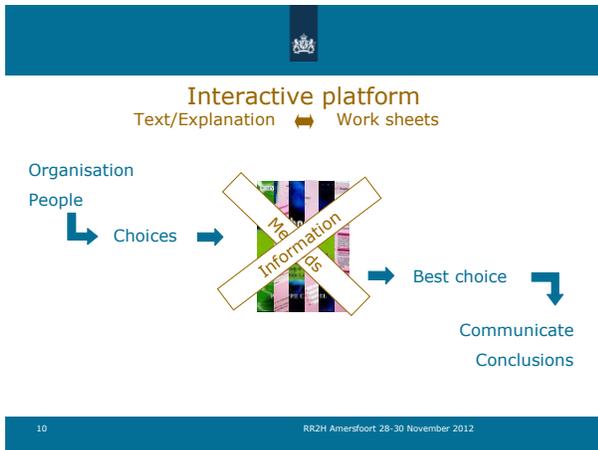


Text with work sheets

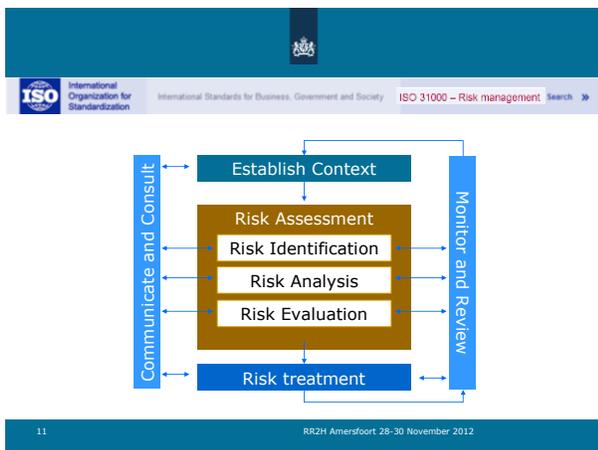


Work sheets with explanation

We wanted a handbook, originally on paper with work sheets. But gradually we became convinced we needed a digital platform with worksheets that you can fill out on your computer accompanied by explanations and background information that could also be read just as a book.



What we actually wanted was a combination of the two. Some users just wanted information. Some wanted just worksheets. Martijn and Feroza wanted all. We wanted something with which organisations, people, who had problems and had to make choices – like how to best spend their scarce resources – could enter the platform in different ways and at different points, apply a suitable method and get their answer as quickly as possible, with as little effort as possible, yet sound, well-enough argued and good enough to communicate them to those that need to be convinced.



Of course the backbone of it all is the ISO 31000 'Standard for Risk Management' which describes the process that we have come to appreciate so much in our 'Reducing Risk to Heritage' courses. The standard describes the risk management process, the risk assessment part in it and points towards a number of methods to analyse and evaluate risks. These methods range from more general quick scans to specific methods for detailed analysis. Which method is best suitable in your own situation?

Which method?

- Simple as possible
- Fit the reason
- Outcome worth the effort
- Fit to convince

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Our digital handbook offers a few methods, ranging from simple to more elaborate. Once you feel you know enough, you can quit. You start as simple as possible, with a method that fits the reason why you take off on the risk management process. After all, the outcome has to be worth the effort. And the outcome has to be fit to convince the final decision makers.



Choice between two options

Method: find the best match
 Data: distinguishing features – one may be enough



For example: if you only have to choose between two options, you do not need to do a full scale risk assessment. All you need to know are the distinguishing features. Sometimes one such feature may be enough to decide. Like in the case of an urgent water risk.



Choice between two options



or

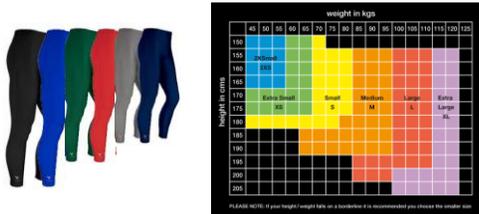
What are the main risks for either?
 What are their respective costs?
 What are the benefits for either?
 What is the most acceptable option?

Or if there are more differences between the two, you can do a quick scan of pros and cons, of risks, costs, and benefits. Then you can decide what the most acceptable option is.



Choice between more options

Method: gender, colour - find the best fit
 Data: Height (cm) and Weight (kg)



wepaysports.com

If there are more options to choose from, there may be some pre-selection criteria. And then you need to find the best fit. For that you need data. In the case of my new running pants I need data on height and weight, which you actually have to measure and weigh. They give me size classes, still rather rough, but they are distinctive enough to get me fitting pants.

Choice between more options



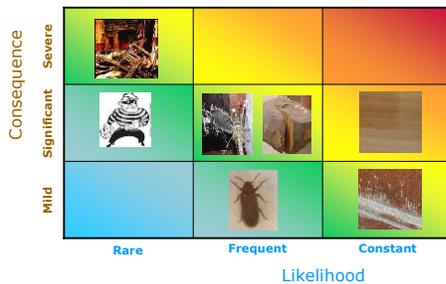
Prioritize for preservation strategy

In the heritage risk world height and weight become likelihood and consequence. Which you can estimate only in terms of confection sizes: small, medium or large. Sometimes those categories are good enough for the purpose. Sometimes you simply cannot do any better because you do not have the data.

Likelihood X Consequence

Rare/Frequent/Constant X Mild/Significant/Severe

Limited data – 2D Risk matrix



Yet this can give you a nice overview in a 'risk matrix' – which for a situation with limited data gives you a reasonable possibility to sort risks by their magnitude.

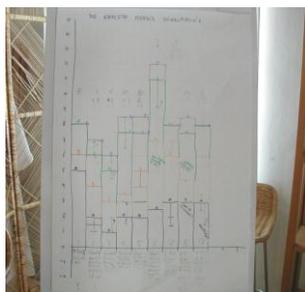
Ranking options

Analyse risk scenario
Michalski's ABC step scales

How soon? X How bad?
 A. How soon? 1-5
 + B. Loss per object? 1-5
 + C. Object in collection? 1-5
 +-----
 MR 3-15

You can go a step further and develop a risk scenario for each identified risk and give a score to likelihood and consequence. Most of you know Stefan Michalski's ABC-scores. Note that when you use a logarithmic scale for the scores, you are actually counting zeros....

More data - 2D Risk graph



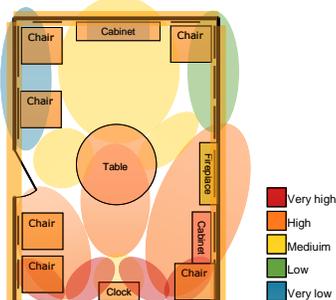
You can plot the scores in an added bar graph showing how the magnitude of risk is built up by the three contributing scores. This enables you to rank the risks by their magnitude. If you include highest and lowest possible scores as well, you can also indicate the uncertainty of the assessment. This gives you a very powerful visual communication tool towards those receivers of your message that are familiar with graphs, like managers and financiers.

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Visualise risks on map

Light sensitivity
+
Exposure
+
Value

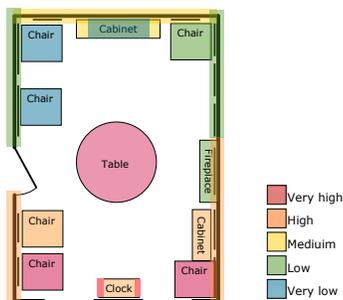


Another way to visualise risks is literally indicating them on a map, like in this case for a historic interior. By overlapping maps for light sensitivity, light exposure and value it becomes clear where the valuable items that are light sensitive are exposed to high light levels. That is where you expect the risky spots to be.

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2D Light Risk map



Such a map enables you to think about options for risk reduction. Where and how you might reduce the risk of light fading. You will hear more elaborate examples of this method, making use of GIS software, this afternoon.

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Tailor-made solution

Method: measure and custom-make to fit
 Data: all widths, lengths, heights, 3D scan



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If simple step scales are still too rough for your liking and you actually have the ability to collect more detailed data, you can go for the tailor-made, perfect fit. Like with tailor-made fashion, a detailed assessment will be more expensive.

Ranking options comprehensively

Analyse risk scenario
 Waller's CPRAM fractional numbers

Likelihood X Consequence
 Probability 0-1
 X Loss of value 0-1
 X Fraction susceptible 0-1
 X Extent 0-1
 MR 0-1

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Rob Waller's CPRAM offers that possibility. The method works with fractional numbers which you multiply. Lots of zeros involved though. The Natural History Museum in New York has developed software to manage all the data, yet not everyone can afford doing that. We have applied CPRAM in a rough version using orders of magnitude only. And the ABC-scores can be done with decimal scores as well. So there are hybrids of the various methods. Fractional numbers have the advantage that you directly see how big they are and you can add magnitudes. But many people find them harder to handle.

CPRAM 3D Risk graph

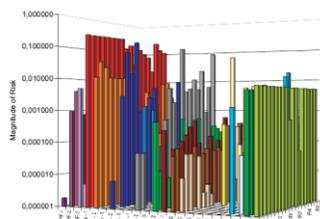


Figure 4. Graph of MR values (z-axis) for all generic risks (x-axis) for each collection unit (y-axis)

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CPRAM produces lovely 3-dimensional graphs. We call them 'forests'. Reducing risks then becomes 'chopping trees'.

Choices – Methods - Choices

- No good or bad method
- Only the most suitable method for the job
- Need to know:
 - Reason
 - Available data
 - Time and effort
 - Receiver



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I have shown you a number of methods that are used to qualify, semi-quantify or fully quantify risks. The next three days you will see examples of applications of all of them in practice. They all go back to the same principles: the RM process and the desire to reduce losses. You cannot say that one is better than the other. One method may be better suited for a certain situation or purpose. We strive for the tailor-made quality but often we do not have the money, the time or the knowledge. We need to compromise – good enough is good enough. That is the thought behind our digital handbook as well.

You don't do a risk assessment for the fun of it, you need to have a reason. You need to answer a question or solve a problem. If you don't have a problem, enjoy living in ignorance. If you don't want to deal with your problem, just accept it. If you want to solve the problem – define it well. And be honest in establishing what you know. It is no use to choose a method for which you lack the knowledge and data.

Choose the appropriate method to get you to the answer with minimum effort but in such a way that the outcome has an impact on the receiver of your message.

It all boils down to the principle of the 'evolving decision'. Start with a general of simple method and if that leads you to a good enough decision, make it. If it does not, continue with a more detailed and difficult method and see if that provides a better argued decision.

For today's attire I have made my choice on the basis of comfort and colour. Was it the right choice? For me it is because my arguments are sound. Yet others may not agree because they use other arguments. That is why communication is so important in risk management.

Actually, the outcome of a risk assessment is nice, rational, and feels like hard evidence. But the most important of the process is the soft, social side of it. Creating a shared sense of the heritage asset that you manage, why you do it and how to best achieve your goals. You will no doubt hear that in many of the case studies that will be presented at this meeting and especially in the session of Friday on communication.

For now I thank you all for joining me in this kick-off and enjoy the next three days!

Principle of the evolving decision

- Choose easiest method
- Good decision?
- Continue more difficult method
- Better decision?
- Go to sleep!

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A choice is always good
when the arguments are sound.

Others may think differently...
....communication!

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