

LECTURE 4

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# TOKEN DESIGN

## DEFINITIONS

- ▶ ICO tokens
- ▶ Payment tokens
- ▶ Utility tokens

## DESIGNING THE TOKEN ECONOMY

- ▶ Why payment tokens won't work
- ▶ Two tokens
- ▶ Revenue Share
- ▶ Discount coupons
- ▶ Burn tokens

## WHY PAYMENT TOKENS WON'T WORK

- ▶ Bread money, coffee money, milk money
- ▶ Atomic exchanges will eliminate payment tokens
- ▶ The duality problem

## THE DUALITY PROBLEM

For the investors, a limited issuance, appropriately volatile token is needed.

For the economy, a potentially unlimited issuance, non-volatile token is required.

## PRE AND POST ICO: DIFFERENT TOKEN NEEDS

- ▶ Volatility vs Stability
- ▶ Limited vs non-limited tokens
- ▶ The Duality problem

## VOLATILITY VS STABILITY

For the ICO, your investors want the token to have a chance to appreciate in price. There must be a potential profit. Otherwise Investors won't be interested. This implies increasing value if everything goes well.

For a utility / payment token, on the other hand, must be as stable, as *non-volatile* as possible. Nobody wants to hold a currency that might worth half the next day.

## LIMITED VS NON-LIMITED ISSUANCE TOKENS

For the ICO, the number of tokens released must be known and fixed. There are very few legit ICOs that can get away with the option to mint tokens at will – there needs to be a clear and coherent rationale for an open ended token.

However, for the token economy *after the ICO*, you must be able to create as many tokens as the economy needs, and you should be able to mint and burn them as it is required. Especially if your tokens will have an intrinsic value, for example they are backed by something. Then if your economy will have 10 times of that something, then you will need 10 times more tokens. (For example tokenized commodities or fiat)



## TOO MUCH SUCCESS IS A BAD THING

- ▶ Problem: first few ICOs became way more successful than they should have been. ICO scene abandoned its roots.
- ▶ Originally ICOs were crowd sourced, crowd funded projects. Majority of people who invested in the ethereum crowdsale did it to help the project – because they liked the idea. They did not think it will be profitable.
- ▶ Most of the 2016 ICOs yielded in crazy returns – sometimes 50x the capital within a few months (Golem)

## THE AUDIENCE CHANGED

So because of the explosive successes, **the audience changed**. Instead of supporters, the majority of the audience are now investors. (Or dare I say speculators)

These two crowds have different needs, and that shows clearly in the duality of the token requirements.

The ICO token needs to appeal to the speculator.

The utility token needs to appeal to the supporter.

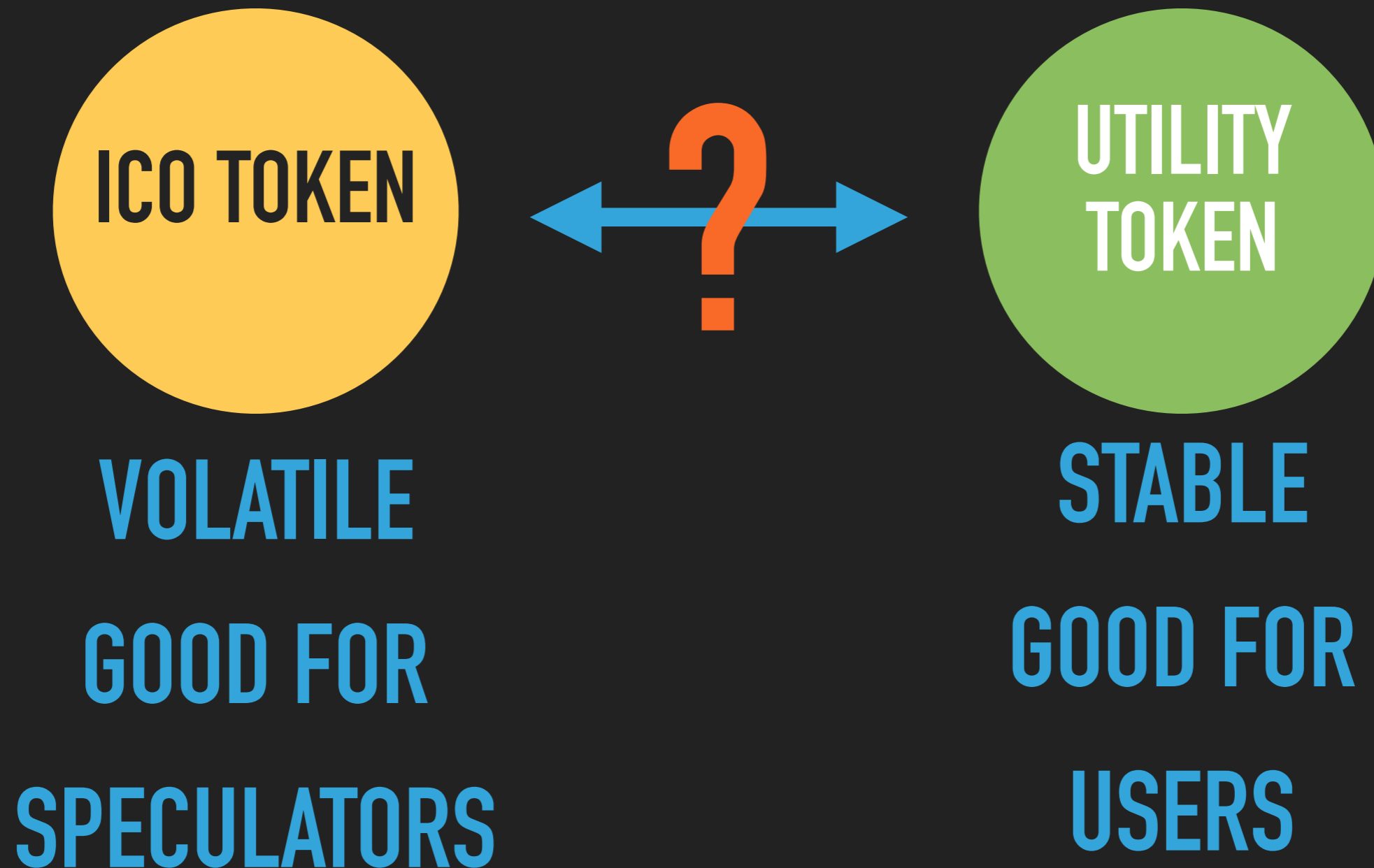
## TWO TOKENS

This solution will please the investor crowd, without taking away anything from the supporter crowd.

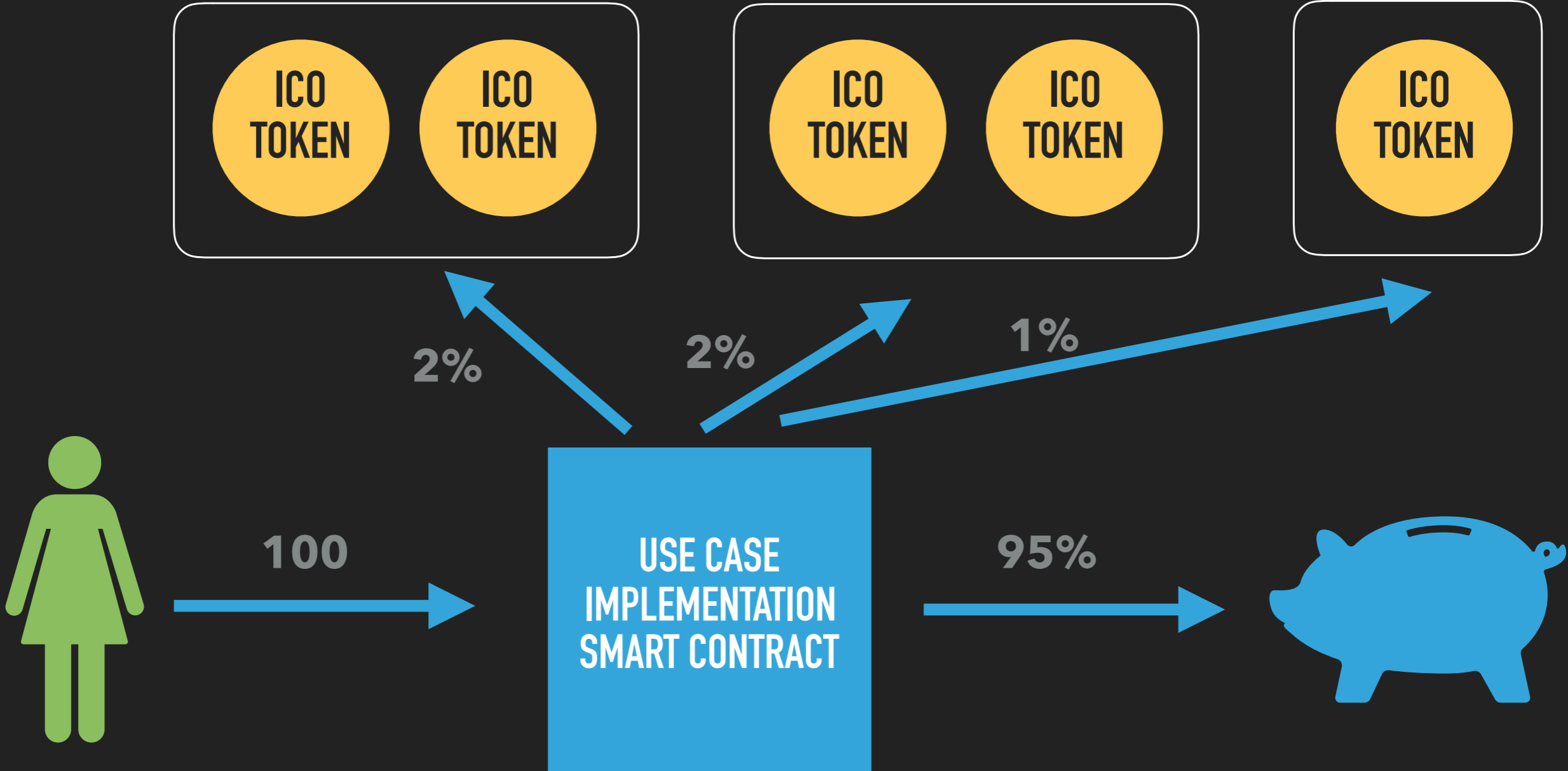
We can create two separate tokens. One for the ICO, and one for the token economy. The ICO token can stay volatile, and the utility token can be pegged to something and can fuel the economy.

This is a very good solution, and when designed carefully, it will work. The trick is to design the two tokens in a way that the utility token can provide a real value to the ICO token.

## SEPARATE TOKENS



# REVENUE SHARE



## DISCOUNT VOUCHERS

- ▶ The use case requires that you have a working business and demand for your service
- ▶ Your service costs 10 dollars
- ▶ During the ICO you issue tokens for 5 dollars
- ▶ The tokens can be used to pay your service. Thus giving a 50% discount

## DISCOUNT VOUCHERS

- ▶ Tokens are burned after use, thus creating
- ▶ ICO tokens can be sold for up to \$10, providing 50% profit
- ▶ Limited upside
- ▶ Prevents speculation
- ▶ Requires a service that is in demand.

# BURN TOKENS



VOUCHER  
CREATOR  
CONTRACT

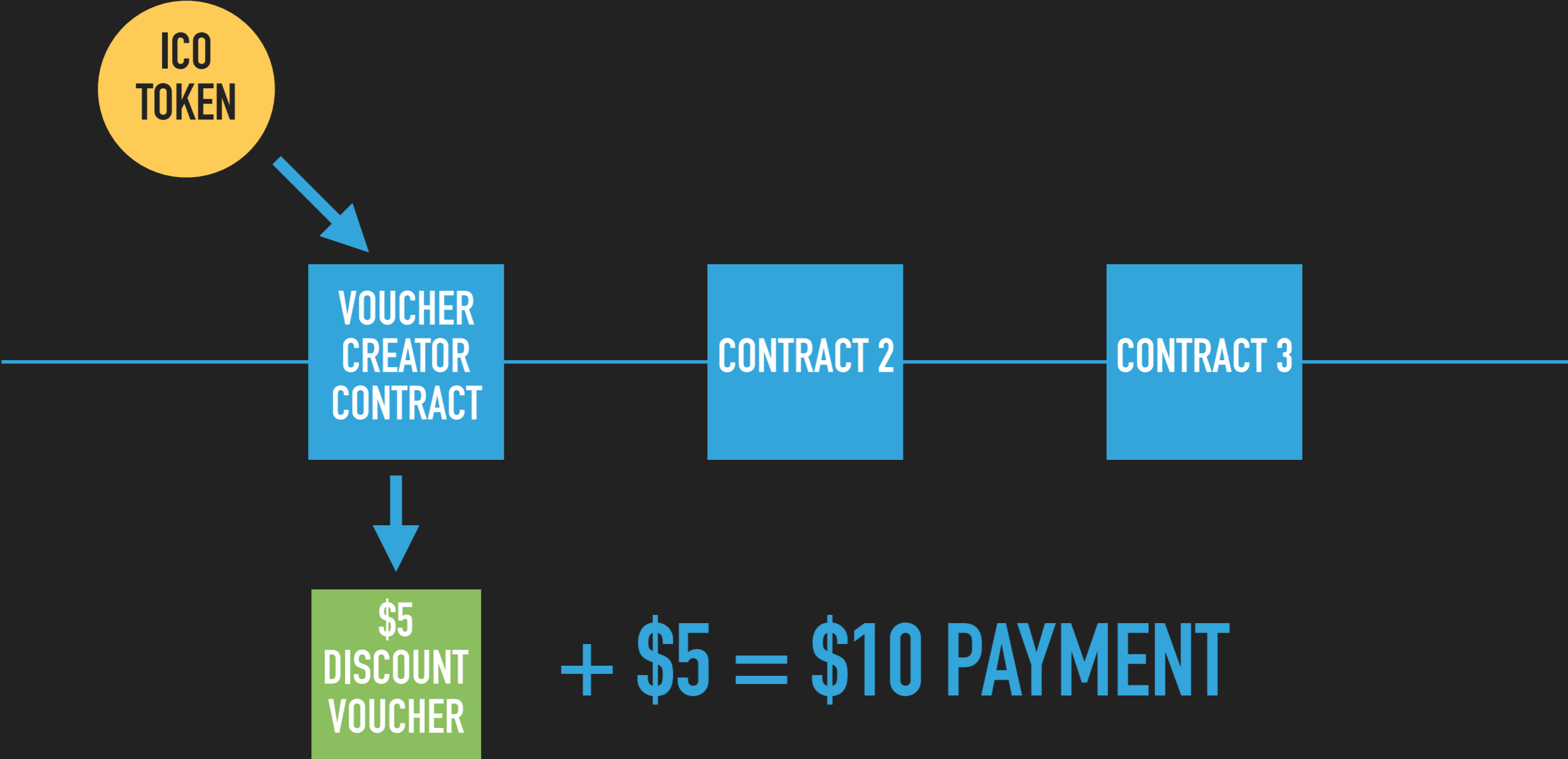


\$5  
DISCOUNT  
VOUCHER

+ \$5 = \$10 PAYMENT



# BURN TOKENS



## BURN TOKENS

- ▶ Keeps possible upside uncapped for ICO token
- ▶ No volatility for the business
- ▶ Diminishing supply
- ▶ Can pay with anything

## BURN TOKENS

- ▶ Constant buy pressure
- ▶ The name of the game: incentivize ICO token holders to burn their tokens
- ▶ requires a running business and a product / service that is in demand

# SUMMARY

**TWO DIFFERENT AUDIENCES  
WITH TWO DIFFERENT NEEDS**

## WHY PAYMENT TOKENS WON'T WORK

- ▶ Bread money, coffee money, milk money
- ▶ Atomic exchanges will eliminate payment tokens
- ▶ The duality problem

## KNOWN SOLUTIONS

- ▶ Revenue / profit share – technically perfect, possibly requires securities clearance
- ▶ Utility tokens – if one can find real utility
- ▶ Discount vouchers
- ▶ Burn tokens

# THE CHALLENGE



## PROPOSE A TOKEN DESIGN THAT

- ▶ Good for the contributors
- ▶ Useful for the business
- ▶ Legal

**THANK YOU**

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