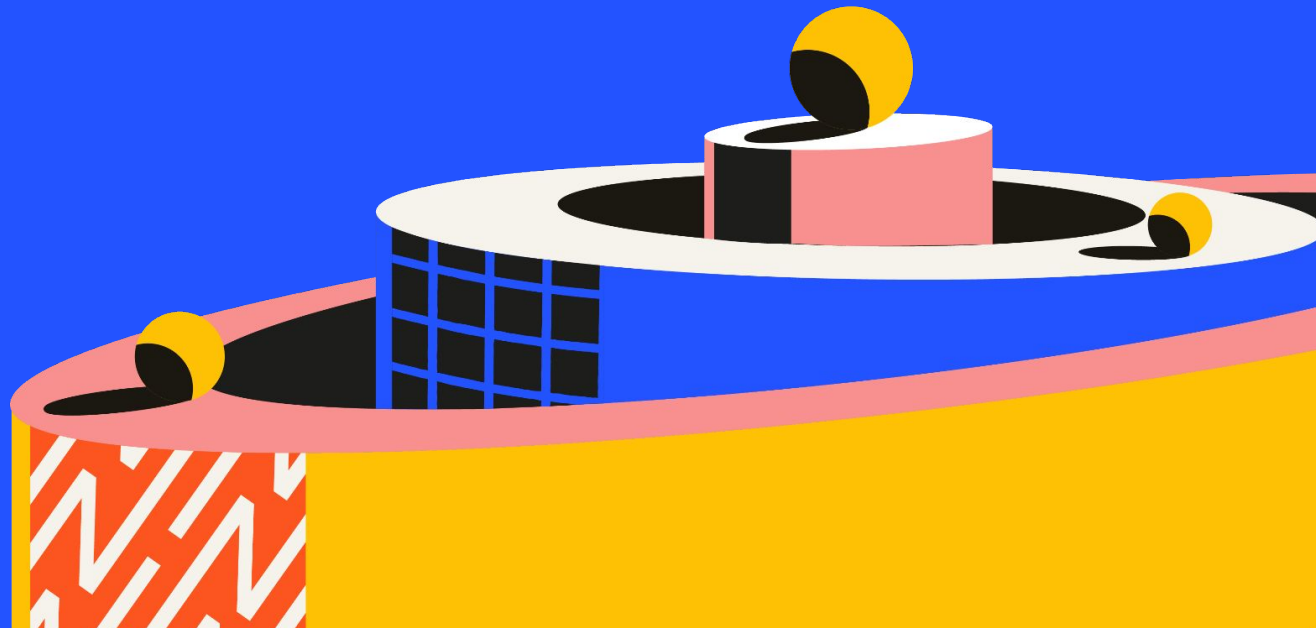
Common Beginner Blockers: Wallets, CLI, tokens



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Agenda

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Intro

Goal: Learn how things break, why they break, and how to fix them fast

Beginner problems fall into:

- Environment issues
- Network mismatch
- UTxO misunderstanding
- Asset metadata confusion

Wallets (Biggest Beginner Blocker)

What beginners expect

- “I installed a wallet, why can’t I send / see / sign?”

What’s actually happening (Cardano-specific)

- Wallet = key management + UTxO viewer
- Funds live in UTxOs, not balances
- Network matters (Mainnet vs Preview/Preprod)

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Common Wallet Issues & Live Fixes

Issue 1: “My wallet shows 0 ADA”

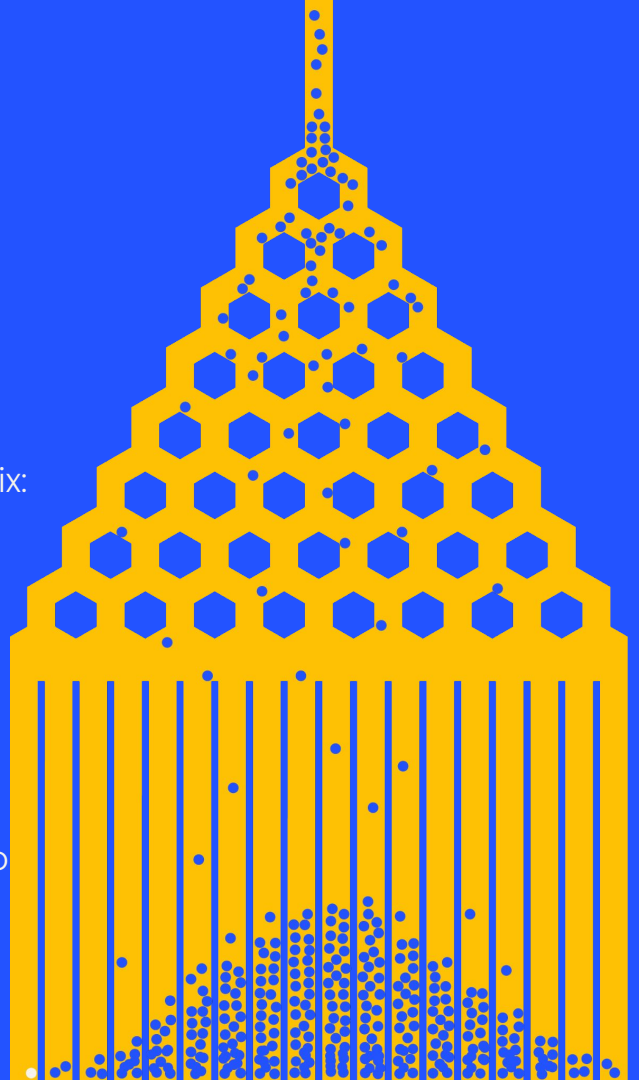
Root causes

- Wrong network
- Wrong address type
- Wallet not synced

Live troubleshooting checklist

1. Check network (Mainnet / Preview / Preprod)
2. Copy address → inspect prefix:
    - addr1… → Mainnet
    - addr_test1… → Testnet
3. Use a block explorer:
    - cardanoscan.io (mainnet)
    - preview.cardanoscan.io

Reusable lesson: Funds exist on-chain, not “in” the wallet



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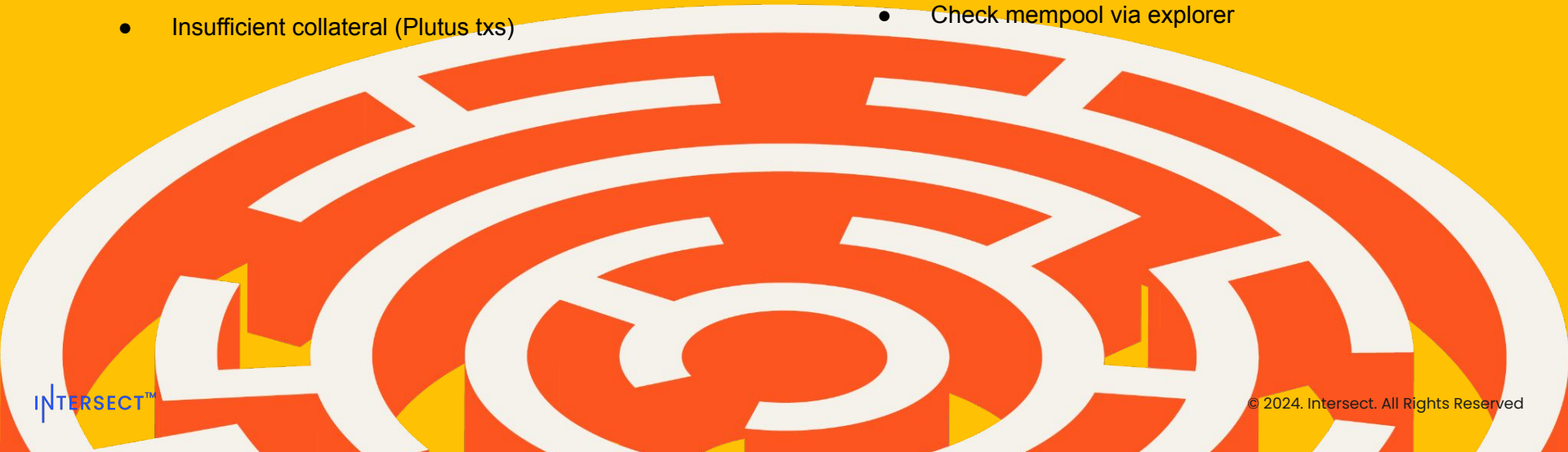
Issue 2: “Transaction pending forever”

Root causes

- Wallet backend down
- TTL expired
- Insufficient collateral (Plutus txs)

Fix

- Refresh wallet backend
- Rebuild tx
- Check mempool via explorer



Issue 3: “I can’t sign this transaction”

Root causes

- Wrong wallet connected
- Missing signing key
- Hardware wallet limitations

Fix

- Verify address used in tx = wallet address
- Check required signers in tx

CLI (Where Most People Panic)

Reframe the CLI

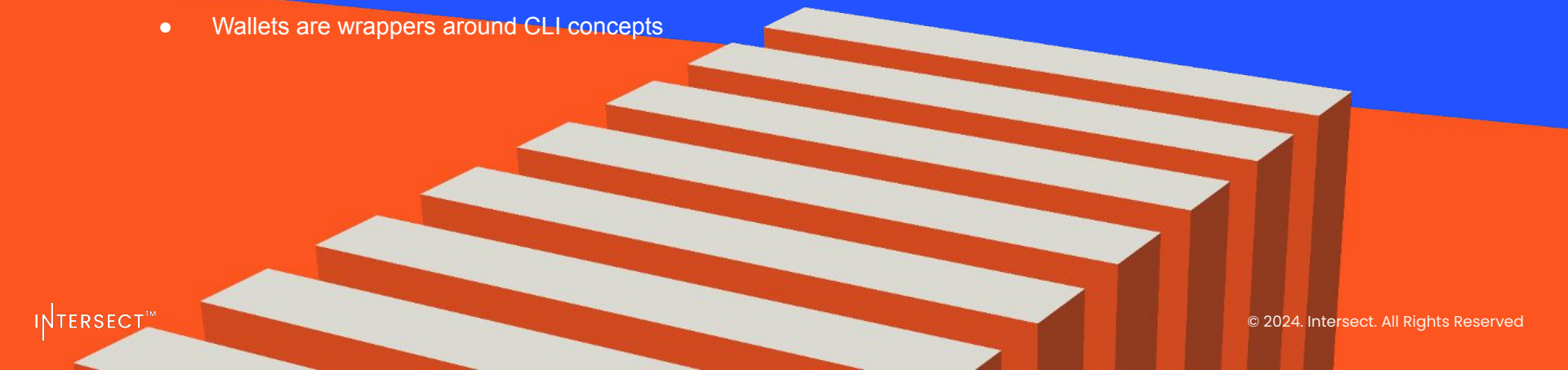
> “The CLI is not scary — it’s just explicit.”

Explain:

- CLI = **raw blockchain interface**
- Wallets are wrappers around CLI concepts

Core Mental Model (Very Important)

Cardano CLI work =
Query → Build → Sign → Submit



Common CLI Blockers & Fixes

Issue 1: “command not found”

Cause

- CLI not installed or PATH misconfigured

Fix

- `which cardano-cli`

Reusable solution:

- **Always validate tooling before debugging blockchain logic**

Issue 2: “Invalid network”

Cause

- Missing `--mainnet` or `--testnet-magic`

Fix

```
--testnet-magic 1   # Preview

--testnet-magic 2   # Preprod

--mainnet
```

Reusable lesson:
👉 *Network mismatch causes 50% of beginner failures*

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Issue 3: “No UTxO found”

Cause

- Address has no spendable UTxOs
- Wrong address queried

Fix (Live Demo)

```
cardano-cli query utxo \
  --address $(cat payment.addr) \
  --testnet-magic 1
```

Explain:

- No UTxO = no transaction possible
- ADA must be **unlocked & sufficient**

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Issue 4: “Transaction build fails”

Common reasons

- Not enough ADA for fees
- Multi-asset minimum ADA not met
- Missing collateral

Reusable pattern

1. Query UTxOs
2. Pick one with enough ADA
3. Build tx explicitly

Tokens (Where Confusion Peaks)

Beginner Myth

"Tokens are like ERC-20s"

Cardano Reality

- Native assets
- No smart contract required
- Always live **inside UTxOs**

Token Anatomy (Explain Slowly)

A token =
Policy ID + Asset Name + Quantity

No metadata required to exist.

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Issue 1: “My token doesn’t show in wallet”

Cause

- Wallet UI filtering
- No metadata
- Min ADA violation

Fix

- Use CLI or explorer to confirm existence
- Check min ADA rule (~1–1.5 ADA per UTxO)

Reusable lesson:
👉 *Wallet UI ≠ chain reality*

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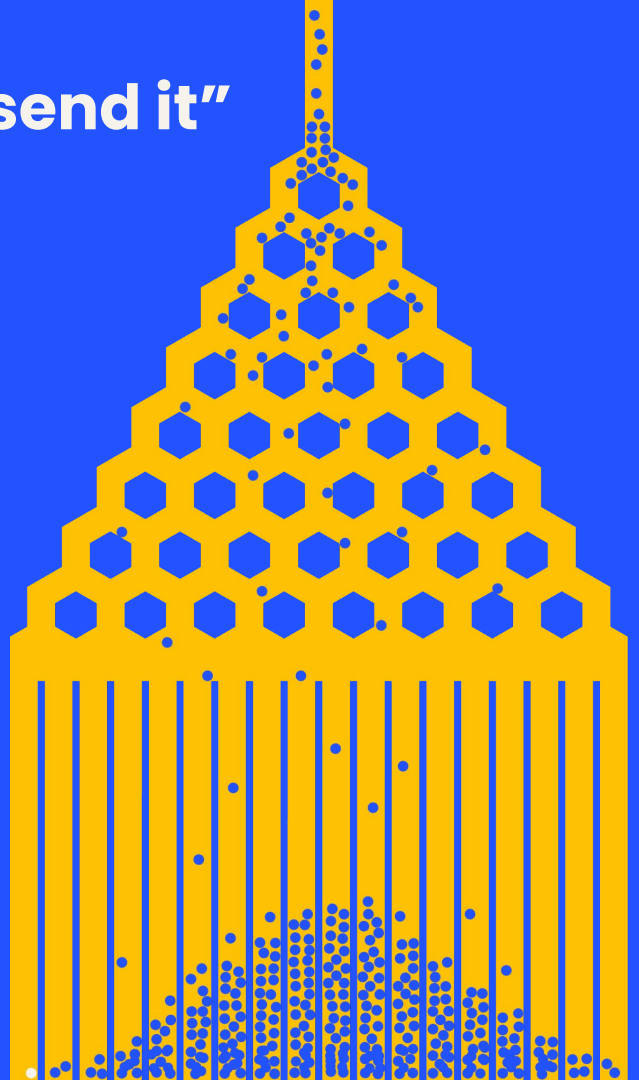
Issue 2: “I minted a token but can’t send it”

Cause

- Token locked in UTxO with insufficient ADA
- Policy script constraints

Fix

- Rebuild UTxO with enough ADA
- Inspect policy script



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Universal Troubleshooting Framework (Key Takeaway Slide)

When something breaks, always ask:

1. **Which network am I on?**
2. **Which address is involved?**
3. **Which UTxO am I spending?**
4. **What does the chain say (not the UI)?**

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“Most crypto problems aren’t bugs — they’re misunderstandings of the model.”

Use explorers

Trust the chain, not the UI

Learn UTxOs early

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