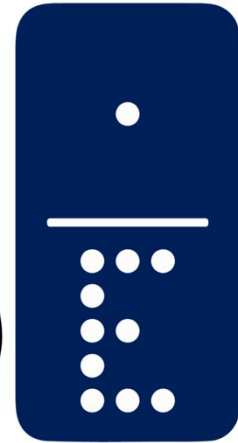




DOMINO



Project Brochure; D8.4

Grant Agreement number	101082230
Call identifier	HORIZON-CL4-2022-SPACE-01
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Project title	Earth Observation Multi-mission federation layer
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Document produced by	Michael Anranter, OIKOPLUS GmbH Thomas Stollenwerk, OIKOPLUS GmbH
Document verified by WP Leader	Thomas Stollenwerk, OIKOPLUS GmbH
Document authorised by Project Coordinator	Jean-Francois Vinuesa, AIRBUS Defence and Space SAS
Dissemination Level	PU*

* Please indicate the dissemination level using one of the following codes:

PU = Public,

PP = Restricted to other programme participants (including the Commission Services).

RE = Restricted to a group specified by the consortium (including the Commission Services).

CO = Confidential, only for members of the consortium (including the Commission Services).



EXECUTIVE SUMMARY

Domino-E has successfully completed the production of its first brochure, an essential communication tool for the project. Deliverable 8.4 “Project brochure” provides a detailed description of the brochure-making process, including the brochure's objectives, key activities, and expected outcomes. During the making, the team followed a rigorous process, beginning with a comprehensive analysis of the project's objectives and target audience. They developed a creative concept and visual design that effectively communicated the project's essence and key messages.

The first brochure is a vital component of the Domino-E project's communication strategy, and the team is confident that it will effectively promote the project's activities and outcomes. The brochure will be widely distributed across various channels, including the project website, social media, and at key events and conferences.

LIST OF PARTICIPANTS

Participant No	Participant organisation name	Country
1 (Coordinator)	Airbus Defence and Space SAS	FR
2	Capgemini Technology Services	FR
3	ITTI SP ZOO	PL
4	Oikoplus GmbH	AT
5	Office National d'Etudes et de Recherches Aéropitales	FR
6	Tilde SIA	LV
7	VVA Brussels	BE
8	Airbus Defence and Space GmbH	DE

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APPLICABLE DOCUMENTS

Ref. / Document Title	Ref	Date
DOMINO-E Description of Work	Version1	29/90/2022
DOMINO-E Grant Agreement	Ares(2022)7032529	10/11/2022
DOMINO-E Consortium Agreement	VF	14/11/2022

DOCUMENT CHANGE RECORD

Issue	Change Author	Date	Page / paragraph affected
v1	Michael Anranter	25/04/2023	Set up document structure
v1.1	Michael Anranter	27/04/2023	First version ready
v1.2	Thomas Stollenwerk	27/04/2023	Revision

TABLE OF CONTENTS

EXECUTIVE SUMMARY	2
LIST OF PARTICIPANTS	3
APPLICABLE DOCUMENTS	4
DOCUMENT CHANGE RECORD.....	4
TABLE OF CONTENTS.....	5
1 INTRODUCTION.....	7
2 STRATEGY.....	7
2.1 Objectives.....	7
2.2 Background & relation to the Work Programme	7
2.3 Budget.....	7
3 WORK DONE AND STATUS.....	8
4 METHODOLOGY: TEXT AND DESIGN	8
5 PROJECT BROCHURE.....	9
6 CONCLUSION.....	10

Acronyms & Definitions	
<i>CA</i>	Consortium Agreement
<i>CB</i>	Coverage Service
<i>D</i>	Deliverable
<i>DoW</i>	Description of Work
<i>EC</i>	European Commission
<i>EU</i>	European Union
<i>EO</i>	Earth Observation
<i>M</i>	Month
<i>PU</i>	Public
<i>WP</i>	Work Package

1 INTRODUCTION

Deliverable 8.4 Project Brochure is the fourth out of five deliverables related to WP8 Dissemination and Stakeholder Engagement. This public deliverable, classified under DEC - website, patent filings, videos, etc., is expected to play a crucial role in attracting stakeholders, particularly at conferences, fairs, and exhibitions. The purpose of this deliverable is to introduce the first Domino-E brochure, providing details on its contents and design.

2 STRATEGY

2.1 Objectives

According to the WP8 description in the DoW, the main purpose of the project brochure is to disseminate the approaches and results of Domino-E and to ensure the highest possible visibility of the Domino-E project. Amongst other, they shall inform about the technical standards and interfaces the modular segment uses.

2.2 Background & relation to the Work Programme

The Domino-E project includes two brochures, each forming an independent deliverable (D8.4 "Project brochure" in Month 6, and D8.6 "Project brochure – V.2" in Month 18) with the latter being described in slightly greater detail in the GA. Although the second brochure mainly focuses on explaining technical interfaces, both brochures have been developed in the context of D8.1 "Communication Strategy and Action Plan (CASP)." Accordingly they shall include:

- critical project information
- the project and consortium description
- vision and values
- services and offers
- links to supporting documents and references
- and contact information

The first brochure published at an early stage of the project is intended to showcase potential use cases. The content for this brochure derives from draft deliverables D2.1 "User Needs & Export Program backgrounds" and D2.2 "Use Case Definition."

Finally, both brochures comply with the project's Visual Identity guidelines, and they will play a crucial role in attracting stakeholders at conferences, fairs, and exhibitions. The project brochure will be available in the "Media Center" of the project website.

2.3 Budget

Oikoplus has reserves a budget for up to €2000,00 for printing, cutting and shipping the both brochures to project partners. Maximum half of that sum is to be committed to D8.4 "Project brochure."

3 WORK DONE AND STATUS

Work on the brochure already started in March 2023. However, the fact that the content for the brochure was not made available to the communications team until mid-April meant that, at the time of the deliverable submission, only a digital version of the brochure was available for the time being, not a printed version.

After submission of the deliverable, a final approval of the brochure by the project coordinator will take place.

Following the final acceptance, the project brochure will be made available for download, comparative offers will be obtained from printing companies, and the final order will be placed. All partners should be able to distribute the brochure by the end of May 2023.

4 METHODOLOGY: TEXT AND DESIGN

To create the brochure, we underwent multiple iterations. Our process started with a thorough examination of the project's objectives and target audience, which aided us in developing a creative concept and visual design that effectively conveyed the project's core essence and key messages. Our aim was to engage professional stakeholders with meaningful content while using attractive design and appealing phrasing to ensure that the material remained memorable.

In addition to our comprehensive analysis, we conducted a brief desktop research and compiled a reading list, which informed the content of the Domino-E brochure: [RL #027: Creating Brochures and Flyers – a Useful Addition to the Communication Toolkit? - Oikoplus](#)

We have created a preliminary version of the brochure, which has been evaluated by the project coordinator. The text was extracted from D2.1 "User Needs & Export Program Backgrounds" and D2.2 "Use Cases," as well as from other project descriptions found on the project website and in the Domino-E Executive Summary. To finalize the text, we underwent multiple iterations and revisions within the internal team before seeking approval from the coordinator.

Regarding the visual design, our internal designer developed various versions that adhered to the standard visibility regulations of the European Commission and the visibility guidelines of Domino-E. The brochure's visual elements were consistent with the project's overall branding and messaging, with the aim of leaving a lasting impression on the reader's mind. We ultimately decided on a design that featured missing circles to convey the message that only a small portion of the Earth is visible from space (see below the successful design draft).

All versions of the brochure, including the final one, were created using InDesign, which is available on the AdobeSuite.



DOMINO-E VISION

Domino E aims at solving the key challenge of availability and reactivity of earth observations from space, by enabling multi-mission accessibility on a scalable and automated way.

DOMINO-E POTENTIALS

- Permanent connection of EO industrial players. Supporting growth and internationalization of European EO industry
- Increasing competitiveness of European EO industry
- Providing modular structure allowing scaling up without disrupting existing architecture
- Development of knowledgebase and skills= better decision making
- Providing right information and the right time-prompt access to multi-mission services
- More efficient fleet management

DOMINO-E CHALLENGES

- Address widening spectrum of user needs and offer the possibility of integrating new services during the program operations
- Automate planning and scheduling observation tasks on multi-mission settings
- Ease system evolution when replenishing with new and different satellites
- Account for all subsystems, e.g. command and control, antennas, radar data production and emerging technologies
- Automate the translate end-level user requirement into acquisition request
- Ensure the successful exploitation of a federation layer and the commercialisation of its services



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This project has received funding from the European Union's Horizon Europe Programme for Research and Innovation under Grant Agreement no 101082230.





Image 1: Preliminary design draft; © OIKOPLUS, 2023



5 FINAL PROJECT BROCHURE

Democratizing Earth Observation: The Domino-E Vision

Domino-E makes Earth observation accessible to SMEs in an affordable way with a focus on improving the user experience of EO systems. Domino-E is implementing cutting-edge technology that allows users to address a variety of acquisition assets by having access to multi-mission observation data. Our innovative multi-mission and multi-layer federation system is designed to enhance the customer's experience through cognitive assistants, scheduling, and optimization algorithms. This approach supports the shift in the space industry and enables the space industry to take advantage of the emerging data-driven space market. Domino-E contributes to the development of Earth Observation technologies, fostering European competitiveness, and supporting SMEs in the development of multi-mission services.

Join us in embracing the future of Earth Observation!

A Modular System of Dominoes

In Domino-E, every domino represents a software component providing a valuable service connected to Earth observation. Every tile is independent and accountable for its performance. Respecting the interfaces such as OGS API or Open API 3.0 and standard formats such as JSON every domino is interchangeable by another implementation. Once connected to the ground segment, they are dedicated to one or several missions. Dominoes can be deployed on customer premise, as a service provided, or as a delivered component.

e-Mail
contact@domino-e.eu

Website
<https://domino-e.eu/>

Twitter
https://twitter.com/DominoE_Europe

LinkedIn
<https://www.linkedin.com/company/domino-e/>

This project has received funding from the European Union's Horizon Europe Programme for Research and Innovation under Grant Agreement no 101082230.

Your Access to Multi-Mission Earth Observation

Earth Observation at a Glance

The Earth observation market is tending towards increased operational needs in terms of responsiveness, revisiting, and multi-mission complementarity. Use cases such as the long-term observation of the natural environment, as well as border and maritime surveillance or natural disaster prevention require system capacities allowing the rapid programming of satellites capable of providing images in the shortest possible time.

Users look for rapidly operational, competitive, and scalable solutions supporting their business and development strategies. To address these needs, each new generation of Earth observation system comes with more capable instruments and satellites. They provide higher resolution, memory, acquisition capacity, and agility to rapidly acquire images at different locations.

This is where the mission of Domino-E starts.

Mission Management: The Key To Earth Observation

Earth observation missions often have to cover large areas. Given the movement of satellites along spheres, coverage requests require multiple acquisitions that ensure customers to receive a complete picture in consistent quality. Domino-E facilitates these multiple acquisitions in one mission request to achieve this.

- The user specifies the needs along predefined parameters filtering available Earth observation systems.
- Domino-E develops a specified Coverage System that helps to specify the distribution share among systems and/or add priorities.
- This way, users will be able to modify their request parameters and system selection and iterate adaptations until satisfied.
- A feasibility analyses assesses the completion of the programming request and may be activated for checking on the progress.

Domino-E: Inside the System

- Once users have sent their request, the work in the background begins. Multiple satellite systems need to be coordinated, and what if a satellite passes in front of the camera just when it's supposed to take a picture? Domino-E can take the scheduling and contacting of the various systems away from the users but allowing a true federation service.
- Based on the users needs and configurations, static and satellite configurations, and requirements in terms of routine contacts it suggests an optimized Satellite Communication and Resource Management that varies in the level of aggressiveness and safety.
- Different optimisation algorithms within the Satellite Communication and Resource Management Service are trained to minimize the risk of jamming for known satellites and frequencies, based on theoretical orbits and provided jamming probability from the ground segment.

Virtual Assistant Service: No Need to Speak Satellite

- Most users don't speak satellite. That's why Domino-E develops an interface that allows users to define their acquisition requests in natural language.
- The virtual assistant will guide them to provide the necessary zones or targets but also their ideas of the results they are planning to generate. The virtual assistant lowers the accessibility hurdles and improves the understanding of satellite-based imaging.
- The virtual assistant searches for existing products in the system that match the geographic and other search criteria provided when preparing a request.
- The virtual assistant will guide the user to formulate production requests to receive complementary acquisitions.



6 CONCLUSION

In conclusion, D8.4 Project Brochure is a crucial public-facing deliverable for the Domino-E project, which aims to disseminate the approaches and results of the project and ensure the highest possible visibility. The brochure was developed through a thorough examination of the project's objectives and target audience, which led to the creation of a creative concept and visual design that effectively conveyed the project's core essence and key messages. The text was extracted from various project descriptions and underwent multiple iterations and revisions, while the visual elements were consistent with the project's overall branding and messaging. The project brochure will be made available for download once it is approved by the project coordinator, and it will be distributed to all project partners by the end of May 2023.