



**D E V E L O P E R
G U I D E**
K N O W L E D G E B A S E



INTRODUCTORY NOTE

An innovative **Knowledge Base software** has been developed based on the **Startin'blox technology** (a free, modular and easy-to-use tool to build decentralized applications). It is funded by **Cooperatives Europe** in the framework of the **ICA-EU Partnership** on international development, also called #coops4dev.

An example of how to take ownership of this Knowledge Base software is the **Coopedia Knowledge Base**, a **collaborative search engine** listing resources (guides, videos, books, and much more) on cooperative entrepreneurship. It aims to give young entrepreneurs worldwide the support and tools they need to set up cooperative businesses, and to provide learning to students and actors interested in the cooperative business model.

This guide aims at providing information to the developers' community, for them to discover and take ownership of this Knowledge Base technology, and join its Federated Network.



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AN OVERVIEW

ABOUT STARTIN'BLOX TECHNOLOGY

Startin'blox technology is a free, modular and easy-to-use tool to build decentralized applications. It uses **SOLID** specifications, meaning that all resources made available are indexed using the latest standards of the semantic web, are interoperable and can be shared and used from any interface.

FAST & EASY

Effortlessly compose your app with ready-made HTML components, each of which provides an entire feature. Add HTML tags with the right attributes and watch your application build itself.

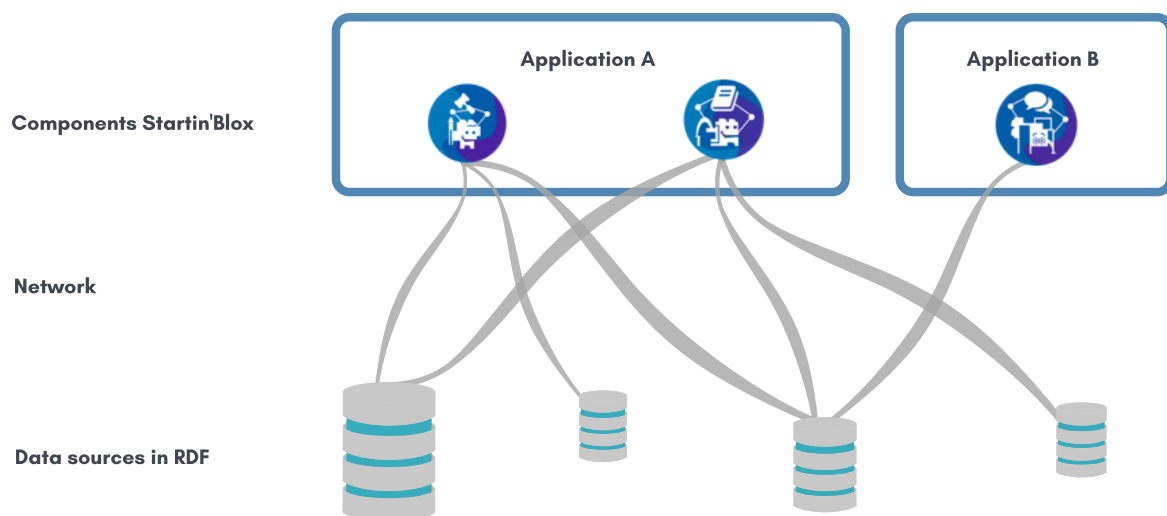
DECENTRALIZED

Startin'Blox is designed to interconnect applications and their users. Our components can plug into an unlimited number of data sources, so your application connects you to the ecosystem of your choice.

NATIVELY MODULAR

Startin'Blox uses the latest standards of linked data and web components. Most modern browsers support them without even a polyfill.

It's a front framework composed of web components which welcome raw data sources in RDF (Resource Description Framework), the basic language of semantic web.



[Discover more](#)

ABOUT THE KNOWLEDGE BASE SOFTWARE

The Knowledge base software has been developed based on **Startin'blox technology**. It includes a **standalone component** that retrieves the resource and which **can be integrated in any interface** and plugged to the **Knowledge Base Federated Network**.

Knowledge Base Main Interface

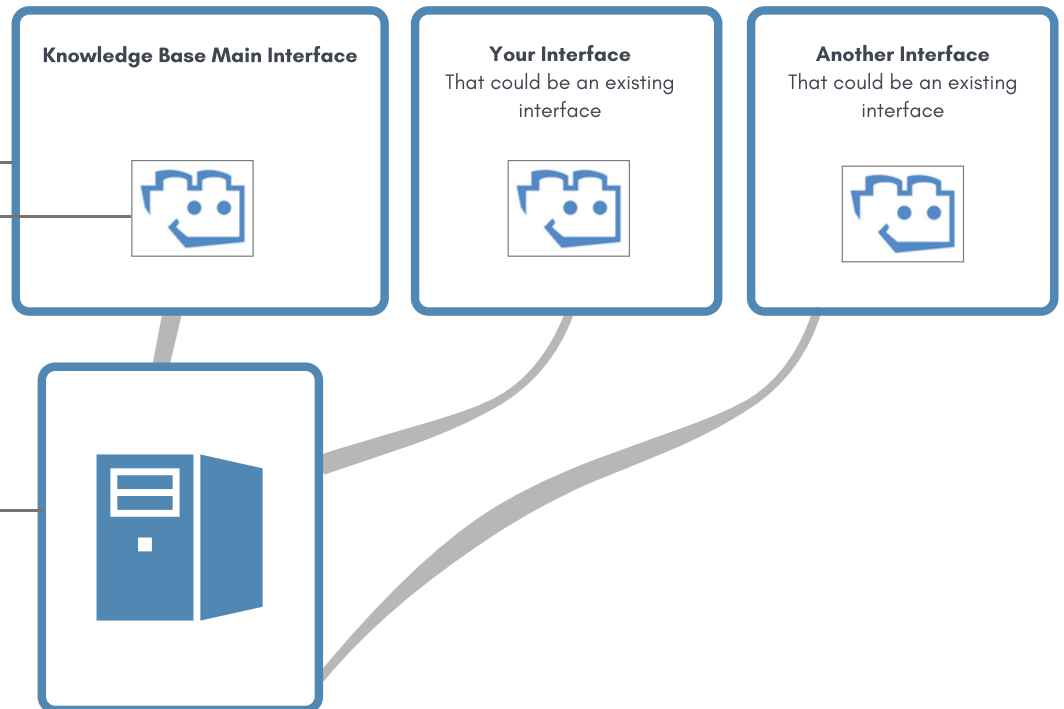
The frontend is built with Startin'Blox. It integrates the resource seeker component.

The Search Component

This component provides a way to display results. It can be integrated on any interface and plugged to as many data sources wanted corresponding to this type of resource.

The Knowledge Base Server

All the resources are stored by one server for the moment. Other server instances will be deployed, host their own resources and share with other federated instances.



Search Box component

It provides a form view to filter the results

Search for a resource

Search here by keyword, author, format...

Search in Computer databases only

Show criteria

Format	Year of publication
All	2018 +
Country of publication	Language
All	English
Field	Step of : Starting up a cooperative business
All	All

The Search Component

is composed of two components:

- Search Box
- Search Results

Search Result component

It provides the render of the result

The screenshot shows search results for 'Starting up a cooperative business'. It lists several steps: 'STEP 1: Identifying needs', 'STEP 2: Recruiting and including members', 'STEP 3: Generating business ideas', and 'STEP 4: Planning the business'. Each step has a dropdown menu. Below the steps, there are two result cards. The first card is for 'Value Proposition Design' by Osterwalder, published in 2017, with a 'SEARCH' button. The second card is for 'Business plan spreadsheet' published in 2018, also with a 'SEARCH' button. A third card for 'Establishing a cooperative - The cooperative as an enterprise' is partially visible at the bottom.

THE KNOWLEDGE BASE SOURCE CODE

Because it is an open source technology, the Knowledge Base code is **free**. This creates transparency and enhances the collective power of its federated network.

It is built on two main components: **frontend** (interface) and **backend** (the indexing system as well as the management part).

The **frontend** is **multilingual** and offers every users the possibility to contribute to the translation through Transifex. It is designed to be **accessible**, and multi-language support was present from the initial phases of development.

The frontend is based on web components and can be embedded in any website with just a few lines of html. Each instance of the Knowledge Base server can be connected with others to **become a node in a federated network**.

Authentication is provided with OpenID connect, an open protocol based on OAuth2 so partners can have different frontends connected to different nodes without the need for a full-fledged server environment every time.

Federation is implemented with ACLs so access to content can be limited to users authenticated on a specific identity provider or be available for any user to boost the visibility of your public resources. The frontend includes controls to define the scope of the query (only local or federation-wide).

Embedding web components in html might not be trivial for website administrators used to Content Management Systems that provide them with easy to use wysiwyg editors. To simplify the adoption of the Knowledge Base Software for this audience, a **Wordpress plugin** has been developed and support for other CMS will come later. Contributions in this area are very welcome and can be a good step stone to learn about this technology while contributing to its spread.

Access the code:

[Frontend](#)

[Backend](#)

[WordPress plugin](#)

[Search component](#)



THE OPEN SOURCE DIFFERENCE

All Startin'Blox components, including those used for the Knowledge Base solution, are released under the **MIT License**.

The MIT License also known as X11 License is a permissive free software license. This software, as all parts of Startin' Blox, is released under MIT License to give programmers freedom to incorporate it in their projects with the sole condition that the license is given with that software. It is also GPL-compatible, so that the code can be incorporated also in other free and open-source projects distributed under the GPL license and its variations.

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Choosing an open source technology means promoting the following values:

- **Transparency**
- **Empowerment**
- **Collaboration**
- **Information sharing**
- **Sustainability**
- **Security**
- **Decentralization**
- **Democracy**
- **Interoperability**

JOIN THE FEDERATED NETWORK!

By working with the code of the Knowledge Base application, you would do much more than taking ownership of this collaborative search engine: you would be **building an ecosystem together** with web developers from around the world, and **benefiting from it**.

You would have the power to contribute to the web without being dependent on large centralized structures. This would allow everyone to **regain control of their digital tools**.

The technology unlocks access to information on the web by creating a digital environment conducive to **interoperability**. It helps to break down the barriers between technicians and non-technicians in order to create an effective dialogue on the implementation of **information systems that reflect their values**.



We invite you to discover and **take ownership of the Knowledge Base application**, and to help interested organizations to become part of the **Knowledge Base Federated Network!**

NEED SOME GUIDANCE?



A **dedicated channel** on the **Startin'Blox community chat** is available on community.startinblox.com. The Startin'blox team welcome both users and developers and are available for guidance and advice for those who wish to contribute to the project.

A FEW WORDS ABOUT **PLATFORM COOPERATIVISM**

As Trebor Scholz puts it: "Platform cooperativism insists that we will only be able to address the myriad ills of the sharing economy – that is to say platform capitalism— by changing ownership, establishing democratic governance, and reinvigorating solidarity."

[Read more about platform cooperativism.](#)

**THE ACTORS BEHIND
THE KNOWLEDGE BASE
SOLUTION**

The Knowledge Base is developed by Cooperatives Europe under the ICA-EU Partnership on international development (#coops4dev).

While Startin' Blox developed the technology, Cooperatives Europe funds, leads and coordinates this project in the framework of the ICA-EU Partnership on international development (#coops4dev).

COOPERATIVES EUROPE AND THE ICA-EU PARTNERSHIP (#COOPS4DEV)

Cooperatives Europe is the voice of cooperative enterprises in Europe.

On behalf of its 84 member organisations from 33 European countries across all business sectors it promotes the cooperative business model in Europe. Its members represent 141 million individual member cooperators owning 176.000 cooperative enterprises and providing jobs to 4.7 million European citizens - a force for economic growth and social change.

In March 2016, the global and regional offices of the International Cooperative Alliance (including Cooperatives Europe) entered into a partnership with the European Commission, DG Development and Cooperation.

The **ICA-EU partnership (#coops4dev)** aims to bring the cooperative model to the next level within international development policies and programs. It is built around activities focusing on visibility, advocacy, capacity building, networking, and support from comprehensive research. Acting as partners, the regional and global offices of the ICA are driving the actions, in collaboration with cooperative member organisations, civil society, development stakeholders, and international institutions.



STARTIN'BLOX

Startin'Blox is a cooperative that develops free tools based on the latest web standards pushed by the SOLID project. The technology they develop is based on Linked data convention and web components. It allows any developer with a minimum of technical skills to develop federated and interoperable applications at a lower cost, to take advantage of these standards. Their mission is to empower users by allowing them to regain control of their digital tool and benefit from a network effect within a chosen ecosystem in order to emancipate from large platforms.

TAKING OWNERSHIP
OF THIS TECHNOLOGY:
THE EXAMPLE OF





A COLLABORATIVE **SEARCH ENGINE** FOR **COOPERATIVE ENTREPRENEURSHIP**

Coopedia Knowledge Base is a **collaborative search engine** listing **resources** (guides, videos, books, and much more) on **cooperative entrepreneurship**.

It aims to give young entrepreneurs worldwide the support and tools they need to **set up cooperative businesses**, and to provide **learning** and introduction to students and actors interested in the cooperative business model. It allows them to find various types of materials, in a variety of languages, based on their topics of interest.

Coopedia Knowledge Base is the first software of its kind specifically built **by cooperators, for cooperators**, worldwide.

It is a unique opportunity for the cooperative movement worldwide to capitalize on its **5th Principle: providing education, training and information** to the public.

The design also fosters **cooperation** between cooperatives and **key actors** like universities, training centers, local authorities, and civil society organizations interested in cooperatives.

A **GLOBAL COMMUNITY** BUILT AROUND COOPERATION AND ENTREPRENEURSHIP

CONTRIBUTORS



SEARCHERS

Who are they?

- Cooperative mentors and experts

What do they do?

- Reference existing materials on cooperative entrepreneurship
- Peer-review content before making it available to all users

Who are they?

- Entrepreneurs, students or anyone interested in learning more about cooperative businesses and how to start them

What do they do?

- Search for and find useful materials in a matter of seconds
- Suggest contributors to index specific resources



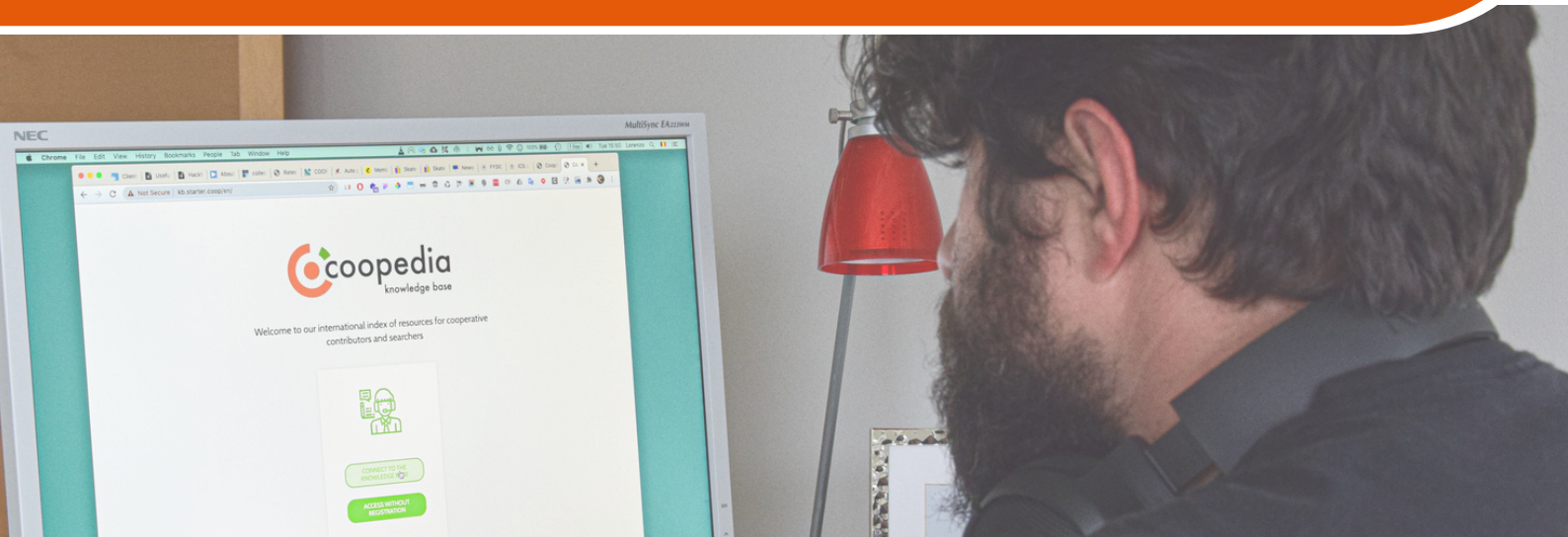
A TOOL FOR **DEVELOPMENT**

By providing educational tools for young people to create their own work opportunities, and fostering collaboration with organizations outside of the cooperative movement, Coopedia contributes to achieving **SDG 4** (Education), **SDG 8** (Decent Work), and **SDG 17** (Partnerships).

We invite interested organizations to join the
Coopedia Knowledge Base federated network!

Discover Coopedia:
coopedia.starter.coop

Contact us:
coopedia@coopseurope.coop



THE COOPEDIA KNOWLEDGE BASE

The Knowledge Base is developed by Cooperatives Europe under the ICA-EU Partnership (#coops4dev). The idea emerged via the CoopStarter 2.0 project led by Cooperatives Europe and was implemented and upscaled via the Global Cooperative Entrepreneurs (GCE) programme, an activity of #coops4dev.



#coops4dev 



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