A look at Hyperledger

How it works? What are the usecases?

Marta Piekarska, Director of Ecosystem, Hyperledger, The Linux Foundation
Hyperledger is a collaborative and global open source software community, hosted by The Linux Foundation, advancing blockchain technologies for business.
What is Open Source?

Open source innovation has a methodology of its own and doesn’t follow traditional business processes. One of its biggest differences is that open source development is collaborative, while traditional software and business practices are proprietary and closed. For many businesses, the needed change in philosophy when approaching open source use doesn’t come easily or naturally.
Dedicated to building sustainable ecosystems around open source projects, The Linux Foundation is working with the global technology community to solve the world’s hardest problems through open source and creating the largest shared technology investment in history.
Some of the game-changing initiatives hosted by The Linux Foundation include:
For the last 18 years, The Linux Foundation has provided unparalleled support for open source communities through financial and intellectual resources, governance structure, IT infrastructure, services, events, and training.

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The Linux Foundation is the umbrella organization for more than 150 open source projects accelerating open technology development and commercial adoption. Some of the game-changing initiatives hosted by The Linux Foundation include:
Boom for Blockchain

New blockchain projects have been launched at a steady frequency by major bond market participants in the past couple of years.

Source: ESG Intelligence
Hyperledger Momentum

3 Years since launch
126K+ Commits
6 Tools
6 Frameworks
2 1.0+ Production Releases

270+ Members
(50+ in China)
10 Active Community Working Groups & Special Interest Groups
160+ Meetups Worldwide (66 countries)
44K+ Meetup Participants
2,000+ Media Clips Per Month
The Hyperledger technical community is 100% open.

It is never pay-to-play with Hyperledger’s business blockchain technologies. You can participate as an individual, an employee of a company that is not a member, or as a corporate member. Our collaborative software development approach ensures the transparency and longevity required to bring blockchain forward to commercial adoption.

Hyperledger is led by a diverse group of technical contributors.

Send your developers! Anyone is welcome to participate and contribute to Hyperledger technical codebases, regardless of corporate membership status. Governed by technical meritocracy, Hyperledger is vendor-neutral. Contributions undergo a rigorous peer review process, but are welcome from anyone.
The Hyperledger Greenhouse

Community Stewardship and Technical, Legal, Marketing, Organizational Infrastructure

Frameworks
- Hyperledger Burrow: Permissionable smart contract machine (EVM)
- Hyperledger Fabric: Permissioned with channel support
- Hyperledger Grid: WebAssembly-based project for building supply chain solutions
- Hyperledger Indy: Decentralized identity
- Hyperledger Iroha: Mobile application focus
- Hyperledger Sawtooth: Permissioned & permissionless support; EVM transaction family

Tools
- Hyperledger Caliper: Blockchain framework benchmark platform
- Hyperledger Cello: As-a-service deployment
- Hyperledger Composer: Model and build blockchain networks
- Hyperledger Explorer: View and explore data on the blockchain
- Hyperledger Quilt: Ledger interoperability
- Hyperledger Ursa: Shared Cryptographic Library

View Project Explainer Videos now!
Hyperledger Goals
Where open source teams build diverse approaches for business blockchain

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

Provide community-driven infrastructures
that are open, neutral and 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 communities
taking a toolkit approach with many platforms and frameworks
Community Working & Special Interest Groups

Technical and Sector Groups are open to the public

- Technical Steering Committee
- Architecture Working Group
- Identity Working Group
- Performance and Scalability Working Group
- Technical Working Group China
- Learning & Materials Development Working Group
- Smart Contracts Working Group
- Healthcare Special Interest Group
- Public Sector Special Interest Group
- Trade Finance Special Interest Group
- Social Impact Special Interest Group
- Telecom Special Interest Group

View on demand video: Blockchain Projects and Working Groups by Hyperledger
Hyperledger Premier Members

Hyperledger Premier Members Serving on the Governing Board. Complete list of members >
Associate Members

(Non-Profits, Open Source Projects and Government Entities)
What is happening now in the space?

- **Value templates** to construct deals that respect the artist as an entrepreneur and equal partner in any venture.
- **Funding mechanisms** whereby artists can raise venture capital.
- **Inclusive revenues** that use self-executing smart contracts to divide profits fairly and without delays according to each person’s contribution to the creative process.
- **Transparent ledgers distributed on** the blockchain so that everyone can see how much revenue a film is generating and who is getting what percentage.
What is happening now?

- **Usage data analytics** in the hands of artists at last, to attract the right merchandisers and distributors, plan promotions, and crowdfund resources for future creative collaborations with other artists.

- **Piracy protection** though public key infrastructure, which enables artists to exchange their assets securely with consumers over networks.

- **Dynamic pricing mechanisms** to experiment with promotions and auction-style schemes that could even tie pay-per-view and advertising rates to the online demand for a film.

- **Reputation systems** that cull data from a token address’s transaction history and social media, to create a reputation score for that address.

- **Micrometering and micromonetizing functionality** to stream the revenues immediately to the artists and contributors, the way a film itself streams to online viewers.
Interstate Medical Licensing

**The Challenge**
Interstate medical licensing is complex, and the provider directories and claims adjudication processes need increased trust and transparency.

**The Collaboration**
Hyperledger members Hashed Health and the State of Illinois have implemented a pilot program to identify opportunities to improve the efficiency and accuracy of these processes in Illinois.

**The Technology**
A blockchain-based registry, built using Hyperledger Fabric, streamlines the sharing of smart contracts and medical credential data to automate workflow associated with interstate and multistate licensure.
Diamond Supply Chain

**The Challenge**
The Kimberley Process Certification Scheme established in 2003 to prevent conflict diamonds is a long, paperwork-heavy process with a history of fraud from missing documents.

**The Collaboration**
Hyperledger members SAP Ariba and IBM are collaborating with Everledger on a pilot to prevent blood diamonds from entering the supply chain.

**The Technology**
The distributed ledger diamond track and trace system using Hyperledger Fabric v1.0 allows everyone in the industry to write to it, from miners, distributors and retailers, using the light pattern that is unique to every diamond to create an ID.
Music and Media Rights

**The Challenge**
Dot Blockchain Media (dotBC) is building a music content rights registry that will help musicians express their rights and wishes for commercializing their art in an interoperable file format.

**The Collaboration**
Although not a member of Hyperledger, dotBC is able to leverage the open source Hyperledger Sawtooth platform for recording its content rights registry for the media industries.

**The Technology**
Data is maintained across a distributed network that utilizes Hyperledger Sawtooth. dotBC's blockchain implementation is a foundation for music and media rights expression into the works themselves.
IPChain

The Challenge
IPChain network is an infrastructure, which allows to construct services and platforms for effective interaction between authors, right-holders, natural persons and legal entities who create and use intellectual property, provide services on IP administration and legal protection.

The Collaboration
IPChain as a non-profit develops standards, technologies, and tools to enable effective collaboration between IP market participants in the digital domain. Promote high standards of IP management and help improve skill sets required for the transition to the digital economy, to ensure a confident and qualitative growth in the volume of creation and turnover of IP objects.

The Technology
n'RIS – a service for proof of authorship, deposition, preventing violations and introducing various IP objects into economic turnover, digital patent and trademark registration service in Russian patent office.

HyperGraph – services and software for authors and collective rights management organizations.

IPEX – IP Exchange for all kinds of transactions with IP rights and objects, including cross border agreements.

CO-FI – first Russian crowd investing platform for financial support of creative and technological projects, including investment loans secured by intellectual property by professional investors or individuals.

DI’S PUT – platform for out-of-court disputes settlement involving intellectual property, which unites arbitrators, experts and parties to the dispute.

FONMIX – a service for legal background audio and video branding, sound design of various venues – from restaurants and hotels to shopping malls and offices.
Collaboration Tools

Account
Sign up for a Linux Foundation account

Chat
Join the discussion on chat

Mailing Lists
Participate on the Hyperledger Mailing Lists

Github
Check out our code repositories

Wiki
Get the latest development updates from the wiki

Bug Reporting
Search for open bugs, or report a new one, in our bug database
Webinars
Register for upcoming Hyperledger webinars or watch them on-demand.

Videos
Explore how-to videos and community spotlights on Hyperledger topics.

Training
Discover and enroll for training courses on Hyperledger technologies.

Publications
Read popular white papers, position papers and case studies.

Vendor Directory
Search for business blockchain products and services built by our members with Hyperledger code.

Blockchain Showcase
Check out the cross-industry PoCs, pilots and production deployments in use today, built with Hyperledger frameworks and tools.

Universities
Learn about resources for universities to help make an impact on Hyperledger.

Jobs
Search for Hyperledger and business blockchain job listings.

Industries
See how different industries are adopting Hyperledger projects.

https://hyperledger.org/resources