

## Formulation Workshop of Business Processes and Standard Operating Procedures at Medan State University

Winsyahputra Ritonga<sup>1</sup>, Muhammad Yusuf<sup>2</sup>, Ichwanul Muslim Karo Karo<sup>3\*</sup>  
Universitas Negeri Medan

**Corresponding Author:** Ichwanul Muslim Karo Karo [ichwanul@unimed.ac.id](mailto:ichwanul@unimed.ac.id)

### ARTICLE INFO

*Keywords:* SOP, Bizagi, Workshop

*Received :* 20, July

*Revised :* 22, August

*Accepted:* 24, September

©2024 Ritonga, Yusuf, Karo: This is an open-access article distributed under the terms of the [Creative Commons Atribusi 4.0 Internasional](https://creativecommons.org/licenses/by/4.0/).



### ABSTRACT

The availability of effective and standardized documentation Standard Operational Procedure (SOP) and business processes of Medan State University (Unimed) creates an effective and efficient bureaucracy, maintains the quality and consistency of campus services and achieving the campus vision. In fact, there are still unstandardized SOP and business processes based on two Ministerial Regulations (PERMENPAN RB) No. 19 in 2018 and No. 35 in 2012. Due to the limited number of human resources who understand, it is necessary to improve the ability of human resources to compile effective and standardized SOP and business processes. This workshop activity reached out to all faculty and postgraduate program participants. The tool used to develop SOP and business processes is the Bizagi application

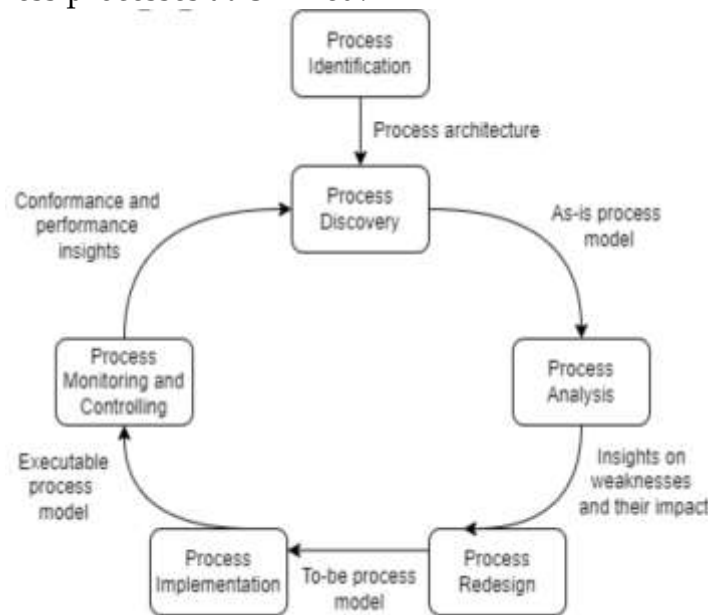
## **INTRODUCTION**

Universitas Negeri Medan (Unimed) is one of several government educational institutions that have an obligation to provide services for students and the public society (Batubara & Insan, 2022). As an educational institution under government control, it must have a clearly defined standard operating procedure (SOP) and business process for every service to students, the academic community and the public. Every SOP and university business process must be standardized and well documented for various institutional achievements, such as accreditation, quality audits, integrity zones and so on. SOP is structured guidance documents that are based on technical, administrative, and procedural indicators of daily operational activities. (Siti Maryam, 2023). While a business process is a series of structured activities that are interrelated to solve a particular problem or produce a product/service, a series of activities can be done by stakeholders or systems (Nugroho, 2021). SOPs and business processes are guidelines for the campus academic staff in performing their work.

The ability to develop SOPs and business processes is necessary for the sustainability of the institution. The availability of effective SOPs and business processes creates an effective, efficient, and economical bureaucracy in educational institutions. In addition, the availability of these documents is very important to maintain the quality and consistency of work results (Asih, 2018), effective and efficient methods as references and work rules (Kurniawan, Rizky Cikal, Agatha dkk, 2021) (Hadiwiyono, P.S., & Panjaitan, T.W., 2013), solutions to minimize the occurrence of various obstacles in the organization and promote continuous improvement (Setiawan, 2011). The benchmark for assessing the effectiveness and efficiency of organizational performance in implementing its work program is through SOPs (Chrisyanti, 2011).

The Indonesian government has established two Regulations of the Minister of Administrative Reform and Bureaucratic Reform of the Republic of Indonesia (PERMENPAN RB RI) that regulate SOPs and business processes. PERMENPAN RB RI number 19 in 2018 about the preparation of business process maps of government agencies and PERMENPAN RB RI number 35 in 2012 about guidelines for the preparation of standard operating procedures for government administration. These guidelines are rules for the government to develop SOPs and business processes in the context of realizing bureaucratic reform within each agency. Based on the analysis of the situation and conditions in accordance with these rules, there are still SOPs and business processes in Unimed that have not fulfilled the two PERMENPAN RB RI. The next problem is the lack of understanding of human resources (HR) in documenting SOPs and business processes set by the government.

BPMN (Business Process Modeling Nation) is a standardization for the illustration of a business process (Cahyanti et al., 2022). BPMN is also commonly used as a standard in drafting SOPs. BPMN is a standardized method in developing business processes and SOPs so that they can be easily understood, organized and used. In addition, BPMN is also flexible to make continuous process improvements as a form of optimization. BPMN lifecycle as a continuous cycle consisting of several phases as shown in Picture 1 (Cahyanti et al., 2022). Thus, this science and technology is also used to solve the problem of preparing SOPs and business processes at Unimed.



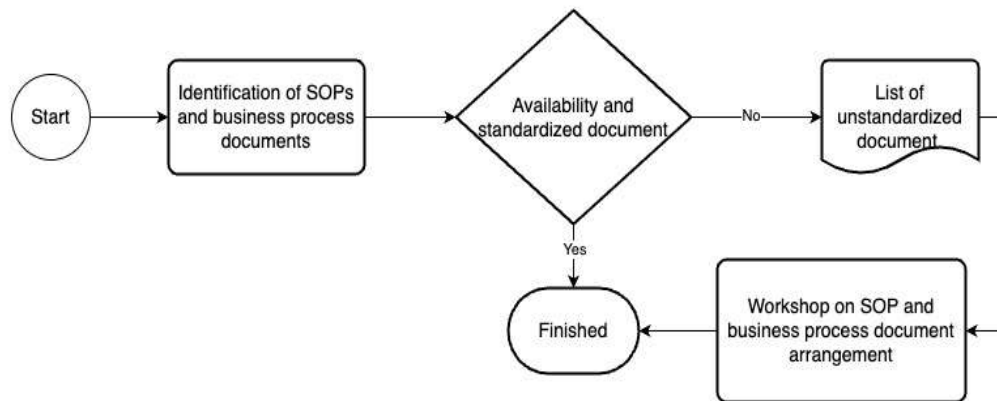
**Figure 1. BPMN Lifecycle (Cahyanti et al., 2022)**

This is the motivation to engage in service regarding the preparation of Standard Operating Procedures and business processes at Unimed. This activity produces outcomes and outputs. All SOPs and business processes within Unimed are documented according to ministerial standards. In addition, a tutorial module on the installation and use of the Bizagi application is available for SOP and business process compilers. Both products are outputs generated from this activity. Each Faculty and Directorate of Postgraduate Unimed has included representatives of 6 people. In other words, there are six human resources in each work unit in Unimed who already know and are able to develop SOPs and business processes effectively. The impact is that every policy in each unit can be prepared effectively and standardized SOPs and business processes.

## IMPLEMENTATION AND METHODS

This activity is a workshop combining training methods and increasing understanding of a problem. This activity was implemented in the form of a series of activities (Picture 2). The series of activities focused on implementation in the Unimed environment. The activity of identifying SOP documents and business processes aims to check whether all service activities in Unimed are available and standardized. All services in Unimed must have SOP documents available. The absence or unstandardized SOP or business process will be entered into the To do List of such documents so that it will be re-arranged during the workshop activities.

In this section the author needs to explain the method of implementation and the method of service carried out. The description of the implementation of the activities includes the location, time, background of the participants and the number of participants. Meanwhile, the description of the activity method includes the methods and materials presented.



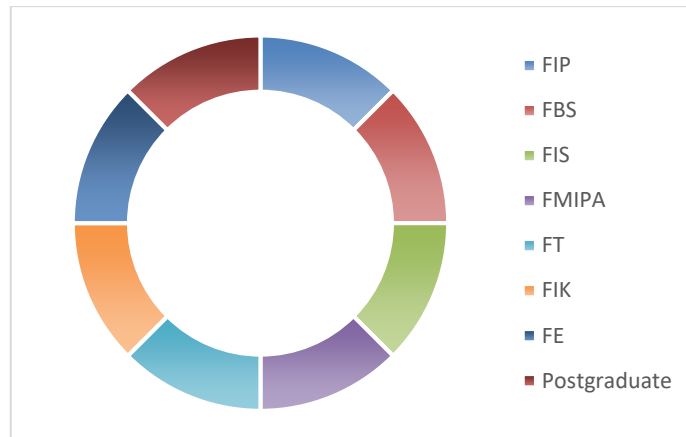
**Figure 2. Workshop Activity Flow**

The Bizagi Modeler application and BPMN approach are used to support Unimed's SOP and business process development activities. Bizagi Modeler is a desktop application that can be used to create diagrams using BPMN (Bizagi, 2020). Bizagi Modeler allows the storage of SOP and business process designs in collaboration and storage in the cloud. Of course, these advantages can increase the efficiency of organizational work.

## RESULTS AND DISCUSSION

### Participant

This activity was attended by all representatives of faculties and postgraduate programs within Unimed (Shown in Picture 3). There are seven faculties and one postgraduate program; Faculty of Education (FIP), Faculty of Language and Arts (FBS), Faculty of Social Sciences (FIS), Faculty of Mathematics and Natural Sciences (FMIPA), Faculty of Sport Science (FIK), Faculty of Economics (FE), and Faculty of Engineering (FT). Each faculty and postgraduate program included six lecturers or education staff in the activity. The representation represents the work areas of change management, structuring management, structuring the HR management system, strengthening accountability, supervision, and quality of public services.



**Figure 3. Distribution of Participants**

### *Workshop Implementation*

This activity was realized in two phases (Table 1). Activity 1 focused on the installation of supporting tools in the preparation of SOPs and business processes (Picture 4). The tools that were installed were Bizagi. Bizagi Modeler is a desktop application that can be used to create diagrams using BPMN (Business Process Model Notation). There are two main points delivered in activity 1, participants can install the Bizagi application and introduce features and notations in Bizagi.

**Table 1. Workshop Schedule**

No.	Activity Time	Activity Description
1	26 April 2024	<ul style="list-style-type: none"> <li>Identify the condition of SOPs and Business Processes in each Unit</li> <li>Installation of Bizagi Modeler Application for the preparation of SOPs and Business processes</li> </ul>
2	8 May 2024	<ul style="list-style-type: none"> <li>Re-design SOP and Business process</li> <li>Reinforcement of the importance of effective and standardized SOPs and business processes</li> </ul>

The stages of the Bizagi application installation delivered to the participants include:

1. Access to the Bizagi website <https://www.bizagi.com/en>
2. Register a new account
3. Account verification
4. Login on the website <https://www.bizagi.com/en>
5. Download Bizagi software
6. Double click on the downloaded software
7. Click next until finished



Figure 4. Installation and Introduction of Bizagi Application

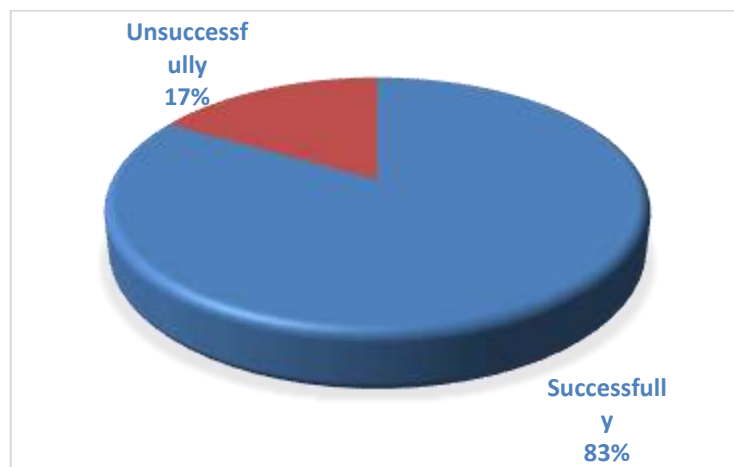









Figure 5. Percentage of Success of Participants Installing the Application

At the installation stage, terdapat 40 of 48 participant successfully installed the application. In other words, 83% of participants who successfully register and install the Bizagi application (Picture 4). In addition, we also identified the causes of participants' failure to install the application. Eight participants were using IOS operating systems, these are Mac OS M1 and M2. After confirming in various online discussion groups, the operating systems did not support the application.

Furthermore, participants were also introduced to various elements in the Bizagi application and their usage. There are ten fundamental elements. Some examples of elements are presented in Table 2. Every SOP or business process contains at least four elements, start event, end event, task and connector.

**Table 2. Elements in Bizagi Application**

Elemen	Simbol	Deskripsi
<i>Start event</i>		Indicates the beginning of a process/SOP/business process
<i>End event</i>		Indicates the end of a process/SOP/business process
<i>Task</i>		A process or activity in a series of SOPs/business processes
<i>Gateway</i>		Used to control the divergence and convergence of sequence flow. They determine branching, bifurcation, combination, and merging in the process. The term "Gateway" implies that there is a gating mechanism that permits or prohibits passage through the Gateway
<i>Connector</i>		Used to connect between every element
.	.	.
.	.	.
.	.	.
<i>Data</i>		Presents information about access to a document stored or accessed in an SOP or business process.
<i>Artifacts</i>		Artifacts provide modelers with the capability of showing additional information about the process that is not directly related to the flow.  Artifacts are found in the Palette. There are five types provided by default, and a user-defined Custom Artifact

Activity 2 focuses on the practice of designing SOPs and business processes. Participants were asked to draw up SOPs or business processes with the Bizagi application. The practice mechanism is organized in groups (Picture 6). The group is based on each faculty. SOPs or business processes that will be created are documents sourced from each Faculty and postgraduate and have been previously defined. The target on the second day of activities is that each group produces at least three SOPs or business processes that have been prepared and evaluated by Unimed internal quality assurance unit.



**Figure 6. Practical Activities for the Designing SOPs and Business Processes**

All Faculty and Postgraduate groups have successfully developed SOPs and business processes in accordance with their respective policies. The realization of the number of SOPs or business processes that have been redefined is presented in Table 3. Seven out of 8 units managed to exceed the target. FMIPA and FT successfully redefined five SOPs or business processes. The results of the two faculties are the largest number compared to other units.

**Table 3. Number of SOP or Business Process for Each Faculty/Postgraduate**

Faculty/Postgraduate	Number of SOP/Business Process
FIP	4
FBS	4
FMIPA	5
FT	5
FE	4
FIK	4
FIS	4
Postgraduate	3

### *Evaluation of Activity*

At the end of the second activity, participants were asked to provide feedback on a series of activities. There were four aspects evaluated, content of the workshop, content mastery by the presenter, duration of the workshop, and participants' satisfaction with the workshop. The evaluation results are shown in Table 4. There are 45 of 48 participants who think that the content is very useful and the same number of them want a longer workshop time. There are 44 of 48 participants considered that the presenter mastered the content and all participants are satisfied for the workshop. Even 95.83% of participants are very satisfied for the event.

**Table 4. Evaluation of Workshop**

No	Indicator	Evaluation
1	Content of workshop	Content is very useful: 93.75% Content is useful: 6.25%
2	Content mastery by presenter	Presenter masters the content: 91.67%
3	Duration of workshop	Need more time: 93.75%
4	Participants' satisfaction with the workshop	Participants are very satisfied: 95.83% Participants are satisfied: 4.17%

## CONCLUSIONS AND RECOMMENDATIONS

The conclusion presents a summary of the description of the results and discussion, referring to the partner's problem. Based on these two things, describe the supporting and inhibiting factors of the activity. From this series of activities, it can be concluded that the preparation of SOPs and business processes must be in accordance with the rules of PERMENPAN RB RI Number 19 of 2018. Every business process and SOP is modeled in the form of BPMN. A total of 40 lecturers from seven Faculties and Postgraduate Program of Medan State University have been successfully trained and installed the Bizagi application for the purposes of preparing SOPs and business processes. Furthermore, each lecturer representative from the faculty has successfully compiled three SOPs and business processes as pilot projects in accordance with their respective faculty policies. A follow-up plan is needed to ensure that all SOPs and business processes have been completed with standardization according to the rules.

## ACKNOWLEDGMENT

The author would like to thank Medan State University.

## REFERENCES

- Batubara, S. S., & Insan, M. Y. (2022). Analisis Determinan Kinerja Pegawai di Lingkungan Biro Rektor Universitas Negeri Medan. *Maneggio: Jurnal Ilmiah Magister Manajemen*, 5(1).  
<https://doi.org/10.30596/maneggio.v5i1.10191>
- Anaya, L. F., & Carreño, D. (2020). Modelado del proceso productivo de productos fritos "Los lanceros" en Bizagi Modeler utilizando Business Process Management. *Congreso Internacional de Administracion*, 1.
- Ari Setya Budi, & Wiwik Handayani, W. (2022). Strategi Proses Bisnis Pada Startup Jasa Digital Marketing Agency. *Jurnal E-Bis (Ekonomi-Bisnis)*, 6(1).  
<https://doi.org/10.37339/e-bis.v6i1.870>

- Bekesiene, S., & Krivcovas, A. (2020). Military field camp installation improvement solutions: Lithuania case. *Challenges to National Defence in Contemporary Geopolitical Situation*, 2020(1). <https://doi.org/10.47459/cndcgs.2020.21>
- Bizagi. (2020). Bizagi Modeler User Guide. In 2020.
- Cahyanti, Y. D., Wiranti, Y. T., & Atrinawati, L. H. (2022). Penyusunan Proses Bisnis dan Standar Operasional Prosedur Administrasi Pemerintahan (SOP AP) pada Kelurahan Sepinggan. *JTKSI (Jurnal Teknologi Komputer Dan Sistem Informasi)*, 5(3). <https://doi.org/10.56327/jtksi.v5i3.1236>
- Cosma de Souza, I. B., Neves de Oliveira, A. V., Alves Arede, C., Machado de Oliveira, R. E., & De Freitas Garcia, A. L. (2024). Unitarização de medicamentos em um hospital de grande porte do Distrito Federal: uma análise farmacoeconômica. *JORNAL DE ASSISTÊNCIA FARMACÊUTICA E FARMACOECONOMIA*, 9(1). <https://doi.org/10.22563/2525-7323.2024.v9.n.1.p.18-25>
- Krasnov, A. N., Prakhova, M. Y., & Tarasenko, A. S. (2021). Increase of Unstable Gas Condensate Accounting Accuracy. *Lecture Notes in Mechanical Engineering*. [https://doi.org/10.1007/978-3-030-54814-8\\_123](https://doi.org/10.1007/978-3-030-54814-8_123)
- Nafie, F. M., & Talab, S. A. (2013). Comparative study between workflow tools Case study: Arabdix workflow and Bizagi express. In *International Journal of Engineering Inventions* (Vol. 3, Issue 3).
- Nugroho, D. W. A. (2021). Rancang Bangun Sistem Informasi Gelanggang Olahraga berbasis Web dengan Metode Scrum. *JATISI (Jurnal Teknik Informatika Dan Sistem Informasi)*, 8(4). <https://doi.org/10.35957/jatisi.v8i4.1132>
- Siadat, S. H., & Shamasbi, S. M. (2015). Reengineering Purchase Request process of TAM Iran Khodro Company using Best Practices. 2015 7th Conference on Information and Knowledge Technology, IKT 2015. <https://doi.org/10.1109/IKT.2015.7288804>
- Siti Maryam, N. (2023). Penyusunan Standar Operasional Prosedur Bidang Pertanahan di Dinas Perumahan dan Kawasan Permukiman Kota Bandung. *Transparansi: Jurnal Ilmiah Ilmu Administrasi*, 6(1). <https://doi.org/10.31334/transparansi.v6i1.3113>