Blockchain Project Approval in Local Government

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Project Research Question

How can we improve internal Finance Department approval processes?

Background

- Local Government is often considered inefficient and outdated
- This project seeks to improve internal financial processes
- Specifically, Capital Improvement Project (CIP) approval process
- Two phases and two uses for Blockchain

Phase 1

- The first part of the project addresses the inefficiencies in processes in government finance offices.
- We created a contract to simplify processes in a government finance office when large capital projects are concerned.
- Using the concept of voting, we applied Solidity to mimic an approval process.
- Since members from multiple levels of government (i.e Board, Management, Finance, Budget Analyst, etc) need to physically sign a paper contract that is passed around to different departments across multiple days for approval, it often slows down the process.
- The idea is that use an electronic contract for approval will eliminate the intricacies of this process. This also ensures a unanimous agreement on the capital project without needing to question signatures. Essentially, we are eliminating the need for physical signatures and making the process more secure and efficient.

Phase 2

In this phase of the project, we added a level for dividing the money required to complete the capital project. These type of projects often require funding from multiple sources including:

- General Fund (general tax-payer money)
- Community Investment Fund (a savings account for projects like these)
- Multi Year Fund (funding for projects that stretch out over multiple years)
- Debt (borrowed money)

This Phase is connected to the first phase so that when the approval is submitted unanimously, the Budget Analyst can easily submit to distribute funds. The Area and Construction Managers won't have to wait on the Finance Department to make this happen in a large elaborate budget amendment form. Ideally, this phase would connect with a government financial software to automatically adjust the budget and actual amounts through journal entries in accounts.

Tech Used and Process

- Remix-Solidity (Phase 2 - Splitter function)
- Ganache wallet
- Truffle - petshop
- Truffle
- Javascript
- Node JS
- HTML

Demo

Potential Impact on Fintech/Financial Industry

- Consumer protection
- Improving payment systems that span across borders with built in licensing
- Efficiency in finance approvals
- Data tracking
- Eliminates security risks

Implications

- Fintech Perspective
  - Is it worth it?
- Local Government Perspective
  - Does this cause more work to ensure thought and public input?
  - Are there security concerns?
- Issues with Integration
  - Would there be another industry where this might work better?

Conclusion

Pros

- Efficiency
- Faster
- Solve multiple issues easily
- Data tracking
- Transparency

Cons

- Costly
- Ethereum -> USD
- Integration with financial software
- Fear of new tech

Questions?

Sources

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