



## **Smart Anything Everywhere Initiative**

## Area 3: Advanced micro-electronics components and Smart System Integration Project: H2020–No 761809



## Digital Innovation Hubs boosting European Microelectronics Industry

# Deliverable 2.4

# Pan-European DIATOMIC One-Stop-Shop

Author(s): Ana Ajdukovic, Davide Guariento (Bios	
Status -Version:	V1.0
Delivery Date (DOW):	28 February 2018
Actual Delivery Date:	27 February 2018
Distribution - Confidentiality:	Public
Code:	DIATOMIC_D2_4 _BIOS_FF_20180227

#### Abstract:

This document is the written report about the DIATOMIC platform, which offers stakeholder group access to DIATOMIC resources, mapping of the DIATOMIC ecosystem, rights and responsibilities of existing CCs and aspiring CCs, full package of documentation; trainings, publications and videos from DIATOMIC ecosystem.

The Pan-European DIATOMIC one-stop-shop is a web-based platform to showcase available resources of the DIH and coordinate connectivity within the DIHs. The platform has a user-friendly interface to facilitate exploration of the multi-faceted DIH, including member capacities, support services offered, application experiments and success stories.

## Disclaimer

This document may contain material that is copyright of certain DIATOMIC beneficiaries, and may not be reproduced or copied without permission. All DIATOMIC consortium partners have agreed to the full publication of this document. The commercial use of any information contained in this document may require a license from the proprietor of that information.

The DIATOMIC Consortium is the following:

Participant number	Participant organisation name	Short name	Country
01	INTRASOFT International S.A.	INTRA	BE
02	F6S NETWORK LIMITED	F6S	UK
03	BioSense	BIOS	SRB
04	Synelixis Solutions	SYN	EL
05	Instituto Pedro Nunes	IPN	PT
06	Fraunhofer IPA	IPA	DE
07	InoSens	INO	SRB
08	Libelium Comunicaciones Distribuidas SL	LIB	ES
09	FastTrack	FASTT	PT

The information in this document is provided "as is" and no guarantee or warranty is given that the information is fit for any particular purpose. The user thereof uses the information at its sole risk and liability.



## **Document Revision History**

Date	Issue	Author/Editor/Contributor	Summary of main changes
14/02/2018	V0.1	Ana Ajdukovic, Davide Guariento	Initial Text
18/02/2018	V0.2	B. Ipektsidis, Y. Oikonomidis	Editing/Reviewing
26/02/2018	V0.3	Ana Ajdukovic, Davide Guariento	Addition of screenshots
27/02/2018	V0.4	B. Ipektsidis, Y. Oikonomidis, R. Broechler	Final Editing inclusion of Executive Summary
27/02/2018	V1.0	B. Ipektsidis, Y. Oikonomidis, R. Broechler	Final version



## **Table of Contents**

Executive Summary		6
1	Introduction	
2	Web site as a gate to the platform	
2	.1 Hosting	8
2	.2 Domain Name	8
2	.3 Design	9
2	2.4 Content	9
3	DIATOMIC one-stop-shop platform	15
	9.1 Platform Architecture	
3	8.2 Platform booklet	19
4 (	Conclusions	20
5 /	Annex A: DIATOMIC One-Stop-Shop: User Guide	21



## List of Abbreviations

- AE Application Experiment
- CC Competence Centre
- CMS Content Management System
- DIH Digital Innovation Hub
- FAQ Frequently Asked Questions
- SME Small Medium Enterprise
- SSL Secure Sockets Layer



## **Executive Summary**

This deliverable reports on the work performed with respect to the design, development and actual deployment of the DIATOMIC Website (www.diatomic.eu) to public use. The design of both, the DIATOMIC website and of the platform is modern, professional and in accordance with the project theme. The website and the platform, will be maintained regularly and will be available even after the end of the project.



## **1** Introduction

This deliverable reports on the work performed with respect to the design, development and actual deployment of the DIATOMIC platform offering stakeholder groups access to DIATOMIC resources and mapping the DIATOMIC ecosystem. In more details, in section 2 we report about the Web site as a gate to the platform. In this section the hosting, domain name, design and content are presented. Whereas, in section 3 the DIATOMIC one-stop-shop platform and the platform architecture and the platform user guide that is included in Annex A are presented.



## 2 Web site as a gate to the platform

For the development of DIATOMIC website the **WordPress** content management system was used. This is a free and open-source content management system (CMS) based on PHP and MySQL. Features used include a plugin architecture (My content management) and a template system, which allowed us to change the look and functionality of a WordPress website according to our needs and the official visual identity of the project.

The website of the DIATOMIC project is based on WordPress platform and a professionally designed theme. In addition, the website includes suitable security plugins.

## 2.1 Hosting

In order to provide 24/7 secure access to the DIATOMIC website and platform, BIOS has decided to use the cloud hosting services provided by EUnet. The main features and benefits that cloud hosting provides are:

- quick deployment automated creation of Cloud infrastructure, without physical installation and hardware connection
- responsibility EUnet guarantees that both hardware and software will work properly
- adaptability more server operating systems in one Cloud application
- guaranteed performances hardware resources will not be affected by other users and applications on EUnet Cloud
- scalability quick change of needed resources, upon DIATOMIC's request
- flexibility EUnet Cloud platform represents ideal solution for implementation of the most complex business and IT systems
- reliability Cloud system will be functional even if server or part of physical infrastructure fails. The data will automatically become available on the other server.
- availability information and applications on Cloud platform can be accessed from any location in the world, at any point in time and from any device (phone, tablet or computer). It is very simple to access information as if one is using company's local network and complete data security and privacy is guaranteed.
- savings DIATOMIC will pay only for those resources it will actually use
- safety our webpage and platform are 99.5% secure in the cutting-edge Data centres on 3 locations in the world (Belgrade, London, Miami)
- migration quick synchronization and relocation of entire Cloud infrastructure, when necessary

## 2.2 Domain Name

The website is accessible through the following domain name:

http://diatomic.eu/

In addition, since DIATOMIC platform will have some features that are used in social media sites (personal data, exchange of messages between user etc.), we decided to implement a SSL certificate, which secures connections from web server to a browser.



## 2.3 Design

The DIATOMIC website serves as an online entry point for the most promising SMEs, competence centres, corporates, investors, as well as other innovation actors who are considering exploring the possibilities of the one-stop shop. It brings all the available DIATOMIC DIHs ecosystem resources together in a central, easy-to-navigate hub. Users can find a full suite of Open Call resources and comprehensive information on the opportunities offered through DIATOMIC DIHs.

To encourage the most sign-ups to the one-stop and get the highest conversion rates, the website is enhanced with a dedicated landing page that is consistent with the overall branding of the DIATOMIC DIH's ecosystem, simple in layout, includes clear statements on the benefits of the one-stop shop, a prominent call to action and incorporates robust analytics tracking. Shown below is the screenshot of the homepage:



## 2.4 Content

The DIATOMIC website is rich with useful information and attractive visuals that will drive the users into a unique experience in the digitalization world of three of the most important European sectors; such as: agrifood, health and manufacturing.

The content of the website is divided into 6 main sections, where the information can be scrolled vertically for offering the most user friendly interface. In more detail the 6 main sections are: About us, Our technology, One-stop-shop, Latest, FAQ, and looking for funding.

The above mentioned sections are further described and visually represented in the following subchapters.

## 2.4.1 About us

This section offers an in-depth explanation of the DIATOMIC DIHs ecosystem. The section starts with a short description of the project that capture the essentials of DIATOMIC. This is followed by the explanation of what the PULL application experiments are and what is their role and goal within the project.

#### H2020–761809: DIATOMIC D2.4: Pan-European DIATOMIC One-Stop-Shop





# About Diatomic

DIATOMIC is a Europe-wide, EC-backed network of Digital Innovation Hubs, with €3 million committed in funding for microelectronics SMEs and midcaps. In alignment with the Smart Anything Everywhere initiative goals, DIATOMIC aims to be Europe's foremost network of innovation hubs in the industries of health, agrifood, and manufacturing.



ABOUT US V PUSH APPLICATION EXPERIMENTS V ONE-STOP SHOP LATEST FAQ

OPEN CALL

## PULL Application Experiments

Two open calls for consortium Application Experiments will be launched to pull disruptive solutions from health, agrifood, and manufacturing sectors exploiting AME and SSI.

Following a competitive selection process, between 15 and 43 high-quality user-driven Application Experiments will be funded. Applicant consortia will consist of highly-talented actors, namely tech-providers, tech adopters, and Competence Centers. It is worth noting that applicant consortia are required to include technology users and they may use DIATOMIC technological offerings or any other. Cross-border experiments will be favored, as well as those showing strong market potential and high opportunity for growth.



#### H2020–761809: DIATOMIC D2.4: Pan-European DIATOMIC One-Stop-Shop



Furthermore, a part of the About us section is dedicated to the open call figures. This includes the number of the open calls foreseen in the project, the total amount of funding that is dedicated to the two open calls, the number/ range of application experiments that will be funded through the two open calls and finally the number of companies that will receive funding from DIATOMIC project.



At the bottom of the "About us" section, there is a space dedicated to the partners of the Project. The partners' logos are shown and the user can click on them to access more detailed information about partners and their roles within the DIATOMIC DIHs ecosystem.



•—• diaton	ABOUT US ~ OUR TECH	NOLOGY $\sim$ ONE-STOP SHOP LATEST FAQ LOOKING FOR FUNDING
	Meet our	team
	Funded by the European Union, under the initiative, the DIATOMIC consortium is wor stop shop where industry leading innovator caps, can realize tangible benefits of A	king together to create a one- rs, most notably SMEs and mid-
	F65 Ser BioSer	INSE SYNELİXIS SEN
🗾 Fraunhof	ier 🔅 INOSENS Li	belium fast track®

## 2.4.2 Our Technologies

This section offers relevant information about the PULL application experiments, as well as relevant results. In this section, the technologies developed in the PULL application experiments are described.



## 2.4.3 Looking for funding

This section navigates users to the F6S platform where they can apply to the DIATOMIC Open Calls.



•—• diatomic	ABOUT US V PUSH APPLICATION EXPERIMENTS V ONE-STOP SHOP LATEST FAQ OPEN CALLS
Open Calls	DIATOMIC, a Europe-wide, EC-backed network of Digital Innovation Hubs has been officially launched. With €3 million committed in funding for microelectronics SMEs and midcaps, DIATOMIC aims to be Europe's foremost network of innovation hubs in the industries of health, agrifood, and manufacturing.

## 2.4.4 Latest and FAQs

The "Latest" section offers thought leadership content, future trends in Advanced Microelectronics and Smart Integrated Systems, news related to the SAE Initiative, and of course, news from the DIATOMIC DIHs ecosystem.

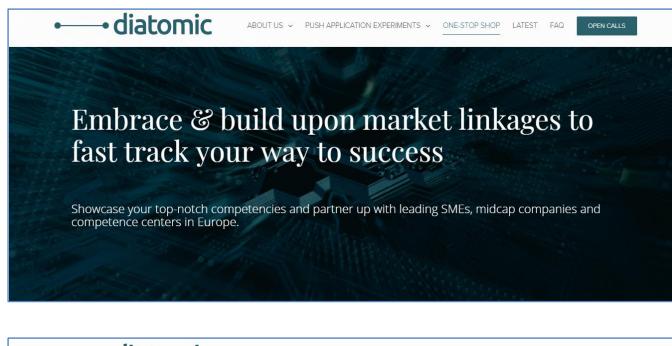
Through the FAQ section, users can find answers to the project, our open calls, the PUSH application experiments, etc.

• • diatomic	ABOUT US $\sim$ PUSH APPLICATION EXPERIMENTS $\sim$ ONE-STOP SHOP	LATEST FAQ OPEN CALLS
FAQs	Search	٩
General	• What are the open call dates?	

### 2.4.5 One-stop-shop

This page is dedicated to the one-stop shop. It describes the key benefits for relevant stakeholders to join the platform.







## A showcase of Digital Innovation Hubs and resources

DIATOMIC one-stop shop has all the right resources to boost your innovation, product development, and business – leading-edge technology, funding, expertise and business support services.

JOIN NOW



## **3 DIATOMIC one-stop-shop platform**

The Pan-European DIATOMIC one-stop-shop is a web-based platform to showcase available resources of the DIH and coordinate connectivity within the DIHs. The platform has a user-friendly interface to facilitate exploration of the multi-faceted DIH, including member capacities, support services offered, application experiments and success stories.

User engagement is enhanced by mapping and providing a searchable profile database, where DIH members will present their competences, capacities, expertise, a complete profile with direct contacts. The DIATOMIC one-stop-shop is designed and communicated taking into consideration the distinct user profiles: innovation actors (entrepreneurs/ SMEs/ midcaps), supporters (competence centres, other support providers and value chain stakeholders) and enablers (investors/ corporates). Some examples: (i) foster community building through blogs and forum features, engaging thought leaders to contribute and attract traffic from stakeholder groups; (ii) for supporters the platform will have space to introduce virtual tours of their laboratories, highlighting available equipment, technical capacities, key lab personnel, focus and expertise of available research groups, etc; (iii) enablers will be able to present their portfolio, target companies/ experiments and type of investment. In fact, this information will enable the mapping of the DIATOMIC ecosystem and promote the development of new business/ cooperation's towards European Digitalization. This approach will simplify browsing and increase its efficiency.

Similarly, other key elements of the DIH will be easily searchable and browsable, including capacities and support services offered. The portal is designed to serve the Public Outreach Strategy conducted in T6.1, providing tailored messages and dissemination content to the various identified target stakeholder groups. This will be particularly important to encourage increased engagement of stakeholder groups needed for function of the DIH throughout the project and post-project. Of special interest is the connection with regional and national hubs: DIATOMIC starting from the CC in its own consortium will exploit the fact the most CC maintain close relationships with national and regional hubs to contact them and engage them in its one-stop-shop. National and regional hubs are expected to engage with DIATOMIC as its offerings are valuable to the hub's members and complementary to hub's offerings.

## 3.1 Platform Architecture

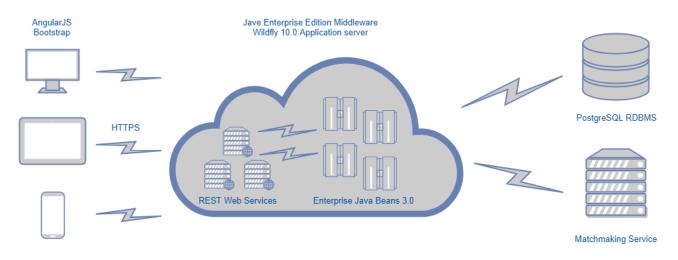
The DIATOMIC platform is based on enterprise scale, open source technologies. For back-end data storage, we use PostgreSQL relational database management system. The PostgreSQL RDBMS is used for storage of various kinds of information from the platform middleware and perfectly adapts to the needs of the project. PostgreSQL has been used by the developing team in several other projects with successful outcomes.

Middleware is built by using Enterprise JavaBeans 3.0 and WildFly 10 application server as the host. Enterprise JavaBeans encapsulate business logic of the system. They connect to the RDBMS for data storage and retrieval and offer functionalities to external clients using RESTful web services and JSON format.

The platform supports various kind of client devices like desktop and laptop computers, tablets and smartphones. Web application accessed by the clients is responsive - it provides optimal viewing experience depending on the device used to access the platform. Web tier design is based on Bootstrap framework. Communication with the platform middleware and web application control is developed using AngularJS JavaScript Model-View-Controller framework that supports exchange of JSON data through RESTful web services implemented on middleware. The above described is graphically presented on picture below:







In the above-described architecture of the system, clients are completely decoupled from server components. Their communication is service based, implemented using RESTful web services (Representational State Transfer) and JSON (JavaScript Object Notation) format. Client server communication is encrypted using registered SSL certificate and secured using session based authentication using session token.

The DIATOMIC platform will be supported by the following browsers:

Browser / System	Android	IOS
Chrome	Supported	Supported
Firefox	Supported	Supported
Safari	Not Supported	Supported
Android browser & WebView	Supported	Not Supported

Browser / System	Windows	Мас
Chrome	Supported	Supported
Firefox	Supported	Supported
Safari	Not Supported	Supported
Internet Explorer	Supported	Not Supported
Microsoft Edge	Supported	Not supported
Opera	Supported	Supported

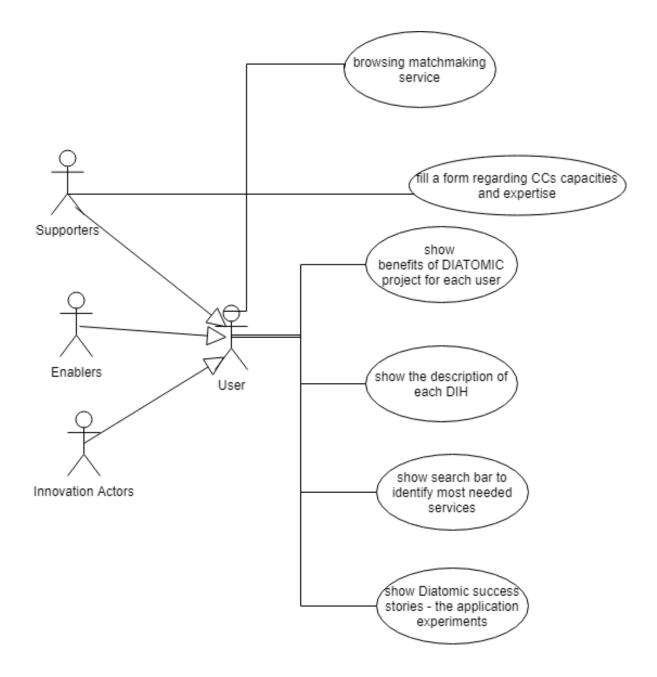
 Table 1: Supported browsers by the one-stop-shop platform

### 3.1.1 Use-case diagrams and workflow

In the following sub-section, the use-case diagram presented in the below Figure will be described. Each single use case describes how a user uses the platform to accomplish a particular goal. It is supposed



that this platform will be used by three different users: Innovation Actor, Enablers and Supporters. These will have common behaviour, which is represented by general actor called User.



#### Use Case 1: SHOW THE BENEFITS OF THE DIATOMIC PROJECT FOR EACH USER

#### ACTORS: User

#### **DESCRIPTION:**

The DIATOMIC Web application will clearly state the benefits for every user type (Innovation Actors, Enablers, Supporters). The benefits will be split per user type. The text describing benefits will be concise and it should be a motivating factor for users to use the DIATOMIC platform. The text will be shown under or underneath a simple correspondent icon.



#### Use Case 2: SHOW THE SERVICES OF EVERY DIGITAL INNOVATION HUB (DIH)

ACTORS: User

DESCRIPTION:

For every DIH, the services they provide will be easily accessible with an inbuilt searching tool. Once the service of interest is clicked, a new page is opened, where the user can find a detailed description of the service, as well whom the service is targeting. Every DIH will have a "profile" page describing their competences, capacities, expertise and contacts. Furthermore, each DIH page includes information about the partners within the hub and their contact details.

#### Use Case 3: DIATOMIC success stories/ the Application Experiments (AE)

ACTORS: User

#### DESCRIPTION:

The descriptions of AE (Application Experiments) will be easily accessible. Both the three AEs embedded in the DIATOMIC project will be shown as well as other AEs. The following information will be displayed:

- general description
- implemented technologies
- AE progress
- partners, tech suppliers involved
- KPIs
- pictures of technologies and demonstration sites

#### Use Case 4: Service Search Bar

#### ACTORS: User

DESCRIPTION: the search bar has the scope to provide a fast access (short-cut) to the DIATOMIC services that could be most suitable for the platform users. Questions regarding the domain of interest, the geographical position and the type of service required will be asked.

#### Use Case 5: Open Calls

ACTORS: User

DESCRIPTION: with the objective to maximize the reach of the open calls, a section will be dedicated to it. The section will show the selection criteria and the open call procedure. Moreover, the section will include a direct link to the application platform provided by F6S.

#### Use Case 6: Survey regarding CCs' CAPACITIES AND EXPERTISE

ACTORS: Supporters

DESCRIPTION:

Innovation actors will be able to fill a form regarding their competences, capacities and expertise. Innovation actors will input their data into a web form, which is a part of the DIATOMIC Web application and their data will be saved to the database. Data asked of user will at least include: available infrastructure, services provided, fields of expertise, geographical position etc.



#### Use Case 7: Message board

#### ACTORS: User

DESCRIPTION: with the objective to allow the users to communicate with each other, an entire section is dedicated to the message boards. The message sent will be received by all the registered users. Moreover, further communication is encouraged by promoting further exchange of messages by email.

## 3.2 Platform booklet

In Annex A we present a booklet about the DIATOMIC one-stop-shop platform. The booklet includes visual and descriptive information on how to use platform and shows the different sections of the platform. This booklet is not only an Annex of this deliverable, but can also be used as a stand-alone document that can be downloaded on the website by interested stakeholders/users.



## 4 Conclusions

The design of both the DIATOMIC website and platform is modern, professional and in accordance with the project theme. From the first days of the deployment it has managed to significantly raise the acknowledgment of our efforts and the efficiency of the project. The website will enable an easy monitoring of the project progress and efficient exchange of project documentation and all types of promotional materials, whereas the Platform will facilitate the communication and support an interactive involvement and matchmaking between all targeted groups, so the all the services of the DIHs and the solutions from the AEs will be widely disseminated. Both, website and the platform, will be maintained regularly and will be available even after the end of the project.



## 5 Annex A: DIATOMIC One-Stop-Shop: User Guide

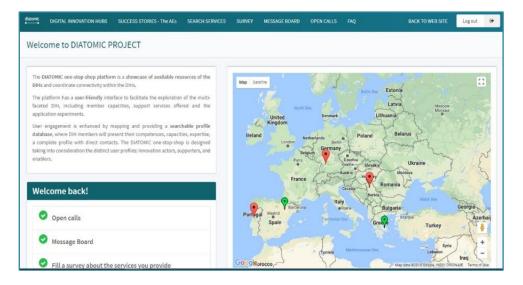
### Welcome to DIATOMIC Project

The DIATOMIC Platform gives the user the enhanced experience by mapping and providing a searchable profile database, where DIH members can present their competences, capacities, expertise and a complete profile with direct contacts.

DIATOMIC Platform will foster the development of new business cooperation's towards European Digitalization. The benefits will show in easier and simplified browsing and increased efficiency.

DIATOMIC Platform provides an opportunity for the collaboration matchmaking is not only done based on the competencies, but also considering the infrastructures each DIHs has and is available to give.

By logging into the Platform, user has the option to apply for the Open calls and exchange experience with other users. Also, Competence centres can promote their own services.



### **Overview**

# A Pan-European one-stop-shop platform of available DIHs resources and connectivity possibilities between the DIHs

The landing page provides the information on the benefits of the DIATOMIC Platform, detailing sections which relates to the DIHs, member capacities, support service and application experiments.

Success stories from the Agrifood domain, Health and Manufacture domain can also be found, giving the user overall experience and information.

DIATOMIC Platform provides a distinctive browsing feature, by considering three user profiles: innovation actors, supporters and enablers.

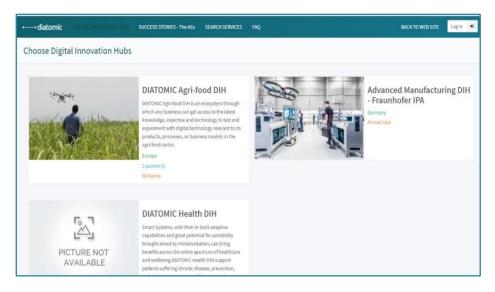




## **Digital Innovation Hubs**

In this section user can find three sector-specific DIHs with their respective knowledge, expertise and technology. They work as centres where investors can find connections with investors, facilitate access to financing and provide help in connecting users and suppliers.

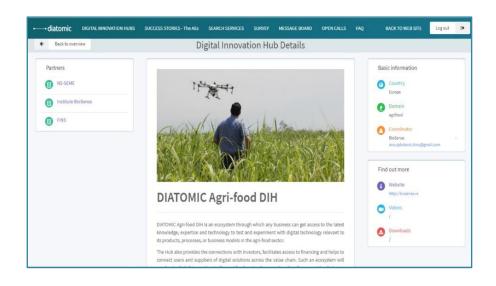
They are divided on DIATOMIC Health DIHs, DIATOMIC Agri-food DIHs and DIATOMIC Manufacture DIHs. Clicks on the specific link leads the user to desired section.



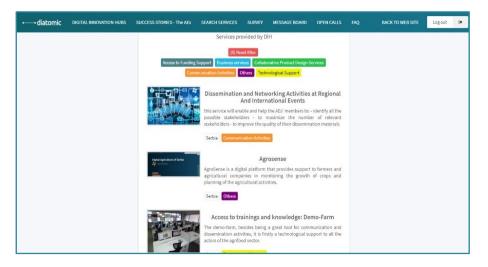
## DIATOMIC Agri-food as Example

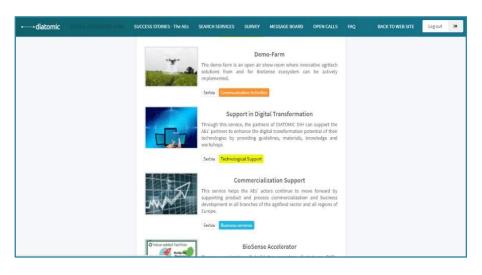
DIATOMIC Agri-food DIH is an ecosystem that provides the connections with investors, facilitates access to financing and helps to connect users and suppliers of digital solutions across the value chain. Such an ecosystem will accelerate digital innovation in the agri-food sector, because it makes the connection between technology, business, and the market.





Services provided by the DIATOMIC Agri-food DIH are access to funding support, business services, collaborative product design services, communication activities and technological support.





#### H2020–761809: DIATOMIC D2.4: Pan-European DIATOMIC One-Stop-Shop

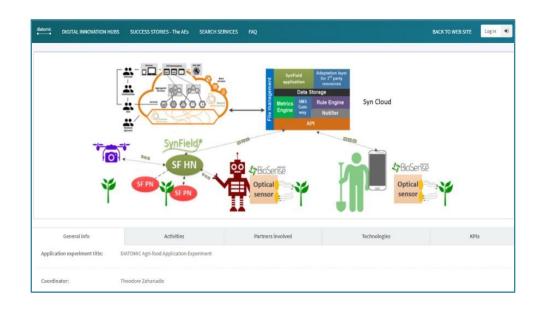


### **Success Stories – The AEs**

Information about the Pull Application Experiments are provided into three different pages, one per each AE. Each page shows the diagram of the AE, the general information, the activities foreseen, the partners involeved, technologies developed and improved, and finally the KPIs to measure the impact of the AE. All the information are easily accessible by the users.

### **Agri-food domain**

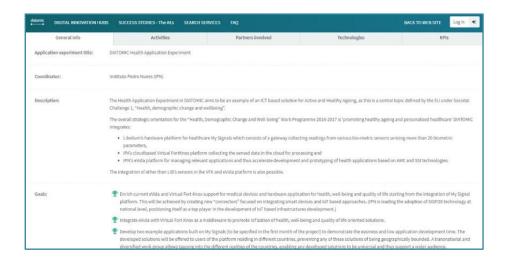
DIATOMIC integrates and extends in this experiment SynField, Plant-O-Meter and VFK systems to offer unprecedented flexibility to prospective developers and an enhanced experience to technology adopters and users



## **Health domain**

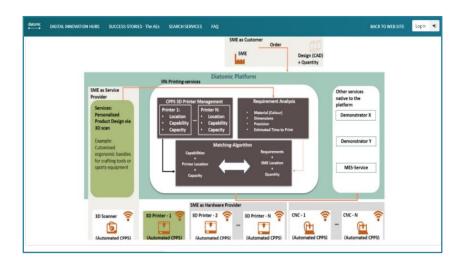
The Health Application Experiment in DIATOMIC aims to be an example of an ICT based solution for Active and Healthy Ageing, as this is a central topic defined by the EU under Societal Challenge 1, "Health, demographic change and wellbeing"

General Info	Activities	Partners involved	Technologies	KPIs



### Manufacture domain

This Application Experiment is focused on industrial automation, and more precisely 3D printing activities, targeting emerging industries such as creative industries and eco-industries. The following figure shows an example of a creative/eco industries cross-sector demonstrator for the manufacturing of personalized products.



General info	Activities	Partners involved	Technologies	KPis
pplication experiment title:	Manufacturing - domain A.E			
Coordinator:	Alumad Issa			
escription:	This Application Experiment is focused on industrial autor example of a creative/eco industries cross-sector demonst	mation, and more precisely 3D printing activities, targeting grator for the manufacturing of personalized products.	emerging industries such as creative industries and e	co-industries. The following figure shows an
		n the form of a cyber-physical production system (CPPS). It isstomer receiving personalized products at the end of the p		ements are fed to the platform, which searches
		This means that it consists of several cyber-physical systems e used by CPPS service to supply a fully automated printing		
oats:	🝸 smart sustainable manufacturing			
	Tend-users will be able to use the demonstrator for the	he realization of their business ideas and experience the ber	efits of process of automation.	
	🝷 Developers will be able to implement additional serv	vices of the DIATOMIC platform as Service Providers.		
	Tor society it would mean lower costs of manufactum	red products, lower costs of personalised products, benefits	from stronger SME-based manufacturing economy.	
hallenges:	🕴 Sustaining the competitiveness of manufacturing in I	Europe		
	🕴 Traditional approach of industrial automation is base	ed on using PLCs, which narrows the solution space for soft	ware and is considered inadequate to address the cu	ment challenges of complexity and flexibility.

#### **Search Services**

diatomic



In 'Search Services', the user can look for the desired service by using a search with keywords, the sector of interest, country and type of services required.

In this way the user can easily navigate through the DIHs' services which along the distinctive browsing features, gives an intuitive user experience. Users will then be able to click on the desired service and to get information about the service itself, as well about the partner that is providing the service. The platform works indeed as a sort of matchmaking tool between users and service providers.



### **Competence Centres**

In 'Competence Centres', the user can look for existing competence centres and additionally other interested centres can apply so as to join our Network of competence centres.