



## **PROJECT MATURITY AS THE WAY TO IMPROVE NON-PROFIT ORGANISATIONS - TRUTH OR MYTH?**

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### **Abstract**

The notion of project maturity is associated mainly with business entities. However, it seems justified to make these deliberations also concern non-profit organisations that are facing the problem of how to use tools and methods applied in the private sector. Currently, the problem taken on in scientific discussions is the identification of the extent to which skilful use of project-related knowledge in non-profit entities may affect their flexibility in responding to the emerging challenges, the ability to maintain good financial condition or the effectiveness of undertaken activities. According to the author, the project approach allows for achieving results that would be impossible to achieve in any other conditions. The purpose of the article is to assess the project maturity of non-profit organisations in Poland and to demonstrate how this may affect the improvement of their project-related operations. The presented article was created on the basis of the available scientific publications and own research results of the author concerning the project maturity of non-profit organisations in Poland.

**Key words:** *project maturity, non-profit organisations, organisation improvement*

**JEL Classifications:** L31

### **Introduction**

A characteristic feature of non-profit organisations is their flexibility in response to social problems and the shaping of entrepreneurial attitudes for the social purposes. This applies, among others, to offering tools, innovative approach and flexibility, indispensable on the labour market, which enable active participation in recognising problems of the local environment, articulating them and, consequently, also solving them. This results in a simultaneous increase in the role of projects in non-profit organisations and implementation of a great part of the statutory activity through projects. Diversity and multiplicity of stakeholders of third sector organisations, their various expectations, and complex mutual relations contributed to the growth in the importance of value created by projects for these particular groups of stakeholders. Therefore, project management has become a tool allowing for translating the organisation's activities into measurable results and fulfilling the mission with diverse activities that are not directly related. Projects may allow the discussed organisations to effectively pursue objectives by skilfully responding to the volatility and needs of the environment.

When discussing non-profit organisations as projectised entities, attention should be paid to the special character of project management in these organisations. This results, above all, from variable conditions present both inside the project and inside the organisation's environment. The special character resulting from the possessed financial and human resources is mainly emphasised [Szańca 2016, p. 1]. The project approach mobilises non-profit organisations to achieve operational efficiency and to focus on the results. This is important, as these organisations are considered to be the most rapidly developing part of the socio-economic activity of modern states. As a result, the literature on the subject contains a variety of studies concerning attempts to develop new or adapt already well-known concepts, methods and tools



of management, taking account of the special character of these entities and their needs. The ability to pursue project undertakings may become an important asset of the functioning of non-profit organisations.

Projects may contribute to reinforcement of strengths and use of opportunities arising from the environment, as well as become one of the remedies to most weaknesses and troubles faced by non-profit organisations every day. Thanks to effective project management, these entities may substantially improve the organisation and raise its effectiveness. This should strengthen the credibility of undertaken activities in the eyes of stakeholders and translate into reinforcement of both financial and human potential [Domański 2012, p. 342].

Implementation of projects in non-profit organisations creates problems of managerial (adjustment of management to the project management methodology) or financial nature (ensuring financial liquidity or own contribution). On the other hand, it also involves positive aspects, such as the possibility to function and perform statutory activities, development of a brand, social status, or the possibility of implementation of unique undertakings. Each project is particular and often concerns broad topics and tasks, needs different resources, may be sometimes based on specific conditions, and often concerns activities that have not been performed before. Changeability of the project environment causes the need to make quick decisions and undertake quick actions that should meet the emerging needs of stakeholders of non-profit organisations.

Thanks to projects, non-profit organisations can overcome many new problems that have not been encountered so far. This is related mainly to the involvement of employees in teamwork, growth in their creativity and acquisition of experience fostering the learning process. In addition, it is worth emphasising that projects affect the creation of the so-called value added, characteristic for projectised organisations in each aspect of their operations. Therefore, it appears that non-profit organisations have a greater chance to achieve their social objectives (resulting from the demand of stakeholders) as projectised organisations. This may occur when they have knowledge about the project maturity, which affects success of their project undertakings. For this reason, it is worth answering the question of whether examination of project maturity may become a method to improve non-profit organisations? Project maturity of non-profit organisations is a very "young" issue, not described in the subject literature, so the presented article should contribute to filling in this gap at least to a small extent.

### **Project maturity of organisations**

The subject literature emphasises that there is no consensus with regard to the interpretation of the term "maturity in project management". It indicates three main theoretical trends, which include [Spálek, p. 25, Cooke-Davies 2007, p. 1234-1255, Kerzner 2005, p. 238-245]:

1. The process trend defining project maturity as the ability of a given organisation to implement processes focused on project management. This approach stresses the need to document, measure, control, and constantly improve processes related to project management. As a result, the probability of achieving a success in subsequent project undertakings increases. This trend is represented, among others, by T. Cooke-Davies and H. Kerzner.
2. The organisational trend combining project maturity with organisational sensitivity of a given entity to project management. The notion is perceived through the prism of development of organisational systems focused on the use of best practices in project management. Representatives of this trend include, among others, I. Saures, W. Ibbs, J. Reginato and Y.H. Kwak.
3. The contextual trend, described as being the newest one, is defined as a combination of the process and organisational area, but supplemented with aspects related to adjustment to the organisation's needs (e.g. Agile) or taking into account new areas (e.g. knowledge management). Representatives of this trend are D. Hillson, E. Anders and S. Jensen.



All the aforementioned trends emphasise that project maturity is the ability of a given organisation to effectively and professionally use techniques, tools and methodologies of project management. A mature organisation completes projects successfully and has the ability to gather best practices.

The increasing meaning of projects in the operations of organisations causes increasingly faster transfer of knowledge about this field of management. This caused the need to develop tools allowing for determining the level of project management skills in an organisation, i.e. project maturity models [Juchniewicz 2009, p. 46]. The starting point for the development of these models laid in issues related to process maturity as well as the Capability Maturity Model (CMM) and the Capability Maturity Model Integration (CMMI) [Twaites et al. 2004, p. 309-314]. At the moment, a few dozens of various models supporting examination of the degree of project maturity of an organisation are used around the world. The most popular include: PRINCE PMMM. Kerzner's Project Management Maturity Model, Hammer's PEMM, Process Maturity Model, BPMM, OPM3, SPICE [Cooke-Davies 2007, p. 1234-1255; Hillson, 2003, p. 298-311; Juchniewicz 2009, p. 47; Khoshgoftar and Osman 2009; Spalek, 2013, p. 26 – 29; Valdes et al., 2011, p. 176-187].

Examination of project maturity concerns both organisations that are not aware of the existence of projects in their operations, as well as entities that want to effectively complete projects but do not have skills related to project management [Juchniewicz 2009, p. 121]. There are many tools supporting this examination on the market. They have one common goal, which is the assessment of strengths and weaknesses of project management and the indication of possibilities of improvement in this area. [Kerzner 2005, p. 245]. It is possible to use simple and more complex tools, general or aimed at specific industries. However, as justifiably emphasised by H. Kerzner, "no model will be fully adjusted to given organisation, although some may come close. Usually several tools are chosen, or one tool is adjusted so that it would correspond to the specific nature of the organisation as well as possible" [Kerzner 2005, p. 245]. The issue with project management maturity, as rightfully noticed by S. Spalek, is multi-dimensional, and the available models are characterised by [Spalek 2013, p. 29]:

- focusing on single industries,
- large degree of complexity,
- focusing on research in the form of in-depth case studies,
- different amount and thematic scope of measurement areas (depends on the selected model)
- considerable differences in sets of the examined issues.

The above considerations indicate the need to build an original model for assessing the level of project maturity, or to adjust the existing models to the specific nature of the examined organisation. From this point of view, it is worth paying attention to the model created by Professor H. Kerzner. This model is characterised by complexity from the point of view of tools, such as CMMI; it is simple to use, universal (i.e. not aimed at any industry) and, more importantly, it is useful for every organisation, regardless of its size. It was created for organisations that apply the principles and techniques of project management [Kerzner 2001, p. 40-42]. This model is based on the traditional 5-point scale, i.e.:

- level 1 – Common terminology – this level contains organisations that see the importance of projects but are only just starting to realise the need for common interpretation of the principles and terms related to project management. The management supports project implementation in a chaotic manner. No trainings are conducted within the area of project management.
- level 2 – Common processes – at this stage, the organisation notices the need for standardisation of project management processes. Processes leading to an increase in the chances for success of the project are improved. What is important, these processes are common for all projects being implemented in the organisation, and the benefits arising from the project approach are noticed. This is reflected in support of projects at each level of management.



- level 3 – Singular methodology – it uses the synergy effect resulting from combining all methodologies in the organisation into one methodology. It simplifies control of the whole process of project management. The organisational culture is focused on project management. The methodology is based on informal links, and the bureaucracy is limited to a necessary minimum. Emphasis is put on the importance of complex and cyclical trainings within the area of project management.
- level 4 – Benchmarking – concerns organisations with large project experience. The organisation develops its own project management methodology. It uses benchmarking as a tool supporting decisions concerning the direction of further development. It is a continuous process. The organisation has permanent personnel that carries out continuous improvement processes. Benchmarking has both a quantitative character (processes, tools, methodologies) and a qualitative character (e.g. culture, personal skills).
- level 5 – Continuous improvement – concerns organisations with a strong position which, as a result benchmarking, make a decision concerning the suitability of acquired information in the improvement of its own project management methodology. They constantly monitor trends in project management and latest technological developments or look for improvements of processes being implemented. Knowledge acquired during project implementations is transferred to subsequent projects and made available to project teams in the future.

The Kerzner PMMM model is based on the analysis of nine areas of knowledge, described in detail in Project Management Body of Knowledge (PMBoK) [A Guide to the Project..., p. 11]. The assessment covers the level of advancement of tools and techniques used in particular domains for implementation of projects. Areas are divided into smaller groups of activities, and those - into very detailed tasks. Then, lists of questions are formulated, concerning the method of execution of particular tasks [Crawford 2015, p. 4].

The idea behind the presented model is universality, simplicity and commonness. This necessitated the conduct of self-assessment on the basis of preparation of a separate questionnaire for each maturity level. However, such a research method makes it impossible to obtain official certificates confirming a given maturity level [Juchniewicz 2009, p. 59].

The subject literature emphasises that research concerning project maturity are targeted, above all, onto two areas [Spałek 2016, p. 4]:

- assessment models of project maturity level – their further development and search for new models
- use of the results of the conducted project management maturity assessment and linking them with improvement in the organisation's operations.

The above trends are consistent with the author's own studies conducted among non-profit organisations in Poland, whose selected quantitative results are presented further in the article.

### **Project maturity of non-profit organisations in Poland – research findings**

The purpose of conducted research was to identify the level of project maturity of non-profit organisations in Poland. These studies were carried out in 2017 and 2018 among the group of 93 third sector organisations with project experience. The studies were carried out in the form of a survey in paper form, as well as in the form of an e-questionnaire with the use of a proper platform. The research's focus on non-profit organisations was purposeful, since these entities are poorly examined in the area of project management. The research used a modified project maturity assessment questionnaire that had been originally created by Dennis Bolles<sup>6</sup> [Bolles 2002, p. 178-189]. This tool was based on nine areas of project management, described in the PMBoK standard, which results in its high compatibility with the approach of H. Kerzner. For the purpose of the conducted research, the questionnaire was modified to a small

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<sup>6</sup> Long-term activist and certified member of the Project Management Institute.



extent, i.e. it was based on ten rather than nine areas of PMI knowledge modified in 2013. The study began with providing answers to several additional informational questions concerning: (1) position held, (2) project experience of both the person taking part in the study and the organisation, (3) number of completed projects along with their sources of financing, (4) level of knowledge within project management, and (5) level of support for the project approach. Further part of the questionnaire already concerned the organisation itself and the substantive aspects. The assessment consisted of 100 statements arranged into ten categories (10 statements in each). The examined organisation was to take a stance on descriptions given in a standardised table pertaining to the examined areas. The questionnaire adopted a verbal description of the given answers (0 = I don't know, 1 = Never, 2 = Sometimes, 3 = Usually, 4 = Often, 5 = Always). Such a form of research allowed for efficient calculation of the average defining the maturity level for each area of knowledge. Every area was individually assigned to one of the five levels of project maturity. On this basis (the sum of all areas and division by their number – ten), the general level of project maturity of non-profit organisations in Poland was calculated. The adopted scale of project maturity levels is consistent with the descriptions of levels presented in The Kerzner PMMM model, so - when assessing the obtained results - the author mainly refers to this model.

The obtained survey results were analysed statistically with the use of specialised SPSS software. The survey covered altogether 93 organisations, including 29 foundations and 64 associations. The study was dominated by organisations of national range of operations and functioning within the area of "education and upbringing" (30.1% of the respondents). The main source of financing of the operations of the examined organisations proved to be local government source (funds from communes, county or provincial government), which were indicated by as many as 75.3% of the surveyed organisations. On the other hand, the main type of implemented projects was related to undertakings focused on the youth (58.1% of responses), children (35.5% of answers) and training activities (41.9% of responses). The examined organisations in 50.5% (47 indications) indicated average<sup>7</sup> project experience, large<sup>8</sup> experience was indicated by 36.6% of respondents (34 answers) and 12.9% (12 indications) indicated that they have very large<sup>9</sup> experience in implementation of projects. The research sample did not include an organisation that did not implement projects at all. This results from the intentional sample selection, since examination of project maturity for a non-profit organisation that does not implement projects would defeat the purpose of the study. Detailed distribution of the examined group from the point of view of completed projects is presented in Table 1.

Table 1

<b>Number of completed projects</b>			
<b>Number of projects</b>	<b>Number of indications</b>	<b>Percentage</b>	<b>Accumulated percentage</b>
1-15	34	36.6	36.6
16-40	30	32.3	68.8
more than 40	29	31.2	100.0
<b>Total</b>	<b>93</b>	<b>100.0</b>	

Source: prepared by the author

The group of people filling out the questionnaire was dominated by project managers (63 indications – 67.7%) and project team members (20 indications – 21.5%). 59.1% (55 indications) of people responding to the questions indicated that they had an average level of knowledge within the area of project management (this means that they had read about project management techniques and/or observed their use and had been personally involved in these

<sup>7</sup> Average project experience - continuous implementation of individual or few projects.

<sup>8</sup> Large project experience - continuous, simultaneous implementation of many projects.

<sup>9</sup> Very large project experience - projectised organisation, all its operations involve implementation of projects.



activities), while 35.5% of the surveyed (33 people) indicated that they had formal education in project management and experience in using project management techniques. Only 5 people indicated that they had heard about project management but knew little on this topic. What is interesting, 54 people (58.1%) indicated that they believed that the use of the principles of project management throughout the organisation is necessary to ensure its continuous growth and competitiveness, while 37.6 (35%) of the surveyed indicated that the use of project management techniques is a good idea, but they did not know where and how they should be used in their organisations.

Table 2 below presents the approach to project management in the examined organisations.

Table 2

**Approach of the surveyed organisations to project management**

<b>N=93</b>	<b>Yes</b>	<b>No</b>	<b>I don't know</b>
The organisation has a project management methodology in place	48	39	6
The methodology is used in throughout the organisation	42	43	8
The organisation has a training programme in project management	22	70	1
IT support for project management is used	34	58	1

Source: prepared by the author

The presented data show that 48 of the surveyed organisations have developed a project management methodology. Therefore, it could be claimed that more than a half of the research sample approaches implementation of projects professionally. It is worth noting that as many as 42 organisations that declared the use of a project management methodology use in throughout the entire organisation. It seems that this percentage of indications (87.5%) results, above all, from the specific nature of functioning of non-profit organisations, which are characterised by the desire to share knowledge within one organisation as well as the specific character of implemented projects. In addition, the presented results indicate that only 22 organisations (23.6%) notice the need for introduction and implementation of training programmes related to project management. Most of the surveyed organisations (70 indications) do not see any benefits in participating in this type of trainings. The level of 36% of organisations using IT support of project management does not seem surprising in the case of third sector organisations.

The further part of the article presents the structure of project maturity of the surveyed non-profit organisations.

Table 3

**General project maturity level of non-profit organisations**

<b>Area of PMBoK</b>	<b>Mean</b>	<b>Standard deviation</b>
1. Integrity	3.19	1.064
2. Scope	3.53	1.010
3. Time	3.15	.932
4. Cost	3.83	.977
5. Quality	3.07	1.088
6. Human resources	3.45	.921
7. Communication	3.18	.937
8. Risk	2.68	1.113
9. Procurement	3.16	1.131
10. Stakeholders	2.34	1.047
<b>Project maturity</b>	<b>3.15</b>	<b>.871</b>

Source: prepared by the author



The project maturity level in the surveyed non-profit organisations was determined at the level of 3.15. It is an arithmetic mean of the results obtained in ten areas of PMBoK. From the point of view of the obtained result, non-profit organisations in Poland have project experience that can be qualified to the 4th level – Benchmarking. However, it should be noted that, in the case of two areas, i.e. stakeholders and risk, this level was determined as third. The other areas, excluding the area of scope and costs, have the value on the brink of entering level 4. Therefore, it is important to pay attention to the assumptions of the Kerzner's project management maturity model, which assumes the possibility of particular levels overlapping, but with the assumption that it is not possible to switch between levels, i.e. before the organisation enters the second level, it has to meet all criteria for level 1. This differentiates this model from other traditional models of maturity. Therefore, when analysing the data available, it is worth indicating the number of organisations that reached particular levels. These data are presented in Table 4 below.

Table 4

**Levels of project maturity of non-profit organisations**

Number of projects	Number of organisations at the maturity level	Percentage	Accumulated percentage
Level 1	0	0	0
Level 2	14	15.05	15.05
Level 3	26	27.96	43.01
Level 4	34	36.56	79.57
Level 5	19	20.43	100.0
<b>Total</b>	<b>93</b>	<b>100.0</b>	

Source: prepared by the author

When analysing the above data, it should be considered whether, in the case of the examined organisations, level 3 and 4 as well as 4 and 5 overlapped. In the first case, a situation may have occurred, in which - during works on its own methodology - the organisation undertook actions aimed at searching for the best solutions among other organisations on the market (benchmarking). On the other hand, overlapping of level 4 and 5 concerns situations, in which the organisation, by developing benchmarking actions and continuous improvement, causes increasingly faster improvement of processes. This results in a fact that the improvement cycle may cover both level 5, 4 and 3. This, in turn, is reflected in a situation, in which its own methodology (level 3) may require fundamental reconstruction. It should be emphasised that levels 2 and 3 do not overlap, since project management should be defined processes first, and only then the organisation's own methodology should be developed [Juchniewicz 2009, p. 50-51]. Therefore, 4th level of project maturity of non-profit organisations, with the result of 3.15, induces to question whether the level of their maturity does not overlap with level 3. To answer this question, the conducted research should be deepened.



Table 5

**Correlations among the results obtained by non-profit organisations in particular areas of PMBoK**

	Integrity	Scope	Time	Cost	Quality	Human Resources	Communication	Risk	Procurement	Stakeholders
Integrity	1	.700**	.786**	.638**	.601**	.575**	.591**	.546**	.603**	.482**
Scope	.700**	1	.859**	.715**	.743**	.628**	.717**	.673**	.648**	.529**
Time	.786**	.859**	1	.731**	.781**	.754**	.728**	.733**	.723**	.586**
Cost	.638**	.715**	.731**	1	.721**	.674**	.692**	.598**	.682**	.453**
Quality	.601**	.743**	.781**	.721**	1	.657**	.787**	.757**	.721**	.588**
Human resources	.575**	.628**	.754**	.674**	.657**	1	.721**	.718**	.774**	.618**
Communication	.591**	.717**	.728**	.692**	.787**	.721**	1	.764**	.790**	.717**
Risk	.546**	.673**	.733**	.598**	.757	.718**	.764**	1	.810**	.711**
Procurement	.603**	.648**	.723**	.682**	.721**	.774**	.790**	.810**	1	.717**
Stakeholders	.482**	.529**	.586**	.453**	.588**	.618**	.717**	.711**	.717**	1

\*\*Correlation is valid at the level of 0.01 (on both sides).

On the basis of the obtained research results presented in the Table 5, it can be noticed that quite strong interdependence can be noted between particular areas of knowledge ( $p < 0.01$ ). Furthermore, the results indicate that time is an area most strongly correlated with other areas of knowledge.

Table 6 below presents project experience of the surveyed organisations, including particular areas of PMBoK.

Table 6

**Project experience of non-profit organisations and maturity level in particular areas of PMBoK**

Assessment of project experience in the organisation	Integrity	Scope	Time	Cost	Quality	Human resources	Communication	Risk	Procurement	Stakeholders	Maturity
Very large	3.29	3.44	3.17	4.06	2.67	3.80	3.22	2.38	2.89	2.49	3.14
Large	3.37	3.74	3.28	4.02	3.40	3.58	3.30	2.91	3.35	2.39	3.33
Moderate	3.03	3.39	3.06	3.63	2.93	3.27	3.07	2.59	3.09	2.26	3.02
Total	3.19	3.53	3.15	3.83	3.07	3.45	3.18	2.68	3.16	2.34	<b>3.15</b>

Source: prepared by the author

The above data indicate that organisations with large project experience obtained a higher project maturity index than organisations with very large experience. The difference is not high, but it is worth considering whether the "routine" approach to project undertakings does not adversely affect the level of project management skills of organisations.

To sum up the above discussion, Table 7 additionally presents the correlation coefficient between institutional solutions and project-related activity of the surveyed organisations.





Table 7

**Relations between institutional solutions and project-related activity of the surveyed organisations**

		The organisation has a project management methodology in place	The methodology is used in throughout the organisation	The organisation has a training programme in project management	IT support for project management is used
Area of operations	Cramer's V	.250	.220	.245	.298*
	Validity	.142	.251	.138	.042
Employees with an employment contract	Cramer's V	.085	.050	.145	.064
	Validity	.756	.909	.430	.849
Employees with civil-law contracts	Cramer's V	.281*	.094	.182	.282*
	Validity	.048	.717	.267	.042
Employed volunteers	Cramer's V	.118	.073	.110	.213
	Validity	.591	.818	.617	.166
Project experience	Cramer's V	.426**	.331**	.481**	.270*
	Validity	.000	.009	.000	.035
Number of completed projects	Cramer's V	.288*	.087	.287*	.120
	Validity	.027	.723	.022	.517
Number of completed EU projects	Cramer's V	.131	.131	.248	.102
	Validity	.481	.481	.058	.621

Source: prepared by the author

\*. Correlation is valid at the level of 0.05

\*\* . Correlation is valid at the level of 0.01

Table 7 presents relations between institutional solutions and project-related activity of the surveyed organisations. The presented data concern qualitative variables, and the equivalent of Pearson's correlation for this type of data is considered to be Cramer's V coefficient, which can be interpreted in the same way. The presented data suggest poor interdependence between institutional solutions and project-related activity of the surveyed organisations. The strongest relation can be observed between project experience and functioning of management methodology in the organisation, as well as the existing training programme. Other factors do not have a significant effect on institutional solutions concerning implemented projects.

The limited size of the article prevents presentation of all results of the conducted study. It presents data that confirm that project maturity of non-profit organisations is an interesting and broad area for research.

### Conclusions

The growing role of projects in non-profit organisations causes an increase in the interest in effectiveness of implemented projects. This is reflected in the desire to improve the organisation's operations in the scope of project management, which affects its development. Implementation of this process is possible thanks to the use of the concept of assessment of the maturity level in project management [Spalek 2013, p. 9]. As a result of this approach, the organisation can perform a detailed diagnosis of the condition of project management, among others, by means of: (1) examining all project management processes, (2) identifying strengths and weaknesses of the organisation with regard to implemented projects, and (3) identifying its level of maturity as compared to the environment. Furthermore, the assessment of project maturity provides a set of tools supporting development of the organisation and helps implement the philosophy of continuous improvement [Juchniewicz 2009, p. 97-98].



The study of project maturity of non-profit organisations in Poland indicates the necessity to improve project activities, first for all, in the area of management of stakeholders, risk and quality. When analysing the presented data, it can be stated that:

- the assessment of project maturity is a way to improve non-profit organisations,
- project maturity models may constitute a credible instrument of measurement and assessment of the possibility of efficient implementation of projects in the organisation,
- the intensity of project-related activities affects the project maturity level to a limited degree,
- the use of solutions in project organisation affects the level of project maturity,
- project maturity is a new issue for non-profit organisations.

The article only presents selected - the most important ones, in the opinion of the author - issues concerning the assessment of the level of project maturity of non-profit organisations in Poland. The deliberations presented in this article are not exhaustive and should undergo further analyses and studies, conducted both by scientists and practitioners.

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