

Hyperledger Projects

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About Me

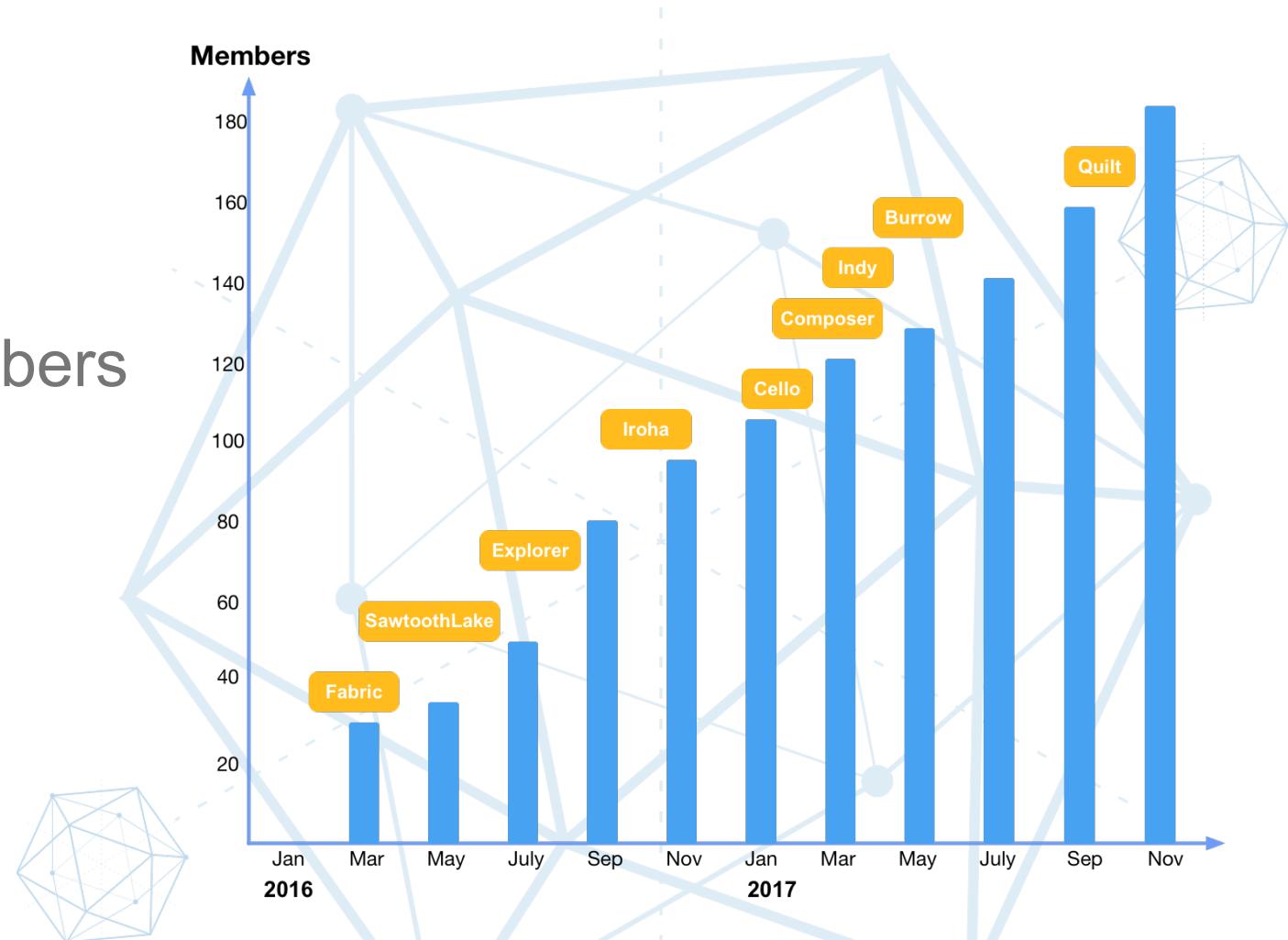
- **Interested Areas**
 - Fintech, Cloud and Analytics
- **Technical Leader**
 - Senior Researcher/Architect in IBM, Oracle
- **Open-Source Contributor**
 - [Hyperledger](#), [OpenStack](#), [OpenDaylight](#), etc.
- **Hyperledger Developer**
 - Core designer & committer of [Fabric](#), [Cello](#), [sdk](#) etc.
 - [Hyperledger Technical Steering Committee \(TSC\) Member](#)
 - [Hyperledger Technical Working Group China Chair](#)



Hyperledger Projects

- Since Dec 17, 2015
- Apache v2 License
- 30 Founding Members
- 21/44/186 Premier/China/Members
- 9 Top Projects
- 500+ Contributors
- 20000+ Commits

Enterprise grade, open source distributed ledger framework!



Introducing Hyperledger

Open source
collaborative effort to
advance cross-industry
blockchain
technologies

Hosted by
The Linux Foundation,
fastest-growing project in
LF history

Global collaboration
spanning finance,
banking, IoT, supply
chains, healthcare,
manufacturing,
technology and more.



Together with the global technology community, The Linux Foundation® is solving the world's hardest problems through open source and **creating the largest shared technology investment in history**.

With 16 years experience providing **governance structure, IT infrastructure and ecosystem development**, The Linux Foundation is the umbrella organization for **more than 60 open source projects** accelerating open technology development and commercial adoption.

Some of the game-changing initiatives hosted by The Linux Foundation include:

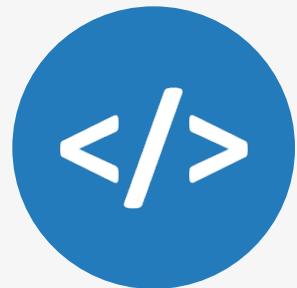


Hyperledger Goals

**Where open source teams build diverse approaches
for business blockchain technology systems**



Create enterprise grade, open source, distributed ledger frameworks & code bases
to support business transactions



Provide neutral, open, & community-driven infrastructures
supported by technical and business governance



Build technical communities
to develop blockchain and shared ledger POCs, use cases, field trials and deployments



Educate the public
about the market opportunity for blockchain technology



Promote our community of communities
taking a toolkit approach with many platforms and frameworks

Hyperledger Technical Scope

Out of Scope

Custom Applications

App Layer

API libraries and GUIs
Specialized consensus algos
Membership policies
Gateway
Operations dashboard

Value Added Systems

In Scope

Core APIs

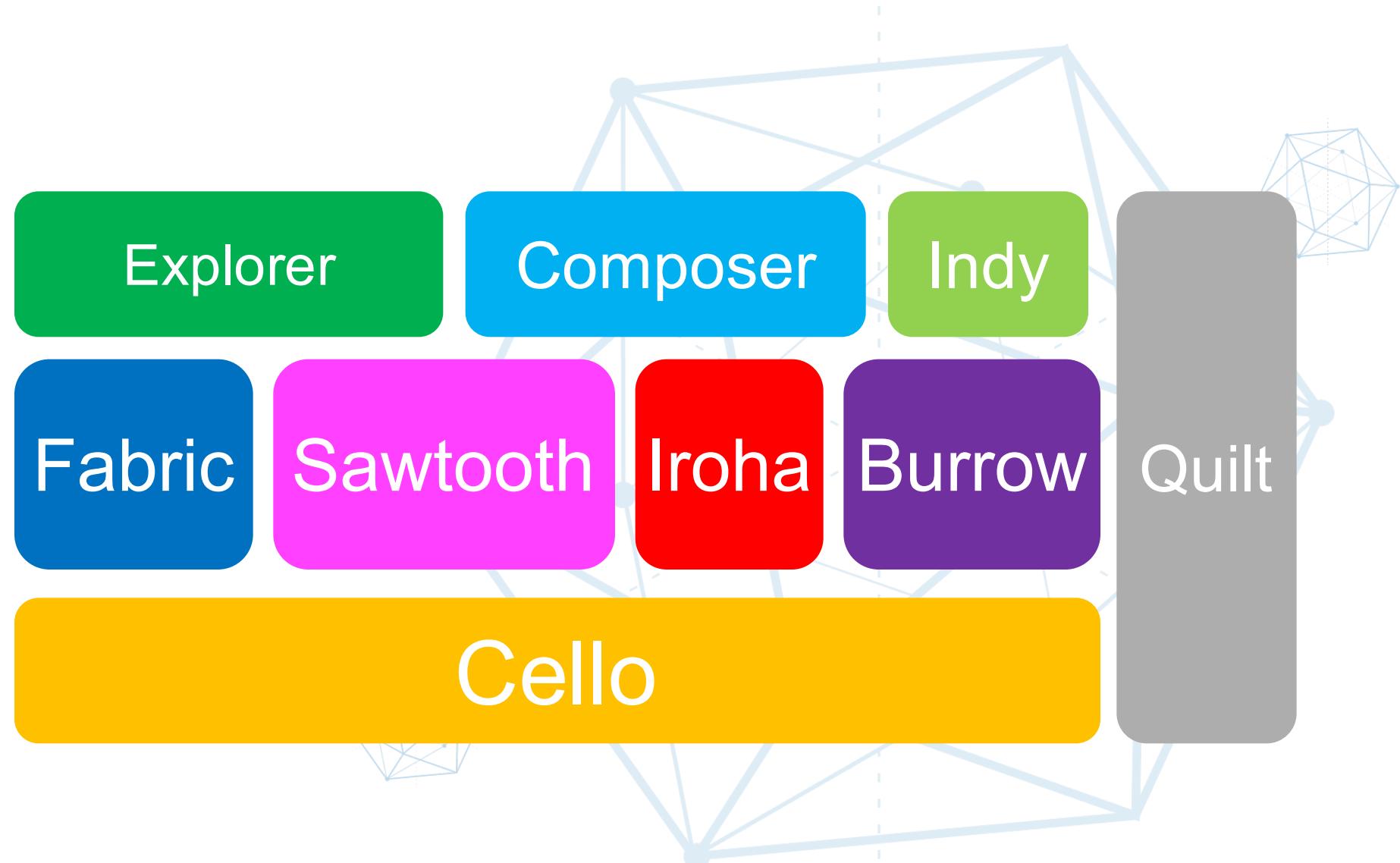
Core APIs

Code execution environment
Ledger data structures
Modular consensus framework
Modular identity services
Network peers

Shared Ledger

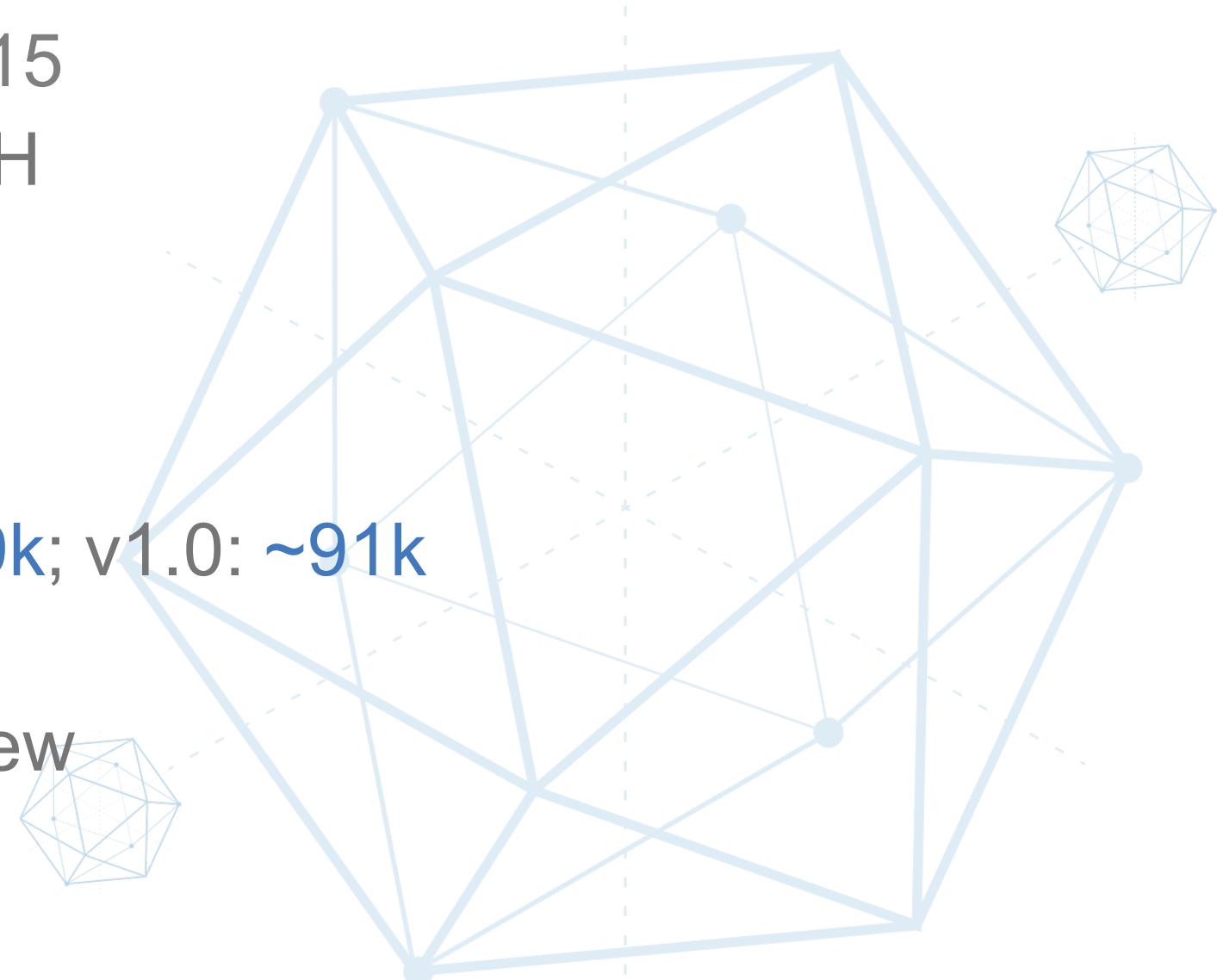
Hyperledger Projects

- 9 Top Projects
 - Fabric
 - Sawtooth
 - Iroha
 - Cello
 - Explorer
 - Composer
 - Burrow
 - Indy
 - Quilt



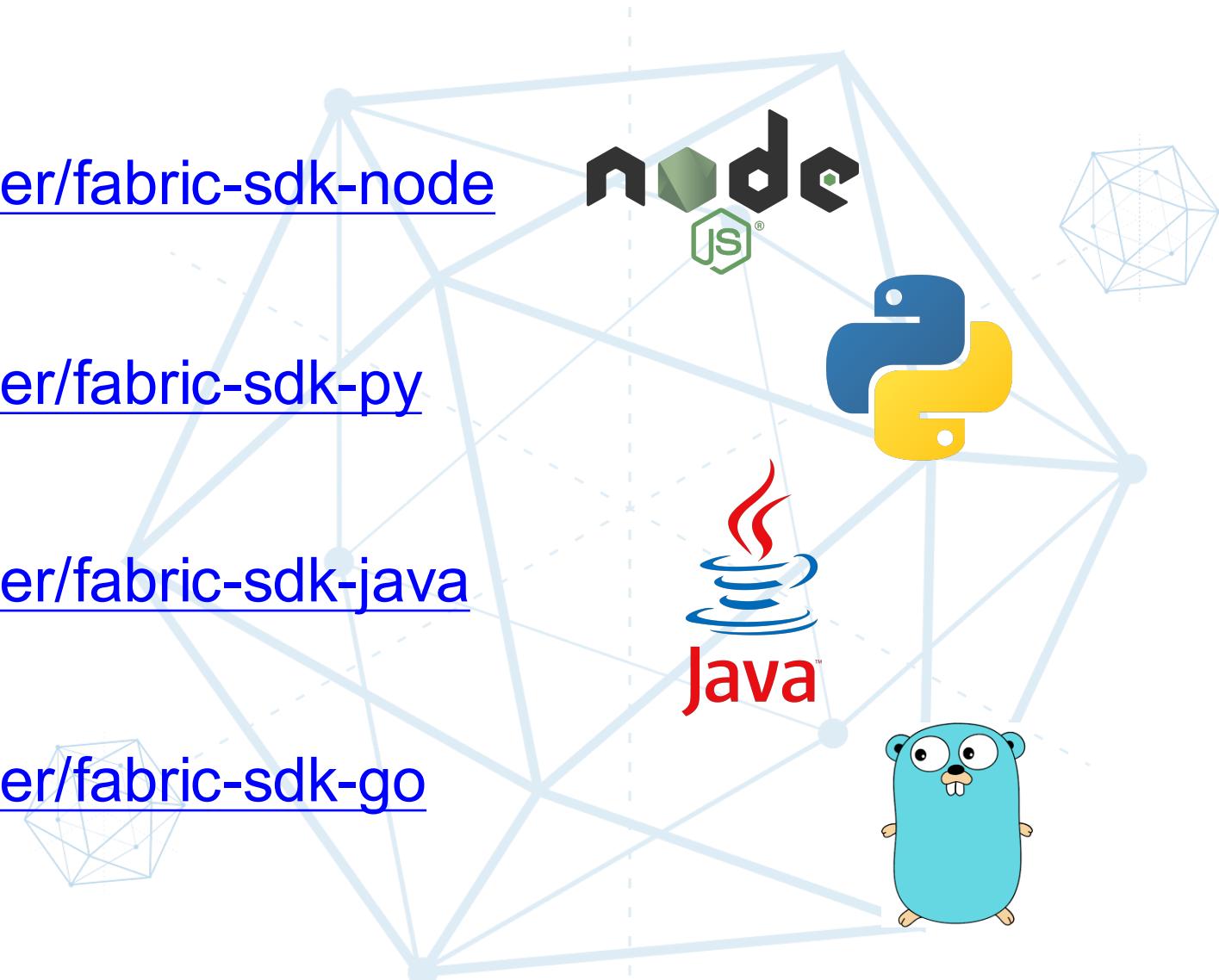
Hyperledger Fabric

- Open-sourced at Dec, 2015
- Proposed by IBM and DAH
- Written in Golang
- 90+ contributors
- 7000+ commits
- Core code (loc): v0.6: ~49k; v1.0: ~91k
- Active now, in 1.1.0-preview



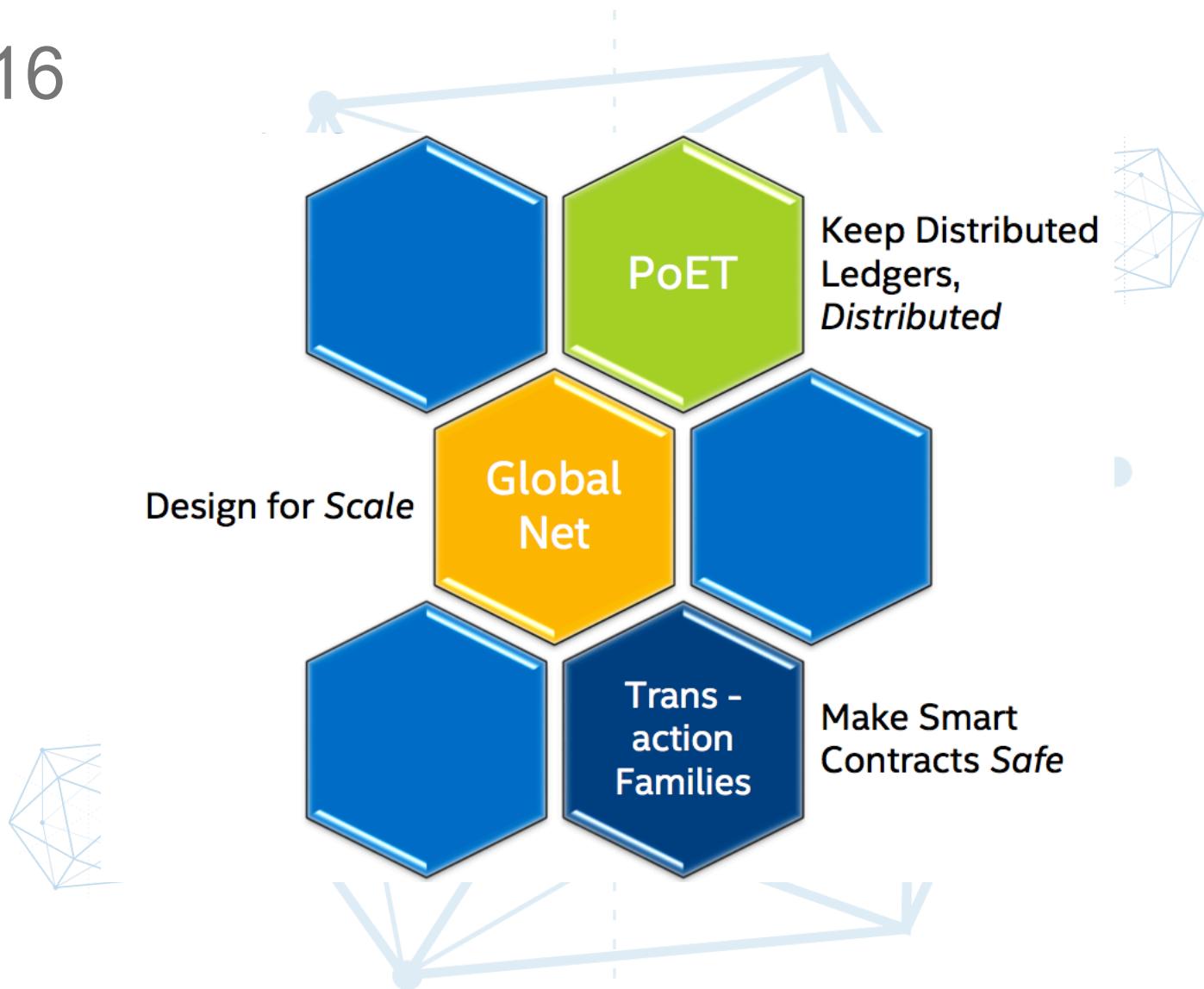
Hyperledger Fabric SDK

- Node.js
 - <https://github.com/hyperledger/fabric-sdk-node>
- Python
 - <https://github.com/hyperledger/fabric-sdk-py>
- Java
 - <https://github.com/hyperledger/fabric-sdk-java>
- Golang
 - <https://github.com/hyperledger/fabric-sdk-go>



Hyperledger Sawtooth

- Open-sourced at April, 2016
- Proposed by Intel
- Python
- 40+ contributors
- 5000+ commits
- Key features
 - PoET consensus
 - Transaction Families
 - Scalability



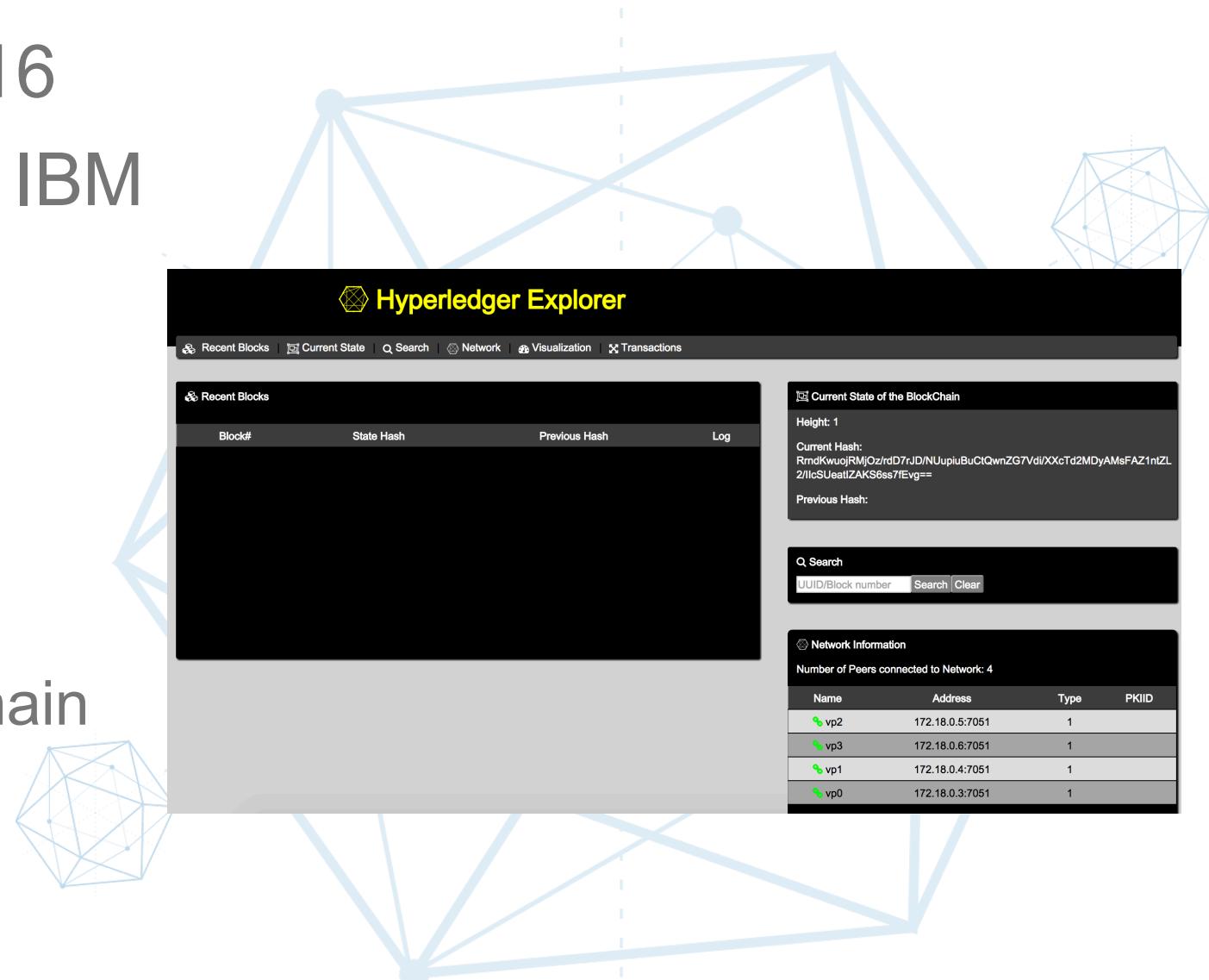
Hyperledger Iroha

- Open-sourced at Oct, 2016
- Proposed by Soramitsu
- C++
- 20+ contributors
- 4000+ commits
- Key features
 - C++ environment
 - Mobile and Web application Support
 - Sumeragi consensus



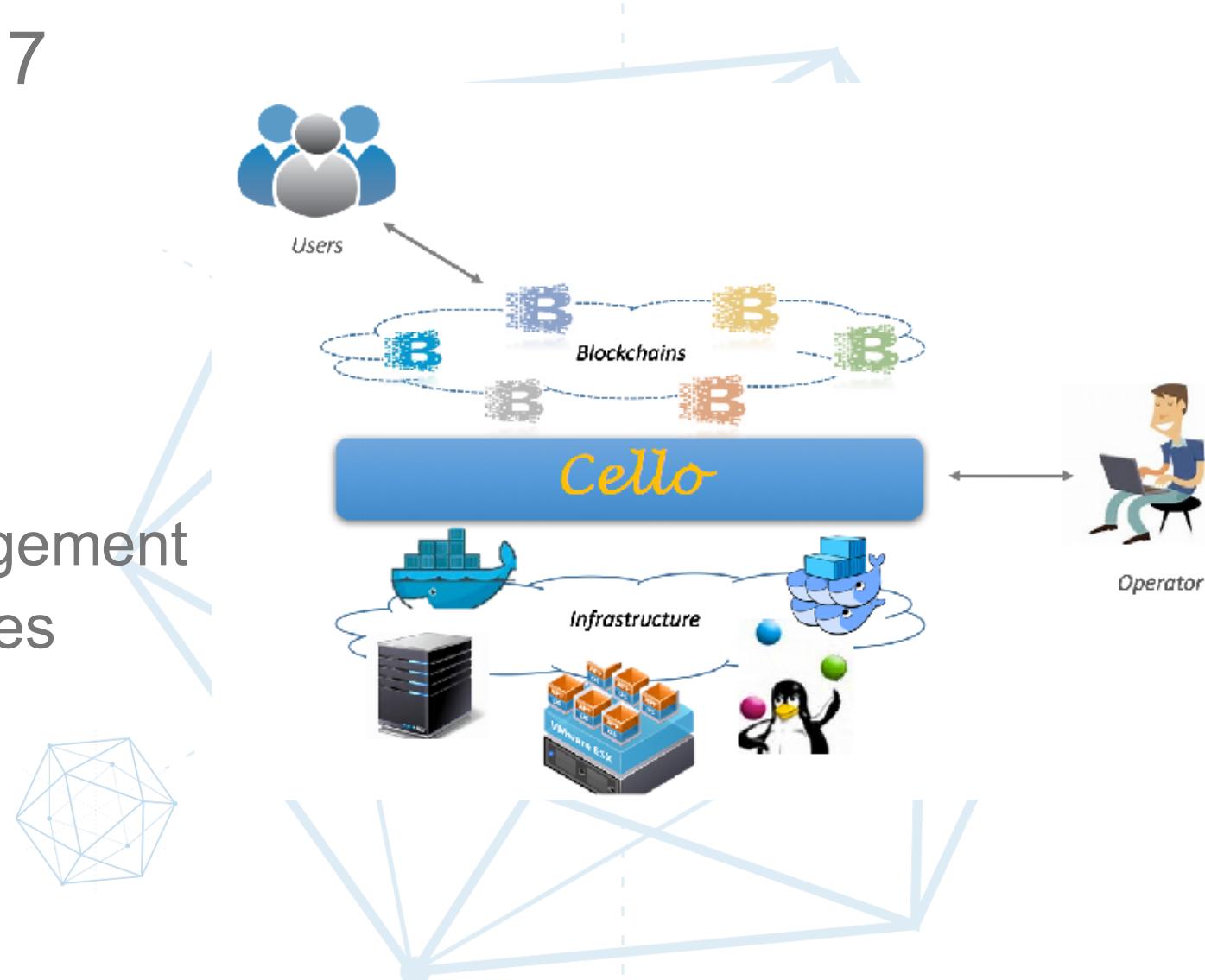
Hyperledger Explorer

- Open-sourced at Aug, 2016
- Proposed by Intel, DTCC, IBM
- UI to interact with ledger
- Node.js
- Under-development
- Key features
 - Web UI to explorer a blockchain
 - Single-Page Application



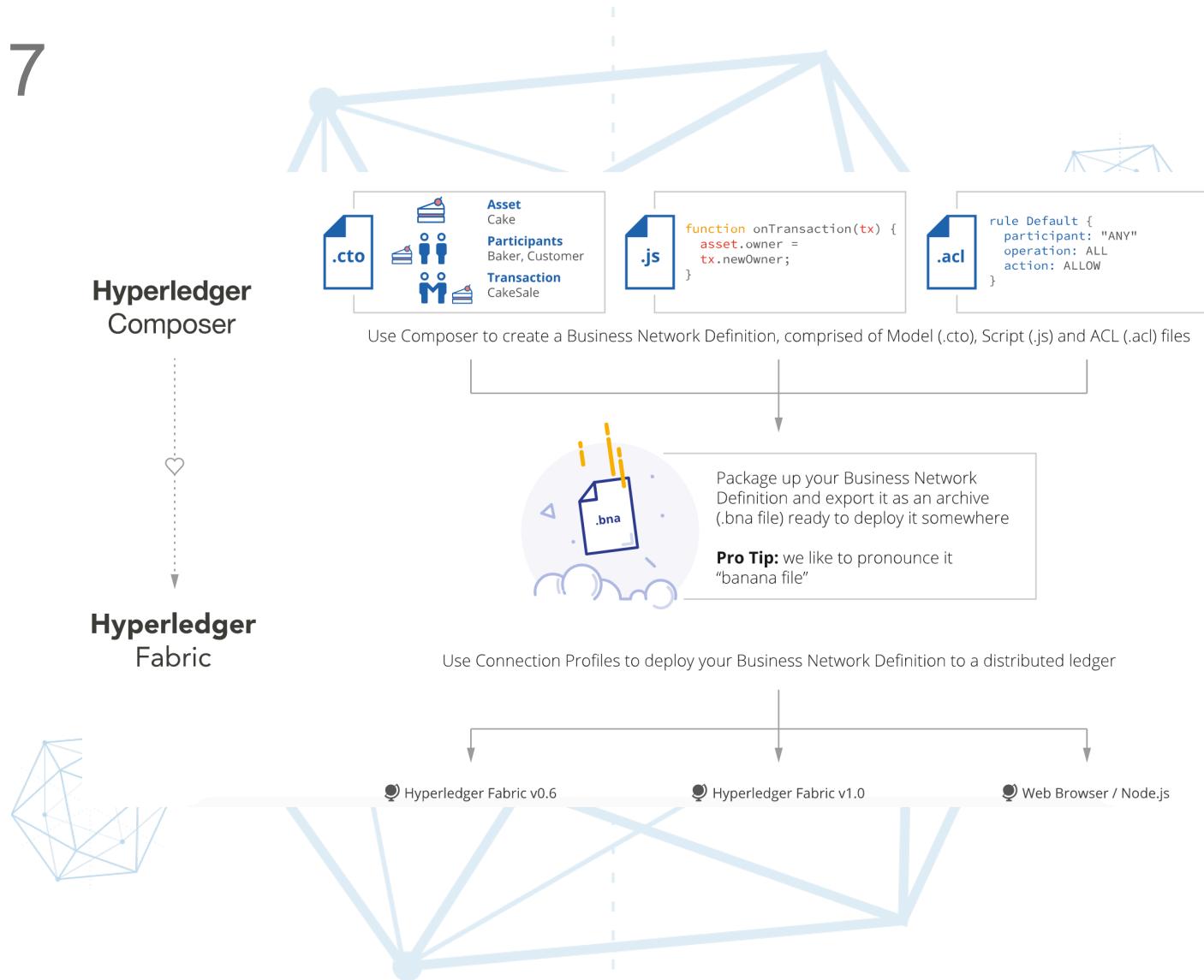
Hyperledger Cello

- Open-sourced at Jan, 2017
- Proposed by IBM
- Python, JavaScript
- 600+ commits
- Key features
 - Blockchain Provision&Management
 - Support various infrastructures
 - High-performance
 - Scalability
 - Pluggability



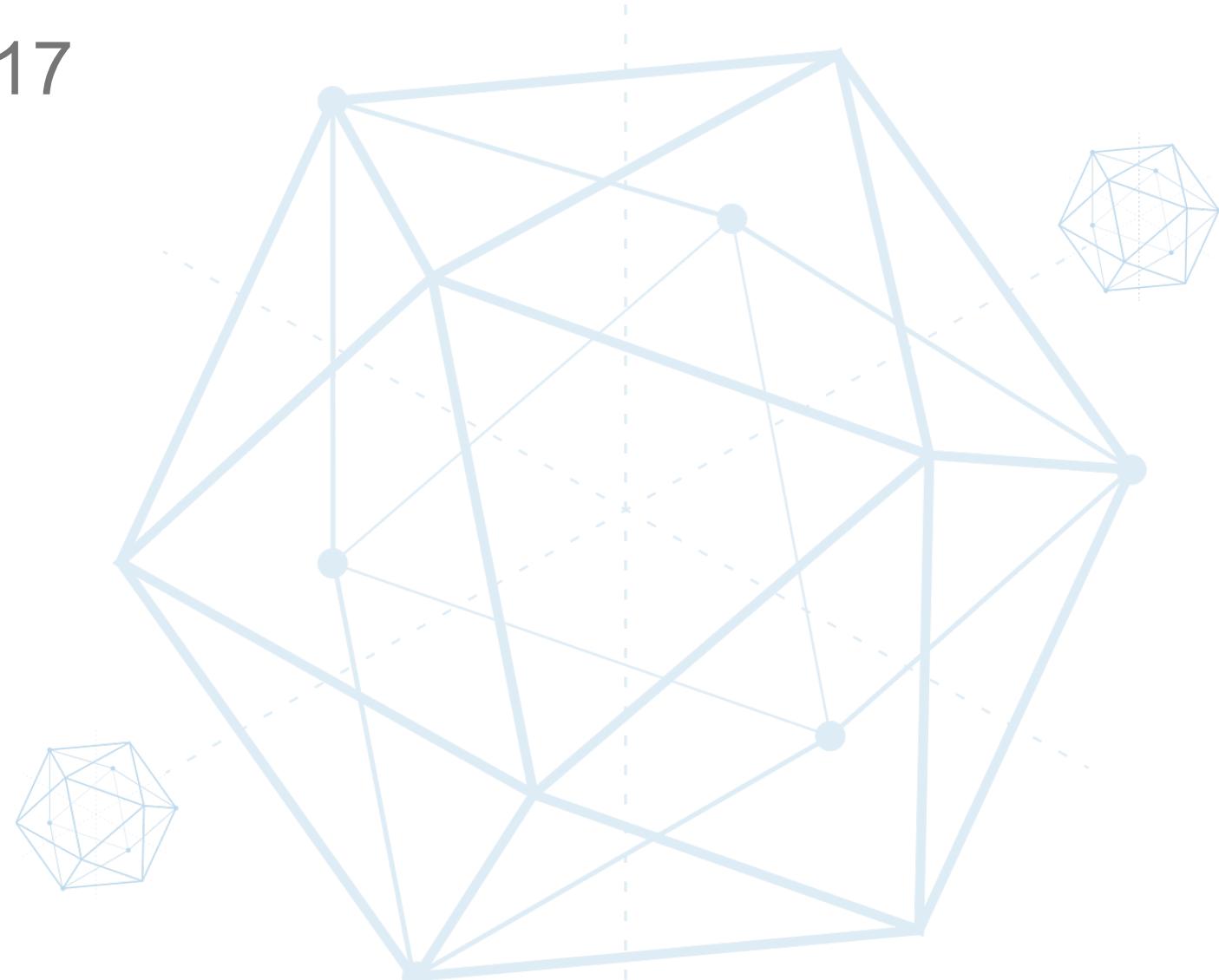
Hyperledger Composer

- Open-sourced at Mar, 2017
- Proposed by IBM
- JavaScript
- 4000+ commits
- Key features
 - For fabric
 - Simplify application creation



Hyperledger Burrow

- Open-sourced at April, 2017
- Proposed by Monax, Intel
- Written in Golang
- 1000+ commits
- Key features
 - From eris-db
 - Ethereum vm support
 - Proof-of-Stake



Hyperledger Indy

- Open-sourced at April, 2017
- Proposed by Sovrin
- Written in Python
- 3000+ commits
- Key features
 - Digital ID management
 - Cross-chain, cross-application

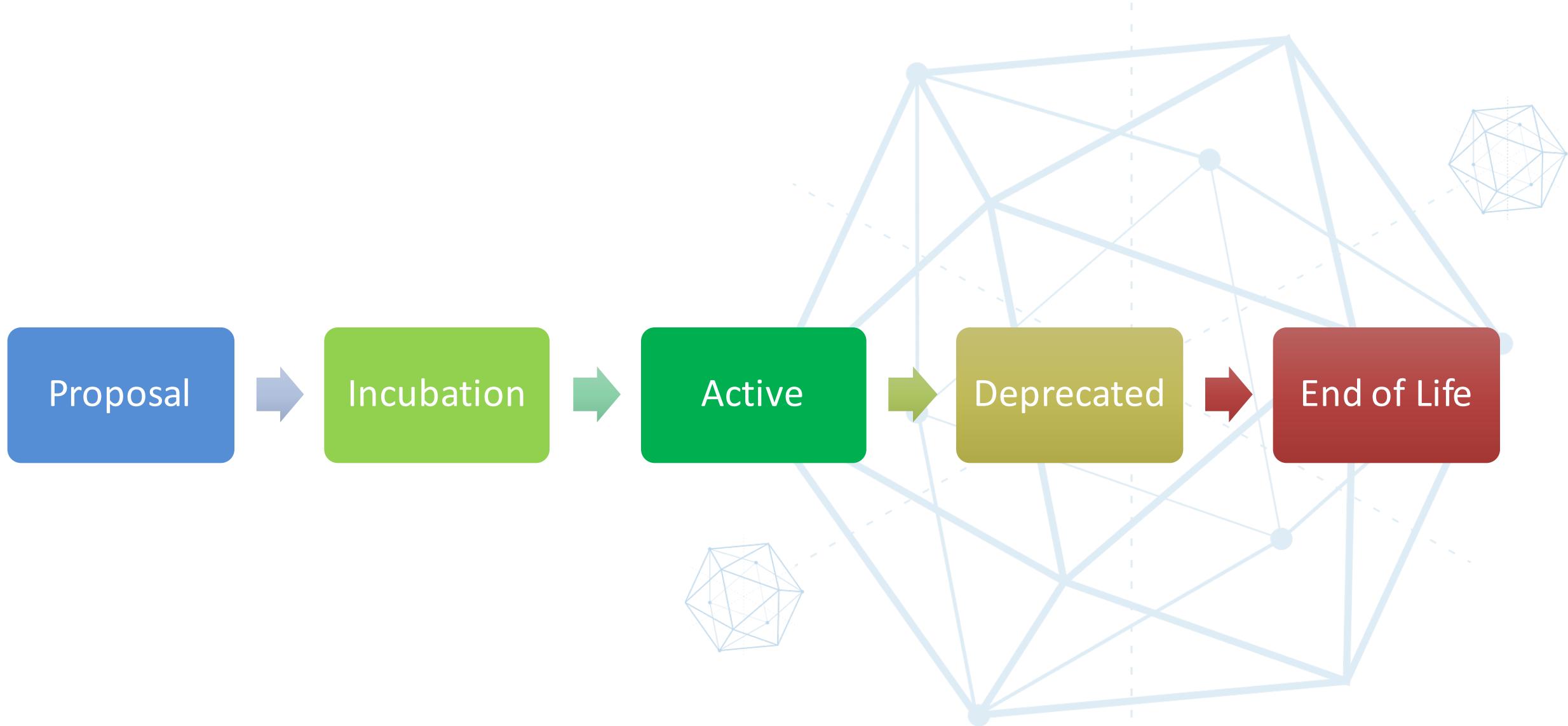


Hyperledger Quilt

- Open-sourced at Oct, 2017
- Proposed by Everis, Ripple, Applied Payments
- Written in Java
- Key features
 - Interledger Protocol by w3c
 - Cross-chain payment transfer

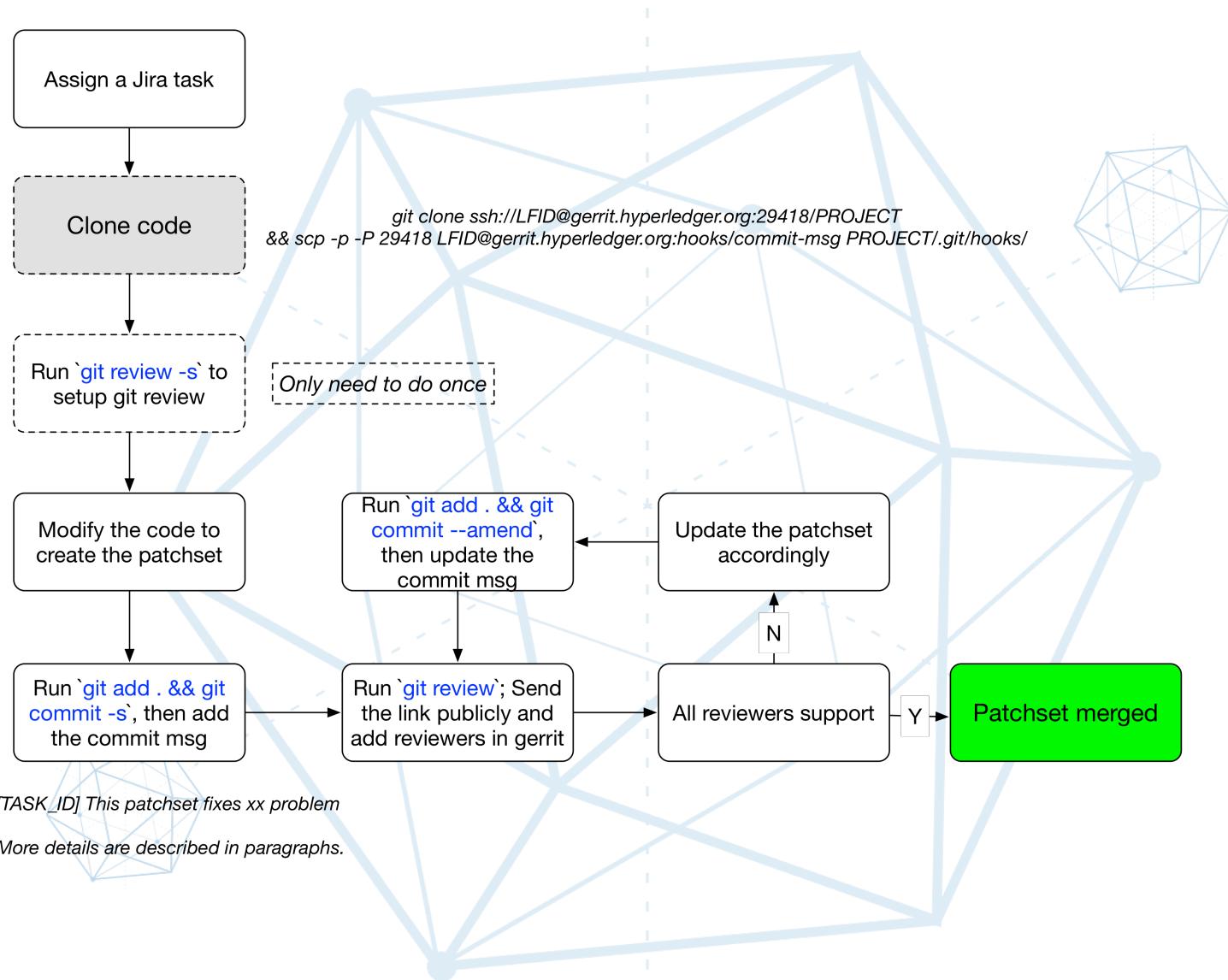


Hyperledger Projects Lifecycle



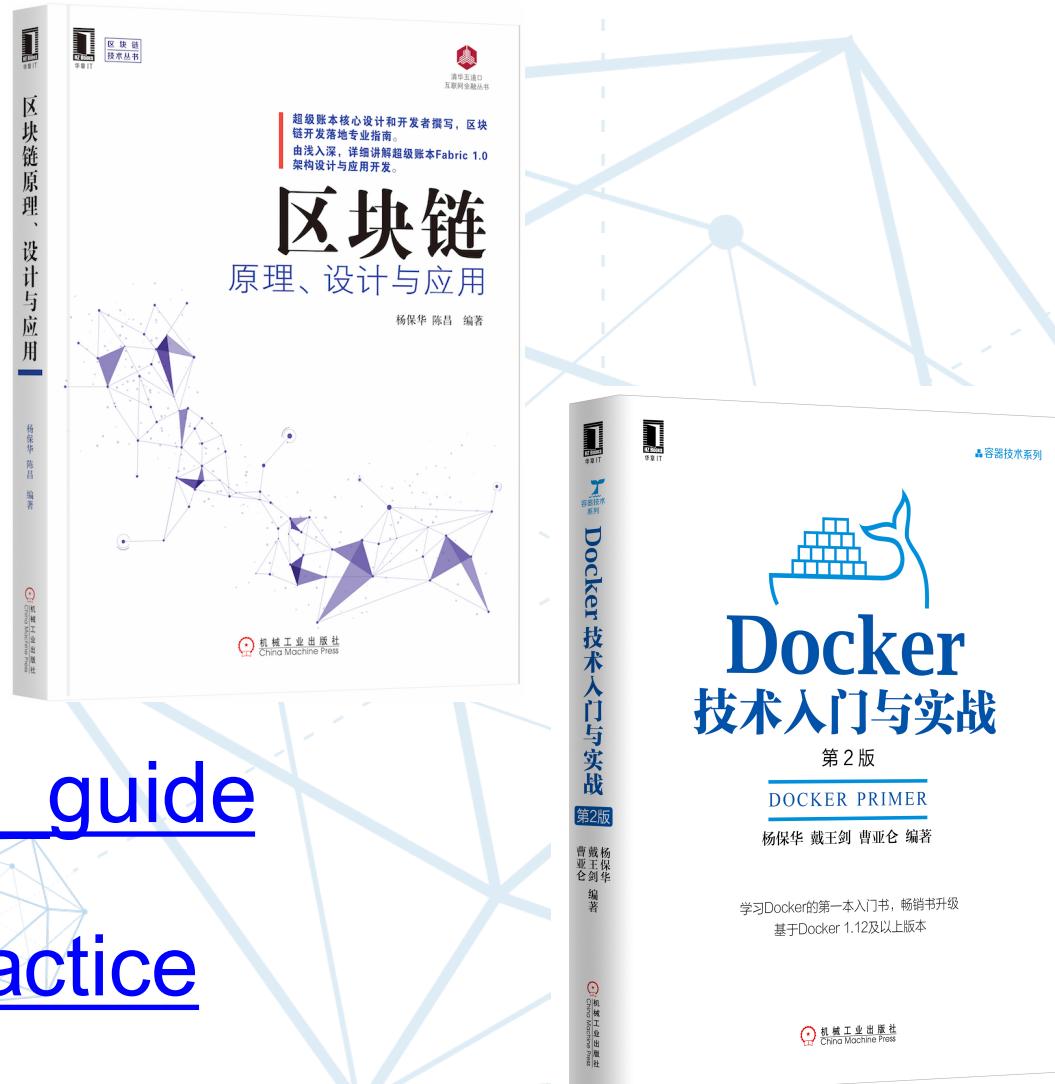
How to Contribute

- Linux Foundation ID
- Jira to manage tasks
- Gerrit to host code
- RocketChat



Reference

- [Hyperledger Project](#)
- [Hyperledger Wiki](#)
- 《区块链原理设计与应用》
- 《Docker 技术入门与实战》
- [github.com/yeasy/blockchain_guide](#)
- [github.com/yeasy/docker_practice](#)





Questions?

Thank You!
@baohua

Slides available at github.com/yeasy/seminar-talk#hyperledger