

# Implementation of Agile Methodologies in Developing Upstream Land and Properties Tax Reporting System to Mitigate Tax Sanction Risk: Case Study: KKKS XYZ

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**Keywords:** Upstream Land and Properties Tax, System Development, Agile Methodologies, Tax Reporting System, Model-Driven Approach.

**Abstract:** This thesis aims to develop upstream land and properties tax reporting system to mitigate tax sanction using a case study of KKKS XYZ, an upstream company which signs oil and gas production sharing contract under pre-PP No. 79 Tahun 2010 regime. Under this regime, the company has an obligation to report its land and properties tax every year and to pay the tax due using overbooking procedure. In recent year, KKKS XYZ receives several Notice of Tax Underpayment Assessment after the tax examination by the fiscus found incorrect land and properties reported data in KKKS XYZ's tax report. The company should bear the tax fine by its own liability since it cannot be charged as an operating cost that can be recovered by the government. A complete and accurate land and properties reporting system are needed to mitigate the risk of future tax sanctions. In this study, we will develop a tax reporting system using six steps of system development developed by Satzinger et al. (2012) through agile methodologies and model-driven approach. Specifically, we use process modelling technique and system tools such as interview and Flowchart. The system development process will be implemented iteratively.

## 1 INTRODUCTION

Oil and gas are a strategic natural resource that has a significant role in Indonesia's economy. Besides being an important non-renewable energy source for people, oil and gas mining provides income for the state in the form of taxes and non-tax revenues. Government Act No. 22 of 2001 regarding Oil and Gas states that revenues from oil and gas in the form of taxes include taxes from oil and gas, import duties and other levies on imports and excise, as well as regional taxes and regional retributions. Non-tax state revenues include the state's share, state levies in the form of permanent contributions and exploration and exploitation contributions, and bonuses.

Oil and gas mining include exploration and exploitation activities (Pudyantoro, 2012). Oil and gas exploration and exploitation activities are carried out within the working area on the ground and inside the land using production facilities. According to the Ministry of Finances Regulation No. 76/PMK.03/2013, land and properties tax on the oil and gas sector (ULP Tax) is subjected to people or

entities that have a right to the land, and/or benefit from the land, and/or have, control, and/or obtain benefits for properties that are objects of the ULP Tax.

ULP Tax according to the tax collection mechanism can be grouped into an official assessment system, a collection system that authorizes the tax officer to determine the amount of tax payable (Waluyo, 2011). However, the taxpayer of ULP Tax is not entirely passive because the taxpayer is given the authority, trust, and responsibility to report data in the Notification of Tax Objects along with the Appendix of Tax Object Notification to the Tax Office determined by the Director General of Taxes. The taxpayer then waits for the Payable Tax Notification Letter for the tax object that is owned, controlled, and/or obtained per January 1.

KKKS XYZ is one of the production-sharing contract's contractors for oil and gas mining with work areas spread across several districts and cities in Indonesia. KKKS XYZ received a mining contract from the government before the enactment of

Government Regulation No. 79 of 2010, which means that the payment of the ULP Tax for KKKS XYZ is made through overbooking procedure. In accordance with the regulations mentioned above, KKKS XYZ compiles and reports Notification of Tax Objects to Tax Office where KKKS XYZ operates every year.

Data from the Tax KKKS XYZ Division shows that from 2014 until 2017 there are 25 Underpayment Tax Assessment Letters from 6 Tax Offices where KKKS XYZ report the Notification of Tax Objects with a total principal value of IDR 83.07 billion and tax fine of IDR 20.77 billion. Issuance of Underpayment Tax Assessment Letters from Tax Office is due to differences in land and properties data between tax authorities and KKKS XYZ. The Underpayment Tax Assessment Letters recapitulation received by KKKS XYZ from Tax Office can be seen in Table 1.

Table 1: Recapitulation of KKKS XYZ's ULP Tax Underpayment Tax Assessment Letters 2013-2017 (in million rupiah).

Year	No of UTAL	Principal Value	Tax Fine	Total
2013	1	662	165	827
2014	10	38,031	9,507	47,539
2015	10	42,847	10,711	53,559
2016	4	2,185	546	2,731
Total	25	83,065	20,766	103,831

Article 13 Government Regulation No. 79 of 2010 states that administrative sanctions in the form of interest, fines and increases as well as criminal sanctions in the form of penalties associated with the implementation of laws and regulations in taxation and claims or fines arising out of contractor's fault due to willful misconduct or negligence cannot be calculated as a recoverable operating cost. Thus, from 2013 to 2017 KKKS XYZ bore its own tax penalty of IDR 20.77 billion.

Based on discussions with the Tax Division of KKKS XYZ, there are several factors that cause differences in data on land and properties assets in the ULP Tax report that can be grouped into several factors: material, people, methods, tools, and environment. These factors can be seen in Table 2. Actions are needed to reduce the risk of fines from the issuance of Underpayment Tax Assessment Letters due to differences in land and properties data between the tax authorities and KKKS XYZ in ULP Tax report by identifying the causes of the problems. This study seeks to overcome these factors by making improvements to the ULP Tax reporting system.

Table 2: Root Cause Analysis of Data Differential.

Root Cause	Analysis
Materials	The preparation of the ULP Tax Report collects a large amount of data on land and building assets.
People	Work overload in the Treasury Function as the responsible function for preparing the ULP Tax Report. Lack of knowledge in compiling the ULP Tax Report.
Methods	The preparation of the ULP Tax Report requires intensive coordination between the functions of users/owners of data on land and building assets.
Tools	The working paper on asset inventory is different/out of sync with the working paper of Notification of Tax Objects along with the Appendix of Tax Object Notification.
Environment	The DGT staff does not have sufficient knowledge of the assets used in the oil and gas mining industry. Tax intensification by DGT to pursue tax targets. Changes in the condition of the Regency and City areas which are the reporting bases of the ULP Tax. The extensive KKKS XYZ working area covers many regencies and cities throughout Indonesia.

This is a case study research by raising the issues above. This study designed the ULP Tax reporting system using the system design process proposed by Satzinger et al. (2012) with the agile methodologies approach and model-driven approach. Specifically, system design uses process modeling techniques with documentation and system design tools used are interviews and flowcharts. System design is implemented iteratively. At the end of this study a proposal for a new work instruction will be presented which is used as a solution to the problem.

In this study, the data collected were qualitative data and quantitative data. Qualitative data used in the form of tax regulation documents and regulatory documents related to upstream oil and gas business activities issued by SKK Migas. Quantitative data are ULP Tax data issued by the Directorate General of Taxes (DGT) in the form of Payable Tax Notification Letter (SPPT) and Underpayment Tax Assessment Letters (SKPKB) received by KKKS XYZ as well as data on land and properties assets owned by KKKS XYZ. The data sources used in this study are primary data and secondary data. Primary data in this study were obtained from the results of interviews conducted with KKKS XYZ. Secondary data in this study is the working system document of KKKS XYZ, ULP Tax data issued by the DGT in the form of Payable Tax Notification Letter and Underpayment Tax Assessment Letters, as well as the Notification of Tax Objects along with the Appendix of Tax Object Notification reported by KKKS XYZ.

## 2 THEORETICAL FRAMEWORK

According to Director General of Taxes Regulation No. PER-45/PJ/2013, subject ULP tax is a person or entity that actually has the rights to the land, and/or benefits from the land, and/or has, controls and/or obtains benefits from buildings, over objects of ULP Tax and is a contractor of production sharing contract who has received a contract from oil and gas supervisory body. The object of ULP tax includes land objects, subsurface objects, and building objects with the following details:

- 1 Land objects include the area used for oil and gas mining activities covering the work area, namely certain areas within the Indonesian mining jurisdiction for the implementation of oil and gas exploration and exploitation, or similar areas and areas outside the work area or similar territory which are used as one entity for oil and gas mining activities. Land objects include onshore and offshore areas used for oil and gas exploration and exploitation activities. Both the onshore and offshore are divided into productive areas, developing areas, unproductive areas, and emplacement areas.
- 2 Objects of the subsurface of land are parts of area that are beneath the surface of the land. The object of the subsurface tax covers the subsurface of exploration and subsurface of exploitation which is under the surface of the land which has the potential or has produced oil and gas.
- 3 The object of the building is a technical construction that is planted or permanently attached to land in the onshore or offshore areas. Supporting buildings for oil and gas mining activities can be divided into public buildings and special buildings.

ULP Tax is a kind of centralize tax. In this case, the agency authorized to collect data to obtain, collect, supplement and administer tax objects and tax subjects, whether those who have not been registered in tax administration, who are already registered in tax administration or to produce geographic information related to tax objects and tax subjects are Directorate General of Taxes (DGT).

Calculation of tax payable on ULP Tax is based on the sum of the Tax Object Value of the land and buildings and Tax Object Value of the subsurface. After obtaining the value of the tax payable, the Head of the Tax Office determines the value of the ULP Tax and issues a Tax Return. Payable Tax Notification Letter consists of notification for onshore, offshore, and the subsurface. After Payable

Tax Notification Letter issued, taxpayers pay by way of transfer or paid for themselves by the taxpayer.

Payment by book-entry is carried out by taxpayers who sign a cooperation contract with the government before the enactment of Government Regulation No. 79 of 2010. The payment procedure by way of transfer is the DGT submits a request for payment of ULP Tax to the Director General of Budget (DJA) no later than the second week of June based on the Payable Tax Notification Letter and Notice of Tax Assessment ULP Tax. Administrative fines in the ULP Tax are not included in the payment request because they are sanctions to the taxpayer and must be paid by themselves. The DJA then applies for transfer to the Director General of the Treasury from the Oil and Gas account to the Perception Bank account and repays no later than 6 months for the Payable Tax Notification Letter and 1 month for the ULP Tax's Notice of Tax Assessment. Payment by self-imposed taxpayers applies to taxpayers who sign a cooperation contract with the government after the enactment of Government Regulation No. 79 of 2010. The procedure is that payments are made by taxpayers through the designated Perception Bank using a Tax Payment Letter.

According to DGT Regulation No. PER-45/PJ/2013, taxpayers can receive a fine if the taxpayer does not submit Notification of Tax Objects and Appendix of Tax Object Notification and after being reprimanded in writing in the Letter of Reprimand or based on the results of the investigation it is known that the amount of tax payable is greater than the tax calculated based on Notification of Tax Objects and Appendix of Tax Object Notification. The amount of tax payable in Notice of Tax Assessment is equal to the principal tax plus an administrative fine of 25% of the tax principal. Payment of fines is carried out by taxpayers themselves, both for taxpayers who make payments for ULP Tax through transfers and taxpayers who make payments for ULP Tax by taxpayers themselves. Penalty penalties imposed on taxpayers are the taxpayer's own responsibility and cannot be calculated in the calculation of profit sharing and income tax.

### Accounting Information System.

According to Boockholdt (1999), accounting information systems are part of management information systems. Management information systems are a set of procedures that can be used for decision making and organizational control when executed (Lucas, 1982). As a system used for decision making, the level or purpose of decision

making and the problems to be resolved must be clearly defined because this will affect the system used.

There are three objectives or levels in decision making, namely strategic planning, management control, and operational control (Bodnar & Hopwood, 1995). While in decision making, there are several forms of problems faced that determine the form of decisions taken, namely structured problems, unstructured problems, and semi-structured problems (Boockholdt, 1999).

According to Romney & Steinbart (2018), there are various reasons for an organization to make a system change, that change in user and organizational needs, technological changes, business process improvements, creating competitive advantages, increasing productivity, integrating systems, and old systems that have expired and need to be replaced.

In analyzing and evaluating the problems contained in the system, there is a framework that can be used to group system problems. Wetherbe & Vitalari (1994) as referred to by Whitten & Bentley (2007) developed a framework that can group system problems called PIECES Framework. PIECES Framework includes Performance, Information (and Data), Economics, Control (and Security), Efficiency, and Service.

According to Whitten & Bentley (2007), system design methods ensure that a consistent and repeatable approach has been applied to all information system projects; the risk of errors and shortcuts has been minimized; Project documentation has been fully and consistently documented; analysts, designers, and system builders can be immediately assigned to the project; and the results of previous work can be easily obtained and analyzed by a new system design team. The system design method is basically developed from the system design life cycle (SDLC).

Satzinger et al. (2012) develop system design in six processes, namely:

1. Identify problems and needs.
2. Plan and monitor the project - what will be done, how it will be done, and who will do it.
3. Discover and understand the details of the problem or need.
4. Design system components to solve problems or meet needs.
5. Build, test, and integrate system components.
6. Complete the system test and launch the resulting solution.

There are several tools that can be used to review, analyze, and design systems. These tools include

interviews, flowcharts, several forms of system documentation, and project management tools (Boockholdt, 1999).

1. Interview. Interviews are needed in system design to evaluate existing systems and identify new system requirements.
2. Flowcharts. Flowcharts describe business processes and document flows within an organization (Romney & Steinbart, 2018).

### **Agile Methodologies and Iterative Development.**

One of the weaknesses of the existing system design process is the failure to maintain the time and budget of the system design. Most system development is used to solve complex organizational problems that require a lot of planning in executing projects (Satzinger et al., 2012). In addition, the application of the SDLC method with a waterfall approach that is generally used assumes that the requirements that have been made at the outset in system design do not change until the end of the system design process or also called plan-driven approaches (Cobb, 2015).

In fact, many requirements in a system design project change because users often don't understand what is desired in the system (Romney & Steinbart, 2018). Users will find out and find other requirements that are different when the system design process is running. In addition, very rapid technological changes drive the product cycle to be shorter so that the system design method that requires a long time is no longer appropriate. Based on this, the system designer (system developer) requires an agile method, which is a method in which the system developer is open to changes in system design.

Agile methodologies or agile development is a system development process that focuses on flexibility in dealing with changes in system design (Satzinger et al., 2012). The basic philosophy of agile development is that either the system developer or user alike does not fully understand the problems and complexity of a new system so that project planning and execution must be able to deal with changes that occur in system design. The design of the system must be agile and flexible.

According to Satzinger et al. (2012), an agile system design is carried out iteratively and incrementally. Iterative development is a system design in which the system is arranged part by part through a series of iterations. Six core processes in system development are carried out simultaneously and are repeated continuously to add value to the entire system designed. Thus, in a system project there are several subproject systems to support the system.



At each iteration, a work plan is prepared that includes the creation of a Work Breakdown Structure (WBS), which lists hierarchies of activities and tasks that must be completed. In addition, an estimate of the effort that must be made and the parties/dependencies needed and the schedule for completing the tasks that have been recorded (Satzinger et al., 2012).

**Recent Studies.**

As far as the author's knowledge, there is not much research that discusses Land and Properties Tax, especially concerning the issue of reporting on ULP Tax in Indonesia in terms of system and tax subject. The ULP Tax research, which the authors obtained, for example Rosdiana et al. (2015) which discusses the impact of changes in regulation on ULP Tax after the enactment of Government Regulation No. 79 of 2010. According to Rosdiana et al. (2015), changes in the payment mechanism of ULP Tax from assuming and discharge principle to cost recovery method led to a decline in interest in investing in the upstream oil and gas sector in Indonesia.

Another research is Adhi's (2006) research which discusses the design of the ULP Tax object database system Non-Oil and Gas Mining Sector with a case study on Sukabumi Tax Office. Then there is the study of Hermawan (2005) which discusses the effect of the mechanism of the imposition of the ULP Tax on offshore waters and production based on the location of the tax object on regional revenues.

**3 RESEARCH METHOD**

In terms of decision making, the tax reporting system is used to solve operational problems. In terms of tax calculation and reporting there are criteria and mechanisms stipulated in tax regulations. In addition, tax issues are a structured problem with clear solutions. Thus, the information system needed in tax reporting is a system that can receive and process accurate historical data to produce correct and complete tax reports to the tax authorities.

System design through the six processes proposed by Satzinger et al. (2012). All these processes are carried out iteratively. In designing the system in this study, the system is divided into two iterations which include a sub-system of inventory of assets of the land the ULP Tax Notification of Tax Objects of the KKKS XYZ is the timeliness of payment and the suitability of the value of the Payable Tax Notification Letter of ULP Tax with the obligation that should be payable.

and buildings and sub-systems for preparing and evaluating reporting. The division of system design into two iterations is due to the analysis carried out, there are two components/sub-systems needed to design the ULP Tax reporting system.

The design and documentation of the system in this study uses system tools such as interviews and flowcharts. The interview was conducted to identify problems and the factors that cause the problem and obtain the activities expected in the ULP Tax reporting system. Flowcharts are used to document the types of input/output data and business processes carried out in the related parts or functions for reporting on ULP Tax in the KKKS XYZ. Flowcharts are chosen because this tool is widely used in documenting systems and writing work procedures in KKKS XYZ.

**4 ANALYSIS**

**Current System Analysis.**

KKKS XYZ has a system for ULP Tax reporting, The Taxation Guidelines as a manual document and a work instruction document to create and report ULP Tax. The guidelines contain a general description of the obligations of the KKKS XYZ on Land and Building Taxes. The KKKS XYZ Tax Guidelines state that the company is obliged to submit ULP Tax object data to the DGT and the payment will be calculated by the Ministry of Finance from oil and gas revenues. Submission of ULP Tax object data is the responsibility of the Financial function assisted by other functions such as the Legal, Surface Facility, and ICT functions to help smooth the submission of data on ULP Tax Oil and Gas objects. Fulfillment of tax obligations must meet the basic principles that include compliance, transparency, optimization, evaluation and tax management.

The document reporting work instructions for the ULP Tax KKKS XYZ contains the mechanism for making and reporting ULP Tax conducted by reviewing the asset data master using the DGT Oil and Gas Notification of Tax Objects reporting format. The assets in question are land and buildings that are objects of the ULP Tax. The indicator of the success of the procedure for the preparation and reporting of

There are several weaknesses in the current ULP Tax reporting system in the KKKS XYZ by analyzing the documentation of the ULP Tax reporting system using the PIECES Framework. The weakness of the system supports the causes of the ULP Tax reporting problem which led to tax sanctions received by the

Table 3: Current System Analysis.

No	PIECES Framework Classifications	System Weakness Analysis	Relevant Causes	Suggestion
1	Efficiency: the effort to complete the task is very large  Service: a confusing system to use	The system does not provide complete and detailed instructions or provide references to tax regulations to prepare reports on ULP Tax.	Human Factor: Lack of knowledge in compiling the ULP Tax report.	The system must provide complete and detailed instructions or at least provide reference to tax regulations that explain the procedures for reporting ULP Tax that must be carried out by the user.
2	Information (and Data): very much processed data, there is data that is not obtained, data is not stored properly, data is not accurate  Service: the system is confusing to use, the system is not compatible with other systems	The system does not provide information about the input data needed, the source of acquisition of input data, and the processing of input data to the user. The input data includes data on land and building assets and oil and gas lifting data.	Material Factors: The compilation of reports on the ULP Tax collects vast amounts of data on land and buildings assets.  Method Factor: The preparation of the ULP Tax report requires intensive coordination between the functions of the users/owners of the land and building assets.	The system must provide clear information about the input data provided and how to obtain and ensure the data is correct and complete. This is very crucial considering that the tax sanctions received by the KKKS XYZ are due to incorrect data on land and building assets in the ULP Tax report. The use of Flowcharts can help describe the types of documents and processes for input data needed between users.
3	Control (and Security): too little control	The system does not provide information on the timing of the preparation and reporting of ULP Tax.	Human Factor: Lack of knowledge in compiling the ULP Tax report.	The system needs to provide information on the timeline for preparation and reporting of the ULP Tax so that the report can be submitted to the Directorate General of Taxes (DGT) at the time specified in the tax regulations.
4	Information (and Data): no information needed  Control (and Security): too little control	The system does not provide an evaluation of the ULP Tax report prepared by the user. Evaluation is needed specially to analyse the reasonableness of reported ULP Tax reports, for example by comparing the results of the UN ULP Tax report in the previous year.	Human Factor: Lack of knowledge in compiling the ULP Tax report.  Tool Factors: The working paper for asset inventory is different/out of sync with the Notification of Tax Objects along with the Appendix of Tax Object Notification ULP Tax working paper.	The system must be able to assist the user in analysing the fairness of the ULP Tax report prepared, for example by producing information that shows the comparison of the results of the current ULP Tax report or the data from the ULP Tax report with data on land and building assets.
5	Service: a confusing system to use	System documentation that shows the current and source of data acquisition is not available.	Human Factor: Lack of knowledge in compiling the ULP Tax report.  Method Factor: The preparation of the ULP Tax report requires intensive coordination between the functions of the users/owners of the land and building assets.	There needs to be good system documentation so that users can understand the data flow and processes that occur in the system. System documentation can use system tools, such as Flowcharts.

KKKS XYZ from the DGT. Based on the weaknesses found, the following are suggested suggestions for improvement of the ULP Tax ULP Tax reporting system in the KKKS XYZ which can be seen in Table 3.

Based on an analysis of the existing system weaknesses, the causes of the problem, and the suggested improvements above, then a new system of ULP Tax reporting is carried out. In terms of the causes of system change as stated by Romney & Steinbart (2018), the design of the new system is included in system changes caused by an increase in

old business and system processes that have expired and need to be replaced.

### Iteration 1: Land and Properties Assets Inventory Sub System.

In this phase identification of problems as well as expectations of the user on the existing system are compiled in the System Vision Document, which is a document that helps explain the scope of the system (Satzinger et al., 2012). Vision System Documents can be seen in Table 4. Next is the division of system components and the iteration phase. The ULP Tax

reporting system will be completed in two iterations, namely:

1. Iteration 1: Land and Building Asset Inventory Sub System

This sub-system aims to fulfill the two capabilities expected of the system, namely collecting and storing data on land and building assets owned and used and storing supporting files such as photographs of land and building assets, land certificates, location/production facilities, building permit documents, and so on.

2. Iteration 2: Reporting Compilation and Evaluation Sub-System

This sub-system aims to gather information on the submission of ULP Tax reports and collect files of copies of the ULP Tax report that have been submitted to the DGT by each person in charge of the Regency/City area where the KKKS XYZ operates.

Furthermore, the Work Breakdown Structure of iteration 1 is compiled as shown in Table 5. Based on the compiled WBS, further identification of data on land and building assets needed for ULP Tax reporting and identification of the parties involved and their role in the asset inventory land and buildings for reporting on ULP Tax in KKKS XYZ. Identification of land and building asset data refers to PER-45/PJ/2013 concerning Procedures for Imposing Land Tax and Mining Sector Buildings for Petroleum, Natural Gas, and Geothermal Mining.

Table 4: Vision System Document.

<p><b>Vision System Document</b>  <b>ULP Tax Reporting System of KKKS XYZ</b></p> <p><b>Description</b>                  ULP Tax Reporting is an obligation for KKKS XYZ by providing data on land and building assets and oil and gas lifting in the form of ULP Tax the Notification of Tax Objects and Appendix of Tax Object Notification. In the past few years, KKKS XYZ received tax sanctions because of ULP Tax Report that was incorrect and detrimental to the company because the fines could not be recovered by the government. It is thus important to design a reliable and accurate ULP Tax reporting system to carry out the obligations of the KKKS XYZ in the field of taxation and ensure that the data reported is correct and complete.</p> <p><b>System Capabilities</b>                  The new ULP Tax reporting system should be able to:</p> <ul style="list-style-type: none"> <li>✓ Collect and store data on land and building assets owned and used by KKKS XYZ.</li> <li>✓ Collect and store supporting files for data on land and building assets owned and used by KKKS XYZ such as photographs of land and building assets, land certificates, location/production facilities, building permit documents, and so on.</li> <li>✓ Collect information on the submission of the ULP Tax Report by each person in charge of the Regency/City area where the KKKS XYZ operates.</li> <li>✓ Collect copies of the ULP Tax Report submitted to the Directorate General of Taxes (DGT).</li> <li>✓ Comparing ULP Tax Reports in several reporting periods, namely data on reported land assets and buildings.</li> </ul> <p><b>System Benefits</b>                  The ULP Tax Reporting System is expected to provide the following benefits:</p> <ul style="list-style-type: none"> <li>✓ Ensure data on land and building assets owned and used by KKKS XYZ is complete, accurate and up to date.</li> <li>✓ Ensure the fairness of data on land and building assets reported annually.</li> <li>✓ Ensure that the ULP Tax Report has been submitted correctly and on time to the Directorate General of Taxes (DGT).</li> <li>✓ Simplify the user in collecting data for verification needs and preparing supporting evidence if a tax audit is carried out by the Directorate General of Taxes (DGT).</li> </ul>
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Table 5: Work Breakdown Structure of Iteration 1.

<b>Work Breakdown Structure</b> <b>Iteration 1: Sub System of Land and Building Inventory</b>	
<b>Planning</b>	Arrange the WBS and determine the plan and completion schedule - 1 day
<b>Analysis</b>	Identify data on land and building assets needed for reporting on ULP Tax - 1 day Identify the parties involved (actors) along with their role in the inventory of land and building assets for reporting ULP Tax in KKKS XYZ - ½ day
<b>Design</b>	Designing a working system for inventorying land and building assets for reporting on ULP Tax by using a Flowchart - 2 days
<b>Settlement</b>	Submit the results of the iteration 1 work to the Tax Function - ½ day Discussion with Tax Functions - ½ day

In this process, the attributes needed for each data of the land and building assets are determined and the data sources/supporting files that are needed. Attributes can be divided into two, namely general. The next process is to identify the parties involved (actors) from the internal company and its role in collecting data and supporting files needed in the reporting of ULP Tax. Based on the discussion with the Tax Function of the KKKS XYZ, there are several parties involved in collecting data and supporting files needed because it is the party that stores/processes/produce the supporting data and files.

The results of identification can be seen in Table 6.

Table 6: Related Parties Data Sources/Supporting Files for the Inventory of Land and Building Assets.

No	Data Sources	Related Parties	Role
1	Certificate, agreement, document permit	Legal	Saving data
2	Location Map/Picture	Surface Facilities	Saving data, creating data
3	Working Area Map	ICT	Saving data
4	Inventory list	Accounting	Saving data, creating data
5	Production sharing contract agreement	Legal	Saving data
6	Building permits	Surface Facilities	Saving data
7	Technical Completion Report of Asset	Accounting	Saving data, creating data
8	Well Completion Report	Accounting	Saving data, creating data

After identifying data on land assets and buildings needed for reporting on ULP Tax and the parties involved along with their roles on the inventory of land and building assets for reporting on ULP Tax, a system of inventory of land and building assets is reported for ULP Tax with the help of Flowcharts.

The inventory system of land and building assets covers the entire process starting from collecting data and supporting evidence for the ULP Tax Report to filling in the ULP Tax Notification of Tax Objects and Appendix of Tax Object Notification so that the ULP Tax Report is accurate and complete. The flowchart can be seen in Figure 1.

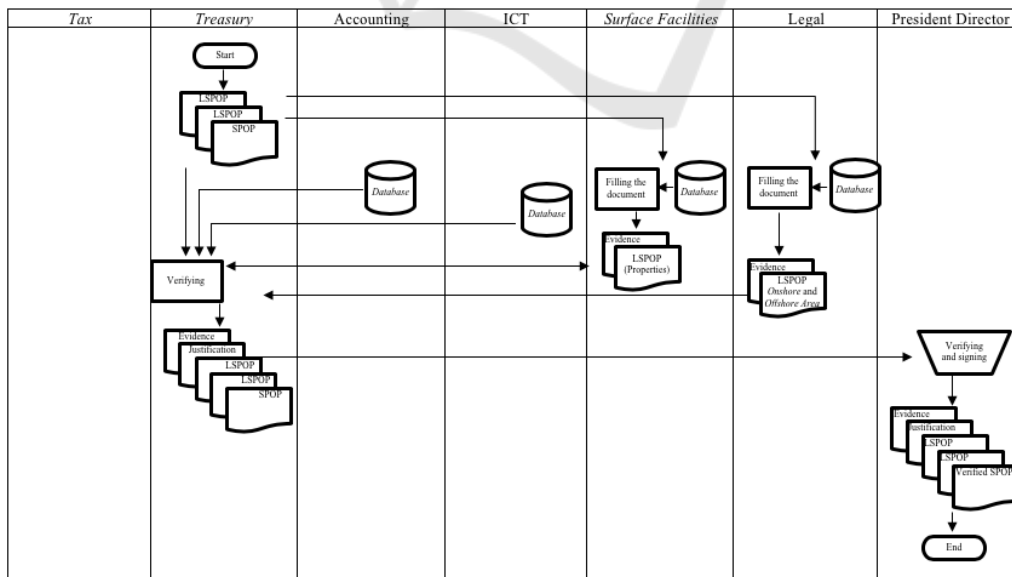


Figure 1: Flowchart of Sub System of Land and Properties Asset Inventory.



**Iteration 2: Report Preparation and Evaluation Sub System.**

In iteration 1 it is known that the design of the ULP Tax reporting system will be divided into two sub-systems, namely the sub-system of inventory data on land and building assets and sub-systems for evaluation of compilation and reporting. Thus iteration 2 will focus on the sub-system for evaluation of preparation and reporting. In this step the Work Breakdown Structure is compiled from iteration 2, as follows.

Based on the WBS, further identification of the data needed to evaluate the preparation and reporting of the ULP Tax is then carried out. Evaluation is carried out to ensure that the preparation and reporting of ULP Tax have been carried out correctly and on time, storing data and evidence of ULP Tax reporting, and analyzing the risk of inspection and the possibility of the issuance of Underpayment Tax Assessment Letters from the submitted ULP Tax Report.

As mentioned earlier, according to DGT Regulation No. PER-45/PJ/2013, ULP Tax penalty sanctions are caused by taxpayers not submitting Notification of Tax Objects and Appendix of Tax Object Notification and/or because based on the results of the examination it is known that the amount of tax payable should be greater than the amount of tax calculated based on Notification of Tax Objects and Appendix of Tax Object Notification. Based on the discussion and identification with the KKKS XYZ Tax Function, the following is a list of

necessary evaluations, data for evaluation of the preparation and reporting of ULP Tax and supporting sources/evidence as found in Table 7.

There are six things that need to be evaluated in the preparation and reporting of ULP Tax, namely the reasons for changes in land and building data in the current year's ULP Tax Report compared to the previous year's assets and ULP Tax Reports, authorizing those who signed the ULP Tax Report, readiness for the ULP Tax Report reported, the place of submission of the ULP Tax Report, the time of submission of the ULP Tax Report, and the value of ULP Tax according to the assessor/examiner of the DGT.

Table 7: Work Breakdown Structure of Iteration 2.

<b>Work Breakdown Structure</b>	
<b>Iteration 2: Sub System of Preparation and Reporting Evaluation</b>	
<b>Planning</b>	Arrange the WBS and determine the plan and completion schedule - 1 day
<b>Analysis</b>	Identify data needed for evaluation of the preparation and reporting of ULP Tax along with supporting sources/evidence in KKKS XYZ - 2 days
<b>Design</b>	Designing a working system for evaluating the preparation and reporting of ULP Tax by using a Flowchart - 2 days
<b>Settlement</b>	Submit the results of the iteration 2 work to the Tax Function - ½ day Discussion with Tax Functions - ½ day

Table 8: ULP Tax Preparation and Reporting Evaluation.

No	Evaluation Needed	Supporting Data	Data Sources
1	Changes in earth and building data in the ULP Tax Report have reasons/justifications	The number of public building and special building items per type, the total area of public buildings and special buildings per type, the area of the earth and buildings, records, year of reporting	The reason/justification prepared by the Treasury Function is based on the results of examination and research as well as supporting evidence provided by the Legal Function, Function of Surface Facilities, Accounting Function, and ICT Function when filling Appendix of Tax Object Notification, copy of the ULP Tax Report reported to Tax Office/DGT
2	The ULP Tax Report has been signed by the President Director/Senior Manager	Name of signatory, position of signatory, date of signing	Letter of Authority from the President Director for the signing of the ULP Tax Report
3	There has been a ULP Tax Report submitted to Tax Office/DGT	Name of Regency/City, name of Work Area	Copies of ULP Tax Reports reported to Tax Office/DGT
4	The ULP Tax Report has been submitted to Tax Office/DGT where reporting should be carried out	Regency/City Name, Work Area name, Tax Office/DGT name where to report, Proof of Receipt Number	Proof of Receipt of Letters from Tax Office/DGT
5	The ULP Tax Report has been submitted on time/before January 31 of the current year	Date of receipt of the ULP Tax Report by Tax Office/DGT	Proof of Receipt of Letters from Tax Office/DGT
6	Data on earth and buildings that are used as the basis for imposing taxes by Tax Office/DGT inspectors are in accordance with those reported	The amount of land and building according to the examiner of Tax Office/DGT, the area of the land and building in the current year which is reported to be the function of the Treasury, the value of the ULP Tax which must be paid	SPPT from Tax Office/DGT

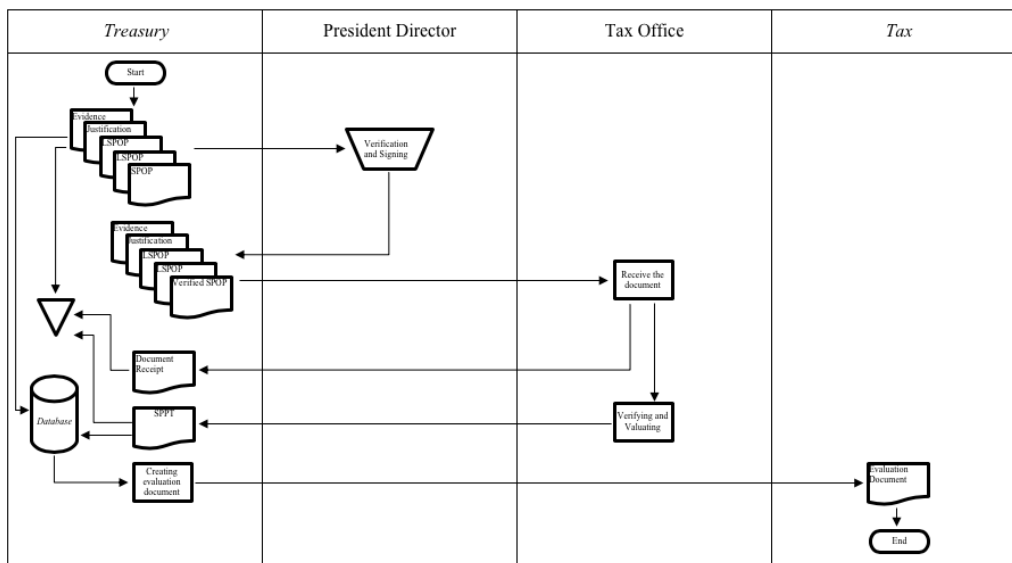


Figure 2: Flowchart of Sub System of Preparation and Reporting Evaluation.

The next process is to identify the parties involved (actors) from the internal company and its role in collecting data and supporting files needed in the evaluation of the preparation and reporting of ULP Tax. After discussing with the Tax Functions of KKKS XYZ, the results of identification can be seen in Table 9.

Table 9: Parties Related to Data Sources of Preparation and Evaluation ULP Tax Report.

No	Data Source	Related Parties	Role
1	Justification	Treasury	Creating data
2	Copy of ULP Tax Report submitted to DGT	Treasury	Saving data, Creating data
3	Letter of authority	President Director/Senior Manager	Saving data, Creating data
4	Receipt	Treasury	Saving data
5	SPPT from DGT/ Tax Office	Treasury	Saving data

After identifying and compiling a list of necessary evaluations, data for evaluating the preparation and reporting of ULP Tax, and supporting sources/evidence, a system for evaluating and compiling ULP Tax is then developed with the help of a Flowchart. The evaluation system includes the entire process starting from the submission of the ULP Tax Report to the Managing Director/Senior Manager (as the attorney of the President Director) to be examined and signed until the ULP Tax Report is prepared for the evaluation of the Tax Function. The flowchart can be seen in Figure 2.

## 5 DISCUSSION

Iteration 1 and iteration 2 have resulted in improvements to the reporting system of ULP Tax in the KKKS XYZ in terms of the process of inventory of land and building assets to the evaluation of the preparation and reporting of ULP Tax. This section then collects the results of the improvement into a proposal for Treasury Function work instructions that standardizes the improvement of the ULP Tax reporting system at the KKKS XYZ. Work instructions for the preparation and reporting of the KKKS XYZ ULP Tax are prepared according to the standards for the preparation of KKKS XYZ work instructions which include work tools, references, implementing qualifications, work instructions, and indicators and measures of success.

## 6 CONCLUSIONS

There are several weaknesses in the current ULP Tax reporting system at KKKS XYZ by analyzing the ULP Tax reporting system documentation in existing manuals and work instructions using the PIECES framework. The weakness of the system supports the causes of relevant problems based on interviews conducted with the user. Based on the identification of the weaknesses of the system, then improvements were made to the new system design.

The results of Iteration 1 and 2 are the results of the ULP Tax reporting system design documented in

the form of Flowcharts which can then be used to help prepare the ULP Tax report in KKKS XYZ. The results of the design are expected to mitigate the risk of ULP tax sanctions in KKKS XYZ in the future.

This study presents a Flowchart that can be used in the reporting of ULP Tax. We suggest for further research to improve the system in this study by designing a computer application for processing data on land and properties assets and compiling reports on ULP Tax. Based on the analysis of the factors causing differences in data on land and properties assets in the KKKS XYZ's ULP Tax report which are grouped into the material, people, methods, tools, and environment, most of the factors causing problems has been addressed in the new system designed in this study. However, there are several factors causing other problems that have not been resolved by the system that has been designed, especially factors that originate from the environment. There needs to be an approach or other solution to overcome the causes of this problem. This can be a topic of concern for further research.

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