

Balanced Scorecard: Literature Review and Implementation in Organization

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Abstrak. Balanced scorecard adalah teknik manajemen formal untuk mengembangkan, menerapkan, dan mengelola strategi bisnis. Tidak mudah untuk memastikan keberhasilan teknik tersebut. Sebagian besar literatur tentang penerapannya diterbitkan oleh mereka yang memiliki kepentingan dalam keberhasilannya sebagai produk komersial. Banyak yang telah ditulis tentang hambatan penerapan strategi tetapi tidak secara khusus tentang penerapan balanced scorecard. Tinjauan pustaka dalam makalah ini menunjukkan bahwa studi tentang implementasi BSC di organisasi perusahaan fokus pada peningkatan kinerja organisasi, membantu dalam pengambilan keputusan, membantu dalam pemilihan komponen, mengevaluasi produksi dan pembelajaran serta pertumbuhan yang berkelanjutan. Makalah ini memberikan manfaat bagi penelitian selanjutnya untuk menambah literatur dan pemahaman tentang implementasi Balanced Scorecard pada organisasi manapun.

Kata kunci: balanced scorecard, kinerja organisasi, industri 4.0, tinjauan pustaka.

Abstract. *The balanced scorecard is a formal management technique for developing, implementing, and managing business strategies. It isn't easy to ascertain the technique's success. Most of the literature on its implementation is put out by those with a vested interest in its success as a commercial product. Much has been written about barriers to strategy implementation but not specifically to implementing a balanced scorecard. The literature review in this paper shows that studies on BSC implementation in corporate organizations focus on improving organizational performance, assisting in decision making, assisting in component selection, evaluating production and learning and sustainable growth. This paper provides benefits for further research to add to the literature and understanding of the implementation of the Balanced Scorecard in any organization.*

Keywords: *balanced scorecard, organizational performance, industry 4.0, literature review.*

1. Introduction

Companies have long known that to be competitive, they must develop a good strategy, implement appropriate tactics to support that strategy, and measure the outcome of their initiatives against strategic goals. Several factors need consideration for the effective and efficient of the implementation and management of the plan. Organization needs to appropriately realign structure, systems, leadership behavior, human resources policies, culture, value and management processes for successful strategy implementation (Beer, 2000). Consideration also needs to be given to the environmental conditions for change and the organizations' ability to manage change in those conditions (Suboguh, et al. 1997; Beer, 2000). Suboguh et al. (1997) espouse that any significant business process change requires a strategic initiative where top managers act as leaders to define and communicate a vision for change. Other factors are cultural readiness, learning capacity and IT leveragability. It is easier to be said that many difficulties lies between ideal strategic alignment and the reality of implementation.

The Balanced-Scorecard (Norton, 1992) has recently been widely accepted as a framework for strategy implementation and management because financial measures are considered with others related to a performance from the customers' point of view, business processes and learning growth. The emphasis is on looking on all aspects of business success, the financial ones, and understanding and controlling their relationship and dependencies. This way, it is possible to have a more comprehensive view of the business's strengths and weaknesses. While the Balanced Scorecard appears to address strategic alignment, successful strategy implementation is faced by barriers not dissimilar to those mentioned above despite the perceived involvement of all aspects within the organization is the strategy.

This paper focuses on three factors that need to be recognized and addressed before any balanced-scorecard implementation can proceed. The issues relating to leadership, culture, and learning capacity are described. An outline of a balanced scorecard is first explained to understand the significance of these factors.

2. Method

According to its creator, the balanced-scorecard is established by a process that builds consensus and clarity about how to translate strategy into operational objectives and measures. This means that the scorecard represents the collective knowledge of the managers of the organizations. The scorecard projects are not an initiative to improve a measurement system but rather make changes in the way the organization views and manages itself (Norton, 1992). In summary, the objectives of a balanced scorecard are to (Kaplan, 1996): 1) Clarify and gain consensus about vision and strategy, 2) Build a strategic management team, 3) Communicate the process throughout the organization, 4) Align department goals to the process, 5) Set strategic targets, 6) Perform periodic and systematic strategic reviews, and 7) Obtain feedback to learn about and improve strategy.

The literature review, several steps must be executed so that the systematic and directed implementation. The first step is to formulate the problem. In this stage, the writer is required to choose a topic that matches the issue taken. Problems must be written completely and accurately. Then the second step is looking for literature and articles. Search for articles using the keyword "Balanced Scorecard and Performance Measurement". Article searches are carried out using databases such as Google Scholar, Research Gate and Elsevier. At this stage, the writer looks for literature relevant to the research and then looks for an overview of the research topic. After that, review according to topic based on research sources. The third step is to evaluate or identify the literature. Search results are sorted as case studies or focus industry, focus number of distribution by country, focus year of publication and focus of the number of publishers. The data collected, analyzed, and the results are presented in graphical form. At this stage, look for the similarities and inequalities of the literature obtained. Then compare from various perspectives, then make a summary. The fourth step concludes the identification of all the literature obtained. The last stage is publishing in national and international journals. For more details can be seen in Figure 1.

3. Result and Discussion

This paper identifies a total of 50 papers related to the implementation of BSC in the organization. The selected papers or articles will be analyzed. The analysis was carried out based on the researcher and year, research object and research results. The author summarizes them in Table 1.

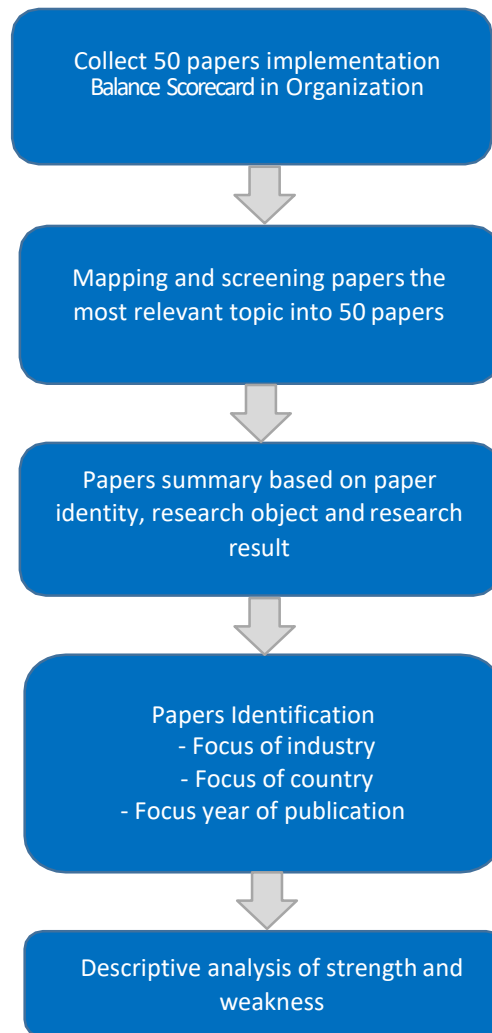


Figure 1 Study framework implementation BSC in industry.

Table 1 Existing Literature review of balanced scorecard in organization

No	Author, Year	Research Object	Result
1	(Barnabè, 2011)	Productivity and Performance Management	This study has focused on the development of a system dynamics-based Balanced Scorecard, i.e.
2	(Hamid, 2012)	Performance measurement of National oil-rich	At first, for the main research theory to measure balanced assessment, questions 1 to 60 are perused.
3	(Corresponding, 2012)	Business Administration	In general the annual average score achieved by the bank was 488 which indicates a weak performance.
4	(Mashtani et al., 2012)	Information, Security and Systems Management	In internal processes perspective, we have to focus on of- faces related to the industry (I4), gradation of service quality (I1), and extension of research and development center (I2) completely (100%) and focus on providing facilities (I3) partially.

Table 1 Continue

No	Author, Year	Research Object	Result
5	(Werner, 2012)	Financial Research	Companies use strategy maps to bring the elements of the balanced scorecard together in a meaningful way.
6	(Striteska & Spickova, 2012)	Review and Comparison of Performance Measurement Systems	The balanced scorecard and the performance pyramid are two excellent illustrations of strategically driven PMFs.
7	(Giannopoulos et al., 2013)	Business and Management	The main limitation of this research is the relatively small size of each country's data set.
8	(Hanif & Ahmad, 2013)	Innovative and Applied Finance	Most of the respondents do not know the balanced scorecard.
9	(C P Muhenje & O Nyamwange, O Robert, 2013)	Management Sciences and Business Research	However, the categories of skills improvement activities and training and also employee satisfaction surveys showed statistically significant differences within $p=0.044$ and within $p=0.001$ respectively.
10	(Abdullah et al., 2013)	A historical review	the study is suggesting some guidelines for improving the Balanced Scorecard in the light of previous researches conducted on Balanced Scorecard
11	(Tominac, 2014)	Research Paper	Balanced Scorecard model for a bank (Carpenter, 2010). Usually a bank will have about 15 – 20 key in- dictators for performance measurement of its strategy.
12	(Rahman & Chin, 2014)	Development and Sustainability	The 'management of parking facilities' has also performed 'excellent' (score: 4.52).
13	(M Alizade & A Talebbeydokhti,, 2014)	Fundamental and Applied Life Sciences	Priorities are the next financial priorities from the experts' point of view.
14	(Marete, 2015)	Influence of Balanced Scorecard on Organizational Performance in Institutions of Higher Learning	The study's concept was that the organizational performance was dependent on these balance scorecard factors independently.
15	(D Fitrianingrum & Sulastiningsih, 2016)	Research Management	The level of performance that has been measured from the four perspectives of the Balanced Scorecard of PT. Madubaru is in the Growth, Learning Perspective, Internal Process Perspective, and Customer Perspective in the neutral or good enough category.
16	(Tibbs, 2016)	Economics, Commerce and Management, United Kingdom	Learning and growth perspective in the Balanced Scorecard model has a significant positive influence on organizational performance.
17	(Saad et al., 2016)	Business and Management	This hypothesis states that the Palestinian listed corporations do not use the BSC for performance evaluation.
18	(Radnor & Radnor, 2016)	Medical Marketing	It is important however, that the right measures are reflected in the BSC.
19	(D. Fitrianingrum, Sulastiningsih, 2016)	Scientific Efficiency	From the data, it can be seen that the employee turnover rate at PT United Tractor, Tbk. is relatively low.

Table 1 Continue

No	Author, Year	Research Object	Result
20	(Kollberg & Elg, 2016)	Productivity and Performance Management	This paper aimed to identify the main characteristics of the BSC practice in health care services.
21	(Trisyulianti, 2016)	Performance Measurement	The last perspective is learning and growth. The score on the strategic target is 8.28%. Overall the company has achieved the target.
22	(A. K. Gupta & S. Sharma, 2016)	Economic and Business Review	Further, it is suggested, more future studies are Identifying relevant common measures under the BSC perspective for banks and comparative studies based on Balanced Scorecard is needed to identify the best performing banks.
23	(N. Nisha, 2017)	Information Systems in the Service Sector	This study argues that it is necessary to examine the BSC model's underlying hypotheses and how they are used to measure banks in Bangladesh's context.
24	(A. Abofaied, 2017)	Business and Management	The analysis reveals that the JB performance measured by the BSC was 470, 430, 470, and 580 for the years 2007-2010.
25	(Widyastuti et al., n.d,2017)	Company Performance Analysis	The data are then categorized and processed into four Balanced Scorecard perspectives.
26	(S. Ryanto & Sutarman, 2017)	Engineering Science Invention	The results of performance measurement on the four perspectives that have been scoring based on the increase/decrease in performance interval
27	(Fakhrina, 2017)	Management and Organization	From the performance measurement results, the IPB management department has achieved a performance achievement of 80%.
28	(Agyeman et al., 2017)	Business and Management	Empirical studies on a balanced scorecard as a tool for managing performance were highlighted.
29	(Muhyi & Muttaqin, 2017)	Science and Research (IJSR)	The dimensions of the learning process and growth of the organization have been well implemented.
30	(Rotchanakitumnuai et al., 2019)	Performance measurement	The results of the performance appraisal from a financial perspective show that ROI has a sufficient average.
31	(S. Ryanto & Sutarman, 2017)	Engineering Science Invention	Using the BSC as a measurement system, it enables all strategic business units and Working groups to stay focused on what matters to future success for the company.
32	(Hasan, R.U, and Chyi, 2017)	Literature review	It is a continuous challenge faced by executives, managers, practitioners, and researchers in measuring organizations' performance.
33	(Banabakova & Georgiev, 2017)	Opportunities for Application of the BSC in Management and Control	The successful social development is a result of effective governance and control

Table 1 Continue

No	Author, Year	Research Object	Result
34	(Anuforo et al., 2018)	Social Science Research	The implication of this study lies in both theoretical and practical contributions.
35	(Muhsyaf & Aoki, 2018)	management control of the hospital	The successful initial adoption of BSC within public hospitals depends on how serious the hospitals' management is in investments of technologies, human capital, and time.
36	(Dhamayantie & Tanjungpura, 2018)	Organization innovation	Cooperatives need to design performance measurement using the business organization's benchmarks in the same industry.
37	(Nurchahyo et al., 2018)	Engineering & Technology	However, these three indicators are influenced by other indicators.
38	(G. Yilmaz, M.N. Inel, 2018)	Business and Applied Social Science (IJBASS)	Sustainability is to maintain continuity by maintaining the current position with the most general definition.
39	(Ayoup, Hazeline, 2018)	Research in Business and Social Sciences	The applications of the strategy map in facilitating good strategy development and implementation process.
40	(Rotchanakitumnuai et al., 2019)	Assessing Large-Scale ERP	This research has examined whether ERP implementation success factors have an impact on BSC indicators in large-scale ERP implementation projects.
41	(Abagissa, 2019)	Financial Management and Economics	As indicated in the figure below, most (39.2%) received Appreciation and recognition letters, 31.4% got bonus pays, and 29.4% received the promotion.
42	(D Nurmagfira, B Modding, Mursalim, 2019)	Economics	Employees at PT. Radio Makassar Cipta Perdana (Delta FM) is satisfied with their salaries, the facilities provide and the job they get productivity.
43	(Ofurum & Afodigbueokwu, 2019)	Social and Management Sciences	Meanwhile, there is a significant relationship between the dependent (return on assets) and independent variables (learning, customers, and business process perspectives).
44	(Katuuk et al., 2019)	Medical Marketing	For the Minahasa Utara District Health Office, the weight of each perspective is determined as follows: 1) a financial perspective of 20%; 2) customer perspective of 40%; 3) internal business process perspective of 20%, and 4) learning and growth perspective 20%.
45	(Syair et al., 2019)	BSC Concepts	The target that has been set by PT. BCV in each strategy initiative with a learning and growth perspective are: 1. Loyalty to time is 90%. 2. Training is 80%. 3. Preparing 90% HR.
46	(Abdelrazek, 2019)	Social Science and Economic Research	The company gives great attention to the financial perspective as it represents 30% of the sustainability performance where the company seeks to increase its sales and profits continually.

Table 1 Continue

No	Author, Year	Research Object	Result
47	(Colbran et al., 2019)	A systematic review of organizational performance	Further research to understand why such limited published organizational performance evidence could be useful for the sector.
48	(Zuniawan,2020)	Implementation BSC	The total weight score can be known, namely 3 scores of the total standard weight.
49	(E Liderilik, D Calisanlarin, A Girisimcilik, Kemal, 2020)	Business & Management Studies	According to the analysis results, it has been determined that transformational leadership perception affects the employees' entrepreneurship.
50	(Setiawan, 2020)	This study reviews and evaluates the development of research on the balanced scorecard.	This literature review is limited to the specific quality ratings of academic journals

Papers Identification

In the identification of literature will be identified from various perspectives. The perspective includes the focus of the research object, the focus of the number of distribution by country, the focus of the year of publication s. Balance Scorecard implementation is very popularly used in management, see Figure 2.

The classification of the articles is shown in Figure 2. We identified the categories of the research object used by the Balanced Scorecard in the organization article. Overall, there were 50 articles, which management, study review, measurement, research, organization, and others.

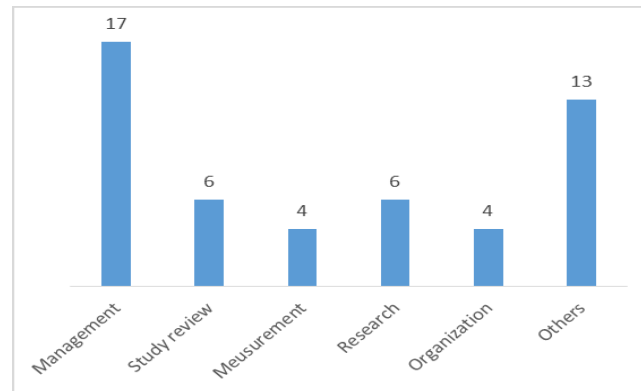


Figure 2 The focus of the research object.

Figure 3 analyzes the distribution of Balance Scorecard publications in the organization. India is the most frequently implemented Balance Scorecard. In this case, Balance Scorecard neglects especially in developed and developing countries. In India, growth is in the figure of 5.4% per year, the projected growth in the economy's complexity. Reports have indicated that Iran has many opportunities that have not been utilized in various industries and encourage growth and fieldwork creation. The economy and the progress of Iran's scientific knowledge that sustained, the country is rated to be in the path of the right to be a state of the most powerful in the world. Then Balance Scorecard present in the implementation in the

organization, in particular, to reduce the variability in the process, so that giving the organization, product, or service that is good to customers, and reduce errors.

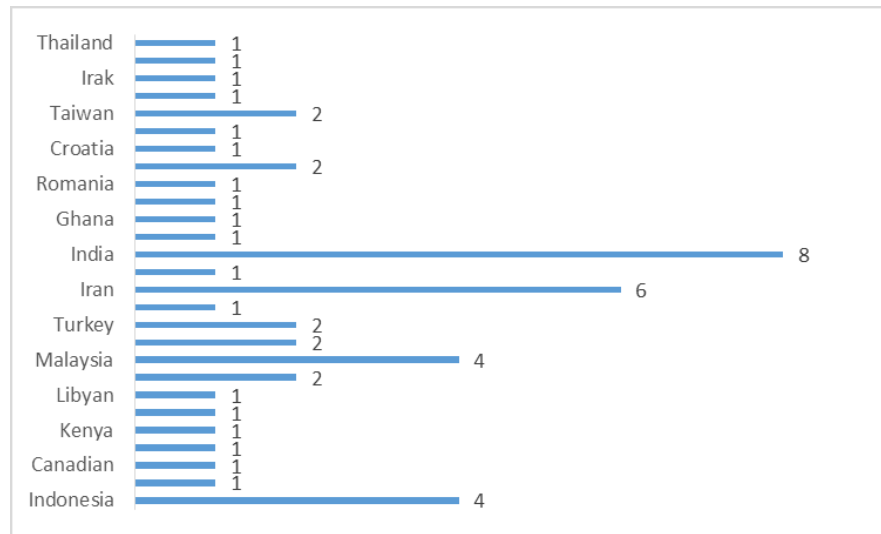


Figure 3 The focus of the distribution by country.

Figure 4 shows that Emerald Insight Publisher was most frequently searched during the 2011-2020 period (Figure 4). This is evident in identifying the paper, at most be the number of publisher emerald insight. The author suggests researchers use Emerald Insight as a reference in collecting reference sources in research because Emerald Insight is also a reputable journal publisher.

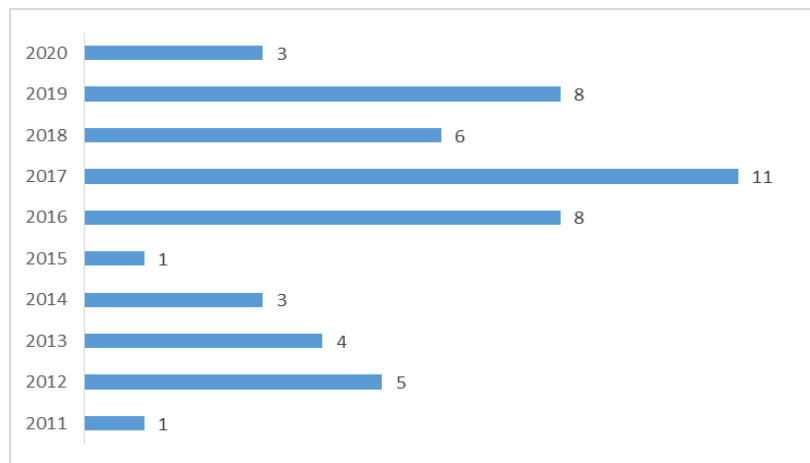


Figure 4 The focus of the year of publication.

Strength Analysis

In this literature study, the authors found the strength of all the journals that had been analyzed. Strength is based on three perspectives, namely journal writing, industry, and science: 1) Journal explained in a clear and complete ranging from the abstract, introduction, review literature, methodology, results & discussion and conclusions. 2) The business perpetrator's advantage of applying Balance Scorecard is to get the slim, reduce the cycle time, and minimize cost. 3) Providing new references for the next researchers in problem-solving related to implementation with the Balanced Scorecard approach.

Weakness Analysis

In addition to the literature study's strengths, the author also found several weaknesses based on journal writing, organization, and research: 1) The format of writing journals are not organized, so that makes the writer difficulty in identifying literature. 2) The approach of the Balanced Scorecard requires a time that is very long in the implementation. Need stages which systematic to get a result that is best and necessary monitoring it regularly. 3) There are many new tools in modern like this so that researchers have many options in solving problems. As a result, the Balanced Scorecard approach is neglected.

Benefits of implementing Balance Scorecard in the organization

A review of 50 scientific articles related to Balanced Scorecard implementation in the organization has provided several benefits for companies. The Balanced Scorecard a company is a breakthrough strategy that allows the company to make extraordinary improvements. The benefits of a Balanced Scorecard for organization companies, namely: increase profits and financial savings of the company, increase customer satisfaction, reducing the cost of the production process, reduce cycle times, improve product quality, and improve the process better.

Based on the many advantages obtained by implementing the Balanced Scorecard, it is recommended that future research use this approach to solve cases of problems that occur and to get benefits, especially in the organization company.

The balanced scorecard in industry 4.0

A balanced scorecard is a tool used to assess and measure a business's progress and its path toward the business' overall strategy. It helps an organization translate its vision, communicate, plan, learn, and enable feedback to continue to grow.

Balanced scorecards allow owners and executives to understand how each department is functioning through a variety of perspectives. From our experience at William Buck, manufacturers face either one of two key issues: not knowing what KPIs to track to allow for improvement or being unable to gather enough data to assess the measures you want to accurately.

There are four drivers known as KPIs in a balanced scorecard. These KPIs help managers develop their resource needs by focusing on finance, customer satisfaction, internal business functions, and innovation to ensure growth. These areas are evaluated by evaluating whether current objectives, targets, and initiatives are being met and efficient measures. For example, it may find areas of skill gaps, which is a major issue in manufacturing, which could mean devising a plan to collaborate more with external bodies.

Since the BSC was first created by Kaplan and Norton (1992), there has been a lot of confusion about the balanced scorecard's exact definition. Several criticisms and questions about the balanced scorecard approach arise. Although many academics are skeptical about the relationship between BSC and organizational outcomes, BSC is widely used. Practitioner-oriented literature shows that it has good values, especially in improving organizational performance and strategy attainment. Based on the findings of empirical results in the private sector and the public sector, it can be inferred that out of 50 articles of empirical research of the organizations investigated in terms of the balanced scorecard implementation. These results conclude that the balanced scorecard's implementation status shows a high success level and a little failure.

BSC has limitations, yet these findings show that BSC is beneficial enough. It is reinforcing the view that the BSC remains worth considering for a performance management system. This literature review is limited to the specific quality ratings of academic journals. Studies from other

quality ratings from academic journals or conference presentations may have been ignored. Furthermore, other exclusion criteria, namely search restrictions, might lead to ignoring some relevant research.

Although applying a balanced scorecard approach may seem easy, there are some important limitations to consider. Kaplan and Norton (1996) identify four specific barriers to effective, balanced scorecard implementation that have to be overcome: 1) Vision and strategies that are not actionable, 2) Strategies that are not linked to departmental and teams goal, 3) Strategies that are not linked to resources allocation, and 4) Feedback that is tactical and not strategic. The root causes of these three barriers can be classified into three categories: 1) Quality of direction (leadership), 2) Quality of communication (cultural readiness), 3) Quality of learning (organizational learning).

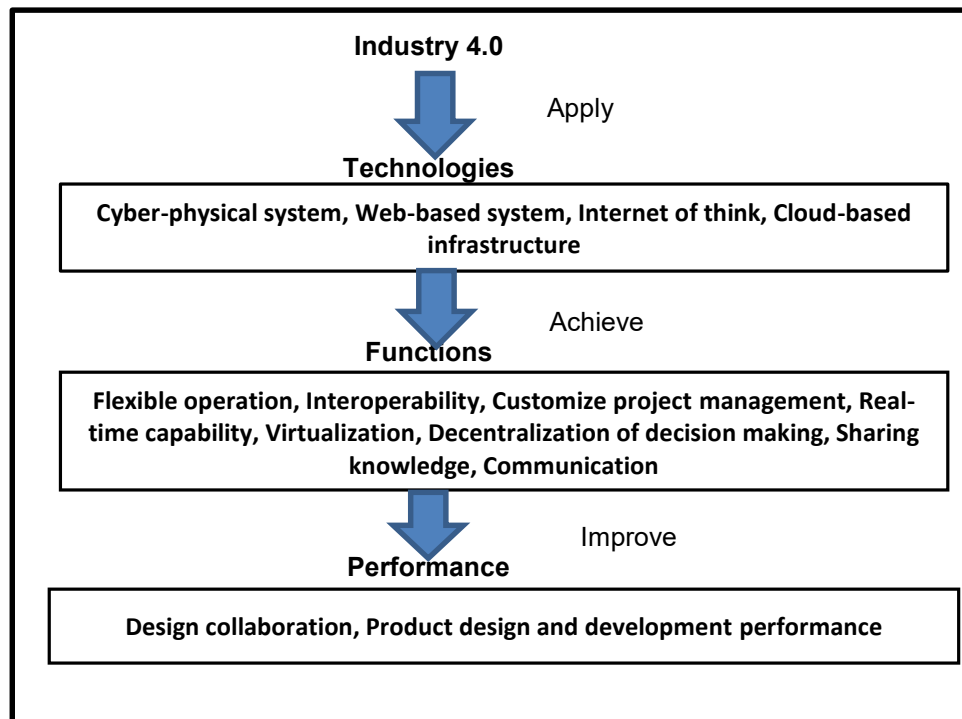


Figure 5 Framework Development BSC to Industry 4.0

4. Conclusion

This paper identifies the application of the BSC to organizations. There are three main focuses of BSC as a management system: focus on performance measurement, vision and mission of the organization, and decision making. The literature review in this paper shows that studies on BSC implementation in corporate organizations focus on improving organizational performance, assisting in decision making, assisting in component selection, evaluating production and learning and sustainable growth. Future research can apply BSC in other contexts apart from measuring the performance of human resources which can be applied to the production process, finance, information technology and others.

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