→ PROPERTY TECHNOLOGY, "PROPTECH", POWERED BY SPACE



space solutions

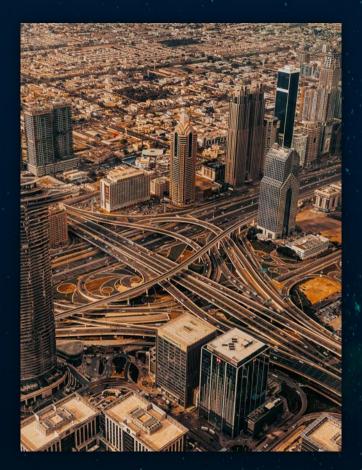
Funding Opportunities for Space-Enabled PropTech Solutions.

Supported by



European **PROPTECH**

Proptech house





Before we start...

- Please keep your microphones muted at all times and switch off the webcam function
- You can use the conversation function anytime to submit your questions. They will be addressed during the Q&A at the end of the webinar

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→ Webinar Agenda

1. Introduction

- ESA and Space Solutions
- What ESA offers

2. Introduction to Kick-Start Activity

• Study Tasks

3. Guest speaker

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 Dirk Paelinck, Chairman and Founder of the European PropTech Association

4. Space for 'PropTech'

- Background
- Key topics
- Enablers from space

5. How to apply to Kick-Start Activity

- How to apply
- Authorization of funding
- The proposal template

6. Q&A

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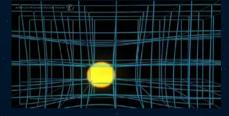
European Space Agency

*

ESA Pillars



Science and Exploration







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Enabling and Support











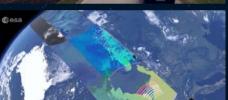
Safety and







+



#Galileo

Applications







→ ESA SPACE SOLUTIONS

The largest space innovation network in the world

- The go-to place for great business involving space to improve everyday life.
- Supporting European companies to develop businesses using space technology and data.
- Offering funding, business and technical support to help to generate successful business and create jobs.

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→ ESA SPACE SOLUTIONS OFFERS





Zero-equity funding (from €50k to €2M+ per activity)

A personalised ESA consultant

Technical support and commercial guidance

Tailored project management support

Access to our international network of ESA and partners

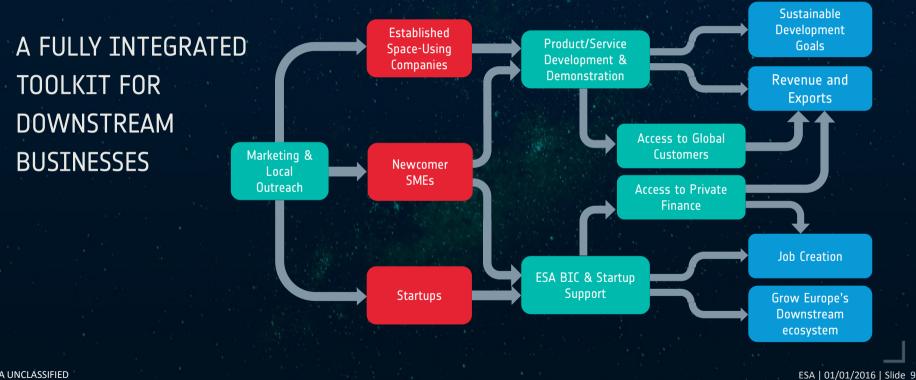
Access to our network of investors

Credibility of the ESA brand









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*





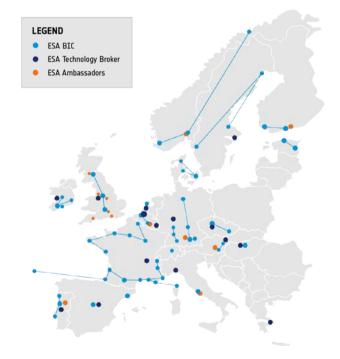
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→ ESA NEAR ME NETWORK

ESA is Near You

- Wherever you are in Europe, we are near you.
- ESA is present in all Member States.
- Access to the largest space innovation network in the world.



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→ ESA BUSINESS APPLICATIONS

Zero-equity co-funding up to €2M

- Demo projects: Mature value proposition & business plan and demo your service with customers.
 - Up to 50% co-funding*
- Feasibility studies: Explore ideas, create a business plan & connect with potential users.
 - Up to 50% co-funding*
 - 100% funding under Competitive Tender
- Kick-Starts: Thematic activities.
 - Up to 75% co-funding

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* Up to 80% for SMEs (pending specific initiative and approval of





Kick-Start Program

*

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Kick-Start: Background

- In 2017, ESA Business Applications launched a Kick-Start (feasibility study) framework for providing up to 60k€ zero-equity financing open to any industry in participating Member States.
- Kick Start activities are designed to be particularly interesting for SMEs (including fast-growing) and start-ups looking for opportunities to develop their ideas for new business applications.



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→ Kick-Start: Background

6 months duration -Overall cost €80K

€60K ESA funding (75% ESA co-funding)

"Kick-Start Activities" are ESA's funding scheme enabling companies to undertake short Feasibility Studies that explore new service and application concepts making use of space capabilities.

Limited initial investment by companies, particularly attractive for SMEs and start-ups, granting them an easy entry into ESA Business Applications.

Competitive tendering procedure.

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- Rapid evaluation process, to allow companies to keep the pace in the market.
- If successful, possible follow-up support via Demonstration Projects



Kick-Start: Goals

Kick-Starts looks at 3 main elements:

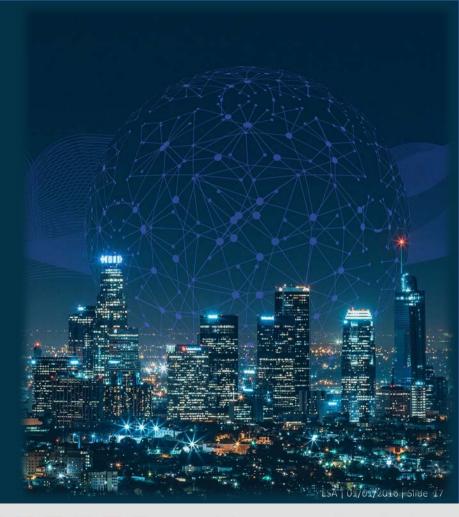
- 1. Engagement with potential end users and customers to understand their needs and translate these into service requirements.
- 2. Evaluation of the technical feasibility of the service, and definition of the service and system architecture.
- 3. Evaluation of the economic viability of the service and development of a business plan.



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PropTech



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→ Guest speaker

Dirk Paelinck

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Serial entrepreneur in the real estate domain, and Chairman and Founder of the European PropTech Association.





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1+1

THE EUROPEAN PROPTECH ASSOCIATION



space solutions



→ YOUR BUSINESS

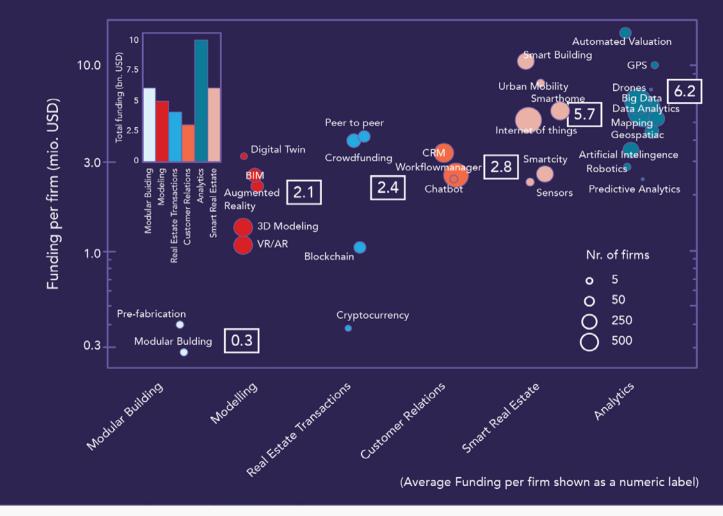
Apply at business.esa.int

Dirk Paelinck, Chairman

Webinar European Space Agency December 16th, 2020

www.proptechhouse.eu

dirk@proptechhouse.eu



WHAT IS PROPTECH?

PropTech includes all innovations (technologies or business models) in the real estate value chain (construction and property industries)



It includes all the asset classes (residential, retail, office, logistics, hospitality, healthcare...)

5 SEGMENTS COVERING THE VALUE CHAIN OF RE

FINANCE & INVEST



MARKET & TRANSACT MANAGE & OPERATE LIVE & WORK

This category covers the beginning of any real estate project, the selection of the site, the investment and financing phase. This category covers the design of the buildings, the execution of the construction works, up to the handover of the buildings.

This category covers the commercialization of the building.

This category covers the management of the buildings, as operator, property manager, facility manager, asset manager.

This category covers any new technology, or service (access controls, air quality monitoring, community management solutions) impacting the end-user experience.

 PriceHubble
 Image: Second and the s

WHY PROPTECH A PRIORITY?

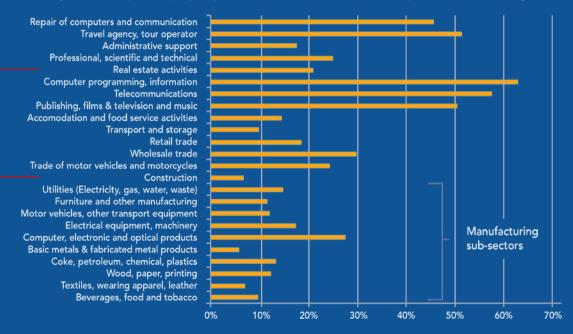
- Macro economic trends put pressure on returns and efficiency
- Data & technology drive new needs of end-users
- Real Estate is still a largely undigitized industry compared to other industries
- Technology giants are entering the market
 EU GREEN DEAL & EU NEXT GENERATION: the 2 top priorities for EC =
 GREEN + DIGITAL

PropTech at the crossroads of green and digital



REALITY CHECK: DIGITAL INTENSITY INDEX

Enterpresis with high or very high digital intensity index by economic activity, EU, 2018 (% of enterprises)



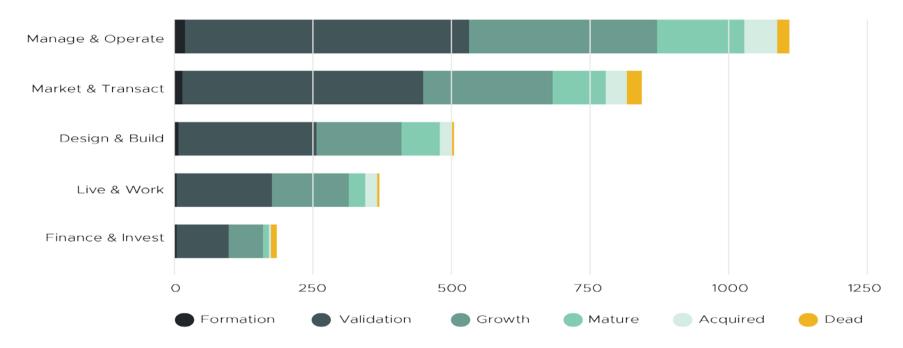
EUROPE IS DRIVING INNOVATION

GREEN DEAL AND EU NEXT GENERATION: BAUHAUS EUROPE

Driver	CHALLENGES	ІМРАСТ
EU GREEN DEAL	 Real Estate = 38% emissions, 44% of energy consumption Renovation of stock: only between 0,4% & 1,2% Decarbonisation goals Digitisation and transformation needs Sense of urgency Reduce exploitation of mineral resources 	 Lower emissions Lower energy consumption Increase buidings stock to 3% reduce energy poverty Support SMEs and local economies Meeting the needs of the Circular Economy = ACCELARATING THE NEED FOR PROPTECH SOLUTIONS
EU NEXT GENERATION	 build a more sustainable, resilient and fairer Europe for the next generation €1.85trillion to boost the economy in the Eurozone Prioritise green investments Sustainability Urbanization / Concentration Build cost 	 PropTech creates high profile jobs Meeting the existing 2030 climate and energy targets can add 1% of GDP and create almost 1 million new green jobs. Renovation Wave will focus on creating jobs in construction, renovation and other labour-intensive industries Renewed Sustainable Finance Strategy 2021



Maturity By Sub Category 2020



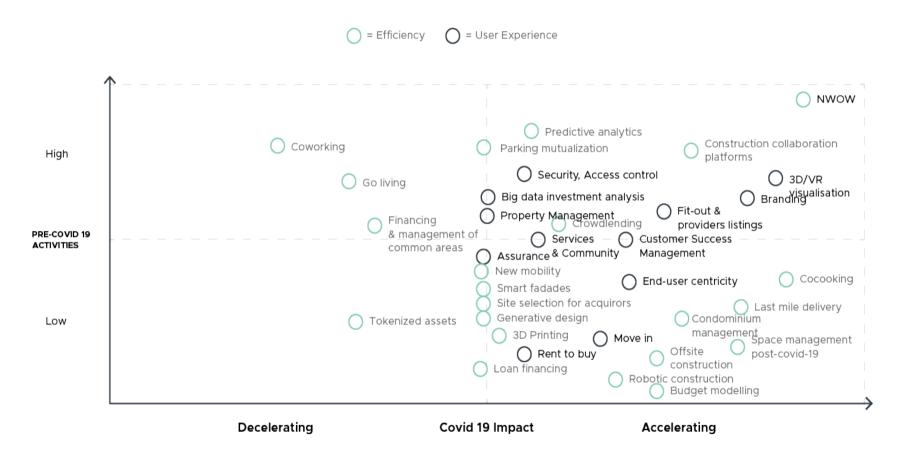
Year by year, this ecosystem is gradually getting more mature.

European PropTech Association – E-Book 2021

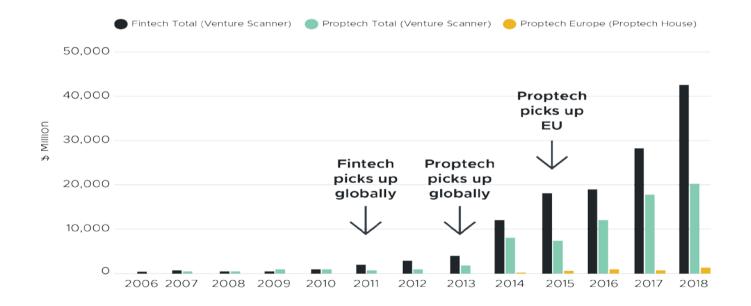


Given the pandemic, 2020 is obviously a very specific year, with 61 bankruptcies compared to 5 in 2019.

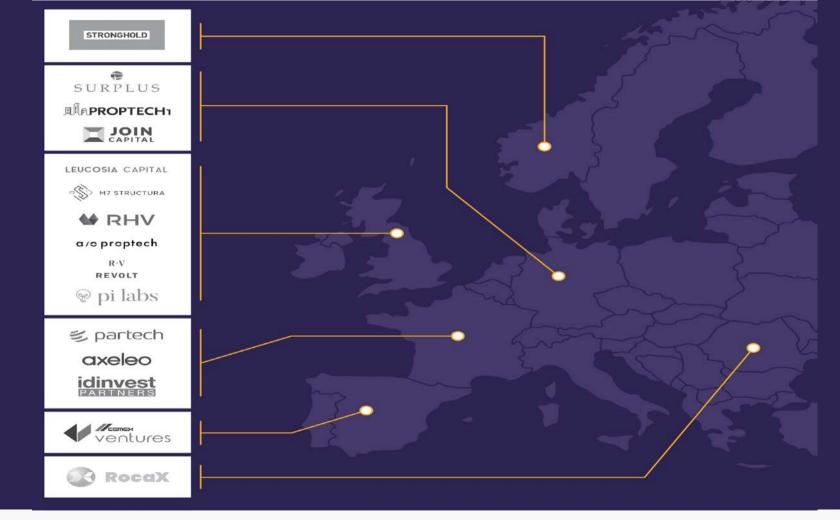
Consolidation is happening gradually but accelerated, with the number of M&As increasing significantly.



The PropTech space is increasingly becoming a global category of investment. Growing number of vertical proptech funds (we currently track 19 of them, compared to 12 in 2019) + generalist VC's active in PropTech + Construction and Real Estate Corporates investing in PropTech



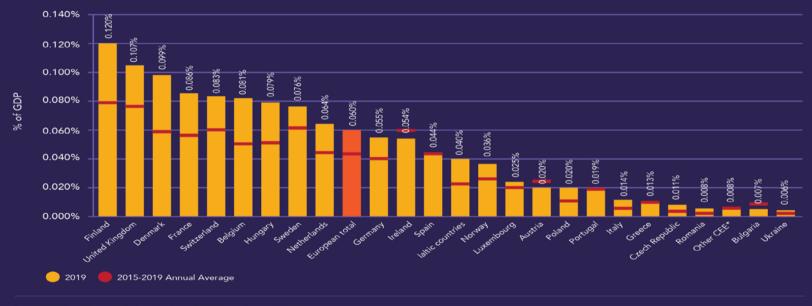
European PropTech Association – E-Book 2021



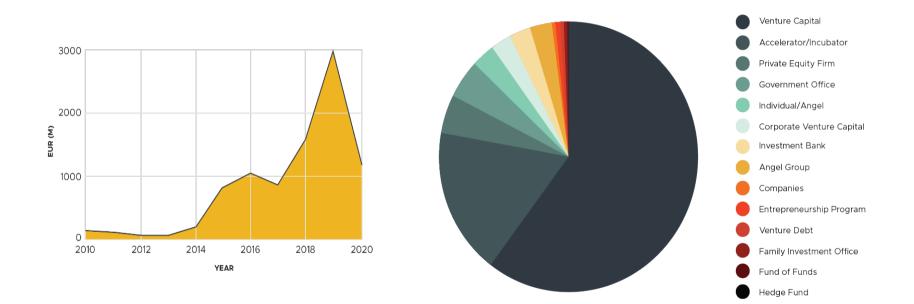
VC INVESTMENTS AS % OF GDP: INCREASE IN MOST EU COUNTRIES

VENTURE CAPITAL - INVESTMENTS AS % OF GDP

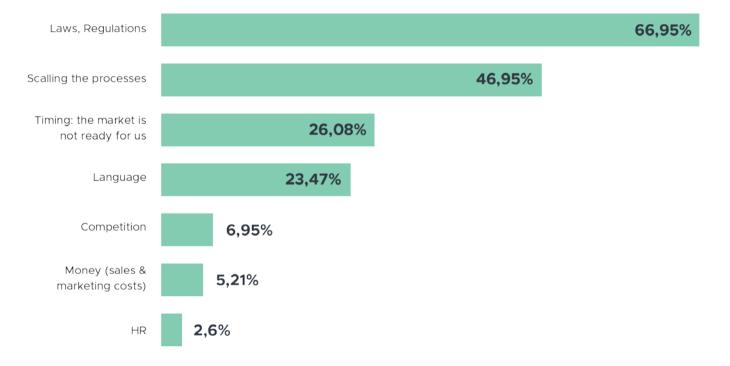
2019 - Market statistics - Location of the portfolio company



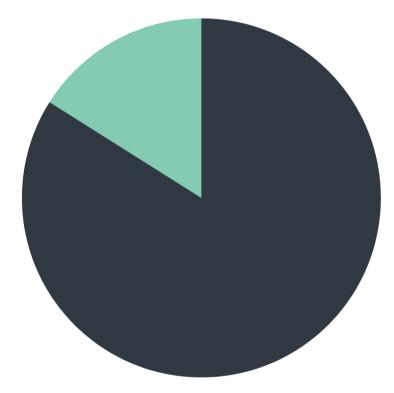
Source: IMF, World Economic Outlook Database (GDPD)/Invest Europe/EDC Notes: *Other CEE consists of Bosnia-Herzegovina, Croatia, Macedonia, Moldova, Montenegro, Serbia, Slovakia, Slovenia If we analyze the European Venture Capitalism, we see that 2019 was a record year, with €3,05B invested, and 2020 - due to the economical conjecture – for far decreased to €1,2B (updated Q3 2020)



What are you struggling with in your international expansion?



European PropTech Association – E-Book 2021



Have you applied to any subsidies, or financing program of EU institutions?



Yes - 15,7%



European **PROPTECH** Association

Proptech house



-) Startup Europe Awards 2020
- O Timeline
- Mission C
-) Categories
-) Partners
- Why Apply
-) News

The European PropTech Association – PropTech House

Our mission is to support a sustainable European PropTech market and to create a positive impact on the European living environment and beyond. Our objectives: to scale up cross-border collaborations, to standardise the European PropTech markets, to create a legal framework adapted to PropTech, to foster innovation in Real Estate and to facilitate access to funding.

PROPTECH STARTUP & SCALE-UP EUROPE AWARDS 2020

DOWNLOAD OUR EBOOK

DOWNLOAD OUR EBOOK

24 NATIONAL NETWORKS: LOCAL PROPTECH ECOSYSTEMS Total of 2700 EU based startups/scale-ups



EUROPEAN PROPTECH ASSOCIATI

- Non Profit alliance of national/area PropTech associations
- Mission: Support a sustainable European PropTech market which creates a positive impact for all country/area PropTech hubs
- First Goals:
 - Standardise the fragmented EU
 PropTech market
 - Create a legal framework adapted to PropTech in Europe
 - Unique partnerships bringing a competitive advantage to the best EU proptechs

Reference Point of Contact for PropTech the European Commission & Institutions
SPOC in the EC departments (DG Scould Research & Innovation, DG Climate Action ECFIN, DG Environment, EASME, DG How

Dirk Paelinck, Chairman European PropTech Association – PropTech House



Dirk Paelinck, Chairman European PropTech Association – PropTech House

FINNOVA, WORKERO AND EU PROPTECH HOUSE ORGANIZING PROMOTED BY THE EUROPEAN COMMISSION:

PROPTECH STARTUP EUROPE AWARDS



European PropTech Association – PropTech House

JURY MEMBERS: ONLY CEO / C-LEVEL OFFICERS



European PropTech Association – PropTech House

30 PEOPLE INHOUSE TEAM FACILITATING ACCESS TO EU SUBSIDIES & TO FUNDING

More than 200 different programs



- EU Commission SME instrument most challenging and comprehensive program for startups
- EU PropTech House: Free first advice regarding EU Funding
- Cooperation with VCs has started

• Current status: helping 42 proptech companies to apply for funding at EC level

PropTech can have much more companies into the Horizon Europe SME Instrument

RELEVATION 2021

Overview

DIGITAL SUMMIT TOP LEAGUE 23 & 24 OF JUNE INSIGHTS Offering the best-in-class Get insights on the fresh The first digital summit A perfect date, following the exits, new fund strategies, content programme, and top gathering PropTech startups COVID-19 breakout, and league networking attend fireside chat with raising funds, and investors before the recoverv successful founders experience SPECIFIC TRACKS **PITCH TO LP's** 300 DEALS REPORTS RELEVATION is organizing Engage with the best 300 Specific tracks on M&A. a pitch session where GP's Have access to data and startups of the globe, Exits, Valuation trends. can pitch LP's, in a reports to be the best currently fundraising, that CVC, Expansion, Deal confidential, closed door and informed possible, and get passed our selection on application only format the most out of your summit Rooms process

RELEVATION

THE DIGITAL FUNDRAISING SUMMIT FOR PROPTECH STARTUPS

23 & 24.06.2021 - From your place to the whole world

WHAT IS NEXT in Q1/Q2/2021?

BAUHAUS EUROPE Miss Von der Leyen Partnership World Economic Forum (WEP) Partnership World Business Angels Forum (WBAF) Increase the existing Funding activities (Subsidies, VCs, . Installation of the Committees with European Commission Partnership European Institute of Technology • EU PROPTECH SUMMIT 2021 WITH EU COMMISSION

Dirk Paelinck, Chairman European PropTech Association – PropTech House

PROPTECH HOUSE



→ YOUR BUSINESS POWERED BY SPACE

Apply at business.esa.int

Webmar European Space Agen 20 January 202



Space for PropTech Kick-Start

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→ Kick-Start "PropTech"

Background

To explore new business models and space-based solutions for commercially viable services addressing broad PropTech applications:

- 1. Call Open 14th September 30th October 2020.
 - Shared Economy
 - Market Intelligence, Investment Management
 - Sales and Marketing
- 2. Call Open 3rd November 18th January 2021
 - Urban Planning
 - Insurance and Law
- 3. Call Open 19th January 26th March 2021
 - Smart Buildings
 - "ConTech" (Construction Technology)



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→ Sub-Theme 3

Smart Buildings

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Security, eco-friendship and building management. Increased digitalisation comes with increased cybersecurity risk exposure. Environmental considerations are proving to be important in terms of both contribution to global emissions, but also exposure to pollution of building occupants. Manual building management processes are expected to be replaced by automated digital solutions and predictive maintenance based solutions.

"ConTech" (Construction Technology)

ConTech ("Construction Technology") can be described as the technology used to innovate the way in which companies conceptualise, design, engineer and build structures, as well as manufacture and install their components.





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The Power of Space



Global Navigation Satellite Systems (GNSS) provide precise positioning and guidance for drones, construction machinery and relevant robotics. Structural integrity monitoring, usage of location data relating to presence and distribution of people.



EO satellite imagery to identify environmental hazards, detect changes in urban development and infrastructure, understand the history of real estate assets, monitor environmental sustainability metrics, support urban planning modelling, risk modelling, property valuation and legal due diligence.



Satcom offer reliable connectivity in places with insufficient terrestrial cellular coverage, especially in the case of remote or poorly connected environments. Act as a back-up to terrestrial communications infrastructure in at-risk areas.

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ESA | May 2020 | Slide 53

Prop-Tech and Space Examples

Orbital Witness - Revolutionising Real Estate Legal Due Diligence with Satellite Imagery

Service

Provision of archives of high-resolution satellite imagery, augmented by property datasets, to real estate lawyers (and other property professionals) to enable them to "look back in time" to understand legal issues affecting the use and development of property.

Role of Space

High-resolution (sub-1m) optical satellite imagery is used to allow real estate professionals to spot important property detail such as, e.g. a change of use at a site, a structural change to a property, or a boundary movement.

ESA Support

Demonstration project supporting the team in testing an MVP with endusers on-board.

Further Info

Raised £3.3M funding July 2020

https://business.esa.int/projects/orbital-witnes https://www.orbitalwitness.com/

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The Convex Lens - SafeBlock

Service

Smart building IoT (Internet of Things) sensors equipped with GNSS (Global Navigation Satellite System) and indoor localisation capabilities to authenticate the test results of building safety systems (smoke alarms, emergency lighting).

Role of Space

GNSS combined with indoor localisation technology geolocates the site of the safety sensor test (to ensure that it took place in the expected place and expected time)

ESA Support

KickStart activity allowing to investigate the technical and economic viability of the service.

Further Info

<u> https://business.esa.int/projects/safeblock</u>

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Prop-Tech and Space Examples

Dida - 4D Urban Insights

Study

Investigating the feasibility of detecting building height and changes to horizontal spread in rapidly-growing West African cities to provide insights into the dynamics of urban growth to urban planners, retail stakeholders and reinsurance companies.

Role of Space

Machine learning algorithms applied to satellite earth observation imagery to analyse city growth by detecting changes in horizontal spread and inferring vertical elevation of buildings.

ESA Support

KickStart activity supporting the team in investigating the technical and economic feasibility of the service.

Further Info

https://business.esa.int/projects/4d-urban-insights ESA UNCLASSIFIED



Further **ESA** Examples:

space solutions

Urged – subsidence and flood risk tool for urban infrastructure managers - https://business.esa.int/projects/urged, https://www.rezatec.com/ Aircheckr – SatEO-derived Air quality data for real estate stakeholders https://business.esa.int/projects/aircheckr, https://www.aircheckr.com/ Buildspot – construction site monitoring using SatEO https://business.esa.int/projects/buildspot,

https://www.pixstart.io/buildspot/

Non-ESA Examples of Space and PropTech:

builtrobotics.com Vehicular automation start-up that develops software and hardware to automate construction equipment (technology uses GPS, amongst other tech) https://orbitalinsight.com/geospatial-solutions/due-diligence-rea estate Satellite Earth Observation used for real estate due diligence and research.

https://www.cloudhawk.com/industry-

applications/construction/ GPS-based asset tracking to give construction companies a bird's-eye view of all their valuable assets and heavy equipment across the construction site.

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→ How to apply (1/2)

- 1. Register by completing online questionnaire on ESA-STAR Registration (minimum 'light registration') (https://esastar-emr.sso.esa.int)
- 2. Download the official tender documentation (Invitation to Tender) via EMITS 'A0 10532' from 14th September 2020
- 3. Create 'Bidder Restricted Area' in ESA-STAR
- 4. Write your proposal and obtain Letter of Authorization from National Delegation, if needed.
- 5. Submit your proposal via 'Bidder Restricted Area' in ESA-STAR Tendering by the relevant closing date (don't wait until the last minute!)



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→ How to apply (2/2)

The Letter of Invitation to Call for Proposals is issued on EMITS (http://emits.sso.esa.int/emits/owa/emits.main) under 'AO 10532' and includes:

Cover letter

Appendix 1:

List of Thematic Calls for Ideas (including the calendar of the Thematic Call for Ideas and specific information on the themes)

- Appendix 2:
 Draft Contract
- Appendix 3: Tendering Conditions for Express Procurement Procedure - EXPRO/TC
- Appendix 4: Proposal Template

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→ Authorisation from National Delegations

- The authorization from National Delegation for the specific Thematic Call against which you submit your Proposal is an admissibility criterion. Proposals not authorized at the closing date of the Thematic Call will not be admitted for evaluation
- For each individual Thematic Call, dedicated clarifications will be posted in EMITS to provide information on the list of Member States that have already provided their preauthorization to the Thematic Call
- In case your company/organisation resides in a country which has not provided a preauthorization to the Thematic Call you are interested in, you need to contact your National Delegation. The contact information of the National Delegations can be found at https://business.esa.int/national-delegations

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→ Proposal template

Your Proposal shall include the following information:

- 1. Executive Summary (max 1 page)
- 2. Business Potential (max 5 pages)
- 3. Technical Concept (max 5 pages)
- 4. Team and Resources (max 3 pages)
- 5. Management (max 4 pages)
- 6. Financials (max 2 pages)

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Thank you!

> Questions?

https://business.esa.int/funding/intended-tender/proptech

Christopher Frost-Tesfaye

Invited speaker

Christopher.Frost-Tesfaye@esa.int

Dirk Paelinck, Chairman and Founder of the European PropTech Association.

BUSINESS	BUSINESS	TECHNOLOGY
APPLICATIONS	INCUBATION	TRANSFER

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