

# Identifying Benefit Register and KPI for Special Economic Zones in Indonesia

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**Abstract-** In 2009, the Government of Indonesia issued Law (UU) Number 39: concerning the implementation of Special Economic Zones. This product was born for a noble purpose: 1). Accelerating economic development, 2). Building a balanced development between regions, within the framework of one economic unitary state of the Republic of Indonesia. Special Economic Zone, Coordinating Ministry for Economic Affairs is the institution that is assigned to managing the SEZ development program. Until today, the SEZ program is measured every year, using metrics parameters that always changing over year; the impact of it is clear, the SEZ progress evaluation is very difficult to be done, since there is no key performance indicator criteria are established to define a success factor of SEZ program. Lack of effective monitoring and evaluation is a critical weakness in most SEZ programs (2016 ASEAN Guidelines for SEZs). Managing each SEZ as well as all SEZs could use program management approach, since a huge interdependencies among projects within each SEZ development, and of course in managing all SEZ in Indonesia. In order to improve the effectiveness of monitoring system of SEZ program development, this research had identified the Key Performance Indicators (KPI) using the program benefit realization registration, of SEZ development in Indonesia. During the research, the authors find out there are 31 KPIs that relevant and can be used to monitor the SEZ development program in Indonesia.

**Index Terms-** Special Economic Zone, Benefit Register, Key Performance Index,

## I. INTRODUCTION

Special Economic Zone (SEZ) is one of an important supporting component and also one of Master Plan program for the Acceleration and Expansion of Indonesia's Economic Development 2011-2025, which is held based on the approach of the presence of growth centers in 6 economic corridors. The development of this corridor is defined as the development of territories to create and empower an integrated and competitive and sustainable economic base (2011 Activity Report of the National Council of Special Economic Zones, 2011). Since the external and internal forces being bigger and must be considered deeply, the development of SEZ which was originally oriented towards growth and equity is no longer adequate for Indonesia. Indonesia needs to develop SEZ program that align to the world dynamics, especially in economy and technology aspects. SEZ is encouraged to be able to build added value for mastery of technology and human resources (2020 Activity Report of the National Council of Special Economic Zones, 2020)

With the spirit for a better Indonesia, during its twelve-year journey, the development of SEZ in Indonesia is still not being optimal. One factor is the lack of effective monitoring and evaluation, which is a critical weakness in most SEZ programs. The regulator should establish a set of indicators to monitor the success of the SEZ program. A number of tools and methodologies for addressing indicators must be in place, and monitoring must be rigorous, regular, and in accordance with political commitments (ASEAN Guidelines for Special Economic Zones (SEZs) Development and Collaboration, 2016). The measurement system is necessary to set program goals and to control improvements by monitoring effectiveness and efficiency of that program development.

A common approach to taking this measurement is through the use of Key Performance Indicator (KPI) metrics. In the analysis of relationship among project management performance and project success in a project-based organization, project management KPIs are the most significant variable for the success of a project (Villazón, Pinilla, Olaso, Gandarias, & de Lacalle, 2020).

Program management is defined as the application of program knowledge, skills, and principles to achieve program objectives and to obtain benefits and controls that are not available by managing program components individually. Program management is performed by program managers who are assigned by the organization to lead the team responsible for achieving program goals and objectives

(The Standard Program Management 4th Ed., 2017). Program management's KPIs provides insights to find out whether the program is running well or not. In program management, the KPIs used can track the results of a business, from before the program started to after the program had been finished. By using program's KPI, management have capabilities to monitor either the program align to the goals of the business and (Eby, 2022).

SEZ development that has been spread throughout Indonesia, has not been maximised yet, since many obstacles to the achievement of national economic development. The annual report of the SEZ National Council have Key Performance Indicators which different metrics every year. This different metric of KPI every year, make the difficulty of program coordinator to understand the real program progress. Based on this fact, a list of benefits of appropriate KPIs that can be used to evaluate each SEZ program as well as national SEZ programs is needed, in order to improve SEZ development in Indonesia. This study aims to identify relevant benefits and KPIs in SEZ in Indonesia as well as group KPIs against the list of benefits.

## II. LITERATURE REVIEW

III. A Special Economic Zone (SEZ) is an area with certain boundaries within the jurisdiction of the Unitary State of the Republic of Indonesia. It's designated to carry out economic functions and obtain certain facilities. The implementation of special economic zones (SEZ) in Indonesia is regulated in Law No. 39 of 2009. SEZ is developed through the preparation of areas that have geo-economics and geo-strategic advantages and function to accommodate industrial activities, exports, imports, and other economic activities that have high economic value and international competitiveness (Law of the Republic of Indonesia Number 39 concerning SEZ, 2009). In its development, in order to be able to maintain the management of SEZ development to remain in line with the dynamics of the world economy and technology, the government transforms the SEZ development policy by emphasizing the orientation on the realization of SEZ which not only emphasizing the acceleration of regional economic growth and equitable development nationally, but also encourages the benefit realization of SEZ. The benefit realization of SEZ is expected able to build added value for mastery of technology and human resources, thru the development of Health SEZ, Education SEZ, Digital Economy SEZ and Maintenance, Repair and Overhaul SEZ (2020 Activity Report of the National Council of Special Economic Zones, 2020).

Programs and projects, as an essential element of the organization's portfolio; They are undertaken to produce the outputs and deliverables necessary to support the organization's strategic objectives. Program management is defined as the application of program knowledge, skills, and principles to achieve program objectives and to obtain benefits and controls that are not available by managing program components individually. Program benefit management is a performance domain that explains, creates, maximizes, and provides benefits that have been provided by a program. This management consists of several elements that focus on the success of a program. From the stakeholder point of view, the purpose of program benefits management is to create the ability to focus on the results and benefits provided by various activities carried out during the program development lifecycle (The Standard Program Management 4th Ed., 2017).

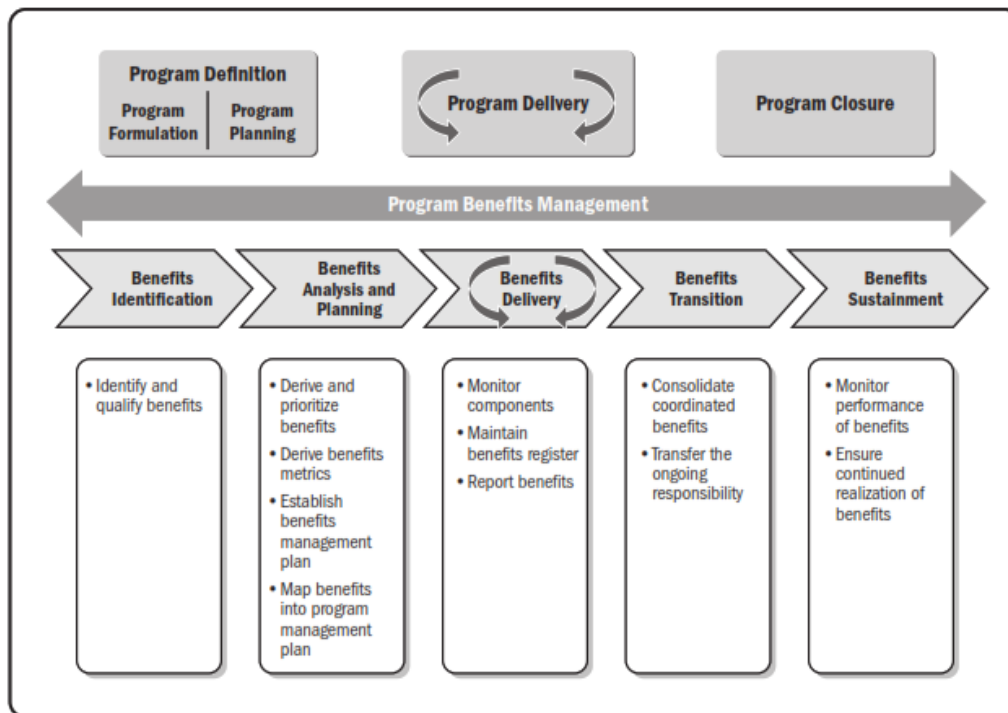


Figure 1. Life-cycle Phase and Program Benefits Management

Key Performance Indicators are progress reports on specified achievements (Andresen, 2015). According to May (2009), KPIs are a measure of the performance of an activity that is important for the success of organizations and projects. KPIs in construction enable the measurement of the performance of projects, organizations and enterprises across industries (The KPI Working Group, 2000; Beatham, Anumba, Thorpe, & Hed, 2004).

#### IV. METHODOLOGY

This research uses a qualitative and quantitative approaches Literature studies is done in order to register benefits as well as relevant KPIs for SEZ. Based on the data collected thru literature study, this research establish Unstructured interviews with experts, ranging from academics and professionals who have backgrounds related to the industrial sector of the SEZ in Indonesia. The experts selection of is done using purposive sampling, to make sure the interview results has tight compatible with the research purpose..

#### V. RESULTS AND DISCUSSION

Based on the results of the study, there are 3 relevant benefits in the SEZ development program in Indonesia, namely economic, social and environmental benefits. The economic benefits include improving the economy of a region, gaining foreign investment, and increasing exports. The social benefits are improving people's skills, education, as well as job creation. and the environmental benefits such as increasing the volume of clean water, reducing water pollution and also air pollution.

Based on the literature study, there are 38 KPIs that can be used as SEZ performance metrics.

Table 1. Key Performance Indicator for SZE

Variable	Description	Definition/ Explanation
X1	International (Export)	Shipping merchandise abroad
X2	Domestic (Micro, Small, Medium Enterprise)	Serving Micro, Small, and Medium Enterprises in the country
X3	Public Transport Subsidy	Subsidies for the use of public transportation / transportation
X4	Utility Subsidies	Utility subsidies in the SEZ area
X5	Fiscal & Non-Fiscal	Government policies related to fiscal and non-fiscal
X6	Corporate tax relief	Corporate tax relief
X7	GDP (Gross Domestic Product)	Increase in gross domestic product
X8	Foreign Investment	Investment commitments and investments absorbed
X9	Local Revenue	Increase in Local Revenue
X10	Skill Level	Skill level of workers
X11	Unemployment Rate	Unemployment rate
X12	Education	Level of knowledge
X13	Employment	Labor absorption
X14	Salary	Wage rate of workers
X15	Social culture	Conditions of the social environment
X16	Train	Train access
X17	Airline access	Airline access
X18	Sea lane access	Sea lane access
X19	Port	Port access
X20	Highway	Highway access
X21	Clean Water	Availability of clean water
X22	Customs Office	Customs office availability

X23	Electricity & Telecommunications	Electricity and telecommunications supply
X24	Convenience Store	Convenience store availability
X25	High-Level Technology	High-level technological operation
X26	Regional Participation	Administration Support and government regulation
X27	The timing of the formation of the program	Duration from the start of the formation of the SEZ to the operation
X28	Duration of operation	Duration of operation of SEZ
X29	SEZ Operator	SEZ Operator
X30	Land	Land Area in SEZ
X31	Market distribution access	Easy access to the market
X32	Access to raw materials	Ease of obtaining raw materials
X33	SEZ preparation costs	Cost of preparation for construction at the SEZ site
X34	Air Pollution	Air Cleanliness Level
X35	Noise Pollution	Sound noise level
X36	Green Area section in total area	Comparison of area to green area
X37	Energy Consumption	Energy consumption
X38	Water Pollution	Water pollution level

Based on the research questioner results, there are 7 KPIs of the 38 KPIs irrelevant to use for monitoring SEZ performance in Indonesia. The 7 irrelevant KPIs namely utility subsidies, unemployment rates, high-level technology, program formation time, SEZ operators, land area, and SEZ preparation costs. The relevant KPIs metrics in SEZ Indonesia consist of 31 parameters. Next, the 31 KPIs are grouped into a list of benefits (economic, social, and environmental).

Table 2. Key Performance Indicator for Economic Benefit Register

Variable	Description
X1	International (Export)
X3	Public Transport Subsidy
X5	Fiscal & Non-Fiscal
X6	Corporate tax relief
X7	GDP (Gross Domestic Product)
X8	Foreign Investment
X9	Local Revenue
X16	Train
X17	Airline access
X18	Sea lane access
X19	Port
X20	Highway
X22	Customs Office
X23	Electricity & Telecommunications
X24	Convenience Store
X28	Duration of operation

X32	Access to raw materials
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Table 3. Key Performance Indicator for Social Benefit Register

Variable	Description
X2	Domestic (Micro, Small, Medium Enterprise)
X10	Skill Level
X12	Education
X13	Employment
X14	Salary
X15	Social culture
X26	Regional Participation

Table 4. Key Performance Indicator for Environment Benefit Register

Variable	Description
X21	Clean Water
X30	Land
X34	Air Pollution
X35	Noise Pollution
X36	Green Area section in total area
X37	Energy Consumption
X38	Water Pollution

## VI. CONCLUSION

The grouping of KPI's parameter into benefit area results are submitted to the SEZ experts to get their feedback. The feedback results is as follow: 1). 17 KPI parameters for economic benefits; 2). 7 KPI parameters for social benefits, and 7 KPI parameters for environmental benefits. Since the SEZ monitoring function involving the urban/ municipals, province and national levels, the next research is to define the institutions among urban/ municipals, province and national, that has authorization to manage the KPI parameters. The final result of this study are expected to be able to provide input to the government and related stakeholders in formulating KPIs in monitoring as well as evaluating the performance of SEZ program development in Indonesia.

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