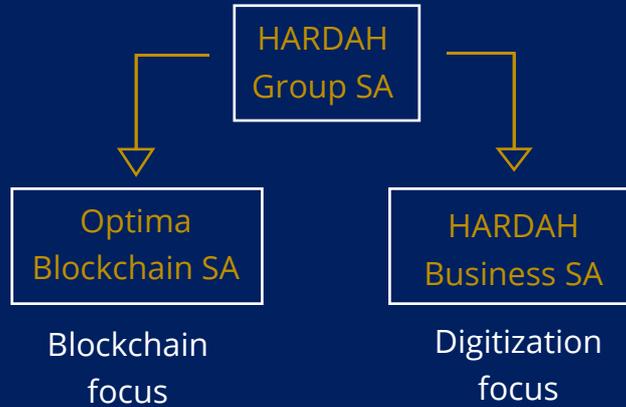


# HARDAH

## Executive Summary

We are an IT startup transforming into a group with two core competences: digitization and blockchain.



Value: We do what we do because we believe that simple access to knowledge empowers a better understanding of the world's complexity. We are going to achieve this goal by democratizing distributed technology and improving the digitization in society.

### Laboratory tool in 2015 and 2016

HARDAH was founded in 2015. Our initial idea was to rapidly launch a digital laboratory tool. This tool was used on computer to make some researches about new graphical user interfaces to increase digital interoperability. We launched a basic websites favorites manager to gather some feedbacks and data. The design was circular, based on smartphones IOS and Android graphical interfaces. Users created thematic circles (Sport, Holidays) and filled them with their favorite's websites. We rapidly got thousands of feedbacks and data and found two main development opportunities: digitization and blockchain.

### Former financing:

HARDAH has been entirely financed since 2015 by the founder David Delmi who still owns 100% of the company. Today the startup is composed of 3 employees and 2 interns.

The company has CHF 0 debts. HARDAH is one of the most mediatized startups in Switzerland and has a strong reputation and network.

### Investment's need:

HARDAH is actually a "Sàrl" based in Geneva and will be transformed into a group after investment. The investment will be used to hire full-times employees to commercialize HARDAH Business, create the tech paper of Optima and implement Optima into HARDAH One. HARDAH will have 9 full time employees after investment.



## I. Digitization with HARDAH Business

During our researches, big companies came to us and shared one of their main challenges: digitization.

### Problems:

- 1) Traditional intranets are too complex. You need weeks of formation to master them.
- 2) Lack of efficiency: too many duplicates, no optimization and too many tools. There is an average of 14 different tools inside companies: intranet, corporate social network, email, task-manager, files sharing system, files storage system.
- 3) Lateness and delay of proper digitalization inside companies because digitization is too complicated and complex to implement now.
- 4) Only 10% of the features of these specialized tools are being used.
- 5) The interoperability between these systems is a real issue.

**Solution:** create the first generalist professional tool for companies: HARDAH Business ([video link](#))

HARDAH Business is the swiss army-knife of professional tools. It is the first Digital Office for organizations, the new generation of professional digital collaborative tools. In HARDAH Business, Circles represent projects or teams. The content of each Circle are websites, documents, files, pictures, graphics classified into projects or subjects. The Circle could be just used as an informational tool for the management, or as a collaborative tool for a team.

A lot of features are added in a very simple and intuitive way: task management tool, a competencies profile page, knowledge management tools. This generates a collaborative atmosphere, increases social cohesion and synergy and creates a transversal communication between employees. Companies optimize their communication and teamwork. A messaging tool is available per Circle or task, decreasing duplication. The information's circulation is more fluid thanks to our product. HARDAH Business could be mastered in less than 20 minutes. So, no more weeks of formation. You got one tool instead of 14.



HARDAH Business capitalizes on knowledge and expertise by organizing them. It eases new members' integration into the organization and access to expertise, simplifying transfer of skills and increasing the collective knowledge and productivity by stimulating innovation. HARDAH Business wants to be the first step to digitize companies. And if some of them wants more features, HARDAH business eases the interoperability between more specialists' professional tools. ([booklet link](#))

HARDAH Business is hosted in Switzerland and was launched in 2018 during a private event at Tesla store in Lausanne. Our founder financed its 2 years development. We are entering the sales phase now.

## II. A) Distributed Technologies with Optima

Today, blockchain technologies face five issues:



**Solution:** Optima, an eco-friendly, 100% regulatory compliant, scalable distributed technology.

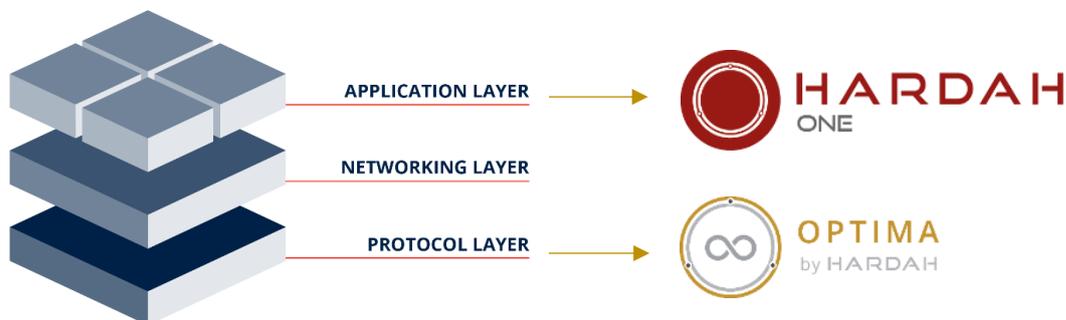
Optima has five pillars:

1. Democratizing Blockchain and distributed technologies
2. Performance (scalability and eco-friendliness)
3. Economic Credibility
4. Regulatory Compliance
5. Swiss Quality

We can classify distributed technologies in two generations. Traditional Blockchains like Ethereum, Bitcoin and Neo are the first generation. They are using the well-known blockchain system linking one block after another. The second generation of distributed technologies is the one creating other mathematical solutions than traditional blockchain to ensure decentralization. Hedera is one good example. They are not using a blockchain structure but a Hashgraph structure with a gossip-to-gossip protocol. Iota is another project using a DAG (Direct Acyclic Graph) instead of a Blockchain structure. We won't use a blockchain structure neither, but a new distributed one. This is the particularity about the technology we are building. Optima will be fast, decentralized, scalable and eco-friendly.

We want to be the first distributed technology with government support and regulatory compliance too. Optima will launch its cryptocurrency too, and it will be the first using macroeconomic models to ensure stability and scalability thanks to a Reserve system, transparent Monetary policies and a decentralized and automated inflation control mechanism.

But Optima principal goal aims to address the main issue of Blockchain and distributed technologies: their democratization and lack of credibility. If you have the best technology but no use case, it's just a bubble. We decided not only to be active on the protocol layer (Optima) but also on the application one with HARDAH One. This will be our strength. Not only creating advanced technologies, but spreading them with concrete use cases too. We saw an opportunity as blockchain and distributed technology could be the best answer to social networks biggest issue: fake news.



*The three software development layers in blockchain. (Source: Demirors, 2017)*

Our actual goal is to create a tech paper describing the new mathematical consensus protocol used in Optima. We plan to create a new generation of distributed ledger architecture going even further than the Hashgraph of Hedera. Creating a new distributed ledger protocol is one of the most valuable investment. We found the people to develop this technology. We need to raise money to write the tech paper and hire the mathematicians that already agreed to join us.

## B) Anti-Fake News with HARDAH One

Our concrete use case that could help us to spread Optima massively will be our own smartphone application: HARDAH One.

During our laboratory researches, some users advised us to look into social networks issues in fact:

- 1) Lack of interoperability between smartphone application: if you want to have more information about an Instagram picture content, you need to get out of Instagram and go on TripAdvisor, Wikipedia, a website, ...
- 2) Fake News
- 3) Data Value

**Solution:** create an anti-fake-news smartphone application based on distributed technologies.

HARDAH One is an ethical social network built to empower general knowledge, to entrust real information, to vitalize diversity and quality of content with a positive global impact on society while ensuring interoperability between other smartphone applications.

To solve the first issue, we used the same interoperability solution we used on HARDAH Business. HARDAH One is a fusion between an image sharing social network like Instagram or Snapchat, and Search engines like Google. Users will be able to share ALL type of contents with HARDAH One: pictures, personal videos, web pages, YouTube videos in a new kind of interface. HARDAH One is the Swiss Army Knife of Social Networks. If you want to merge social networks with blockchain/distributed technologies, your smartphone application needs to be innovative and interesting enough even without blockchain. (see next page)

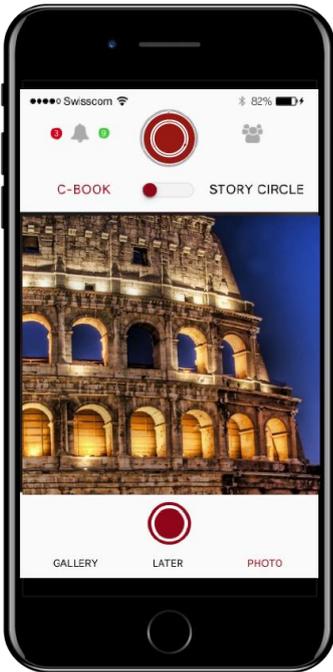
We have already developed it thanks to our research in 2015 and 2016. Influencers are key partners and future customers of HARDAH One. They could increase their revenue with our app. We are in discussion with 30 big Instagram influencers cumulating 100Mio views per week to bring their community on HARDAH One after the blockchain implementation.

The implementation of our technology Optima is answering the two other issues being fake news and data value. Optima will be implemented to fight fake news and reward users for uploading data and sharing quality content on HARDAH One. Each user and each content will have a decentralized quality indicator. Users will be paid in Optima when they are using the app and sharing quality content with a high indicator. This will increase the market capitalization of the coin and the virality of the app.

Optima allows complete transparency, truthfulness, and accuracy while protecting data privacy. The content itself is not in the ledger. If you post a picture on HARDAH One, it won't be stocked on the ledger. If it was the case, everybody could see your picture. But the picture will be in a Circle with a specific ID number. It's the ID number that will be on Optima. It will be linked with the Circle Quality Indicator of this Circle in the distributed ledger. When a content is identified as fake news, we will be able to trace its source because the ID of the Circle is known and stocked in Optima. We will be able to decrease the quality indicator of the people sharing fake news so that their content won't be massively shared. The tamper-proof aspect of distributed technology is perfect to fight against fake news, trace them and increase high-quality content diffusion.

Our goal is of course not to compete against Facebook or Wechat. In fact, we could be seen as a good opportunity for them. Thanks to HARDAH One, our interoperability could give them back some lost traffic. And our data would be used to build an independent certification of content that could be used as a label inside Facebook or Instagram. This could answer their fake news issue while boosting our ecosystem.

[\(Video link\)](#) (booklet link)



A. User is in Rome and take a picture of the Coliseum.



B. After taking the picture a Circle is going to appear.



C. User fill the Circle with some content: webpages, pictures, videos related to the Coliseum.



D. On the user profile you only see the first picture like the cover of a book.



E. When you click on the picture, the Circle appears bringing the full experience.



F. Press Play to launch your multimedia Story. Even webpages are going to open inside the Story.