



European Factory
Platform

GoGREEN - Smart platform for quantification of CO₂ and H₂O footprint in industry

27-28.09.2022

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CEO Artificial Intelligence Talentum

It's a **young** company from where we tackle the most innovate projects in food, energy, sustainability and climate change. Our **experience focuses on machine learning, software development and intelligent IoT devices**. We are experts in the design and development of artificial intelligence algorithms for predictive models and digital twins.



Carbon emissions are the **primary driver of global climate change** and one of the world's most pressing challenges.



Water is an important resource in many production processes, and the reduction of the water footprint is as urgent as of the carbon one.

“World would **need ways of calculating emissions and judging the progress** of companies to the net zero by 2050” .King Charles III in the opening Conference of the Parties (COP26).



“Software platform (digital twins) for the **quantification of environmental impact (CO₂ and water footprint)** of industrial processes “

- **Project Objectives**

- Give factories a **reliable tool to calculate and manage their carbon and water footprint.**
- To **integrate the tool with EFPF** so, it helps factory companies with the Net Zero Strategy

From business perspective, our goals were:

- To expand our products' **portfolio** focused on climate change.
- To enter the European market through the **EFPF marketplace.**

Technical Achievements

SCOPE 1

Direct emissions from onsite generation and fleet fuel consumption

SCOPE 2

Indirect emissions from purchased energy

SCOPE 3

All other emissions associated with a company's activity (travel, supply chain management...)

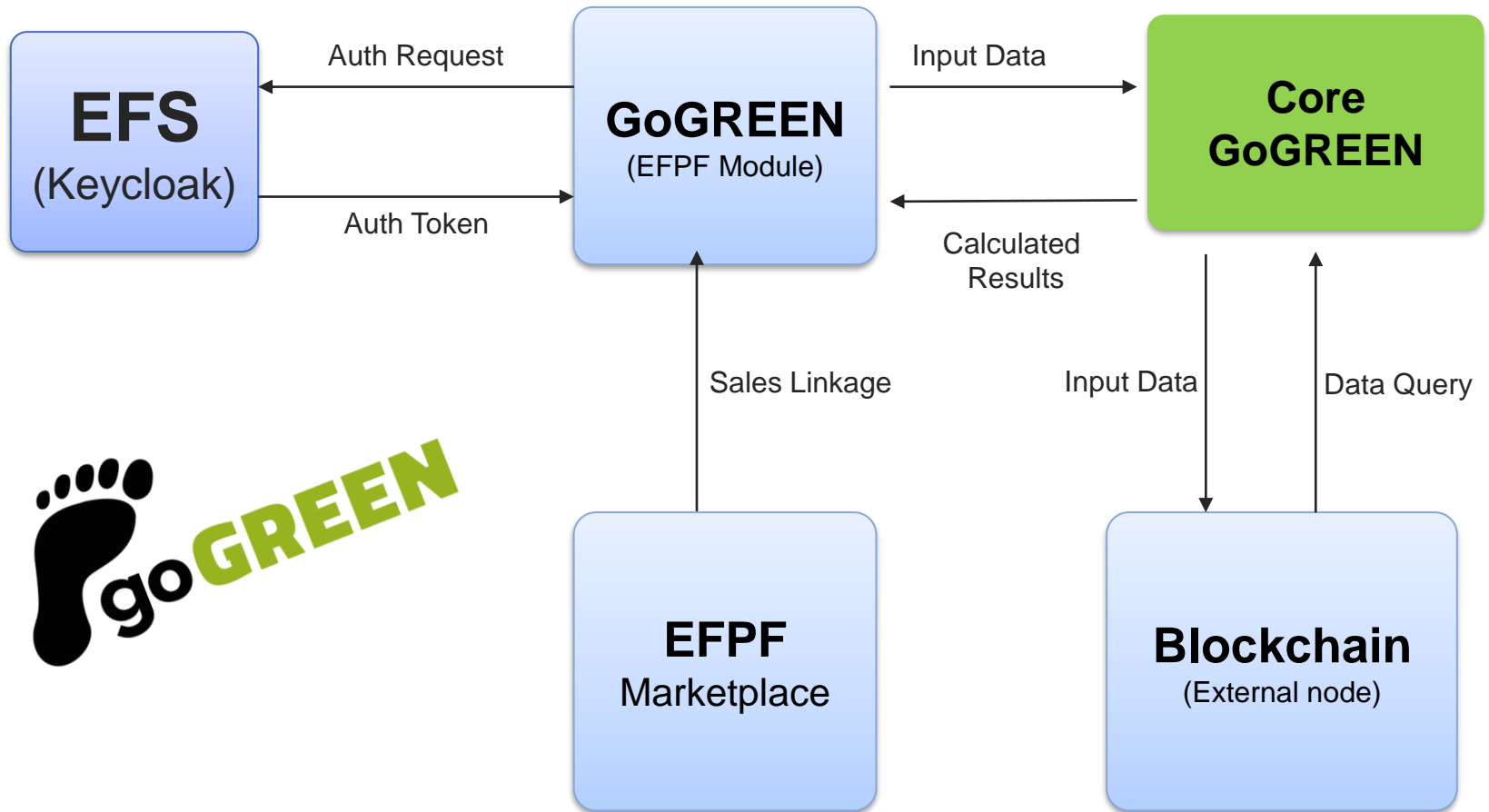


→ Integrated, centralized web-based to get the calculation of environmental footprints.

Use of standards: DEFRA/DECC, GHG Protocol, BEIS, EPA, Carbon Trust, Global Water Footprint Assessment Standard...

Technical Achievements

Architecture



- ✓ **KPI1:** Enter a **new market** → Solution integrated in the EFPF Marketplace
- ✓ **KPI2:** **Focus group** of 5-10 people → 5 people
- ✓ **KPI3:** Number of **live demonstrations** of the platform → 3 live demonstrations of GoGREEN
- ✓ **KPI4:** Number of **posts in social media**. At least, one publication on social media per month is expected during the developing phase → 6 posts
- ✓ **KPI5:** Number of **hosted workshops** → Participation in 1 workshop with the GoGREEN platform in a specific talk

Initial Workplan

Activities	M1	M2	M3	M4	M5	M6	M7	M8	M9
	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May
WP1: Requirements, Architecture and Use Cases/Pilot									
T1.1: Requirements gathering									
T1.2: Architecture design									
T1.3: Use Case/Pilot									
WP2: Prototype Development, Integration, Piloting									
T2.1: Development of the interoperability components									
T2.2: System Integration and Piloting									
WP3: Business Models and Impact									
T3.1: Market Analysis and Regulatory Compliance									
T3.2: Business Modelling and IPR Planning									
T3.3: Dissemination and Communication									
WP4: Project Management									
T4.1: Internal progress monitoring and meetings									
T4.2: Project reporting and financial management									
T4.3: Quality control and risk management									

Final Workplan

Activities	M1	M2	M3	M4	M5	M6	M7	M8	M9
	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May
WP1: Requirements, Architecture and Use Cases/Pilot									
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EFPF components integrated

- Keycloak
- Marketplace

EFPF components evaluated

- TSMatch Gateway (IoT connectivity devices)

EFPF components not integrated

- DAML (Blockchain)

Live demo

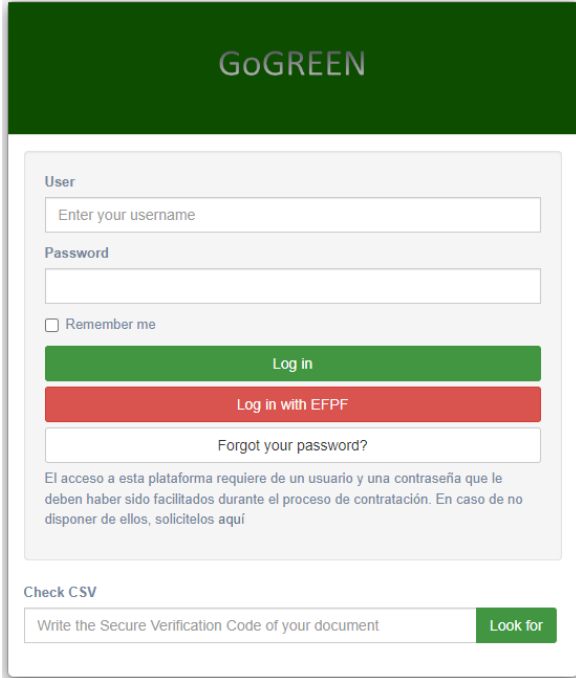
<https://gogreen.aitalentum.com>

User: test-user-2@aitalentum.com

Password: AITalentum

Recorded demo

Link to download ([Recorded Demo](#))



The screenshot shows the GoGREEN login page. It features a dark green header with the text "GoGREEN". Below the header is a light gray login form. The form contains the following elements:

- User:** A text input field with the placeholder "Enter your username".
- Password:** A text input field.
- Remember me
- Log in:** A green button.
- Log in with EFPF:** A red button.
- Forgot your password?:** A text input field.

Below the login form, there is a paragraph of text in Spanish: "El acceso a esta plataforma requiere de un usuario y una contraseña que le deben haber sido facilitados durante el proceso de contratación. En caso de no disponer de ellos, solicítelos aquí".

At the bottom of the form, there is a section for "Check CSV" with a text input field labeled "Write the Secure Verification Code of your document" and a green "Look for" button.

Live demonstrations of the platform:

27/12/2021: Presented to Eroski, *Spanish supermarket chain*

Ainara Llona and Cristina Rodríguez (ainara_llona@eroski.es,
cristina_rodriguez_domingo@eroski.es)

08/03/2022: Presented to Peymapiel, *Leather processing and finishing*

Sacri López (peymapiel@peymapiel.com)

16/05/2022: Presented to Global Omnium, *Catchment, treatment and distribution of drinking water in Spanish cities*

Juan Luis Pozo Calderón (jlpozo@globalomnium.com)

Dissemination results

Social media

- Twitter:

- <https://twitter.com/aitalentum/status/1486630099613106179>
- <https://twitter.com/aitalentum/status/1513475861214806016>
- <https://twitter.com/ioticsocial/status/1504006775888039936>
- <https://twitter.com/ioticsocial/status/1501475505056456707>
- <https://twitter.com/EFPFproject/status/1517424572425019392?s=20&t=Mo0bRdmrgEavtdl-mwQe3A>

- LinkedIn:

- <https://www.linkedin.com/feed/update/urn:li:activity:6937711189040771072>

- Blog post:

- <https://www.ioticsolutions.com/en/gogreen-has-been-integrated-into-the-european-platform-efpf/>



Nuestra plataforma software #GoGreen ha completado un proyecto de integración de 9 meses para formar parte de EFPF Project. La integración se ha realizado a través de nuestra marca de innovación AI Talentum.

EFPF es un ecosistema de Smart factory federado y una plataforma digital que vincula a diferentes partes interesadas procedentes del ámbito de la fabricación digital. La plataforma EFPF permite a los usuarios utilizar funcionalidades innovadoras, experimentar con enfoques disruptivos y desarrollar soluciones personalizadas para maximizar la conectividad, la interoperabilidad y la eficiencia en las cadenas de suministro. Las soluciones que ofrece se centran en #Industria4.0, #IIoT, #AI, #BigData y #DigitalManufacturing.

A través del ecosistema #EFPF, los usuarios podrán acceder a #GoGreen y conectarlo con sus sistemas industriales y dispositivos IIoT para automatizar el cálculo de la huella ambiental de sus procesos productivos. Además, en esta integración, se ha incorporado una nueva funcionalidad enfocada a la certificación del impacto ambiental, tecnología #Blockchain. Este registro inmutable permitirá a las empresas certificar su huella de carbono de manera fiable y sencilla.

La solución estará disponible en el EFPF Marketplace en los próximos meses.



Workshop

“ENCUENTRO TÉCNICO HUELLA DE CARBONO”, 16/03/2022, 09:00-11:30

- Number of participants: 96
- Target audience: CEOs, quality and product managers, engineers.
- Hyperlinks:
 - [FREMM website. Note of the event](#)
 - [Recorded session](#)

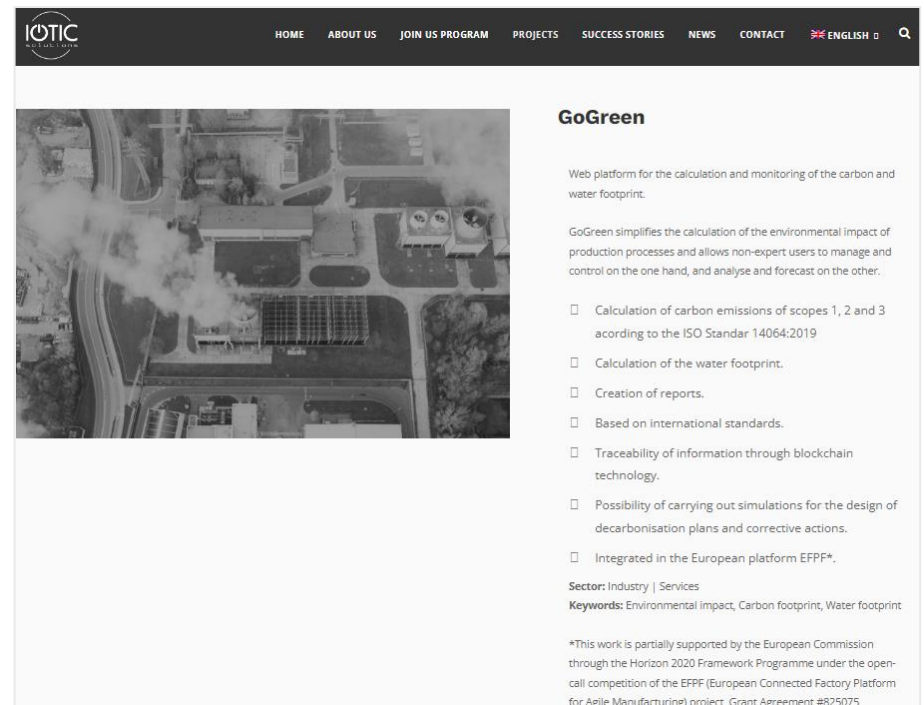
ORGANIZAN	ENCUENTRO TÉCNICO	
	HUELLA DE CARBONO 16 de marzo	
	9:00h.	Inauguración Saludo de bienvenida del Presidente de AMBIMETAL, <i>D. Pedro Rodríguez Martínez</i> Inauguración por el Ilmo. Sr. Director General del Medio Natural, <i>D. Fulgencio Perona Paños</i>
COLABORAN Región de Murcia 	9:15h.	Marco legal <i>D. Francisco Victoria Jumilla</i> Responsable del departamento de Fomento del Medio Ambiente y Cambio Climático en Comunidad Autónoma Región de Murcia
	9:35h.	Calculo, Reduzco, Compenso: Compromiso medioambiental de la empresa <i>Dña Mar Abenza Martínez</i> CEO GreenCo2
	10:00h.	Inteligencia artificial al servicio de la sostenibilidad Caso de éxito: iFishCan- EFPF <i>D. Antonio Vicente Contreras</i> Fundador y Director de IOTIC SOLUTIONS
	10:20h.	Casos de éxito en PYMES y Administraciones Públicas <i>D. Francisco David Gallego Martínez</i> Director General de REGENERA
	10:40h.	Certificación en Huella de carbono <i>Dña. Soledad Seisdedos Castilla</i> Directora territorial de AENOR en Murcia e islas Baleares Caso de éxito en gran empresa <i>Dña. Raquel María Martínez Martínez</i> Técnica de Medio Ambiente (Dársena de Cartagena), NAVANTIA
	11:00h	Ayudas para fomentar la sostenibilidad en las empresas <i>D. Rafael Martínez Fernández</i> Jefe del Área de Iniciativas Estratégicas del INFO
	11:20h	Preguntas y conclusiones
	FECHA:	16 de marzo de 2022
	INSCRIPCIÓN:	https://forms.gle/hzDSvna255UKSCcN9
	ENLACE :	https://us06web.zoom.us/j/84838938164

Website

EFPP project has been included in the company's website.

A landing page will be designed exclusively for the GOGreen platform. This page will explain the different sections of the platform and will include references to EFPP.

The information included on the website is available in [this link](#).



The screenshot shows a website header with the IOTIC logo and navigation links: HOME, ABOUT US, JOIN US PROGRAM, PROJECTS, SUCCESS STORIES, NEWS, CONTACT, and ENGLISH. The main content area features an aerial photograph of an industrial facility with smokestacks. To the right of the image, the heading "GoGreen" is followed by a description: "Web platform for the calculation and monitoring of the carbon and water footprint." Below this, a list of features is presented with square bullet points: "Calculation of carbon emissions of scopes 1, 2 and 3 according to the ISO Standard 14064:2019", "Calculation of the water footprint.", "Creation of reports.", "Based on international standards.", "Traceability of information through blockchain technology.", "Possibility of carrying out simulations for the design of decarbonisation plans and corrective actions.", and "Integrated in the European platform EFPP*." The text also includes "Sector: Industry | Services" and "Keywords: Environmental impact, Carbon footprint, Water footprint." A footnote at the bottom states: "*This work is partially supported by the European Commission through the Horizon 2020 Framework Programme under the open-call competition of the EFPP (European Connected Factory Platform for Agile Manufacturing) project. Grant Agreement #825075."

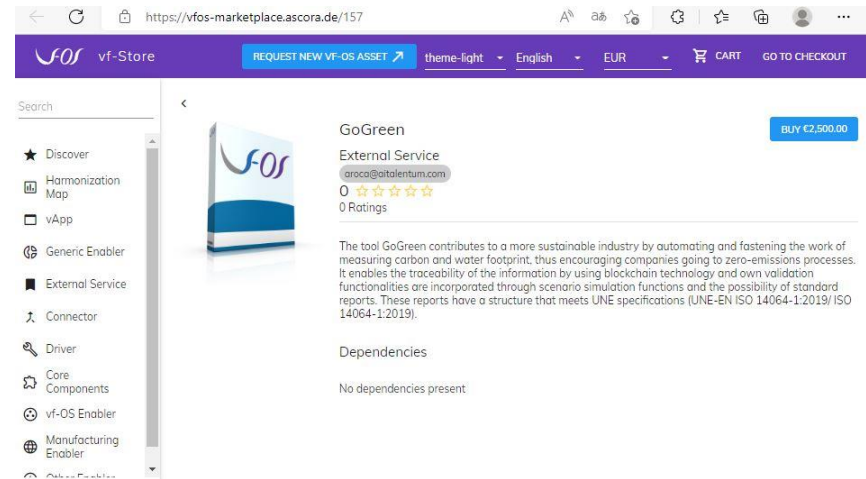
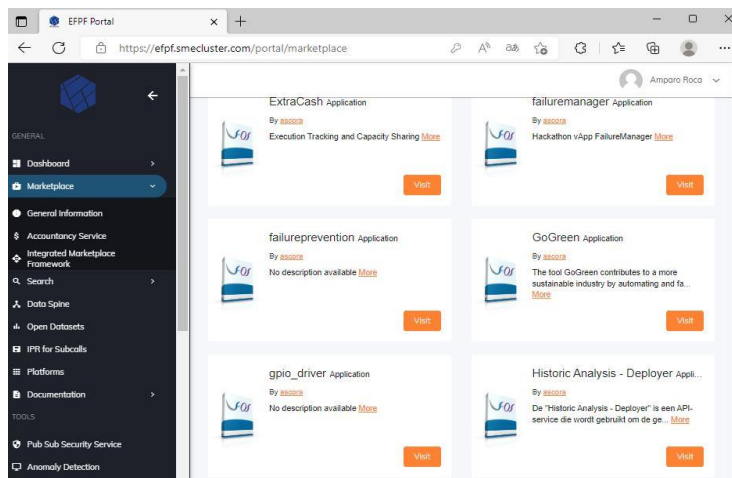
Conferences/Journals

- [I-ESA 2022 \(11th International Conference\)](#)
 - Paper: *How to integrate Environmental Impact Assessment in manufacturing collaborative platforms* ([Link to full document](#)).
- [IEEE ICE - IAMOT Conference 2022](#)
 - Paper: *Use case on Environmental Impact Assessment in Manufacturing: the Fish Canning Industry* ([Link to full document](#)).
- [European Journal of Sustainable Development](#)
 - Paper: *Use Case on Environmental Impact Assessment in the Fish Canning Industry* (Accepted, pending of publication)



Exploitation Plan

- **Business model:** Subscription or Software as a Service model.
 - **End users:**
 - Initial set-up fee (2.500,00€)
 - Recurring fee (450,00€)
 - **EFPP developers/integrators:**
 - During development/integration: Waived fee
 - Sub-project launched: Annual fixed fee: 1.500€



Positive remarks

- Part of a European ecosystem of solutions for the industry.
- Access to components and modules with powerful usage applications.
- Close collaboration with assigned advisors.

To improve

- The technical deployment of some of the components was not available from the beginning of the sub-projects,
- Sometimes, the documentation was not complete or was not enough clear
- Long time to give answer to some technical issues posted through Tikki.

Suggestions

A “Welcome program to the new partners involved in projects”, such as technical workshops or video tutorials for every component, would help to shorten the apprenticeship period.



European Factory
Platform

Special thanks to our advisors of AIDIMME
Thank all of you for your attention!