

Bitcoin and a Two-Tier Network?



Examining Dash Solutions For Bitcoin

Mexico, 7th December, 2015

Evan Duffield

- Dash Founder
- Software Developer
- Experience in Finance Industry
- Crypto-Currency Enthusiast
- Inventor

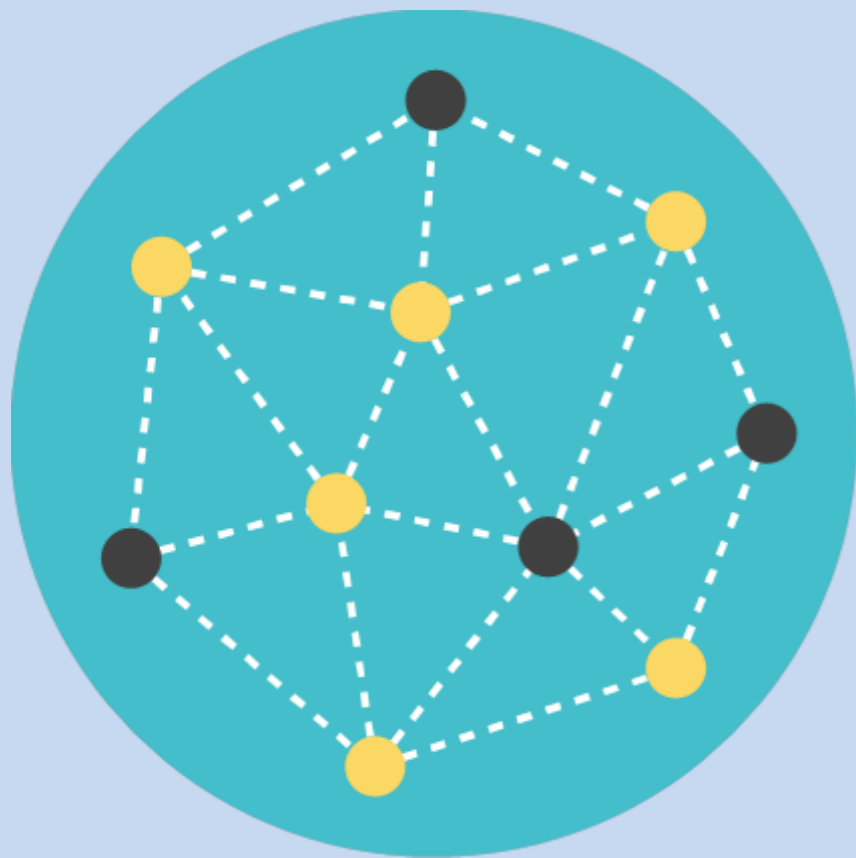


What is Dash?

- *Innovative* Cryptographic Currency
- 14M Market Cap
- ~10k Users
- Nimble Development



The Dash Network

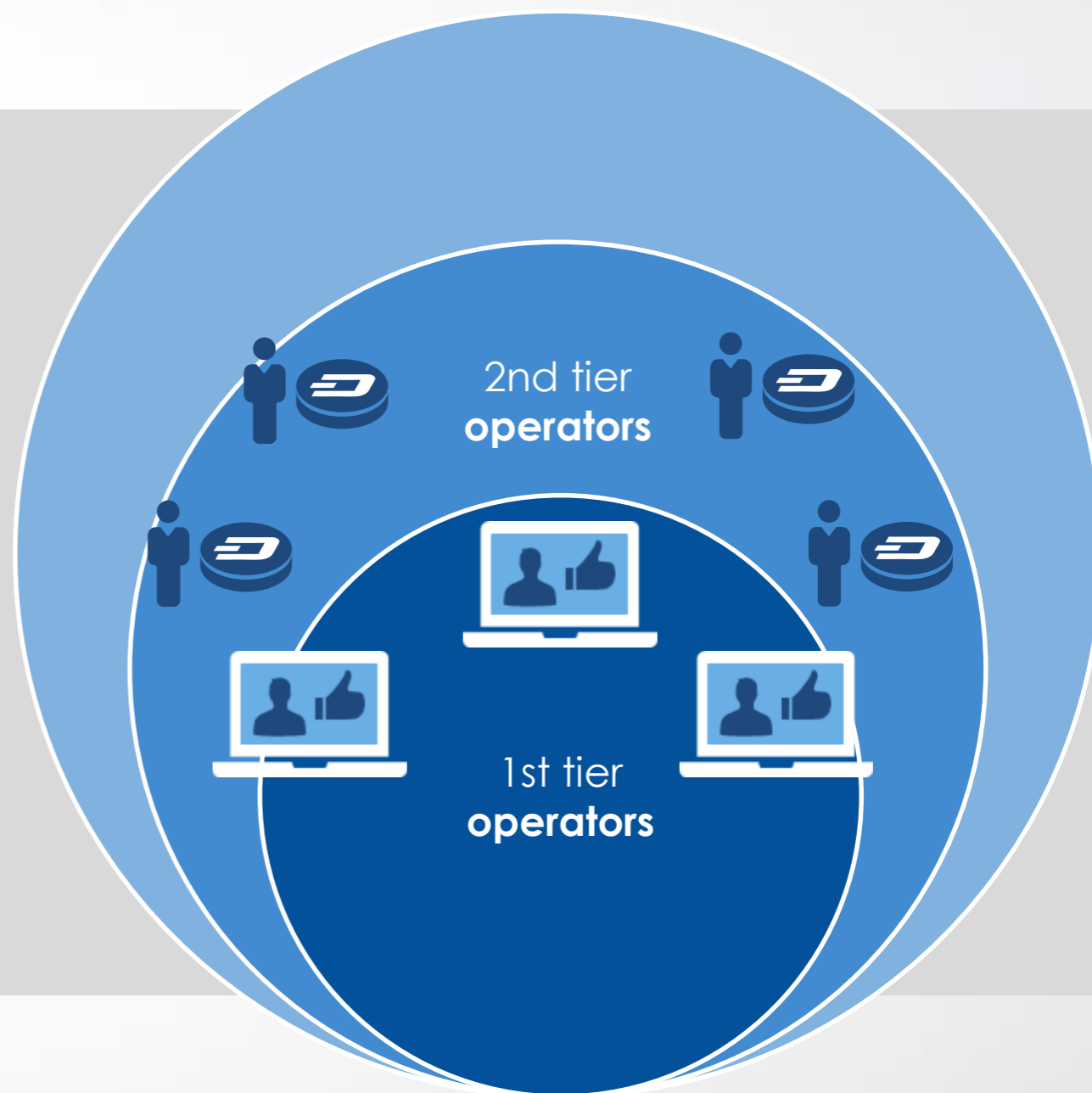


Series of experiments since 2014:

- **Two-Tier Network** for scalability
- Decentralized **Funding**
- Decentralized **Governance**

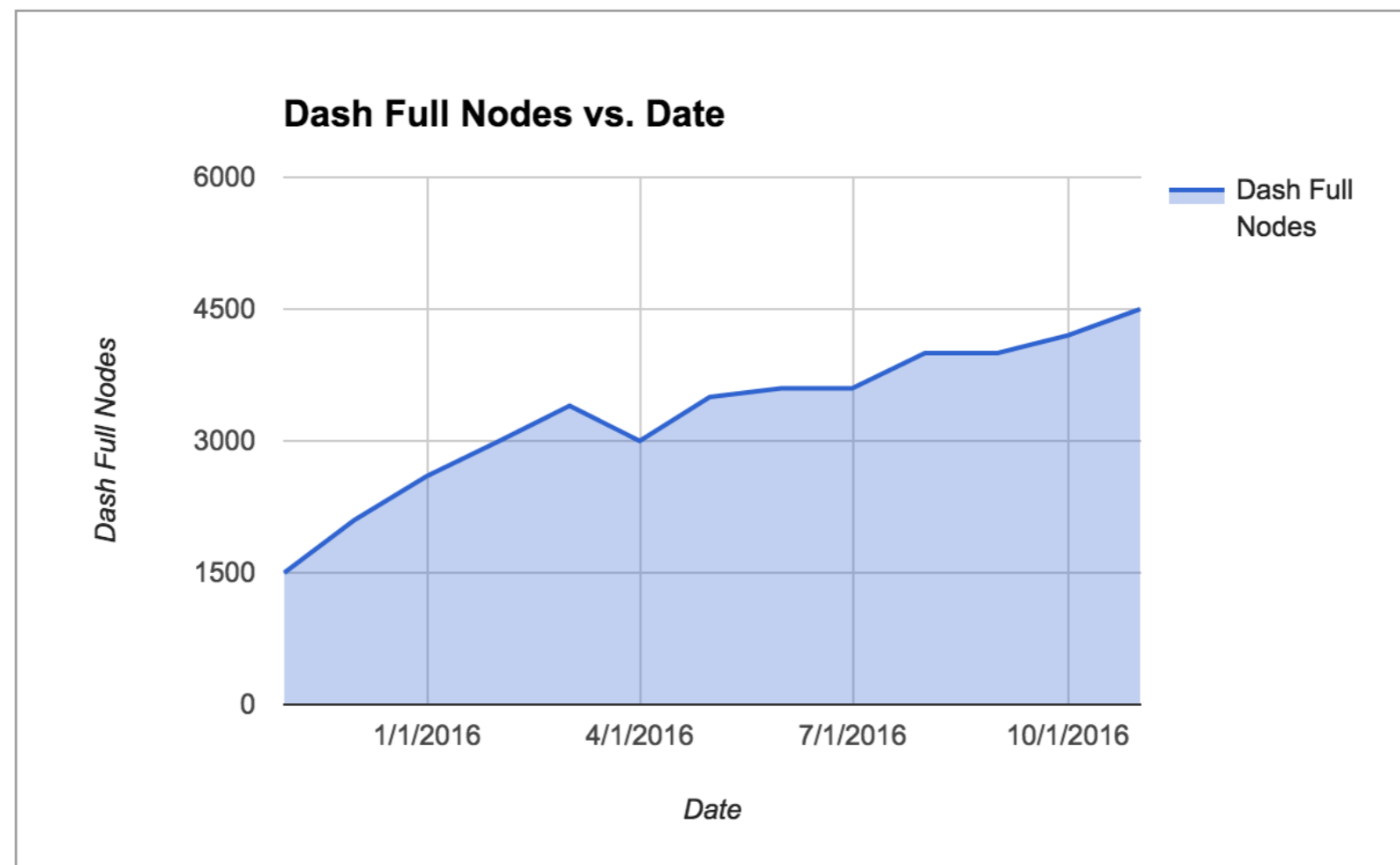
What Is The Second Tier?

- Administrators run a full node (Masternode) and get paid from the blockchain
- Operators must meet network requirements
- Decentralized Infrastructure!

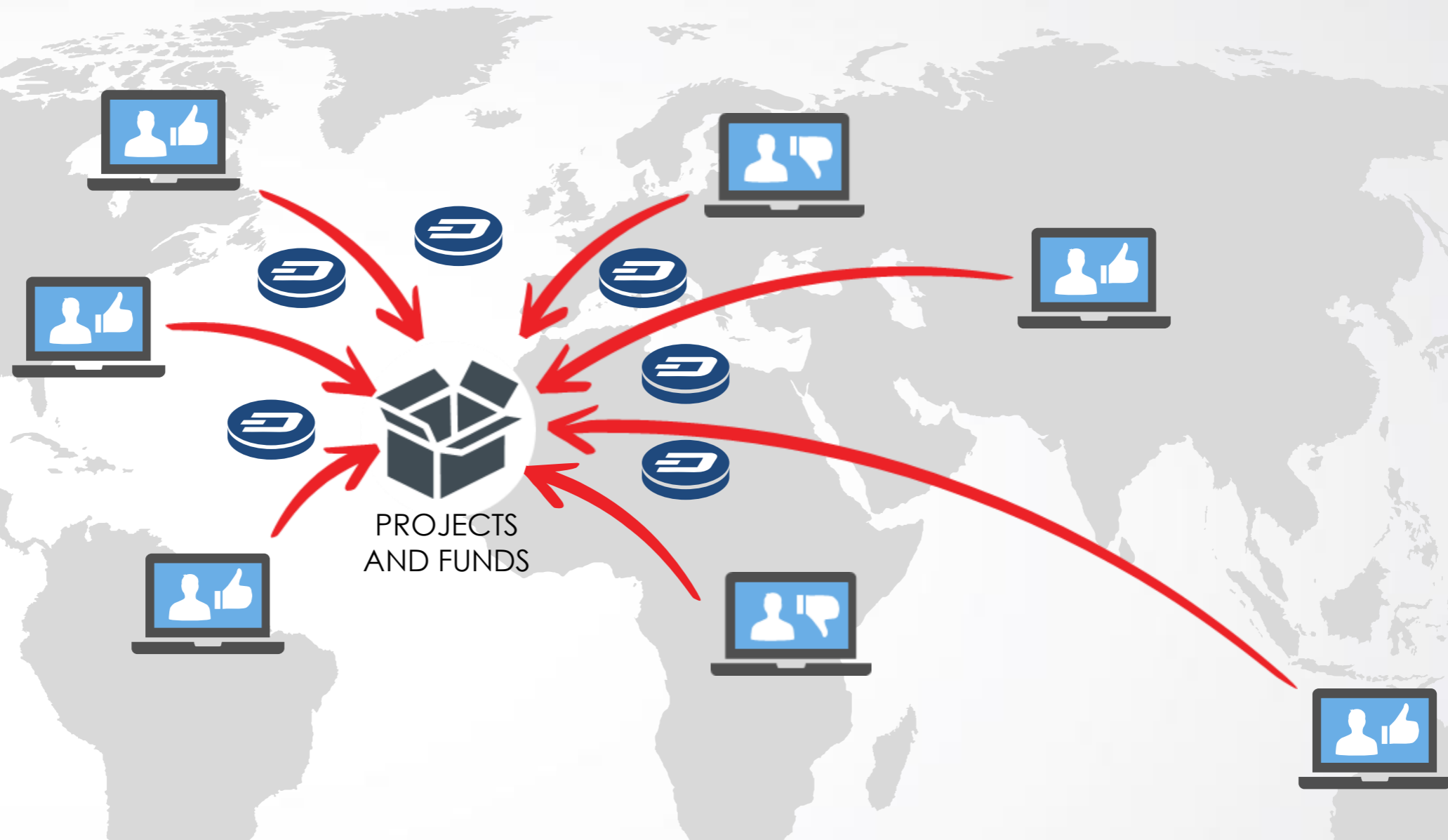


How The Second Tier Works For Dash?

- Added **3400 Masternodes** using the Second Tier
- Thousands of Professional Decentralized Administrators
- Stronger Network Infrastructure!



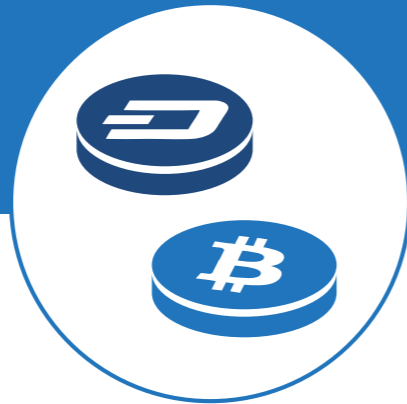
How Do You Join The Second Tier?



- Buy some coins and run a Full Node (Masternode)
- Meet the Second Tier Qualifications (update, CPU, RAM, etc)
- Get Paid

Second Tier Advanced Features

Decentralized
Funding



Decentralized
Voting



Decentralized
Governance



Decentralized
Infrastructure



Dash Second Tier Governance And Funding

- We poll second tier to **make decisions** about funding
- Funds come **directly from the blockchain**

Date Added ▾	ID	Hash	Fee Hash	Block Start	Est. Start	Block End	Est. End
3 days ago	christmas-lottery	53e4dfa	c914f6b[1]	382168	12/6/2015	407092	1/21/2016
28 days ago	amsterdam-expenses	67d2401	502d2b0[1]	365552	11/6/2015	390476	12/21/2015
28 days ago	btc-miami-conf	f0b16b4	167697a[1]	365552	11/6/2015	390476	12/21/2015
28 days ago	laBITconf	87a3529	ba2afc2[1]	365552	11/6/2015	390476	12/21/2015
1 month ago	dashwhale-basic	4f8b122	26c17d0[1]	365552	11/6/2015	473556	5/20/2016
2 months ago	liquidity-provider	74d557d	b4bf407[1]	348936	10/7/2015	373860	11/21/2015
2 months ago	website-pt-1	8387cdf	24dd4be[1]	348936	10/7/2015	373860	11/21/2015
2 months ago	electrum-pt-2	244bd3d	1c249a6[1]	348936	10/7/2015	373860	11/21/2015
2 months ago	foundation-pt-2	d06d273	43179ef[1]	348936	10/7/2015	373860	11/21/2015
2 months ago	Tennis_Reimbursement	a64c67c	bac481a[1]	348936	10/7/2015	373860	11/21/2015
2 months ago	compensate-testers	c0e0c1a	b821e98[1]	332320	9/7/2015	540020	9/17/2016
2 months ago	reimbursement	4284389	2c808f1[1]	332320	9/7/2015	357244	10/22/2015
2 months ago	public-awareness	cbafad1	0f86953[1]	332320	9/7/2015	2002228	12/14/2023

Miami conference

LaBITconf funding

New website design

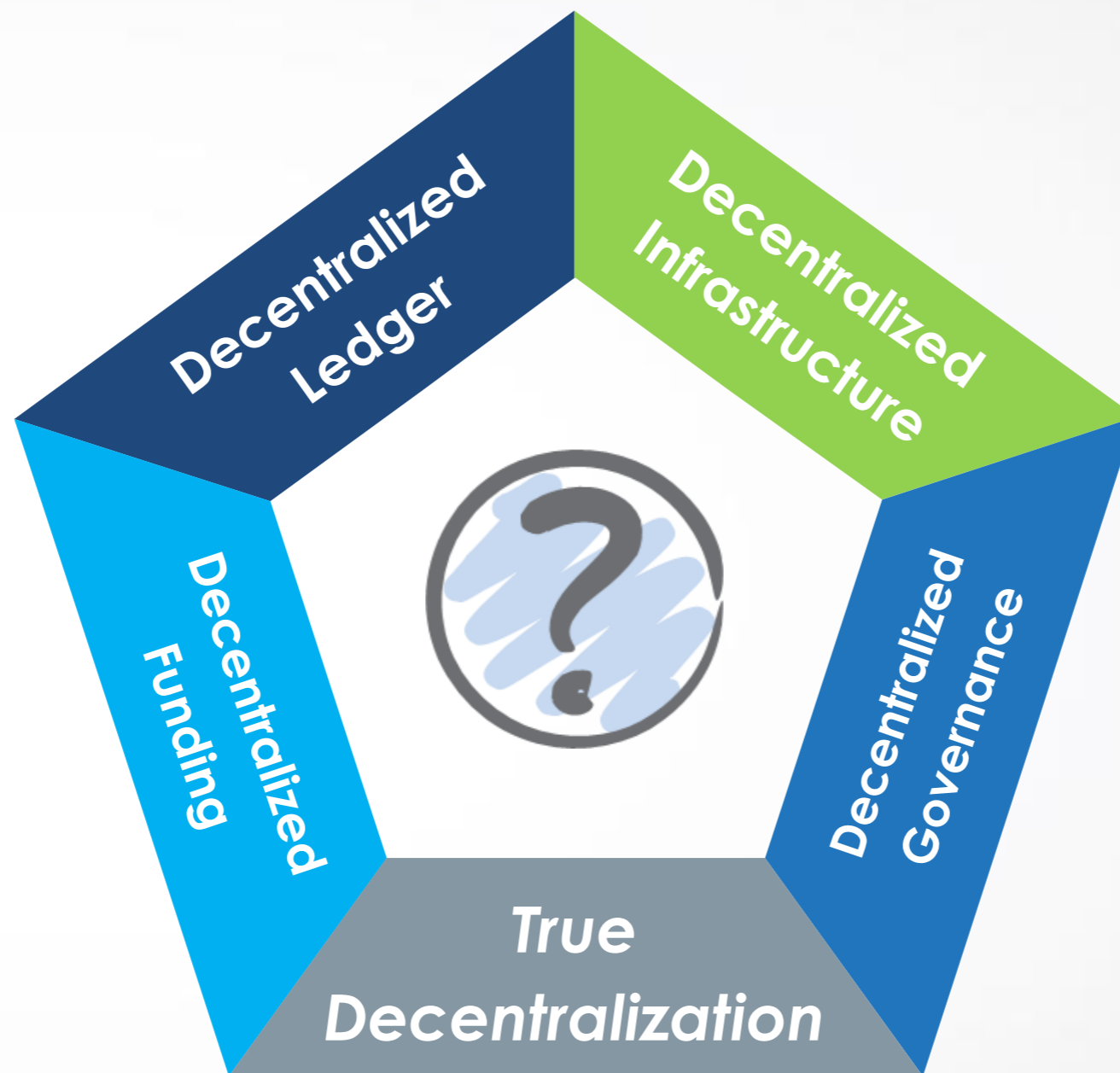
Dash Business Development

Bitcoin And The Second Tier



What would make the perfect Bitcoin?

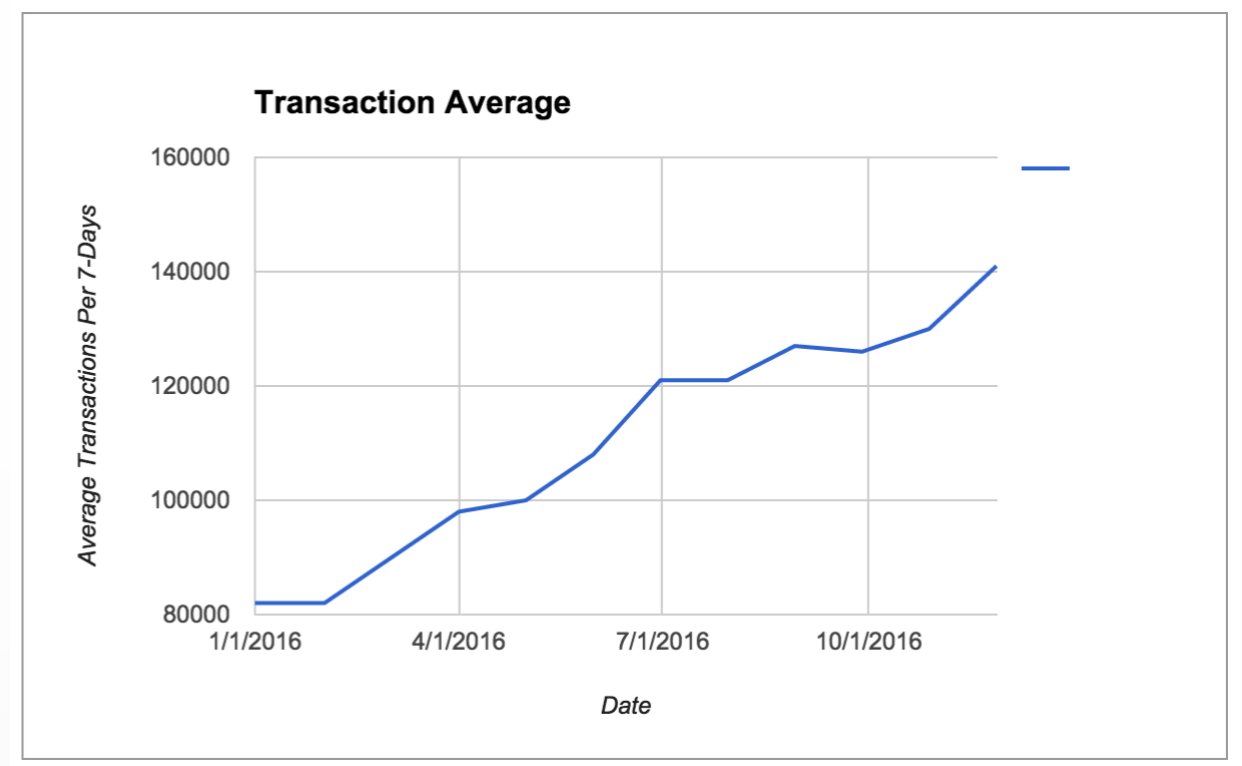
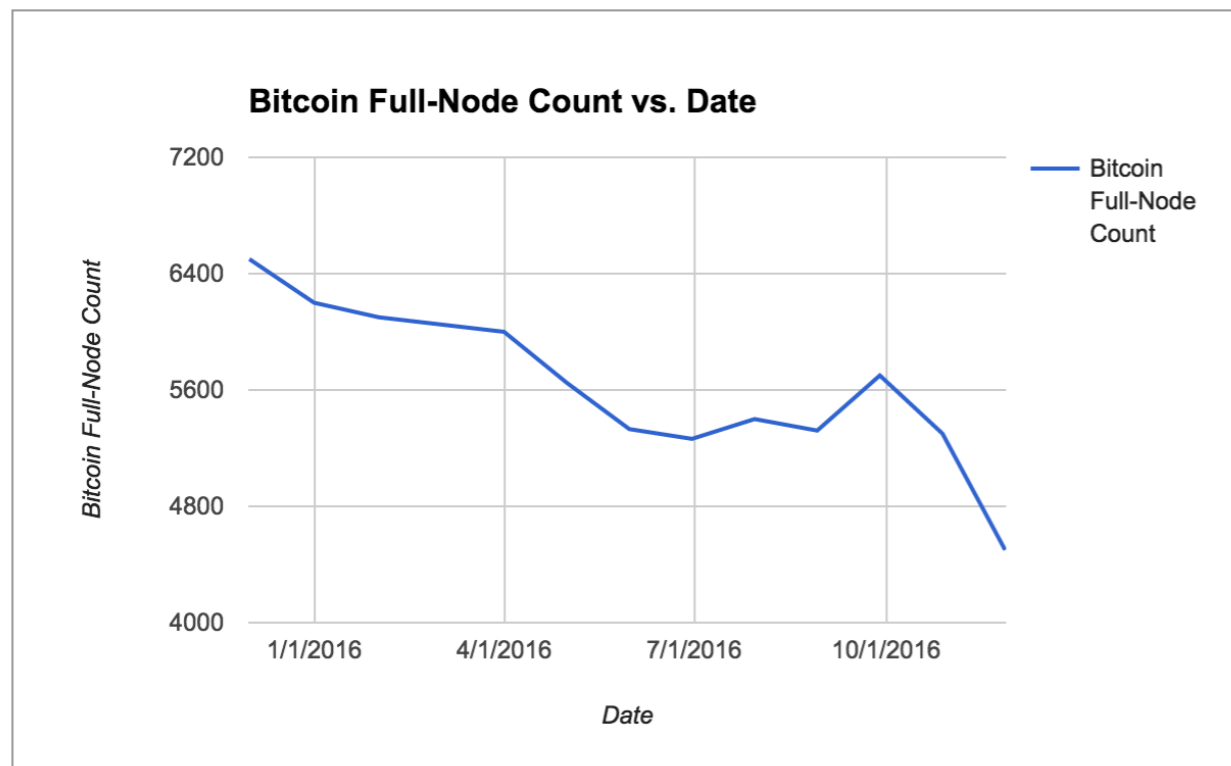
What Would Make The Perfect Bitcoin?



These should be our goals when finding a solution

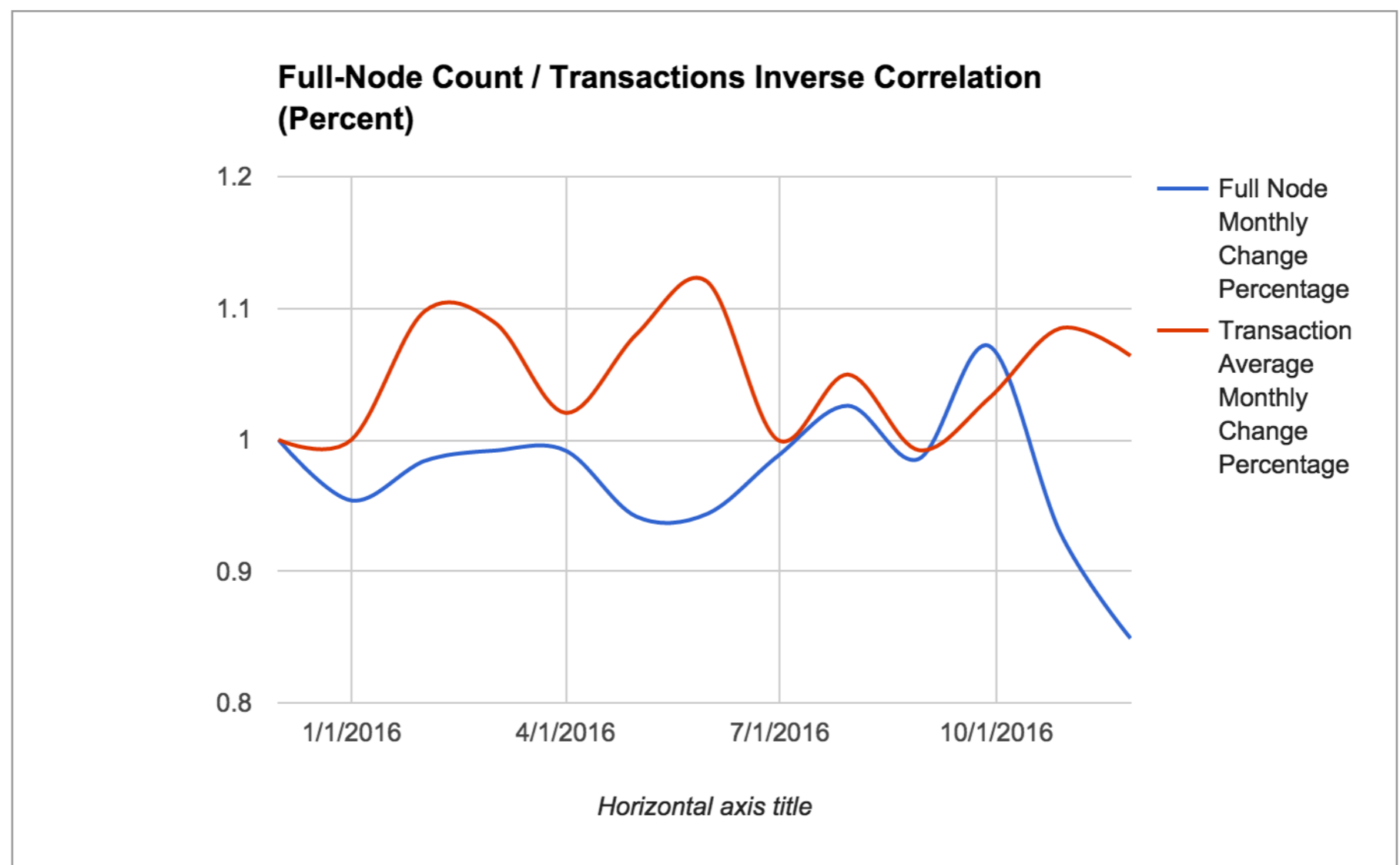
Infrastructure Problem?

- Is Full-Node Count Inversely Related To The Network Transaction Bandwidth?



Infrastructure Problem?

- How can Bitcoin scale from 1MB blocks to 100MB blocks in 10-20 years?
- What happens to the full node count if Bitcoin raises the block limit?



Scaling The Bitcoin Ecosystem

Innovation



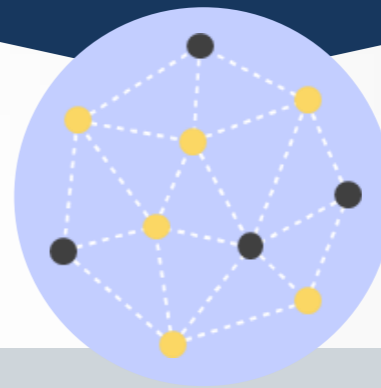
Security



Scalability



Decentralization



the Human Effect



- How to support millions of mobile devices connected to the Bitcoin Network?
- How to increase the block size without hurting the network?
- How to keep or even grow the infrastructure?

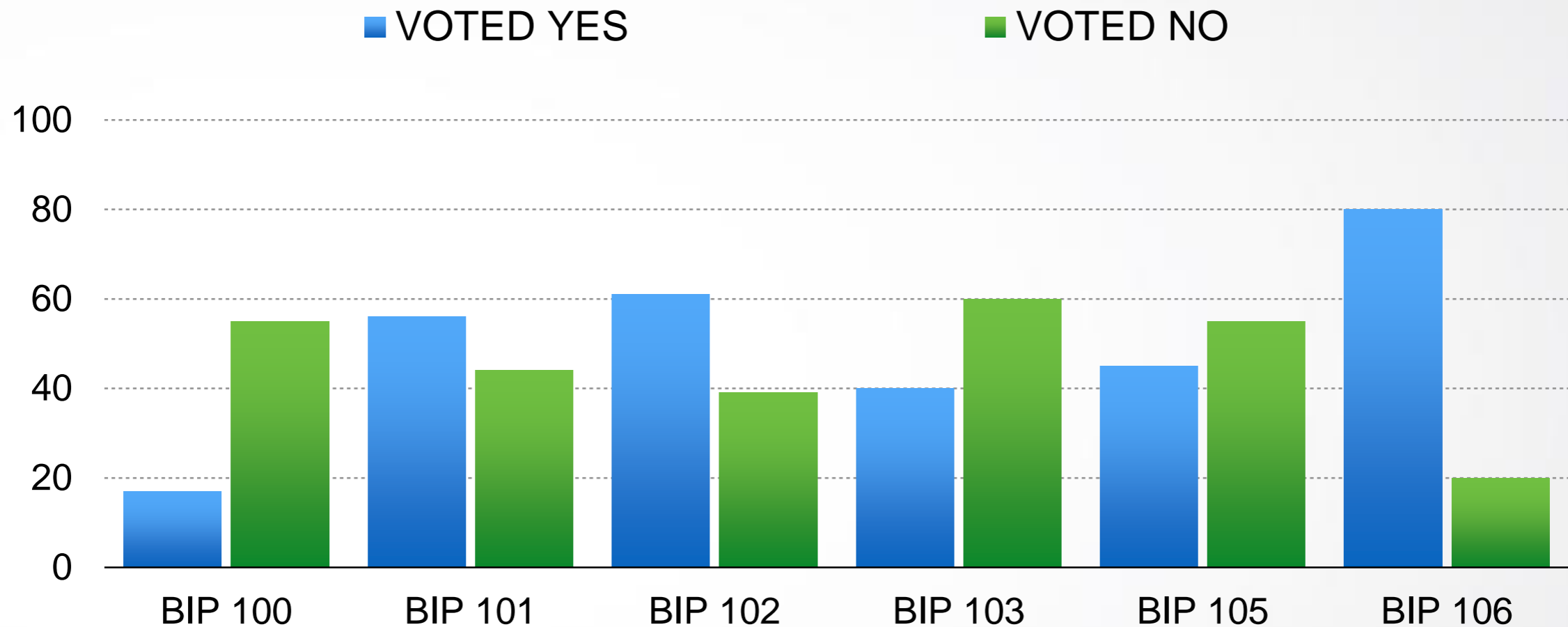
Current Issues

Bitcoin issues with scalability and decentralization

- Centralized **Simple Payment Verification**
- Centralized **Development Funding**
- No **Decentralized Governance** Model
- Centralized Scalability Proposals (**Bitcoin Lightning**)
- One Megabyte Block Size Limitation



Governance by Decentralized BIP Voting System



- Each Masternode Operator has one vote per BIP (Bitcoin Improvement Proposals)
- Cast support for your favorite BIP
- Sybil proof

Bitcoin Funding System

- **Allocate** a small percentage of the reward (1%)
- **Fund** whatever the network wants

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Bitcoin Core Development

Legal Expenses

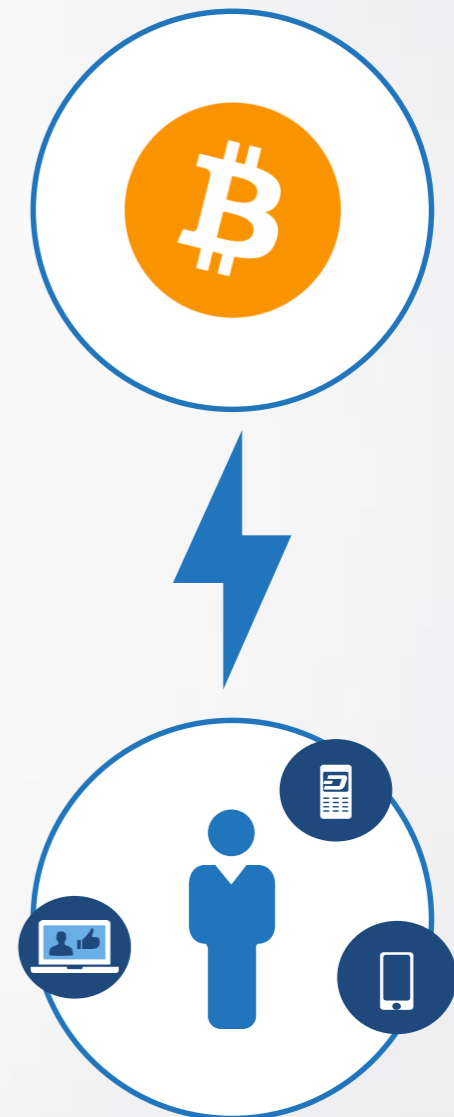
New website design

Bitcoin Business Development

Decentralized SPV: Supporting Millions Of Mobile Users

How do you implement decentralized SPV (Simple Payment Verification) with the second tier?

1. Point <https://tier2.bitcoin.org/> at a round robin DNS for the entire second tier
2. Require SPV running on second tier to get paid.
3. Mobile installation will connect to <https://tier2.bitcoin.org>

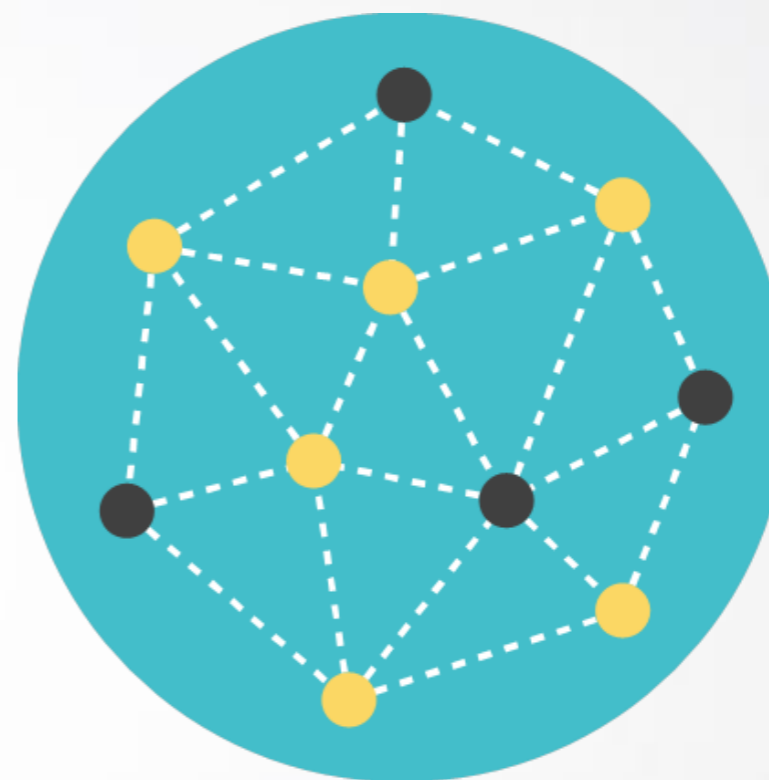


How Would Bitcoin Implement A Second Tier?

- Plan and implement **decentralized second-tier**
- Allocate about 1% of the block reward to the **second tier**
- Allocate about 1% of the block reward to **decentralized funding**
- Trustlessly detect and **pay masternodes** on network
- **Scale!**



Conclusion: Adopt The Second Tier!



- Adopt the second tier to make Bitcoin scalable!
- Plan out an implementation to achieve decentralized funding and decentralized governance.
- Resolve the block size issue and scale for mass adoption!

Announcements



New blog “Hello, Bitcoin”

Help us explore the possibilities of Bitcoin and a Two-Tier network:

<https://medium.com/@hellobitcoin>

Open Sourcing Dash Evolution

Visit us at dash.org