

# **Implementasi Blockchain Pada Bidang Agribisnis**

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# Latar Belakang

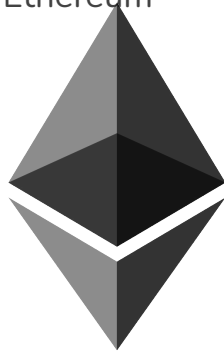
Teknologi Blockchain secara luas dianggap sebagai pilihan revolusi dalam perkembangan teknologi yang mengedepankan sistem peer-to-peer, data yang terdesentralisasi untuk data organisasi. Dalam perkembangan yang lebih baru telah difokuskan tentang bagaimana Blockchain dapat digunakan untuk mendistribusikan sistem buku besar keuangan atau ledger system dan transaksi keuangan lainnya.

Saat ini supply chain dalam bidang agribisnis sangat terstruktur, global dan saling berhubungan. Data dan dokumentasi produk agribisnis mengenai keamanan, sustainability, sumber, dan atribut lainnya biasanya dicatat dan disimpan di atas kertas atau database pribadi, dan hanya dapat diperiksa oleh otoritas pihak ketiga yang tepercaya. Terlepas dari tren digitalisasi dalam bidang ekonomi yang terus berlanjut, produk agribisnis masih menjadi salah satu industri yang kurang terdigitalisasi. Teknologi Blockchain berpotensi mempengaruhi situasi ini dalam banyak hal Blockchain menawarkan sesuatu berupa data yang tidak dapat diubah dalam catatan transaksi blok, dan dapat diakses di seluruh entitas. Dengan demikian, Blockchain bisa menjadi instrumen untuk menciptakan lebih banyak kepercayaan di antara para pelaku supply chain di bidang agribisnis berkat auditabilitas catatan yang lebih mudah



## Fokus Penulis

Membangun solusi bisnis dan sistem Blockchain pada transparansi supply chain bidang agribisnis dengan membuat prototipe sistem Blockchain yang menghasilkan Txn pada proses supply chain untuk transparansi dalam kegiatan bisnis supply chain yang berjalan menggunakan jaringan Ethereum

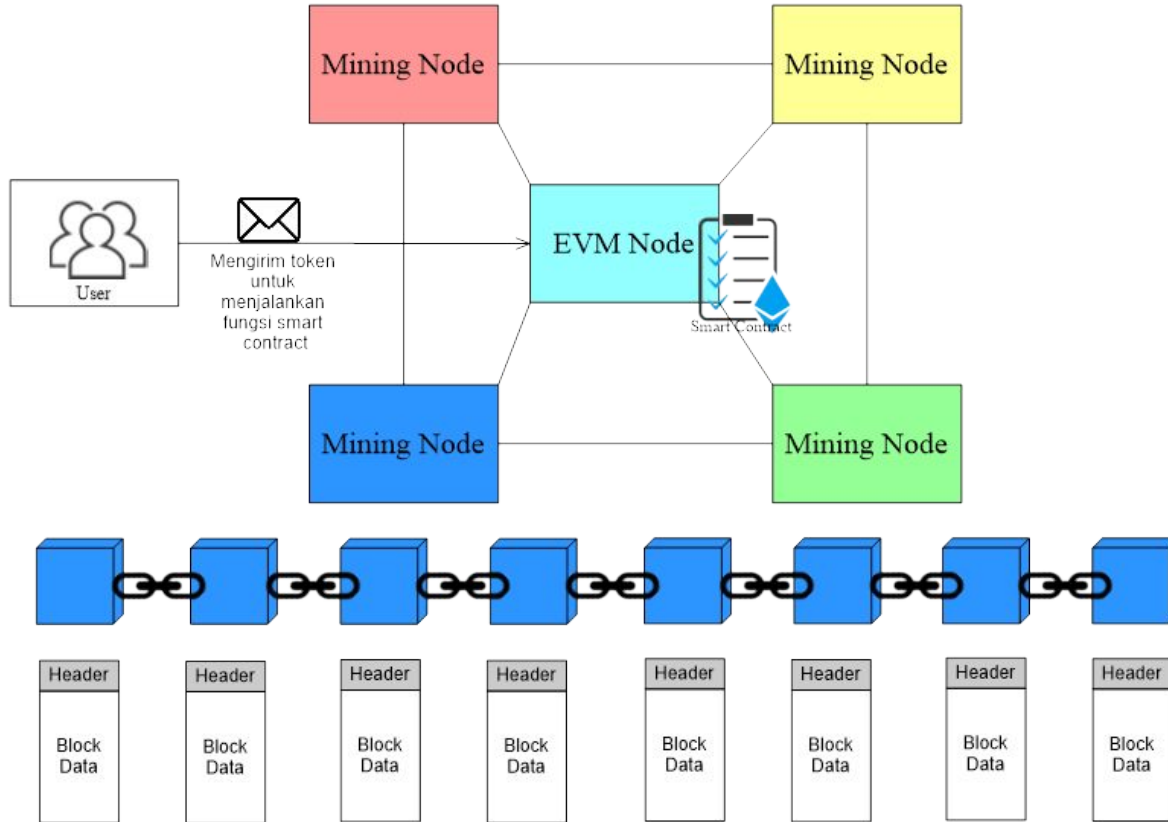




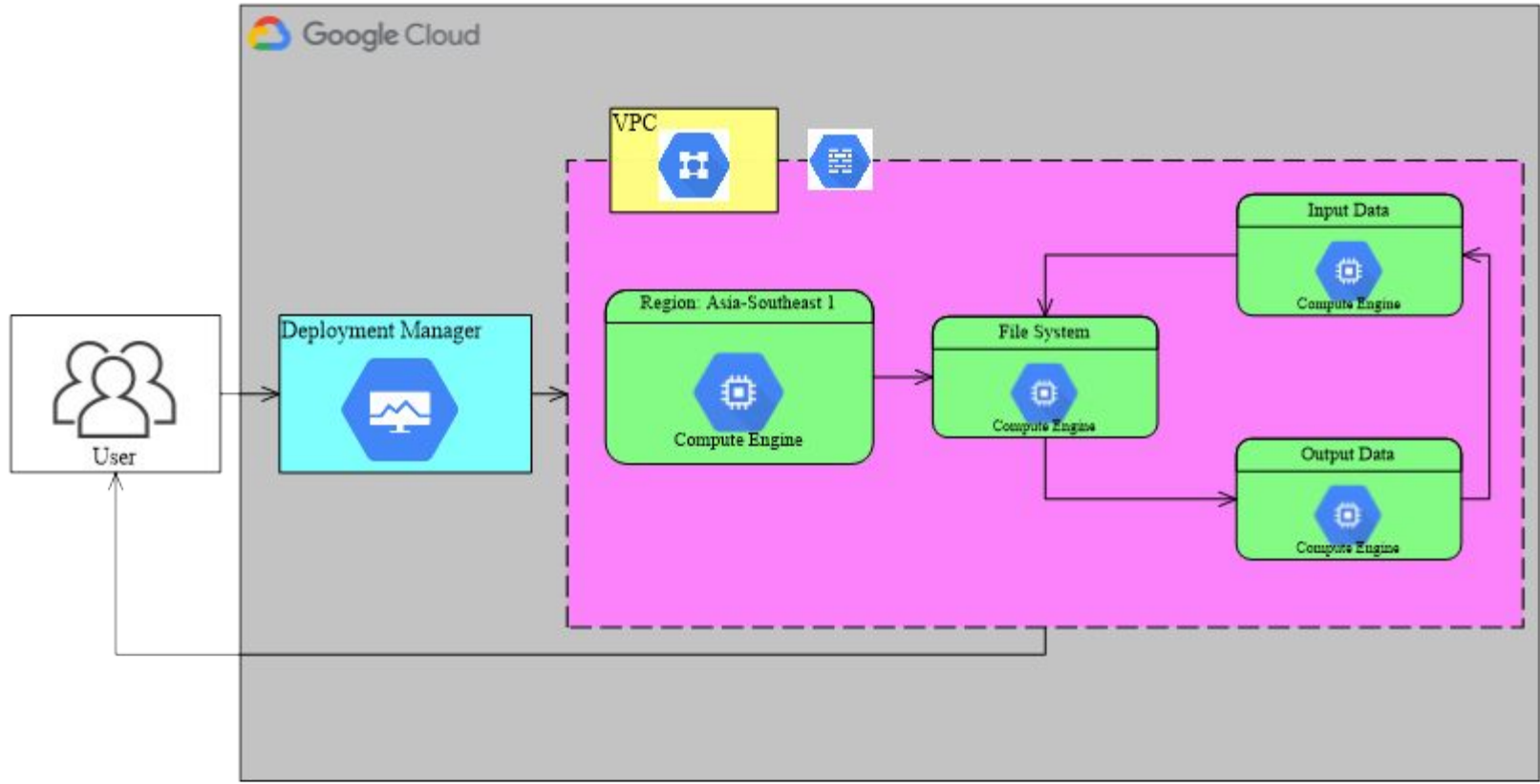
## Penelitian Terdahulu

Judul Penelitian	Pembahasan
Blockchain in Food and Agriculture Supply Chain: UseCase of Blockchain in Indonesia	Pada jurnal ini perusahaan Hara menggunakan Hara Token (Mata uang kripto Indonesia) dalam kegiatan transaksi di blockchain untuk kegiatan pertukaran data dan berdagang dan bagi yang berpartisipasi akan mendapatkan Hara Token.
A Blockchain-Based Trust Model for the Internet of Things Supply Chain Management	Pada jurnal ini penulis mencoba memanfaatkan produk teknologi blockchain untuk optimisasi penggunaan Internet of Things dalam transaksi yang sedang berjalan di proses supply chain contohnya seperti penggunaan barcode

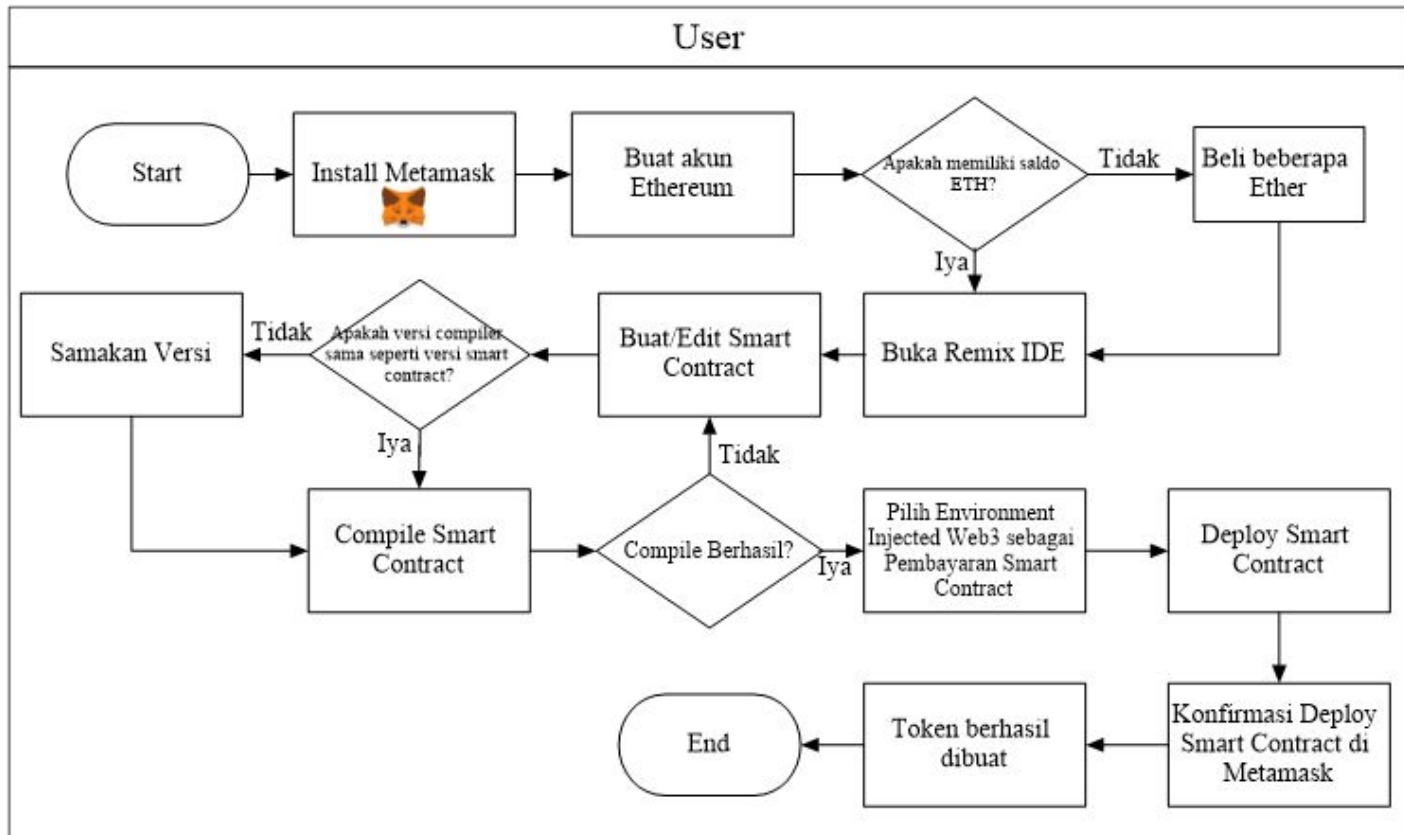
# Arsitektur Ethereum



# Arsitektur Cloud

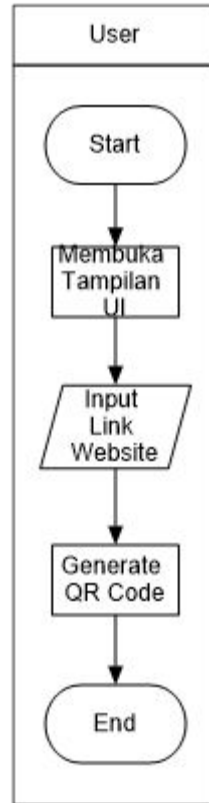


# Membuat Smart Contract





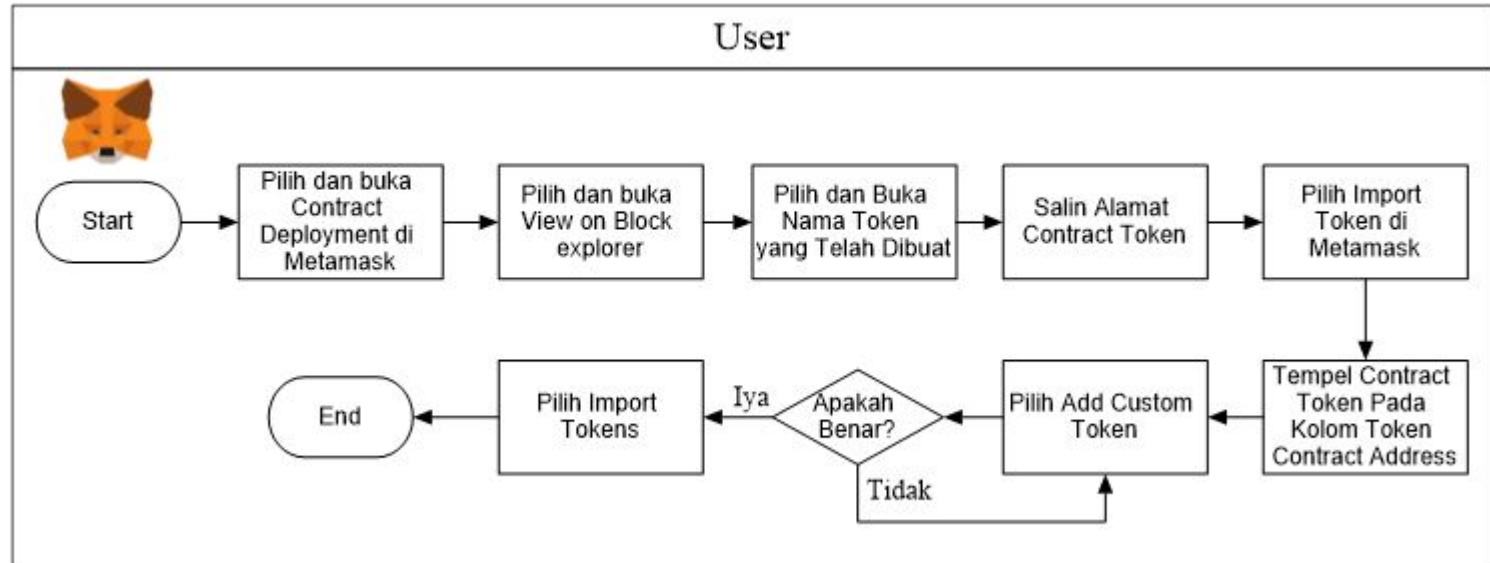
# Mencetak QR Code



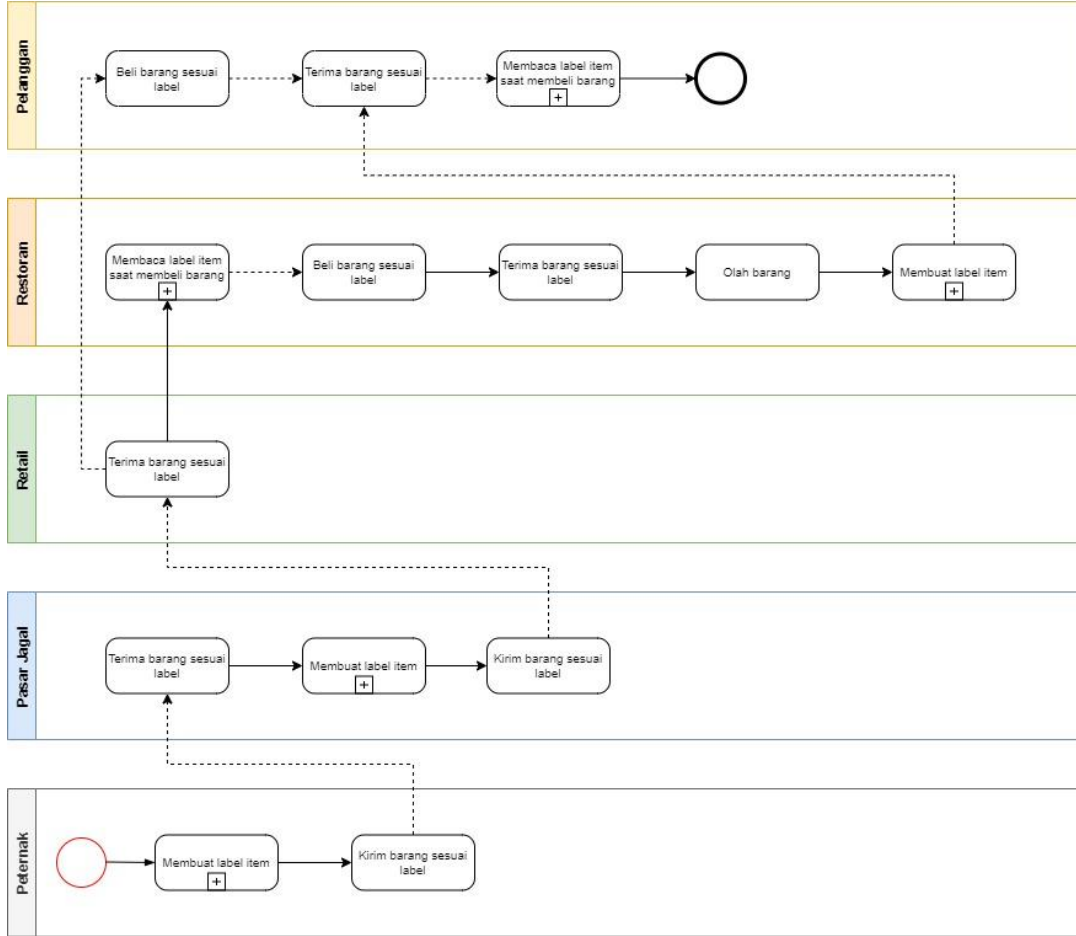




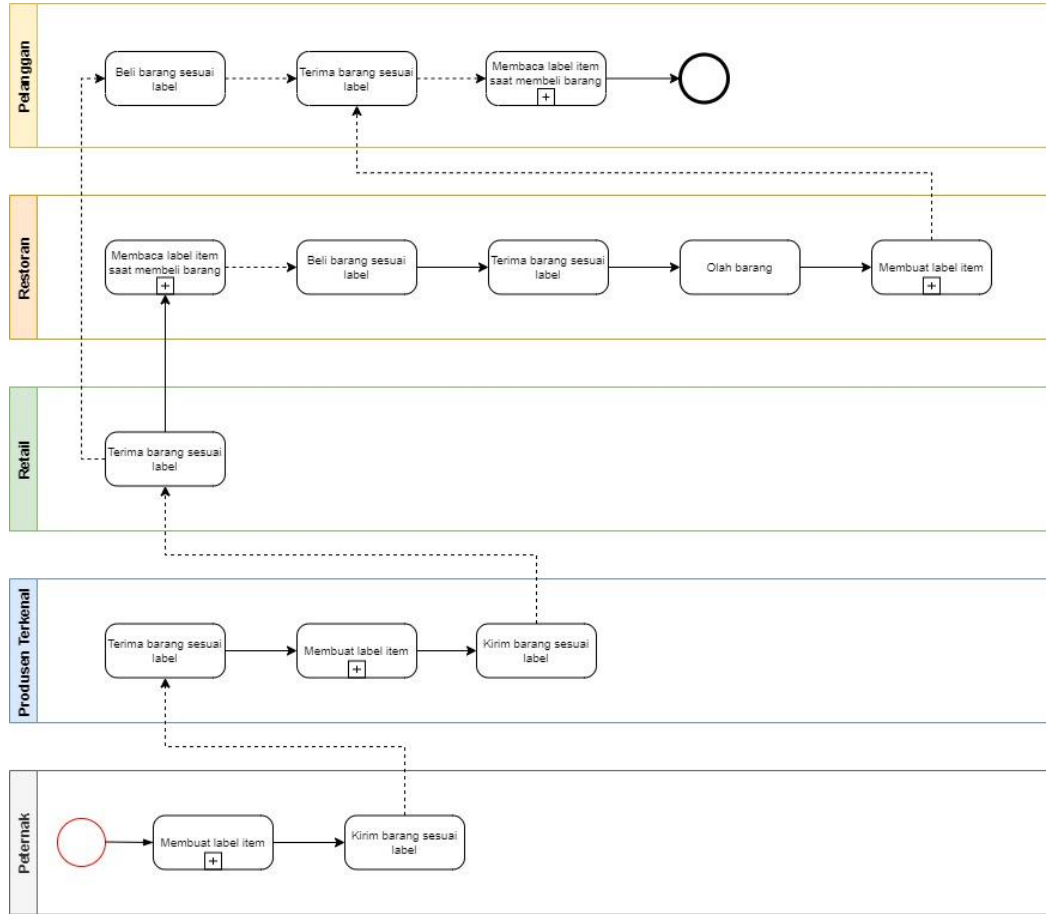
# Memasang Token di Metamask



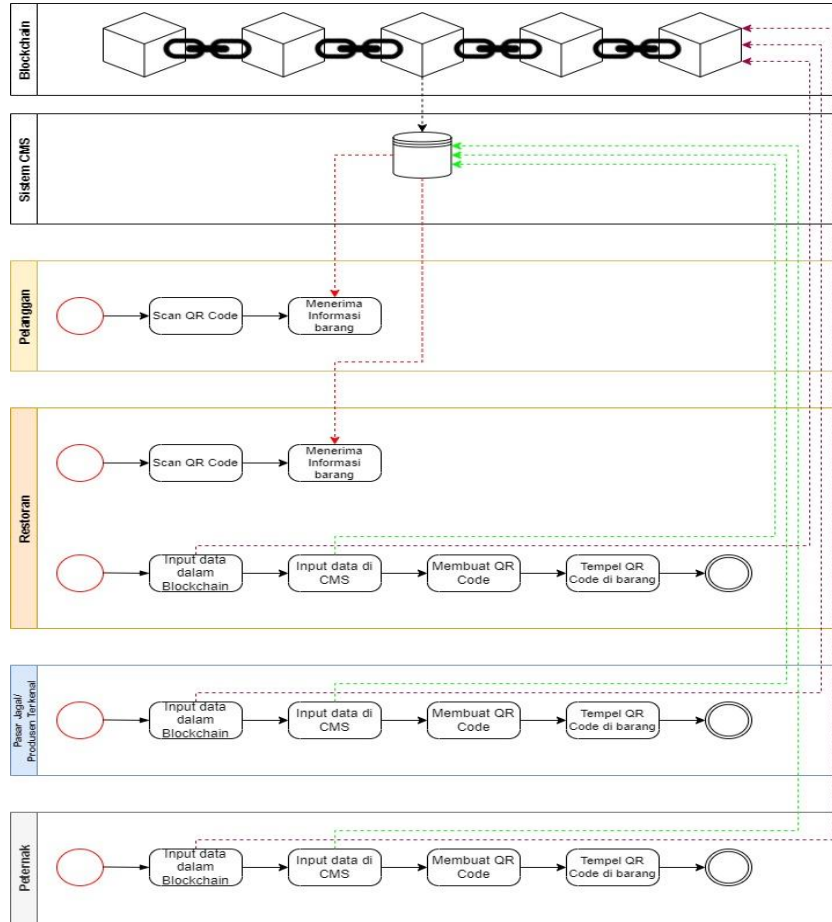
# Proses Bisnis Supply Chain



# Proses Bisnis Supply Chain



# Proses Bisnis Supply Chain Level 2



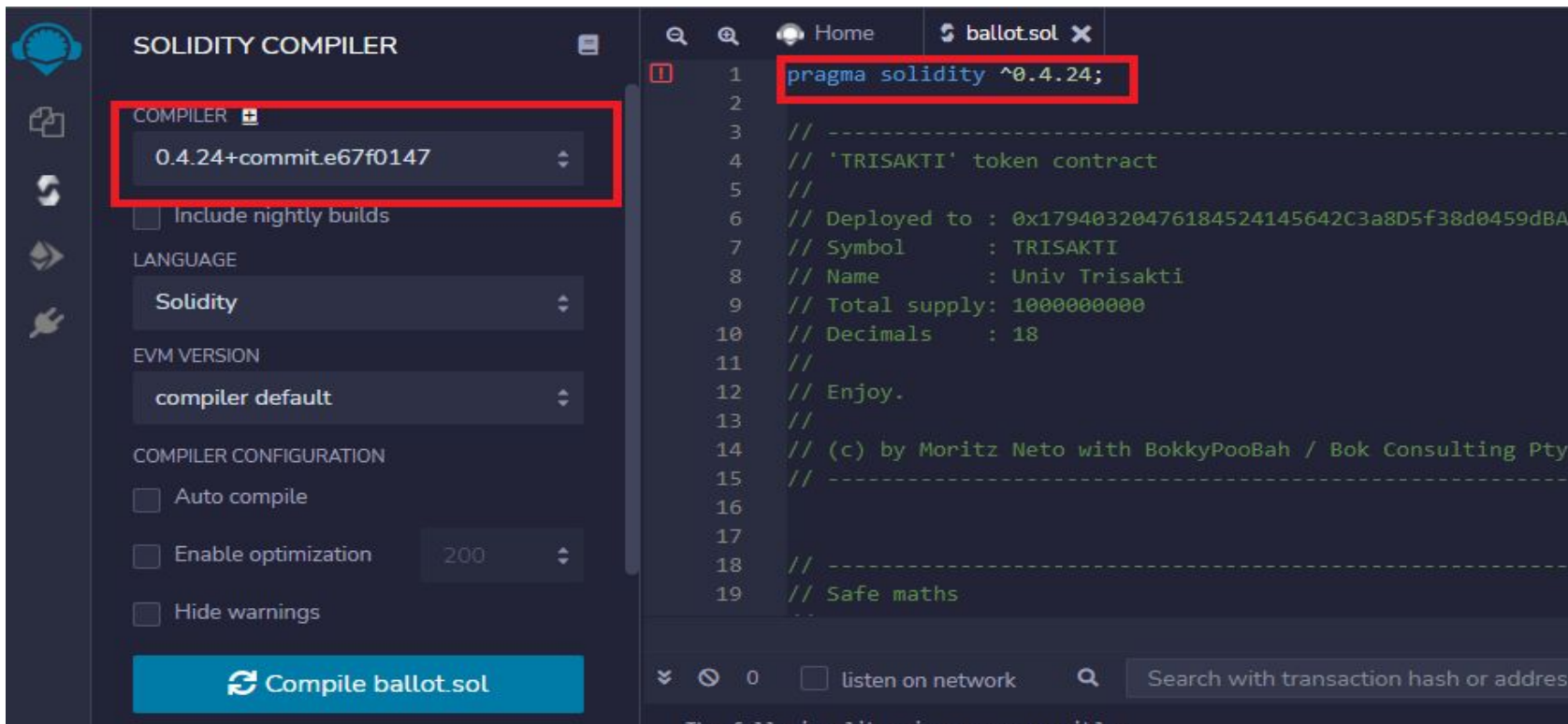


# Modifikasi Smart Contract

The image shows a screenshot of a Solidity IDE interface. On the left, the 'FILE EXPLORERS' sidebar is visible, showing a tree view of the project structure. The 'Workspaces' section is active, and the file 'ballot.sol' is selected. The main editor area displays the content of 'ballot.sol', which is a Solidity smart contract. The code includes a pragma statement for Solidity version 0.4.24, followed by a series of comments describing the contract as a 'TRISAKTI' token contract. The comments specify the deployment address, symbol, name, total supply, and decimals. The contract also includes a license notice and a safe math pragma.

```
1 pragma solidity ^0.4.24;
2
3 // -----
4 // 'TRISAKTI' token contract
5 //
6 // Deployed to : 0x17940320476184524145642C3a8D5f38d0459dBA
7 // Symbol      : TRISAKTI
8 // Name        : Univ Trisakti
9 // Total supply: 1000000000
10 // Decimals    : 18
11 //
12 // Enjoy.
13 //
14 // (c) by Moritz Neto with BokkyPooBah / Bok Consulting Pty Ltd Au 2017. The MIT Licence.
15 // -----
16
17
18 // -----
19 // Safe maths
```

# Compile Smart Contract



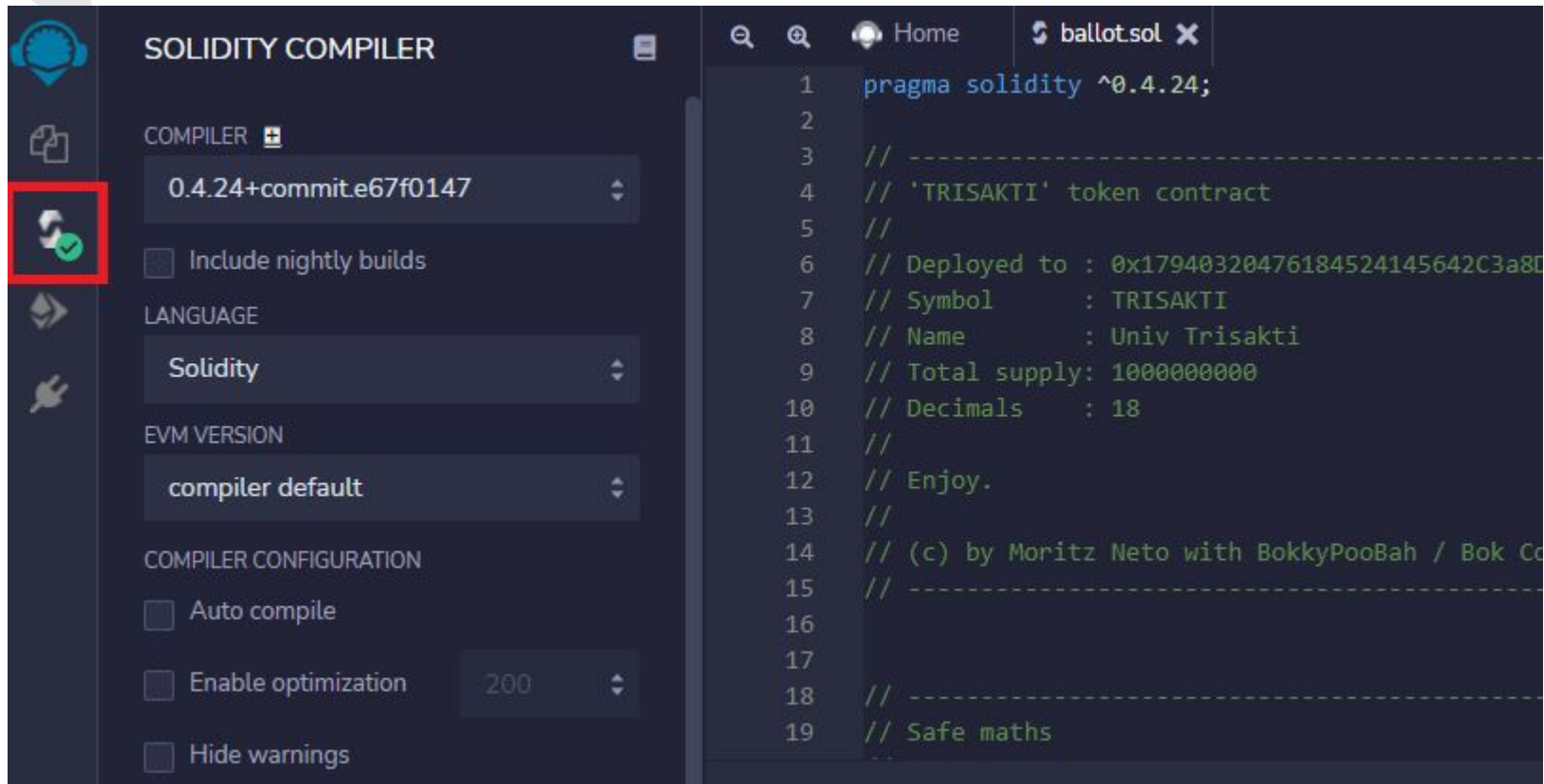
The screenshot displays the Solidity Compiler interface. On the left, the 'COMPILER' section is highlighted with a red box, showing the version '0.4.24+commit.e67f0147'. Below this, the 'LANGUAGE' is set to 'Solidity' and the 'EVM VERSION' is set to 'compiler default'. The 'COMPILER CONFIGURATION' section includes checkboxes for 'Auto compile', 'Enable optimization' (set to 200), and 'Hide warnings'. A large blue button at the bottom left reads 'Compile ballot.sol'.

The main editor on the right shows the source code for 'ballot.sol'. The first line, `pragma solidity ^0.4.24;`, is highlighted with a red box. The code includes comments for deployment details and a copyright notice.

```
1 pragma solidity ^0.4.24;
2
3 // -----
4 // 'TRISAKTI' token contract
5 //
6 // Deployed to : 0x17940320476184524145642C3a8D5f38d0459dBA
7 // Symbol      : TRISAKTI
8 // Name        : Univ Trisakti
9 // Total supply: 1000000000
10 // Decimals    : 18
11 //
12 // Enjoy.
13 //
14 // (c) by Moritz Neto with BokkyPooBah / Bok Consulting Pty
15 // -----
16
17
18 // -----
19 // Safe maths
```

At the bottom right, there is a search bar and a checkbox labeled 'listen on network'.

# Compile Smart Contract Lanjutan



The screenshot displays the Solidity Compiler web interface. On the left, a sidebar contains icons for a compiler, a file, a chat (highlighted with a red box), a wallet, and a plug. The main panel is titled 'SOLIDITY COMPILER' and features several configuration sections:

- COMPILER**: A dropdown menu showing '0.4.24+commit.e67f0147'. Below it is a checkbox for 'Include nightly builds'.
- LANGUAGE**: A dropdown menu set to 'Solidity'.
- EVM VERSION**: A dropdown menu set to 'compiler default'.
- COMPILER CONFIGURATION**: Includes checkboxes for 'Auto compile', 'Enable optimization' (with a value of 200), and 'Hide warnings'.

The right side of the interface is a code editor with a dark theme, showing a Solidity contract named 'ballot.sol'. The code includes a pragma statement and several comments:

```
1 pragma solidity ^0.4.24;
2
3 // -----
4 // 'TRISAKTI' token contract
5 //
6 // Deployed to : 0x17940320476184524145642C3a8D
7 // Symbol      : TRISAKTI
8 // Name        : Univ Trisakti
9 // Total supply: 1000000000
10 // Decimals    : 18
11 //
12 // Enjoy.
13 //
14 // (c) by Moritz Neto with BokkyPooBah / Bok Co
15 // -----
16
17
18 // -----
19 // Safe maths
20
```

# Deploy Smart Contract

DEPLOY & RUN TRANSACTIONS

ENVIRONMENT

Injected Web3

Ropsten (3) network

ACCOUNT

0x179...59dBA (2.9845876!)

GAS LIMIT

3000000

VALUE

0

Wei

CONTRACT

UnivTrisakti - ballot.sol

Deploy

☐ Publish to IPFS

Home ballot.sol

```
1 pragma solidity ^0.4.24;
2
3 // -----
4 // 'TRISAKTI' token contract
5 //
6 // Deployed to : 0x17940320476184524145642C3a8D5f38d0459dBA
7 // Symbol      : TRISAKTI
8 // Name        : Univ Trisakti
9 // Total supply: 1000000000
10 // Decimals    : 18
11 //
12 // Enjoy.
13 //
14 // (c) by Moritz Neto with BokkyPooBah / Bok Consulting Pty Ltd Au 2017. The MIT Licence.
15 // -----
16
17
18 // -----
19 // Safe maths
20 ..
```

0

☐ listen on network

Search with transaction hash or address

The following libraries are accessible:  
- web3 version 1.5.2





# Konfirmasi Deploy Smart Contract

MetaMask Notification

Ropsten Test Network

Host

→

New Contract

http://remix.ethereum.org

CONTRACT DEPLOYMENT

\$0.00

DETAILS

DATA

EDIT

Estimated gas fee

\$14.77 0.003612 ETH

Site suggested

Max fee: 0.00526964 ETH

Total

\$14.77 0.00361184 ETH

Amount + gas fee

Max amount: 0.00526964 ETH

Reject

Confirm

column size


Thirds - 1/3 column

Content \*

Card

ADVANCED SETTINGS

Image



CLEAR CHOICECHANGE IMAGEEDIT THIS IMAGE

Title

Chicken Karaage Mental Level 1

Subtitle

Body \*


B I H L U A S

From: % retail1.eth  
To: % ohkaerid.eth


Button Link

ADVANCED SETTINGS

Page link

CHOOSE A PAGE

Document link

CHOOSE A DOCUMENT

Other link

https://ropsten.etherscan.io/tx/0x

Button Title \*

Txn Bahan Baku

Button Style

Outline Danger


Button Size

Default


Button Link

ADVANCED SETTINGS

Page link

CHOOSE A PAGE

Document link

CHOOSE A DOCUMENT

Other link

http://34.124.232.7:8000/ayam-jav

Button Title \*

Asal Bahan Baku

Button Style

Outline Success

Button Size

Default

Button Link



# Input CMS Lanjutan



Column



⚙️ ADVANCED SETTINGS

Column size

Thirds - 1/3 column



Content \*



Text



**B** *I* H2 H3 H4

## Description

Chicken Karaage Mentai adalah makanan khas Japanese yang dibalut dengan saos mentai pilihan racikan dari juru masak terlatih





# Input CMS Lanjutan

## ⚙️ ADVANCED SETTINGS

Column size

Thirds - 1/3 column



Content \*



Google Map



## ⚙️ ADVANCED SETTINGS

Search query

-7.594926999999999,112.106321

Address or search term used to find your location on the map.

Map title

Prima

Map title for screen readers, ex: "Map to Goodale Park"

Google place ID

Requires API key to use place ID.



# Cetak QR Code

A screenshot of a web browser window titled "Hangga Generator". The browser window has standard Windows-style window controls (minimize, maximize, close) in the top right corner. The main content area of the browser is a solid red color. In the center of this red area, there is a white text input field with the label "Enter URL" and a text input field with the label "File Name". The "Enter URL" field contains the text "http://34.124.232.7:8000". The "File Name" field contains the text "QR Ayam Potong Prod". Below these two input fields is a white button with the text "Generate".

Hangga Generator

Enter URL

File Name

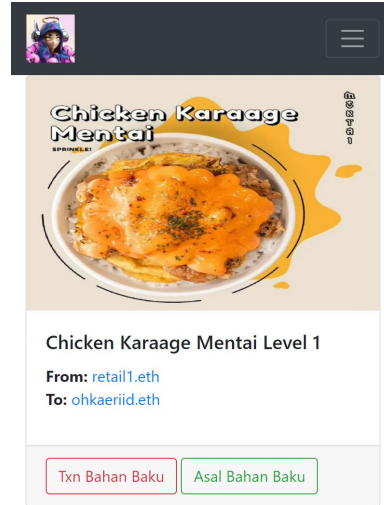


## Hasil QR Code





# Tampilan Website



## Description

Chicken Karaage Mentai adalah makanan khas Japanese yang dibalut dengan saos mentai pilihan racikan dari juru masak terlatih

