

# **SUPPLEMENTARY MATERIAL**Data Science Analytics 05/17/2022

#### Prof. Mateus Cecílio Gerolamo

#### D.I.C.E. Framework <sup>1</sup> – The Four Key Factors of Change Management

In Sirkin, Keenan and Jackson's (2005) view, a focus on aspects, which usually are not much attractive at Change Management, is missing in the change management (tirar essa ultima parte): the *hard* factors. These aspects consider three characteristics: companies are able to measure them, they can easily communicate their importance, and it is possible to influence these elements in a quick way. Some of the *hard* factors that affect a transformation initiative are: the necessary time to complete it, the number of necessary people to execute it, and the expected financial results thanks to the proposed actions. According to the authors, change projects fail when organizations neglect the *hard* aspects of the change. If organizations do not watch out for these *hard* questions, the transformation programs will fall apart even before the *soft* elements get in.

The research carried out by Sirkin, Keenan and Jackson (2005), has revealed that there is a consistent correlation between the success and failure of change projects with four existing *hard* aspects in it: the project **dur**ation, particularly the time between their revisions (evaluations); **integrity** related to the performance or capacity (competence) of the project team regarding the project's execution. the **commitment** of both the high management team and the other members of the organization which affects or will be affected by the change; and the additional **effort** that employees will have to make to deal with the change. The authors have appointed these factors with the DICE framework (games data), because they could be "launched" in the project's favor, making an analogy to gambling games. The four DICE factors are better explained in Table 01.



Data Science Analytics 05/17/2022

Table 01 – The Four Factors D.I.C.E. (Duration, Integrity, Commitment, Effort)

DICE Factors	Description
Duration (Duration)	The ran time until the change is completed in the project in case of a short-time project, or the time gaps between the revisions of the project's marks.
Integrity (Integrity) (Team Competence)	The integrity of the project team related to their performance, which is the team's ability to complete the activity in time. That depends on the team member's skills and characteristics related to the project requirements.
Commitment (Commitment)	The commitment demonstrated regarding the change, both by the high administration $(C_1)$ and the other employees affected by the change $(C_2)$ .
Effort (Effort)	The effort level that must be undertaken besides the usual tasks of people that the change initiatives will demand from the participants, directly or indirectly involved with the project.

Source: adapted from Sirkin, Keenan and Jackson (2005)

It is possible to determine if the success chances of a project are high or low asking the executives about their perceptions regarding the evaluation of each DICE factor. For that, they must score each factor on a scale from 1 (very good) to 4 (very bad), using fractions if they like. Therefore, the lower score (1) means that a specific factor is contributing to the probability of the project being successful; and the higher score (4) represents that a factor is not contributing to the success, on the contrary, it is an indicator of the project failure.

Table 02 presents some score suggestions for questions that can serve as guidelines for executives to make their own projects evaluations in which they participate or support.



Data Science Analytics 05/17/2022



Table 02 - Calculation of D.I.C.E. Score

DICE Factors	Questions and Score
D	The team usually monitors and reviews the project regularly. Reviews take place at a frequency consistent with the total project time (eg every 2 months). (Score: strongly agree = 1; agree = 2; disagree = 3; strongly disagree = 4)
1	The team's leadership has shown itself capable of ensuring the project is carried out.  Team members have adequate competence to complete the change initiative on time. (Score: strongly agree = 1; agree = 2; disagree = 3; strongly disagree = 4)
<b>C</b> <sub>1</sub>	Senior leadership often communicates the reason for the change and the importance of success.  The message is consistent and compelling. Top leadership has directed enough resources for change.  (Score: strongly agree = 1; agree = 2; disagree = 3; strongly disagree = 4)
C <sub>2</sub>	Employees who impact or are impacted by the change understand the reasons and believe in the need for transformation. They support and are motivated. They are not distressed or showing signs of resistance.  (Score: strongly agree = 1; agree = 2; disagree = 3; strongly disagree = 4)
E	The project demands an amount of effort commensurate with the day-to-day activities of the team members. The team prioritizes their time to put the effort into change. Resistance is not perceived when it is necessary to increase the effort demanded by the team. (Score: strongly agree = 1; agree = 2; disagree = 3; strongly disagree = 4)

Source: adapted from Sirkin, Keenan and Jackson (2005, p. 109).

When researchers carried out a regression analysis with data from 225 change projects, which they had access to success or failure assessment or applied the DICE score, they found an even stronger correlation of two specific factors of the framework that doubled the weight in the calculation of the success probability of the project: the competence or integrity (I) of people and the commitment of the high-management team (C1) to the project (SIRKIN; KEENAN; JACKSON, 2005). Thus, the equation for calculating the DICE score is:



### Data Science Analytics 05/17/2022

The framework's regression analysis also showed that (SIRKIN; KEENAN; JACKSON, 2005):



- Score between 7 to 14 → The project has a high success probability, known as the victory zone.
- Score between 14 to 17 → The risks of the project are increasing, specially as the score approaches the number 17. This is the concern area.
- Score above 17→ The project has a high failure risk. Scores between 17 to 19 indicate a very high failure risk. Scores above 19 indicate that the project is most likely to fail. This is the difficulties area.

A way of managing the project progress is to follow the indicated procedure to calculate the DICE score at a particular project moment, and insert the result in Figure 01. This same figure can be used to evaluate other project moments and follow their evolution regarding the DICE points and the probability of success or failure of the specific moments.

Figure 01 D.I.C.E. Framework

Source: Sirkin, Keenan and Jackson (2005, p. 110)

DICE Score



## **SUPPLEMENTARY MATERIAL**Data Science Analytics 05/17/2022

Through this DICE score, companies are able to evaluate how change projects are progressing over time; they can also evaluate the projects before and/or after they made changes in their structure. Four factors work as a test that executives can carry out to evaluate the success probability of a project or a series of them (SIRKIN; KEENAN; JACKSON, 2005).

Although evaluations are subjective, the tool offers the organization an objective structure for decision-making. In addition, the scoring mechanism ensures that the executive team is evaluating the projects at their important or mark moments, and also considering the possible *trade-offs* between different projects (SIRKIN; KEENAN; JACKSON, 2005).

Overall, according to the authors, the DICE framework can be used for three purposes (SIRKIN; KEENAN; JACKSON, 2005):

- 1. Evaluate **the projects over time** executives can use a specific tool as an electronic worksheet to record all scores and their different versions in distinct moments of the project, and compare the evolution based on the past data (see an example in Figure 02).
- 2. **Manage the project portfolio** companies can identify projects that are showing problems and focus the execution team's expertise and the high management attention where it is most necessary at a given moment, which also concerns disarming policy issues that may exist.
- 3. **Impose conversations about the projects** some interesting questions which can be addressed: "why do we see the project in different ways?" or "which are our agreement points on ensuring that the project will be successful?".

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Data Science Analytics 05/17/2022



Score DICE 10 11 12 13 14 15 16 17 18 19 20 21 22 23 Cabral Ca 25

Figure 02 – Management D.I.C.E. Example for a Specific Project

References:

Source: based on the research project of the Change Management Group, EESC-USP. Adapted instrument of BCG.



Timeline

Project

Gate 1 Gate 2 Gate 3

