

Inflation Control Information System for North Sulawesi Province, Indonesia

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Keywords: Market, price, system, inflation, website.

Abstract: Traditional markets have a large influence on inflation in Indonesia. The reason is because traditional markets offer more competitive prices compare to anywhere else. The North Sulawesi Province Inflation Control Team (TPID Sulut) is tasked with overseeing the movement of staple food prices which has a major impact on inflation in North Sulawesi Province. Periodically TPID should monitor traditional markets as a key indicator of price movements. This study is intended to assist TPID Sulut to monitor and stabilize price movements in traditional markets. The data obtained from the traditional market is processed so that it can be used by the community as a benchmark price in the region. In this study, website-based information system was built to facilitate TPID in processing data and sharing basic material information in traditional markets.

1 INTRODUCTION

North Sulawesi's high and sustainable economic growth can be achieved through the stability of prices of goods and services, which is reflected in the inflation rate of Manado City. In this regard, efforts to safeguard the inflation rate of Manado City in a low and stable level are very important. However, economic activities in the region are still faced with a variety of fundamental problems such as low connectivity, low efficiency of the logistics system, high dependence of food productivity on weather factors, and a distorted market structure.

The implication of the various problems mentioned above is that efforts to achieve the inflation target require the solid policy that coordinates between monetary, fiscal and sector policies - including the policies of the Regional Government - through the central Inflation Control and Monitoring Team (TPI) and the Regional Inflation Control Team (TPID) at the regional level.

However the improvement of usability, effectiveness, transparency and accountability of government administration becomes very important and urgent. Website could and often used by organizations to present information to customers or

anyone as a means to promote improvement as mention above. With the great need to always keep abreast of technology and its alignment with business, the creation of a dynamic website requires reliable frameworks and personnel. Collaboration between humans, networks, hardware, software, and databases as information system will complement website as solution for this problem.

This study aims to help TPID solve the problem of inflation in the province of North Sulawesi with a web-based information system. The designed system is used to record price movements in Manado city markets which are the main indicators of regional inflation.

TPID

TPID as a coordination forum has an increasingly strategic role in supporting the achievement of the low and stable inflation target in the region. The formation of TPIDs is encouraged to the level of District / City in order to strengthen the institutional aspects of the TPID. This is inseparable from the fact that the TPID at the Regency / City level must aware of the current conditions faced by the region regarding price control conditions.

The TPID as part of the civil servant carries out various work programs which include: Technical Team Meetings, High Level Meetings, and Regional Coordination Meetings. TPID also conducts various other activities related to inflation control in North Sulawesi, such as visits to markets and strategic places, in an effort to maintain supply availability and price affordability in the face of religious holidays, as well as public service announcements regarding wise consumption. These activities can be simplified using information technology

2 METHOD

The information system website development process has a high level of complexity. Often the user or organizational environment demands a sudden change, which is not anticipated by the development team. This condition is difficult to anticipate by conventional systems development methods such as Waterfall or Spiral. The choice of methodology plays an important role in the possibility of success of a project. Scrum makes a significant difference because the software produced will be adapted to the environment as the system develops. One important difference is the backlog, which is a list of user needs that must be in the product to be completed. Unlike the other methodologies, this backlog can change at each stage of system development. In addition to

consisting of several Sprints, SCRUM consists of three phases with the following details:

2.1 Pregame

Determined from existing backlogs, including schedules and costs. If a new system will be developed, this phase will consist of a conceptualization and analysis process. If the project consists of the development of the old system, this phase will consist of limited analysis.

2.2 Development

Development of Sprints: development of new derivative functions, taking into account the variables of time, needs, quality, costs, and completion. The interaction of these variables will determine the end of this phase. The system will use some Sprint development, repetition for system development.

2.3 Closure

Closure: product release preparation, including documentation and testing .The complete picture of the phases are shown in Figure 1.

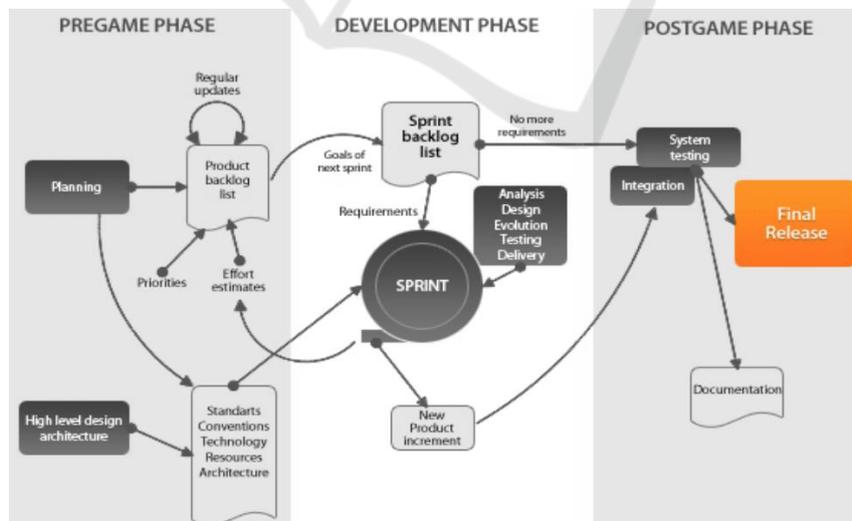


Figure 1: Scrum Methodology Phases.

3 INFLATION CONTROL INFORMATION SYSTEM

The inflation control information system is a website developed to input strategic commodity prices regularly and display them on the internet so that community in the region can monitor price movements in traditional market. The reason why traditional market was chosen to collect data was because most of the inflation commodities in the province of North Sulawesi were sold and purchased there. Central Bank of Indonesia (BI) determined there are nine main commodities that influence inflation the most in North Sulawesi Province, which are:

- Rice
- Chili
- Egg
- Fish
- Cooking oil
- Wheat flour
- Cement
- Garlic
- And Tomatoes

Thus the price movements of these nine commodities need to be monitored to facilitate the determination of regional policies. The prices of

these commodities will be recorded every day. Important information presented on this site include:

- Commodity prices
- News about commodities
- Markets and stores where commodities are sold
- Tables and charts of changes in commodity prices

In addition to the information above there are several roles of users who have different tasks and access on the website pages. The role is divided into the following:

- Administrator: responsible for managing user access rights along with news and market and store profiles
- Operator: tasked with entering commodity price data every day
- Authorization: tasked with checking data entered by the operator before displayed to the site.
- Public: see information displayed on the site.

3.1 Website Feature

To summarize the features needed in the website, it is necessary to interview users, especially the TPID. Table 1 shows interviews resulted in the following requirements and explained in feature and Actor List of the Website..

Table 1: Feature and Actor List of the Website.

No	Feature	Actor
1	Commodities Price Input	Operator
2	Commodities Price Display	Public
3	Authorization	Administrator
4	Tables and Graphics of the Price Movements	Public
5	News Input	Operator
6	News Display	Public
7	Traditional Market and Store Profile Input	Operator
8	Traditional Market and Store Profile Display	Public
9	Price Request via SMS	Public

The construction of commodity price website starts with the first feature and system design. The system design itself is carried out by system analysts including business processes, interfaces, and databases. After the new design is completed then it becomes the task of the programmer to do the coding until it can be tested by the project manager.

This process is also carried out for other features in the backlog, and if it is not completed the advanced Sprint is carried out until the product produced meets the needs of the user.

4 RESULTS

The results of this study are a good response from TPID and the community. TPID sends its staff every day to record the prices of the nine main

commodities in traditional markets and major shops. Price movements are displayed in the URL address: <http://tpidsulut.org/index.php?module=grafik&show=harga>. On this page the price movements of the main commodities are displayed within one month.

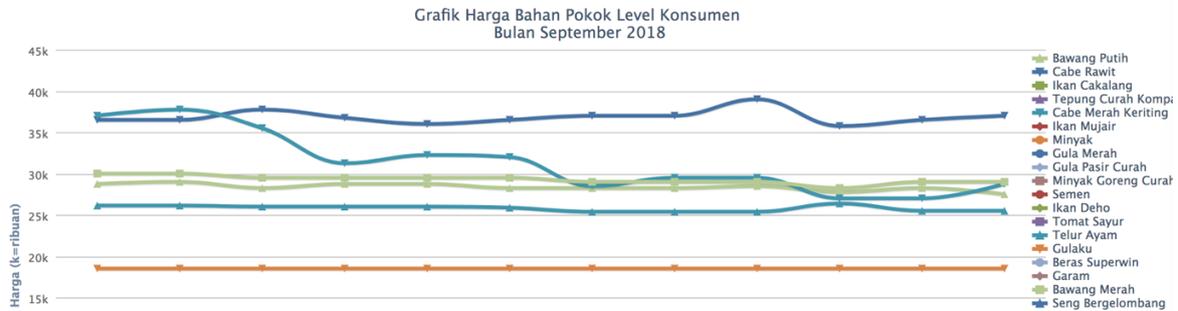


Figure 2: Chart of price movements of major commodities within one month.

Figure 2 shows Chart of price movements of major commodities within one month .

As time goes by it can be seen that the SMS feature is a favorite feature of the community as shown in Figure 3.



Figure 3: SMS webpage as a favorite feature of the community

TPID acknowledges that with this website inflation on holidays, especially Christmas and New Year can be anticipated more quickly.

5 CONCLUSIONS

Features and information updates greatly affect the number of visitors to a website. The emergence of Scrum Methodology proves that system development projects require more flexibility from day to day to meet customer satisfaction. This is especially common in the development of web-based applications, which is a way to achieve competitive advantage.

ACKNOWLEDGMENTS

The authors wish to express their appreciation to Institution of Research and Community Services Universitas Negeri Manado, Ministry of Research, Technology, and Higher Education of Republic of Indonesia which given funding all of the study activities, and to Rector of Universitas Negeri Manado, Indonesia who has agreed our study.

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