DECISION FREE SOLUTIONS



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THE FOUR STEPS OF DICE THAT WILL CHANGE THE WORLD

- Definition, Identification, Clarification And Execution

The Four Steps of DICE that will Change the World

— Definition, Identification, Clarification and Execution

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Note to the reader: This article is a chapter of the manuscript with the work title "Achieve aims with minimal resources by avoiding decision making — in Organisations, (Project) Management, Sales and Procurement (Everybody can manage risk, only few can minimise it)". The article refers to other chapters, but can be read on its own. Other chapters available on the website are "On decision making", "On experts and expert organisations", "How to predict future behaviour of individuals and organisations" and "The five principles of TONNNO that will avoid decision making".

A general introduction to the approach of Decision Free Solutions can be found here.

From the universal to the particular

How to renovate your bathroom?

The four steps of DICE — Definition, Identification, Clarification, Execution — are generic. They are used in each and every Decision Free method. Be it in organisations, in management, in politics or in birthing. DICE is a key element of the approach of Decision Free Solutions and essential to utilise available expertise. By making expertise matter resources will be freed. These resources can be used to instigate meaningful change. The utilisation of expertise can not merely change the world, it can save it.

In an attempt to demonstrate that the four steps of DICE are a simple and everyday concept (as opposed to yet another acronym from yet another theory to try (yet again) to resolve the same old problems) this chapter begins with a story. The story of you — with no practical skills whatsoever — needing to have your bathroom renovated.

What to do when your bathroom needs complete renovation? You have a limited budget, a practical deadline, little to no knowledge on building matters and a choice between contractors to make. How to minimise the risk the bathroom does not meet your (rather ill-defined) expectations and will not be ready in time?

Describe your conditions, define your bathroom

The Event model states that the event conditions (budget, available time, current state of the bathroom and house, required functionality, how long you think you will be living in the house, expertise of contractor hired, etc.) and the relevant universal rules (renovation work in an old house is likely to result in extra work, the most likely cause of any delay is the customer (you), a contractor who takes time for a thorough inspection is likely to deliver quality work, etc.) determine the outcome. To minimise risk the right expert must be identified, and the expert must be allowed to fully utilise his/her expertise.

In order to identify the building contractor who is "right for the job" the job needs to be defined first (step one: Definition). This is your task. As a minimum it shall be clear what budget you have in mind, what the deadline is, what functionality should be provided, what style you are thinking of, what priorities you have, how much access you will provide. What you must avoid is defining a list of detailed requirements. These restrict the utilisation of the expert's expertise and or may ensure the desired outcome can no longer be achieved within the boundaries of time and budget.

Identify the expert contractor: look for transparency, observe behaviour

Having defined, to the best of your ability, the event conditions from your side, the time has come to identify the contractor who shows himself to be the expert to renovate your bathroom (step two: Identification). The proposals that arrive in the mail without having inspected the bathroom you discard out of hand, no matter how low the price. Contractors who have no interest in the event conditions and who do not want to learn more about the desired outcome will not minimise risk for you.

From the contractors who do visit your bathroom you select the one who spends time to inspect the status of the cement of wall and floor, who looks at both the heating system and the electric installation, who quickly checks whether the walls are straight and perpendicular to each other, who explains the risk of debris falling between the beams on the ceiling of the kitchen below and that using a dark grout with light tiles will be considerably more expensive as it takes more time to ensure the grout lines will be straight. This same contractor also tells you that it will be cheaper if you order the bathroom furniture directly via his supplier, which will minimise the risk it will arrive too late.

Let the contractor clarify the work to you before hiring

Having identified the expert-contractor you ask him how he intends to achieve the desired outcome (what his plan looks like), and how he will mitigate any external risks (step three: Clarification). He explains the list of activities, the interdependencies, the possible surprises (only to be discovered once removing existing tiles and floor) and what they could add in terms of cost and time. He provides an overview of the fixed costs, the flexible cost, where and how you can save cost, where and why you mustn't, and by what time you must have made a choice in bathroom furniture. Finally he explains how you will be informed of progress, and of any extra work that might show up, and how this will be handled between the two of you.

He also explains that to minimise the risk of not being ready in time he is to start with demolishing the old bathroom as soon as possible. Preferably next week. Which happens to be when you go on holiday. So not only do you give him the work, but also — without any misgivings — the key to your house. He explained the what and why in an easy to understand way and you approve of it all. He can now get to work, without having to detail what he will be doing in what order. He only has to inform you of any deviations to the plan that may arise, and what he will do about them (step four: Execution).

Don't control the contractor, but let the contractor assure you

The concrete floor was more difficult to remove than he had anticipated, which he does not qualify as extra work. After removing the floor he finds a serious problem with one of the supporting beams, which is extra work. He makes a proposal to repair it and you accept. Replacing the piping there is a small water leakage, which becomes visible on the ceiling of the kitchen. He repaints it.

At no time do you interfere with his work. About once week the contractor tells you how it is going. When you have a question, you ask. When something isn't immediately clear, you ask again. Then you find you no longer ask questions and that you don't have a single worry either.

When all the work is done you have stayed within budget and within the deadline. Only the bath is still to come, as you had ordered it online yourself. To save some money. It was shipped from China and took longer to arrive than indicated.

The logic of DICE

The four steps of DICE are Definition, Identification, Clarification and Execution. Whenever risk is to be minimised in achieving a desired outcome these four steps are to be followed, and the five principles of TONNNO to be applied.

Definition — In the Definition step the desired outcome is to be defined. Also, to the greatest possible extent, the event conditions and the relevant universal rules shall be identified. The Definition step forms the basis for the identification of the expert.

Identification — Based on the description of the desired outcome and the provided event conditions and universal rules, the expert who is able to achieve the desired outcome is to be identified. This identification is usually done through a combination of the expert's past performances and ability to substantiate the relevance of his/her expertise in achieving the outcome. Observation of particular characteristics can also be used, or provide additional reassurance/confirmation.

Clarification — The identified expert makes a plan, from beginning to end, and clarifies this plan to the point that it is transparent also to the non-expert that the desired outcome will be achieved. Only when the plan is made sufficiently transparent will the expert receive the go-ahead to execute the plan.

Execution — The expert executes the plan, and periodically informs the non-expert from any deviations to the plan, how these may have an effect on the desired outcome, and how these effects will be mitigated.

In all of these steps the principles of TONNNO are to be observed as to avoid any decision making in the process, as will be explained in each of the next four sections.

Definition

What needs to be defined

Unless you are an expert bicycle repair man fixing your own bike, you are in need of others to achieve a desired outcome. This means that certain things need to be defined to allow for e.g. the identification of the right expert.

The following needs to be achieved in the Definition step to ensure that a desired outcome is achieved against minimal risk:

- 1. Unambiguous definition of the desired outcome (understood the same by all involved).
- 2. A complete-as-possible overview of the event conditions.
- 3. A complete-as-possible understanding of the universal rules impacting on the event conditions

If the attempt at "defining" is half-hearted, not only will it be so much harder to identify the right expert, the right expert is also so much more likely to not be interested in helping you. Experts have

limited resources too. They will use them wisely and shun those who are unable to express what they are in need of, or are unable or unwilling to provide the context for it.

Who needs to define it

Logic has it that the "expert-in-something" defines "something". An organisation set up to achieve a desired outcome is also the expert in defining what this desired outcome is supposed to look like. The expert in achieving this desired outcome is to identify the event conditions and be fully aware of the universal rules impacting on these conditions.

In practice the roles are not so clear cut. An organisation may be able to define the desired outcome, but to define it in such a way that it is understood the same by everybody (including those whose expertise is needed to achieve it and who may not be part of the organisation), may still be a challenge. Often the organisation makes implicit assumptions. It generally takes questioning from others to define the desired outcome in a fully transparent, unambiguous way.

When you need somebody's help to achieve something this does not mean you don't make vital contributions in achieving it yourself. An organisation may be in need of external expertise to achieve some particular outcome, it still provides plenty of expertise itself that must be taken into account. Almost invariably the organisation knows best in what way the desired outcome is going to be used by, or be of use to, the organisation. The organisation's expertise itself is part of the event conditions.

An expert may have a good idea of which conditions will have an effect on achieving a desired outcome, it often still is the organisation who is to provide the relevant information. The organisation may also provide the expert with some particular event conditions which the outside expert cannot possibly know otherwise (e.g. outcome of a lawsuit, a possible buyout, pending personnel changes, etc.).

The same applies to the universal rules. There may be certain organisational automatisms an outside expert cannot not identify. For example, a department's personnel may tend to resist change because of earlier experiences, a particular board member will try to own a proposal and is thus likely to make changes to it, a supervisory board is particularly risk-averse and generally takes a very long time convincing. All this information may be of great importance to an outside expert but is to be shared by someone from within the organisation itself.

Whenever *somebody* needs *somebody else*'s expertise to achieve a desired outcome against minimal risk, then:

- Somebody is to define the desired outcome and, to the best of his/her ability, the relevant event conditions and universal rules.
- Somebody else is to make sure the desired outcome is fully understood and take the provided event conditions and universal rules on board (on top of what somebody else's expertise has already identified as typical relevant event conditions and universal rules)

Defining the desired outcome

To correctly define the desired outcome is, logically, the most important step. The definition of the desired outcome is what is used to identify the expert (whose expertise is best aligned with achieving it). The desired outcome is also what the identified expert works towards to achieve. If the desired outcome can be understood in several ways, than the wrong expert may be identified, or the identified expert may end up contributing to or achieving the wrong thing.

The following is to be paid attention to in defining a desired outcome:

- A desired outcome is seldomly a singular and independent activity, but generally something that will contribute to or is to be aligned with other, higher level outcomes. The question to be answered is here is "Why do we want to achieve the desired outcome?" For example, an organisation may need to purchase a solution to achieve a particular outcome, but this outcome itself is to contribute to achieving the organisation's mission, which may be in turn defined in the context of an organisation's vision. This context is generally essential when defining a desired outcome. Answering the "why" question may contribute significantly to achieving it as it may evoke both inspiration and dedication.
- The desired outcome is something the organisation wants to see achieved. Often the organisation itself plays an important role in achieving it. In these cases the desired outcome shall not to be narrowed down to a description of what the organisation lacks and is looking for. In other words, the desired outcome is not, technically, what an expert will achieve for the organisation, but something an expert will contribute to and achieve with the organisation. Often the expert (with its expertise and its solution) facilitates, or makes it possible for the organisation to achieve it. This is the situation as assumed throughout this textbook: whenever an expert is "to achieve the desired outcome" it may either do this "independently" or, more typically, by contributing expertise and a solution with which the organisation will be able to achieve it.
- Every desired outcome has an "owner". This owner is accountable for achieving the desired outcome. Every desired outcome also has someone who is responsible for its definition. Although this must not necessarily be the case, it is here assumed that the owner is responsible for both.
- The definition of the desired outcome is to observe the TONNNO principles to avoid subsequent decision making. In particular, a desired outcome is to be transparent, to be objective (it should be clear when it is achieved), and should not include requirements.
- To transparently and objectively define a desired outcome is something that usually requires
 the reflection and feedback of others, most prominently the (potential) experts who are to aid
 in achieving it.

Defining and identifying the event conditions

The event conditions are those conditions the universul rules impact upon and which determine the outcome of the event. When an organisation has defined a desired outcome, it should also define, to the best of its ability, the event conditions. Among which are the organisation's available resources and the organisation's expertise.

The owner of the desired outcome, of its own accord and in response to an expert's questions, is to share its knowledge on all the possible event conditions. Relevant may be an ongoing

reorganisation, expected changes in legal requirements, another project which may compete for resources, etc. etc. In the end it is the expert's responsibility to learn as much as possible about as many relevant event conditions as possible.

Identifying the relevant universal rules

Universal rules cannot be controlled or influenced. Universal rules are generally the domain of the expert (the result of the expert's experience and ability to perceive). Based on the universal rules the expert will be able to judge whether the event conditions allow for the desired outcome to be achieved (and or what resources need to be provided for to be able to achieve it). As mentioned before, the organisation is to share those universal rules which apply to the organisation (for as far as the expert does not already have access to it). The organisation's universal rules include the way the organisation tends to behave in certain situations which may be of relevance in achieving the outcome.

Identification

Identify the expert, not the solution or product

In the Definition step the desired outcome, the event conditions and the universal rules have been defined.

The following now needs to be achieved in the Identification step:

The identification of the expert best able to achieve the desired outcome

It is crucial to understand that it is the expert who is to be identified here, and not a solution or a product that is required to achieve the desired outcome. There are several reasons for this:

- Both experts and not-so-experts can provide solutions and products, but only experts will minimise risk in achieving a desired outcome
- The identified expert will be accountable for achieving the desired outcome, an identified solution or product is only accountable for doing what it was designed for
- For the owner of the outcome it is generally very hard or even impossible to actually recognise beforehand whether a solution or product will be able to achieve a desired outcome

 it is much easier and rather straightforward to identify the expert

How to identify the expert

An important decision avoiding principe in the Identification step is "No relationship". The expert is to be actively identified and not be appointed based on some kind of existing relationship. The identification process runs a similar course regardless of what kind of expert in whatever field is needed. All experts will have many things in common.

An expert, by definition:

Will make sure the desired outcome is fully understood

- Will make sure to get to understand the event conditions as clearly as possible
- Will make sure to learn as much as possible from the owner of the outcome about any particular universal rules pertaining to the event (e.g. an organisation's lessons learned from earlier, similar projects)
- Will be able to transparently explain its relevant expertise (e.g. metrics of previous performances in achieving comparable outcomes)
- Will be able to transparently explain the risks in achieving the desired outcome (and how they will be mitigated)
- Will be able to transparently explain the opportunities available to the owner of the outcome (over and beyond merely achieving the desired outcome)
- Will demonstrate characteristics in line with a high level of perceptiveness (see section "The three categories of the EXPID model")

All of the above points apply to all experts. In principle the confirmation/observation of a single point suffices to identify an expert. Depending on the context the identification process can be a drawn out and formal one (e.g. when something needs to be procured) or a quick and informal one (e.g. delegating the responsibility of a specific task to a team member). Either way, an expert will be able to tick off all of the above points.

Clarification

Clarify before doing anything else

With the desired outcome defined and the expert able to achieve it identified, it is the expert's turn to clarify.

The following needs to be achieved in the Clarification step to ensure that a desired outcome is achieved against minimal risk:

The identified expert clarifies for the owner how, given the event's conditions, the desired outcome will be achieved.

Note that the Clarification step is only concluded once it is transparent to the owner of the outcome that the expert is indeed able to achieve the desired outcome, and that till that moment no activities are undertaken.

If not all has been made sufficiently clear to the owner when the Execution step commences, this may be a reflection of the expert not being an expert "every step of the way". The owner's remaining questions are likely to result in wanting to control the expert. The likely consequence of either situation is that risk will not be fully minimised.

Making a plan from beginning to end

The expert, having a good grasp on the event conditions and the universal rules, will be able to "look into the future." An expert will thus be able to make a plan from beginning to end. In many Decision

Free methods the expert will be required to make such a plan. The plan is to be seen as the expression of the expert's expertise. This plan may contain the expertise of others. Then it is the responsibility of these others to make and clarify their particular part of the plan.

Often a plan is to be made in an environment so dynamic — with conditions steadily changing and additional universal rules coming into play — that only the beginning of this plan can be planned in detail. Also in these instances, however, it is important to make a plan until the end, taking into account and accepting that this plan in all likelihood will be adjusted. The plan — also in uncertain conditions — remains an expression of the expert's expertise in achieving the desired outcome.

The plan's outcome and the desired outcome

The expert is to make a plan with which the desired outcome will be achieved. Sometimes the plan's outcome directly achieves the desired outcome, e.g. when the desired outcome is the ability to get from one side of the river to the next. Sometimes the plan's outcome allows the desired outcome to be achieved, e.g. when an organisation needs a tool to better serve its customers. In fact, there may be an entire "supply chain" with which the desired outcome will be achieved, of which the plan may only be a part.

This distinction is important to make, but in the context of this book not all that relevant. Whatever the case may be, the same principle of how to minimise risk applies for each part that is needed to achieve the desired outcome. For reasons of clarity (and brevity) this textbook generally assumes the plan's outcome is congruent with the desired outcome.

There is another important distinction to be made. The plan is to achieve the desired outcome, but there may be many plans with which the desired outcome can be achieved (e.g. a bridge and a tunnel are both ways to get from one side of the river to the other). The plan's outcome is always concrete, and to achieve it generally requires the delivery of products and or services. A plan's outcome may also change, but a desired outcome doesn't. So when some risk occurs, and the plan needs to be adjusted accordingly, the plan's outcome is likely to change. As long as this modified plan's outcome is clarified to be also congruent with the desired outcome risks are still minimised.

Clarifying the plan

When the expert makes a plan, the expert may make a detailed plan for internal use, and a more general plan for the owner of the outcome. This general plan is used to create the required transparency. It typically includes a description of the main deliverables, an overview of the main activities and who is accountable for them, key performance indicators, a risk management plan, and how and with what frequency progress and or deviations will communicated with the owner.

Identifying the plan's resources

Often a very critical element when making a plan is identifying the required resources. Resources are those aspects of the event conditions over which there is some control. These include people and finances (e.g. the budget). To achieve a desired outcome requires resources, and when

perceiving all an event's information these resources will be at a minimum. When expertise is lacking, when not all information is or can be perceived, there will be resource risk.

When estimating the required resources, when making a budget (in e.g. project management), when determining a price-ceiling (procurement) or costs (e.g. sales), the amount of assumptions that are being made tells you something about the resource risk. The more assumptions are made, the greater the resource risk, the more uncertain your estimated budget, price-ceiling or costs become. In many instances (especially in procurement) it may be crucial to determine whether potential changes to a plan (which would have financial consequences) may be the result of internal or external risks occurring. This may determine which party is to carry these consequences (e.g. the expert or the customer, the vendor or the buyer), and this may be pivotal information when estimating required resources.

The expert has no risk

In the Clarification step the expert clarifies how the desired outcome will be achieved and identifies the external risks and how they will be mitigated. Once the expert has transparently documented, explained and verified with the owner how, using which deliverables, what outcome will be achieved, the expert him/herself has no more risk.

By definition an (omniscient) expert has no internal risk. Those tasks the expert is to perform and has full control over the expert will perform without error. Would the expert, for whatever reason, not be able to deliver something it has full control over, the expert would clearly have to carry the consequences, not the owner.

The main risk in achieving the desired outcome, however, lies in situations which cannot be foreseen or controlled by the expert (e.g. weather, developments in the owner's organisation, non-performance of the owner or third parties). When these external risks occur — also in spite of any mitigation measures the expert has put in place — the consequences are never for the expert.

Execution

Execute and inform

Following the Clarification step it has been transparently explained to the owner how the expert will achieve the desired outcome.

The following needs to be achieved in the Execution step to ensure that a desired outcome is achieved against minimal risk:

The identified expert achieves the desired outcome as transparently explained to the owner and periodically informs the owner of any deviations to what was explained, of any eventual impact on the desired outcome a deviation may have, and of how this impact will be mitigated.

In many Decision Free methods the Execution step comes down to executing the plan that was made during the Clarification step. But plan or no plan, it is essential that the expert periodically informs the owner on (plan) progress. By informing the owner the situation is prevented that the owner starts to worry and, possible, ends up restricting or affecting the utilisation of expertise.

The Periodic Execution Report (PER)

The expert periodically informs the owner on the status of the execution step in the so called Periodic Execution Report (PER).

In the PER the expert states:

- Whether there are any deviations to the plan (yes/no)
- In case of a deviation:
 - The cause of the deviation
 - The impact this may have on the desired outcome
 - The measure, if any, to mitigate the impact on the desired outcome
- Any newly identified risks and corresponding measures taken

The PER not only informs the owner of progress and deviations, it also results in the clear allocation of the cause of deviations. As, in practice, the owner tends to be the main cause of deviations, the PER becomes a powerful tool for the expert to both document and demonstrate the owner's accountability with respect to changes to the desired outcome.

The PER shall not be used to report on any actually performed activities. The principle to be observed here is "No details".

A modified plan should still achieve the desired outcome

Risks may occur which result in deviations to the plan. If the original plan's outcome may no longer be realised, then the plan is to be modified. This modified plan is to be clarified to also achieve the desired outcome.

Of course an occurring risk may be such that the desired outcome can no longer be achieved. Then a new situation occurs. How to resolve this situation depends on the context. In case of financial or legal or other consequences it is essential to determine whether the risk was internal or external. The expert is responsible for any consequences resulting from internal risk, but carries no responsibility for consequences of external risks.

Completion

Starting from the owner's definition of the desired outcome (which the identified expert made sure was unambiguous) and sharing of the event conditions and universal rules (which the identified expert made optimal use of), followed by the identification of the expert and the subsequent clarification of how the desired outcome was going to be achieved by way of a plan, the desired outcome has now been achieved in the Execution step.

Through the application of the TONNNO principles at all times all types of decisions could be either be avoided or be identified for further Risk Management. The desired outcome has achieved against minimal outcome and resource risk.

The expert has gained further experience and has collected the relevant performance data (including owner-satisfaction data) to communicate the relevance of its expertise to another owner in need of assistance able to minimise risk in achieving the desired outcome.

As the head of the Apollo Spacecraft Program Office (ASPO) Joe Shea was to oversee the entire Apollo Program: all the interfaces with the Marshall Space Flight Center (where the Saturn launch vehicles were developed), everything going on with the command module, with the service module, with the Spacecraft Lunar Module Adapter, with guidance and navigation, with the lunar lander, with the launch pad, with the ground support equipment, with what General Electric and Boeing were doing, in short, with everything everyone was doing. In absence of any workable management tool Shea ordered a loose-leaf notebook to be prepared, to be handed to him every Thursday evening. The project manager of the lunar lander recalled that when Shea came into the organisation, he said: "I want only those things that you want me to read and that you want some kind of answer on. Just don't tell me things are going along great, but if you want some decision, do it through your weekly activities report." The loose-leaf notebook not only included what (in absence of any existing clarified plans) had been done in the last seven days throughout the entire program, but also comparisons against the programmed schedule and costs. For 165 consecutive weeks Joe Shea received a notebook running more than a hundred pages. He would get up at 4 A.M. Friday and start annotating. By Monday morning he gave the notebook back, and by Monday afternoon everyone in the ASPO network would have gotten his response from Shea. Questions asked by Shea were to be answered by Thursday night, and were added to the notebook which would then also have the brand-new section with the newest status too. The result of this system was that Shea kept "a running communication without having to type up long memos. Even if I didn't see [the project officers] directly, I'd at least been in touch with them, and they'd been back in touch with me." The lunar lander project manager had never seen such a system before, and hasn't seen it done since. He could never figure out where Shea got the time. Shea's Herculean effort, week in week out, is what kept the Apollo program on track. It goes too far to label Shea's loose-leaf notebook a Periodic Execution Report (PER) avant la lettre, but the strictly maintained periodicity, the emphasis on required resolutions and deviations (also with respect to schedule and costs), and the resulting 'running communication' which ensured issues would be addressed in a timely fashion they both have in common. Joe Shea's achievements, however, will forever remain unique. Source: [2]

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