State of Blockchain at LF
Christopher Ferris, CTO Open Technology, IBM
Blockchain and Distributed Ledgers

Blockchain allows multiple competing parties to securely interact with the same universal source of truth

**Finance**
Streamlined settlement, improved liquidity, increased transparency and new products/markets

**Healthcare**
Unite disparate processes, increase data flow, reduce costs and improve patient outcomes

**Supply Chain**
Track parts and service provenance, ensure authenticity of goods, block counterfeits, reduce conflicts
Pre-existing Blockchain Technologies

- Limited Throughput
- Slow Transaction Confirmations
- Designed for Cryptocurrency
- Poor Governance
- No Privacy
- Anonymous Processors
- No Settlement Finality
Perfect for open source

New, potentially revolutionary technology
Requiring multiple specialist skills to develop
Used by multiple parties
Controlled and monetized by no one
Strong governance model
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, manufacturing and technology
Hyperledger Goals

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.
# Modular Umbrella Approach

<table>
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<tr>
<th><strong>Infrastructure</strong></th>
<th><strong>Frameworks</strong></th>
<th><strong>Modules</strong></th>
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<tr>
<td>Technical, Legal, Marketing, Organizational</td>
<td>Meaningfully differentiated approaches to business blockchain frameworks developed by a growing community of communities from the entire industry</td>
<td>Typically built for one framework, and through common license and community of communities approach, ported to other frameworks</td>
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- Ecosystems that accelerate open development and commercial adoption
- CloudFoundry, Node.js, Hyperledger, Open Container Initiative
- Fabric, Iroha, Sawbooth
- Chaintool, Explorer, Cello
Hyperledger Leadership

Brian Behlendorf
Exec Director

Blythe Masters
Digital Assets
Board Chair

Chris Ferris
IBM
TSC Chair

Dan O’Prey
Digital Assets
Mktg Cte Chair
Premier Members

accenture
High performance. Delivered.

AIRBUS

AMERICAN EXPRESS

CME Group

DEUTSCHE BÖRSE GROUP

Digital Asset

DTCC
Securing Today. Shaping Tomorrow.

FUJITSU

HITACHI
Inspire the Next

IBM

intel

J.P. Morgan

R

THE LINUX FOUNDATION

WANDA FFAN TECHNOLOGY
General Members
General Members (con’t)
Associate Members
Hyperledger Effect

<table>
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<tr>
<th><strong>The Wall Street Journal</strong></th>
<th><strong>CoinDesk</strong></th>
<th><strong>The New Stack</strong></th>
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<td><em>How Blockchain Will Save Your Life</em></td>
<td><em>Hyperledger’s Next Act: A Blockchain Bridge to China</em></td>
<td><em>Blockchain Hyperledger Project Generates Interest in the Enterprise</em></td>
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<th><strong>MIT Technology Review</strong></th>
<th><strong>3</strong> Major Code Bases</th>
<th><strong>THE LINUX FOUNDATION</strong></th>
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<tr>
<td><em>Web Pioneer Tries to Incubate a Second Digital Revolution</em></td>
<td>149 Active Contributors</td>
<td>110+ Members (20+ in China)</td>
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</tbody>
</table>

**600+** Average month-over-month Global Press Articles Covering Hyperledger in 2016

"Hyperledger’s focus has always been on the development of core blockchain technologies such as Hyperledger Fabric and other products built by the community.”
+270% membership growth
5 top-level projects
149 contributors
Diverse Technical Leadership
6553 commits
5,400 Slackers
5,400 Slackers

RocketChat
9 Working Groups
Global Meetup Community

We are 8,600+ members across 38 Meetups
8 Bi-monthly F2Fs
Member Summit
Five top-level projects

- Sawtooth Lake – DLT written in Python with potential from IoT to Financials. Support for both permissioned and permissionless deployments. PoET consensus
- Iroha – a simple, decentralized ledger with mobile clients
- Fabric – a foundation for blockchain applications with a modular architecture that allows components, such as consensus, messaging, identity, and encryption services to be plug-and-play.
- Cello – orchestration for delivering blockchain as a service
- Blockchain Explorer – a UI for exploring the state of the ledger
Sawtooth Lake Highlights

• Published a stable release in January
• Adding new Transaction Families
• Enriched Proof of Elapsed Time (PoET) to help realize a spectrum of public to private policies.
• Working on enhanced performance (e.g. from different threading techniques) and multi-language support for smart contracts.
Iroha Highlights

- Improving the set up experience by using Docker Swarm.
- Improving network stability and also replace our method of data storage to improve performance and simplify the codebase.
- Aligning APIs with the Hyperledger Fabric project to enable greater interoperability.
Fabric Highlights

- Published stable v0.6 release
  - Stable set of features for POCs and pilots
  - Enable developers to be up and running in minutes
- Feedback from pilots across multiple domains driving v1.0 architecture
- Increasing contribution diversity
- Production deployment – IBM Global Finance
- Driving towards v1.0 release (real soon now)
Consolidation begins?

- A number of cross-project collaborations are beginning
- PoET integration with Fabric
- Iroha collaboration with Fabric
- Blockchain Explorer taking on additional back-ends
- Cello support for multiple platforms
Join Us!

Ensure the strength and longevity of a core technology to your business.

Publicly proclaim your leadership in the blockchain space.

Work with other blockchain leaders to develop and promote Hyperledger.

Visit hyperledger.org/about/join or email info@hyperledger.org.