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BLOCK4Coop

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# REGIONAL ROADMAP

Region Auvergne-Rhône-Alpes



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## Foreword

It is necessary to say that in terms of territorial organization, effectively impacting regional policies to support businesses in innovation and digitization, it is no longer relevant, since the merge of the French regions in 2016, to speak of Auvergne region but indeed of Auvergne-Rhône-Alpes region. This merge led to a complete overhaul of industrial policies and strategies applying to the entire territory of the enlarged region. However, this enlargement did not prevent the emergence of initiatives and structures on a more local scale in the former administrative territory of Auvergne under the impulse and with the support of metropolitan public authorities in particular.

## 1/ EXECUTIVE SUMMARY

The interest shown by the French public authorities in Blockchain technology is quite recent. Some initiatives and decisions taken in recent years mark the desire to build a real public policy in support of technology. The public authorities are interested in the Blockchain through policies supporting the Industry of the future and not in a dedicated way. However, France does not hide its great ambitions for this technology applied to different sectors: economy, finance, industry, public administration...

The main public initiatives have mostly been related to financial and monetary applications of Blockchain technology. However, more recently, it was affirmed that "the will of France to become a benchmark in development and regulation" in order to have a "head start" for French companies<sup>1</sup>. The mobilization of French political players, and in particular the Ministry of the Economy, around Blockchain reveals an awareness of the multiple interests of technology for different economic sectors. There is the ambition to promote its development in the service of companies, for example agrifood to meet the needs for traceability and transparency vis-à-vis consumers<sup>2</sup>. Indeed, the agri-food sector is one of three sectors, along with the construction industry and the energy industry, where the development of Blockchain technology has been considered a priority at the national level. In order to make this ambition a reality, the Blockchain Task Force was launched in July 2019, bringing together "French experts from associations in the private sector, the world of research and administrations, in order to monitor the government's strategy in terms of blockchain, to allow the sharing of experiences on blockchain projects led by public or private actors and to support the structuring of the ecosystem"<sup>3</sup>.

Delivered in February 2020<sup>4</sup>, the first report of the Blockchain Task Force makes 14 main recommendations for the development of Blockchain technology in France, emphasizing the

<sup>1</sup> <https://www.lesechos.fr/finance-marches/banque-assurances/blockchain-la-france-reve-de-devenir-la-reference-mondiale-1009544>

<sup>2</sup> <https://www.lesechos.fr/industrie-services/conso-distribution/carrefour-rejoint-la-blockchain-alimentaire-dibm-141191>

<sup>3</sup> <https://www.entreprises.gouv.fr/fr/presse/numerique/enjeux/task-force-blockchain>

<sup>4</sup> <https://bitcoin.fr/reunion-de-la-task-force-blockchain/>



need for substantial public funding and support for research and innovation to help businesses and civil society more broadly to understand this disruptive technology. The success of Blockchain will depend on its wide use by players in the manufacturing industry, first involving significant work of demonstrating its usefulness through concrete and reproducible application cases.

## 2/ STARTING POINT: REGIONAL LEVEL

The national reflections and actions that are mentioned in the 1<sup>st</sup> part of the document are then relayed to the regions by platforms, relying on the networks of AIF members, local authorities (especially the Regions), Chambers of Commerce and Industry (CCI), competitiveness clusters and clusters. The latter two stakeholders ensure coordination between the national and regional levels on questions of the Industry of the future by being as close as possible to businesses and their needs. They are also fully involved in regional industrial development initiatives. In Auvergne-Rhône-Alpes region, the industrial development policy, aiming to translate more locally the national ambitions defined by the Industry of the future Alliance and the European ambitions expressed by the various S3 platforms, is carried out around 8 areas of excellence (DOMEX) allowing to develop precise sectoral strategies to associate the different scientific, economic and academic actors of the regional ecosystem: Industry of the future and industrial production, Building and public works, Digital, Health, Agriculture/Agrifood/Forest, Energy, Mobility and intelligent transport systems and Sport/Mountain/Tourism<sup>5</sup>. These areas of excellence are the result, on the one hand, of the fusion of intelligent specialization strategies of the former Auvergne and Rhône-Alpes regions and, on the other hand, of exchanges carried out with all the regional players in innovation. They are included in the Regional Scheme for Economic Development, Innovation and Internationalization (SRDEII) and the Regional Scheme for Higher Education, Research and Innovation (SRESRI), structuring documents for regional economic and scientific action.

Catalysts of this ambition, the 22 competitiveness clusters and clusters of Auvergne - Rhône-Alpes are at the heart of the 8 areas of excellence (DOMEX). Through their actions, the competitiveness clusters and clusters carry the innovation dimension of the regional plan piloted by the DOMEX Industry of the future. To this end, the competitiveness clusters concerned (Manufacturing, Chemistry, Plastics, Elastomers, Textiles, Energy, Digital Technologies) have joined together in the form of a collective in order to share a common action plan. This collective is led by CIMES. Illustration of the continuity of State and Region policies, the deployment of the support plan for 10,000 French SMEs in their transition towards Industry of the future which is reflected in the Auvergne-Rhône-Alpes Region by a regional contribution to state fundings and which leads to an ambition of 1,726 SMEs to be supported before the end of 2021 by the Ambition Industry of the Future scheme.

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<sup>5</sup> <https://ambitioneco.auvergnerhonealpes.fr/401-ma-page-2.htm>



The competitiveness clusters and clusters are also mobilized on the attractiveness and European influence of the Auvergne-Rhône-Alpes region through European projects and their contribution to S3 platforms. These structures are indeed essential relays with the European level participating in fact in the implementation of transnational and transregional reflections led for example by EFFRA or the World Manufacturing Forum in the field of manufacturing. European dynamics are a central point of the digital transformation of industrial companies, supported by numerous initiatives - I4MS network, platform 4.0 - aiming to facilitate access to technologies, exchange between partners and the emergence of collaborative projects. The competitiveness clusters and clusters work closely with the specific structures and devices set up at regional level to support the digital development of companies, in particular by training in new knowledge and skills.

In 2017, Auvergne-Rhône-Alpes Region announced the creation of the Digital Campus Region in Lyon, which is operational since January 2021. This place host research organizations, companies, start-ups, service providers and high-level technologies through pilot industrial platforms with a demonstrative and productive vocation.

On the private initiative side, the region is not outdone with Hall 32. Public-private partnership (large groups, SMEs, rectorate, competitiveness cluster, public decision-makers), Hall 32 offers a new approach to training and aims to create an excellence program to train in new jobs in the industry requiring qualified experts. One of the main goals of Hall 32 is to break the negative image of the industry and give young people the opportunity to enter rewarding professions. It is just as much a center of competence, a pilot plant, a place of training as a process lab where students learn by doing.

The development strategy and regional tools can be accompanied by local initiatives and structures serving smaller economic and industrial basins compared to the regional scale. This structuring of development policies enables better application and adaptation of global strategies according to the needs and actors present in each of the territories concerned. On the former regional territory of Auvergne, Clermont Auvergne Métropole is at the head of an important economic pole where digital technology and the industry of the future are two of the Activity Areas recognized as Strategic (DAS). These strategic and innovative fields of activity bring the jobs of tomorrow, and Clermont Auvergne Métropole is attentive to their development, their dynamism, their attractiveness in a hypercompetitive context at the national and international levels. Wishing to fully include higher education, research and innovation as the fundamental pillars of its future, Clermont Auvergne Métropole also adopted on December 15, 2017 a strategic roadmap supporting a long-term territorial vision, implemented in the short term by an operational plan of concrete actions. On the industrial level, large-scale projects, collaborative dynamics and the vision carried by the economic sectors present locally are thus encouraged by the multiplication of bridges between the worlds of business and research and the implementation of a reactive and concerted innovation policy with the entire value chain.

An essential sector of the economy which it irrigates transversally, digital technology is notably based within Clermont Auvergne Métropole on an ecosystem of public and private actors, rich and diversified. Composed of leaders in the digital economy, security and digital services, many startups, VSEs and SMEs collaborate with higher education and research, supported by

structuring professional networks (competitiveness clusters such as CIMES, Digital League - cluster present since 2012 and with 60 members in the Clermont area, Clermont Auvergne French Tech) and facilitators (incubators, accelerators Le Bivouac and the Village by CA) at the service of their growth and partnership dialogue. Following the organization of regional networking workshops, it can be noted that a dozen CIMES member companies offering solutions to industry, mainly VSEs/SMEs, joined in a collaborative dynamic and are supported by the cluster in order to strengthen their visibility and promote their solutions in Hall 32. This project has received support of 50 000€ from Clermont Auvergne Métropole by decision of the Metropolitan Council on June 24, 2022.

This public-private link between companies and university/academic research laboratories is a tangible reality on the territory as evidenced by the CAP 20-25 project, labeled I-Site in 2017, which aims to bring about a research university with high visibility at the international level to the west of Auvergne-Rhône-Alpes region, in addition to the university centers of Lyon and Grenoble. Thanks to the involvement of all stakeholders in the territory - higher education and research, local authorities such as Clermont Auvergne Métropole and Auvergne-Rhône-Alpes Region, as well as businesses - CAP 20-25 helps to promote excellence in Clermont public research combined with the best of private innovation from major industrial partners, such as Michelin and Limagrain, but also from a dynamic network of SMEs. The I-Site label requires in particular to be exemplary in terms of economic development of research and public-private partnerships; this is the reason why the CIMES competitiveness cluster is strongly involved in I-SITE CAP 20-25 Challenge 2 entitled "Innovative systems and services for transport and production": it is indeed an essential vector for stimulating innovations and collaborative R&D projects between companies and laboratories that contribute upstream to the economic development of the territory.

This initiative to structure the scientific and entrepreneurial ecosystem is not the only one to energize the Clermont area in terms of digital research. In 2016, Le Bivouac was born with the ambition to develop and deploy programs of excellence to boost accompanied start-ups by giving them access to privileged areas of experimentation, opening up market opportunities thanks to our partners, and bringing high level structuring expertise. The setting up of the Bivouac strongly participated in the FrenchTech labeling of Clermont Auvergne Métropole recognizing its involvement in the digital domain. In 2017, the Digital League excellence cluster was created, uniting more than 500 members including many digital companies, providing them with an adequate service offer for their growth.

### 3/ STRATEGIC PILLARS AND GOALS TO ACHIEVE

There is a growing interest in Auvergne-Rhône-Alpes for the implementation of Industry 4.0 and Blockchain technology, especially in areas such as connected objects and industrial internet and advanced production technologies.

It is however important to remember that for SMEs even more than for large companies, digitization is not an end in itself. Above all, SMEs express operational needs: gain in competitiveness, securing and diversifying supply chains, capacity gain, ramp-up, scrap reduction, reduction in machine downtime for maintenance, margin control, guarantee of quality and traceability, reduction of environmental impact, response to the challenges of mass customization, reduction of design/manufacturing time, etc. Digital technologies are therefore willingly considered as a means when their effectiveness in meeting operational challenges is demonstrated. Unlike large companies, SMEs do not have the financial capacity or the time to multiply experiments.

It is therefore essential that the solution providers have the opportunity to demonstrate the operational nature of their offers intended for future SME-SMI users thanks to, for example: website, third places, showcases, etc.

Many companies are still unfamiliar with digital subjects and lack knowledge of digital technologies in general and blockchain in particular. The digitization of processes must therefore be done gradually in accordance with the strategy and maturity of the company and requires support for implementation. Blockchain technology still remains a technology little used by the manufacturing sector, on purpose because the difficulty of its implementation is one of the most important obstacles noted by companies that do not have the necessary technological prerequisites and the interest of its industrial applications still remains unclear for many of them. Although having a primary interest in Blockchain technology, its operational value for manufacturing companies remains to be demonstrated in a context of production performance.

The technological interest remains primarily with solution providers rather than end users. However, the latter must be accompanied in their expression of needs to understand the levers and limits that will decide whether or not to deploy Blockchain technology. There is currently no clear expression of an immediate and particular need for Blockchain technology by the companies contacted.

However, it is necessary to provide means of raising awareness among industrial players so that the “Blockchain” solution remains a possibility and gradually settles in the same way as other proven IoT technologies in the technological corpus available for the industry. manufacturing.

## 4/ ACTION PLAN

### 4.1 / Strategic Objectives

The important conclusion of the work carried out within the framework of the BLOCK4COOP project within the regional industrial ecosystem and in particular the ecosystem supported and accompanied by CIMES Auvergne-Rhône-Alpes is that the technological interest remains in the first place with the suppliers. solutions rather than end users. However, the latter must be accompanied in their expression of needs to understand the levers and limits that will decide whether or not to deploy Blockchain technology. However, this conclusion leads us to reconsider the means of raising awareness among industrial players so that the “Blockchain” solution remains a possibility and gradually settles in the same way as other proven IoT technologies in the technological corpus available for the manufacturing industry.

## 4.2/ Actions

We must strengthen the support and promotion of solution providers who are best able to develop and offer Blockchain technology both for their own uses and for applications to end users. It is necessary to develop proofs of concept scaling up Blockchain technology towards industrialization. It is also necessary to reflect on the support given to third places (in Auvergne-Rhône-Alpes: Hall 32, Quartier Cataroux, etc.), which are places of discovery and testing in an environment close to reality. These places can provide an interesting first approach for industrial players in IoT technologies. Finally, in an approach of resilience and reduction of environmental impacts increasingly favored by manufacturing players, it will be necessary to ensure the viability and lifespan of digital solutions over long periods of time. All these measures will be detailed in a regional roadmap.

Currently, many efforts are being made to improve the deployment of this technology, starting with the awareness of industrial players. Several documents are available, some developed within the framework of the European BLOCK4COOP project, to support this ambition to make Blockchain and its industrial interest better known:

## 4.3/ Potential projects

The three following projects are supported by CIMES at regional level.

ITEM	SHORT DESCRIPTION
<b>Partners</b>	<i>Monoceros, Beeionic, Exotic Systems, Kaelis</i>
<b>Title of the project</b>	<i>Monoceros SmartMx</i>
<b>Rationale</b>	<i>The objective is to extend the Monoceros technology to develop the first smart IoT sensor/tracer for logistics monitoring down to -200°C, reusable for 10 years without human intervention, which can be recalibrated remotely, validated for the air transport and can be integrated into all packaging.</i>
<b>Objective of the project</b>	<ul style="list-style-type: none"> <li><i>Scientific objectives:</i></li> </ul> <p><i>Ecological: over 10 years of use, the complete screw cycle of our service (sensor &amp; software) must reduce the carbon footprint by more than 98% compared to current standards. To achieve this goal, eco-responsibility must be a priority in all stages of the life of the IoT system: design, manufacture, use and recycling.</i></p> <ul style="list-style-type: none"> <li><i>Technological objectives:</i></li> </ul> <p><i>Achieving 10 years of service life in the field without human intervention.</i></p> <p><i>Reliability: one of the main obstacles to the adoption of real-time IoT systems is the reliability of the data, which is why we aim for 100% reliability, i.e. guaranteeing never to miss an important measurement, even when it arrives out of order. network.</i></p> <p><i>Characteristics: the case must be IP65 with a socket to connect an external temperature probe, an inductive charging system powerful enough to work through the packaging, a battery charge must provide 6 months of autonomy in 2G mode even at after 10 years, a 5G/4G connection with 2G fall-back, the all-inclusive thickness must not exceed 20mm.</i></p> <ul style="list-style-type: none"> <li><i>Economic objectives:</i></li> </ul>

	<i>Local: the sensitivity of the data generated by the sensors allows us to convert our Made in France guarantee of quality and safety. We seek to produce and assemble all parts of the sensor/plotter in the Auvergne-Rhône-Alpes region.</i>
<b>Activities</b>	<i>Selection of components</i> <i>Design of the electronic board</i> <i>Firmware Development</i> <i>Realization of the first prototypes</i> <i>Prototype testing in all key scenarios and across the world</i> <i>Certifications CE, FCC, EN61010, EN12830, RoHS, DO160-G</i>
<b>Entities/agents</b>	/
<b>Expected results</b>	<i>Monoceros will become the world leader in cold chain monitoring down to -200°C. To achieve this, we will supply all subcontractors wishing to offer a connected packaging solution to their customers.</i> <i>Monoceros already works in partnership with several companies in the region, and this SmartMx tracking system was requested by a company in the region that wants to become the largest European logistics platform for cell and genetic therapies as well as biobanks.</i>
<b>Indicators of measure</b>	<i>Technical performance: battery life, size, measurement speed</i> <i>Short circuit: number of kilometers covered by all the components before obtaining the final product</i> <i>Ecology: LCA validated by an external certified organization</i> <i>Economic: number of orders signed, number of foreign contracts</i>
<b>Beneficiaries</b>	<i>Logistics and transport sectors stakeholders</i>
<b>Period implementation</b>	2022-2023
<b>Budget and potential sources of financing</b>	<i>Budget: 200K€</i> <i>Financing: National Program France 2030</i>
<b>Costs</b>	<i>Staff costs and purchase costs</i>
<b>Other additional comments</b>	/

ITEM	SHORT DESCRIPTION
<b>Partners</b>	<i>Heverett Group, Nuclear Valley, Limos and Aquilla</i>

<b>Title of the project</b>	<i>D4N – Datalake 4 Nuclear</i>
<b>Rationale</b>	<p><i>The project is born from a meeting between Hervé Labarge (Heverett Group) and Pascal Lafourcade (LIMOS laboratory) during a BLOCK4COOP regional sensitization workshop in 2020.</i></p> <p><i>At a time when data collection is becoming more and more widespread, whether videos, telemetry, raw data or manually entered, they are often single-use for a specific control. The ambition of this project is the pooling of these dormant data for their valorization in the training of algorithms.</i></p>
<b>Objective of the project</b>	<i>Design all the infrastructure and governance necessary for sharing raw data between the various French nuclear players in order to pool the efforts necessary for training artificial intelligence (AI) algorithms</i>
<b>Activities</b>	
<b>Entities/agents</b>	/
<b>Expected results</b>	<p><i>Creation of a secure, qualitative, reliable and anonymized data lake (DataLake) for the nuclear sector</i></p> <p><i>A market place (MarketPlace) is created to register, use, market data and artificial intelligence applications on use cases, the first of which is the detection of the clogging rate of an EDF steam generator.</i></p>
<b>Indicators of measure</b>	<i>Datalake created</i>
<b>Beneficiaries</b>	<i>Nuclear sector stakeholders</i>
<b>Period implementation</b>	<i>2022-</i>
<b>Budget and potential sources of financing</b>	<i>National funding: programme France Relance (BPIFrance) et le Crédit-d'Impôt-Recherche</i>
<b>Costs</b>	<i>Staff costs (esp. doctorate)</i>
<b>Other additional comments</b>	/

ITEM	SHORT DESCRIPTION
<b>Partners</b>	<i>COMPTE-R (SME – Coordinator), Data&amp;Co, Inventhys</i>
<b>Title of the project</b>	<i>CAMERA-FOYER (Biomass burner flame interpretation device for real-time optimization)</i>
<b>Rationale</b>	<i>Compte-R group has been manufacturing biomass boilers and multi-fuel boilers for more than 130 years with strong founding values: innovation, performance and respect for the environment. An international industrial group specializing in wood</i>

	<p>biomass energy, Compte-R wishes to continue to innovate in order to remain competitive by launching the "Camera Foyer" project. Challenges: automatic optimization of combustion in real time by detecting the dynamic state (position, intensity, turbulence, etc.) of the flame to adjust the settings (fuel, air, fuel advancement speed, etc.). The end goal is to increase boiler efficiency and reduce emissions.</p> <ul style="list-style-type: none"> <li>• Validate a method of detection and analysis of the flame front by camera (visible domain) and image processing with integrated AI</li> <li>• Build the "digital" camera/processing/interaction chain with the boiler control PLC, under severe operating conditions (heat/thermal radiation, dust, etc.)</li> <li>• Validate the proof of concept on an existing installation</li> <li>• Transfer the knowledge of an experienced boiler operator/fitter into an autonomous, real-time system.</li> </ul>
<b>Objective of the project</b>	<ul style="list-style-type: none"> <li>• Scientific objectives:</li> </ul> <p>Design of algorithms (AI) and taking into account the observations of technicians/engineers</p> <ul style="list-style-type: none"> <li>• Technological objectives:</li> </ul> <p>Use a "simple" camera technology (visible domain) and enrich it with powerful analysis methods</p> <p>Operation in severe conditions (heat, thermal radiation, etc.)</p> <p>Integrate the device into the boiler control environment</p> <ul style="list-style-type: none"> <li>• Economic objectives:</li> </ul> <p>-5k€ of purchase for the industrial version</p> <p>Reduce travel (COMPTE-R workers)</p> <p>Maximize the energy contained in the biomass.</p>
<b>Activities</b>	<p>1) Design &amp; Development of image processing and analysis algorithms</p> <p>Bibliographic research and summary of the relevant models according to the definition of the main functions:</p> <ul style="list-style-type: none"> <li>• Detection of flames and different phases ("gas" and "solid" fronts, unburnt parts, etc.)</li> <li>• Temperature gradient detection</li> <li>• Focus turbulence detection</li> </ul> <p>2) System prototyping</p> <p>Prototyping a connected system comprising a camera visualizing the flames of the furnace furnace.</p> <ul style="list-style-type: none"> <li>• Connectivity to the Cloud will allow remote control as well as the implementation of a continuous improvement mode.</li> <li>• This system will process the information and will be able to transmit information to the PLC (boiler).</li> </ul>

	<ul style="list-style-type: none"> <li>• <i>Mechanical constraints</i></li> <li>• <i>Proximity to high heat (80°C), IR radiation, brightness variation, different configuration/fixing on different models/sizes of boilers (from 150kWh to 15MWh)</i></li> </ul>
<b>Entities/agents</b>	/
<b>Expected results</b>	<ul style="list-style-type: none"> <li>• <i>Creation of added value</i></li> </ul> <p><i>Improvement of the lifespan of certain equipment (grid bars, concrete, etc.)</i></p> <p><i>Reduction of biomass consumption (Commercial and Ecological argument)</i></p> <p><i>Simplify the use of the boiler</i></p> <ul style="list-style-type: none"> <li>• <i>Job quality</i></li> </ul> <p><i>Reduction of travel (adjustment technicians)</i></p> <p><i>Capitalization of knowledge and ease of transmission for newcomers</i></p> <ul style="list-style-type: none"> <li>• <i>Economic</i></li> </ul> <p><i>Increase in environmental performance (energy and emissions).</i></p> <p><i>Significant differentiation from the competition</i></p>
<b>Indicators of measure</b>	<p><i>Comparison of AI analysis to operator interpretation. The interpretations should come as close as possible. Focus step by step analysis and gradually increase in difficulty</i></p> <p><i>1- Detection of the position of the bottom of the flames in the hearth</i></p> <p><i>2- Detection of unburned below the bottom of the flame</i></p> <p><i>3- Turbulence detection</i></p> <p><i>4- Detection of the temperature gradient (Visible domain)</i></p> <p><i>Resistance of the prototype in the middle of uses</i></p> <p><i>The indications provided by the analysis model transmitted to the automaton is integrated into a test regulation for precisely real-time combustion settings</i></p>
<b>Beneficiaries</b>	<i>Energy sector stakeholders</i>
<b>Period implementation</b>	<i>2022-2024</i>
<b>Budget and potential sources of financing</b>	<p><i>Budget: 600K€</i></p> <p><i>Financing: National program France 2030</i></p>
<b>Costs</b>	<p><i>Staff costs: 375K€</i></p> <p><i>Subcontracting: 225K€</i></p>

Other additional comments	/

#### 4.4/ Governance

Awareness of Blockchain technology and its concrete deployment in terms of industrial applications are results that presuppose the involvement of several types of stakeholders at the regional level.

STAKEHOLDER	ROLE TO PLAY
<b>Pôles de compétitivité and Clusters</b>	<ul style="list-style-type: none"> <li>• Mobilize and raise awareness among players in industrial ecosystems on the benefits of blockchain technology</li> <li>• Encourage companies, and primarily solution providers, to use the blockchain</li> <li>• Participate in European collaborative projects</li> <li>• Highlight the regional offer on blockchain technology</li> </ul>
<b>Regional authorities</b>	<ul style="list-style-type: none"> <li>• Mention blockchain technology in strategic roadmaps</li> <li>• Open the possibility of regional funding clearly to blockchain technology</li> <li>• Support the initiatives of centers and clusters, particularly at European level, on blockchain technology</li> </ul>
<b>Solution providers</b>	<ul style="list-style-type: none"> <li>• Integrate blockchain into their catalog of technologies available and offered to industrial end users</li> <li>• Develop inspiring case studies for companies</li> </ul>
<b>Industrial end-users</b>	<ul style="list-style-type: none"> <li>• Participate in awareness-raising actions</li> <li>• Express needs for innovative technologies including blockchain</li> <li>• Participate in testing and implementation actions</li> </ul>
<b>Research and competences centres</b>	<ul style="list-style-type: none"> <li>• Serve as third-party testing locations for businesses</li> <li>• Develop case studies and industrial applications of blockchain technology</li> </ul>

#### 4.5/ Resources

There is no funding window at the regional level that is specifically dedicated to blockchain technology, however several windows can finance the deployment of this technology.

FUNDING	INFORMATION
<b>R&amp;D Booster</b>	<p><b>Beneficiaries</b></p> <p>Companies with fewer than 2,000 people, higher education and research establishments, research and knowledge dissemination organisations.</p> <p><b>Purposes</b></p>

	<p>Aims to promote collaborative R&amp;D projects (at least two companies and a research and knowledge dissemination organization) in response to a development challenge for new products, processes or services.</p> <p>R&amp;D activities are positioned between 5 and 9 on the TRL technological maturity level scale, with a market launch objective in the short or medium term (12 to 24 months).</p> <p>Two categories of projects are identified:</p> <ul style="list-style-type: none"> <li>• Projects based on the development of a demonstrator in a representative environment (laboratory environment or simulated operational environment). TRL scale: maturity at levels 5-6</li> <li>• Projects based on a demonstrator or proof of concept in a real environment (industrial environment, conditions of use of the final product/process/service or close to the conditions of use). TRL scale: maturity at levels 7-9</li> </ul> <p>Projects must:</p> <ul style="list-style-type: none"> <li>• concern one of the 13 key sectors of the region or one of the 4 sectors of excellence;</li> <li>• have an impact on activity and employment in the Auvergne-Rhône-Alpes region and contribute to the balanced development of the territories;</li> <li>• be labeled by one of the 24 competitiveness clusters or clusters of Auvergne-Rhône-Alpes;</li> <li>• present a total budget between €300,000 and €1,000,000 (without one company alone representing more than 70% of the total budget and without the budget of the ORDC partner exceeding 20% of the total budget of the project);</li> <li>• demonstrate the capacity of the partners, in particular financial for the companies, to carry out the project.</li> </ul> <p><b>Terms</b></p> <p>Project led by 2 companies + 1 research organization minimum. The 3 must be part of the AURA Region</p> <p>For companies, regional support takes the form of a subsidy and/or a Zero Innovation Loan (PTZI), capped according to the intervention rates authorized by regime no. SA.58995 (section 5.2) and by the basis of eligible expenses retained following the investigation of the Region.</p> <p>For research and knowledge dissemination organisations, the aid takes the form of a grant, capped at 20% of the total cost of the project (sum of the eligible expenses of all the project partners) with a corresponding intervention rate 100% of the eligible expenses retained following the investigation by the Region.</p>
<p><b>I-DEMO Région</b></p>	<p><b>Beneficiaries</b></p> <p>The projects must present a consortium of partners from the regional territory made up of at least 2 companies, including an SME or an ETI, and one or more academic research partners. A consortium will be made up of a maximum of 5 partners.</p> <p><b>Purposes</b></p> <p>This call for projects aims to support collaborative research and development projects, with the aim of strengthening the positions of industrial and service</p>



	<p>players in growth markets in order to consolidate or build, around leaders, contractors or suppliers of new innovative products or services with high added value, a fabric of lasting and long-lasting collaborative industrial relations of large, medium and small companies.</p> <p><b>Terms</b></p> <p>The Region provides its support, on an equal basis with the State, to regional companies and research establishments involved in this action, in order to promote innovation, growth and competitiveness in its territory.</p> <p>The projects will have a duration of between 24 and 48 months. A company that carries out R&amp;D work will be identified as leader of the consortium (research partners cannot be designated as leader).</p> <p>The expenditure base to be incurred within the framework of the work presented is between €1 million and €4 million per project.</p>
<p><b>Plan de relocalisation Auvergne-Rhône- Alpes “Intégrer l’IdF dans mon entreprise”</b></p>	<p><b>Beneficiaries</b></p> <p>VSEs, SMEs, ETIs established in the Auvergne-Rhône-Alpes territory carrying out manufacturing activities. The production establishment must be located in the regional territory.</p> <p>For actions involving several companies and more particularly on actions to organize supply chains and local production, the flat-rate aid ceiling may be raised to 16,000 euros.</p> <p><b>Purposes</b></p> <p>Be accompanied to integrate solutions or approaches related to the industry of the future as part of a relocation and establishment project. More specifically, I am looking for help to finance the costs of the consulting services provided.</p> <p><b>Terms</b></p> <p>The Auvergne-Rhône-Alpes Region and the State co-finance the costs of consulting services, proof of concepts, study expertise at 100% within the limit of 8,000 euros excluding tax.</p> <ul style="list-style-type: none"> <li>• Economic feasibility studies to understand the interest of ensuring a relocation action;</li> <li>• Support and expertise on an industry technology of the future with a view to relocation;</li> <li>• Study for relocation operations of production activities.</li> </ul>

#### 4.6/ Monitoring

Some indicators could be used at regional level in order to measure the level of implementation of the blockchain technology:

- Number of projects submitted via a regional mechanism using blockchain technology
- Number of projects financed via a regional mechanism using blockchain technology
  - Percentage of projects selected with blockchain technology
- Mention of blockchain technology in regional strategies