

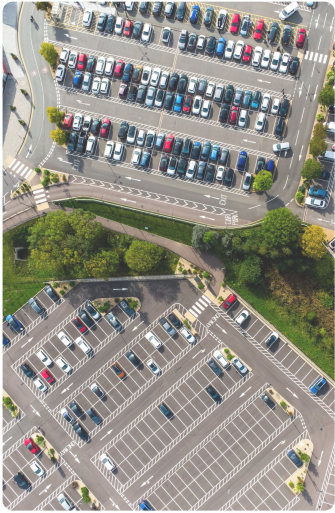


Real Estate analytic technology

Value Proposition

Outline AI revolutionizes **real estate feasibility studies and schematic designs**. What architects once spent weeks on can now be accomplished **in hours** by anyone, **outperforming professionals by an average of 6%**, setting new benchmarks for efficiency and accuracy.





Parking lots

Optimization Service



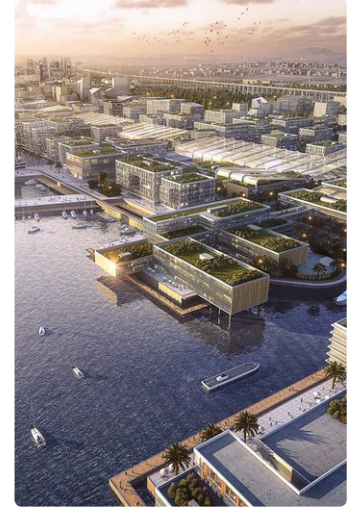
Hospitality

Optimization Service



Logistic Parks

SaaS Application



Tailored solutions

Individually

Team



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COO & Founder



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CTO & Founder



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Programmer



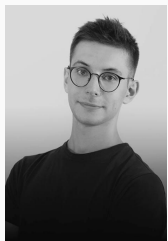
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Anna Melon
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Piorun
Crisis Management



Patent protected in the USA

U.S. Patent granted! No.: US 11.960,798 B1

Artificial intelligence systems and methods for processing parametric land plot data.

3 additional US Patents in progress regarding computational design in the field of Architecture and Urban Planning:

1. Methods for determining dynamic relationships between outcomes,
2. Methods for generating warehouse layouts,
3. Methods of automatic analysis of factors influencing environmental impact.

Fact: We are the only AI company with a patent protecting broad-generation methods in geometry.



US011960798B1

(12) **United States Patent**
Cudzik et al.

(10) Patent No.: **US 11,960,798 B1**
(45) Date of Patent: **Apr. 16, 2024**

(54) **ARTIFICIAL INTELLIGENCE SYSTEMS AND METHODS FOR PROCESSING PARAMETRIC LAND PLOT DATA**

(56) **References Cited**
U.S. PATENT DOCUMENTS

(71) Applicant: **OUTLINE AI Sp. z o.o., Gdansk (PL)**

10,255,383 B2* 4/2019 Gavini E01C 1/02
11,308,246 B2* 4/2022 Benjamin G06T 17/10
2007/0219739 A1* 9/2007 Ghazali E04H 1/065
703/1
2018/025310 A1* 9/2018 Shen G06F 30/13
2019/026295 A1* 8/2019 Ishida G06F 19/00
2022/0115981 A1* 4/2022 Kranti H02S 20/23
2023/0394197 A1* 12/2023 Dongjie G06F 30/18

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* cited by examiner
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(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

(57) **ABSTRACT**

(21) Appl. No.: **18/202,644**

Disclosed herein are methods and systems related for creating multi-unit structure plans. An example method may comprise obtaining land plot data and environmental data. The example method may comprise obtaining building type data. The example method may comprise obtaining legal rules and/or regulations data. The example method may comprise obtaining building demands data. The example method may comprise creating a first line and additional lines that represent corridors/alleys thereby generating layouts based on the created maximal volume and/or floor area. The example method may comprise applying an optimizer to the generated layouts. The example method may comprise generating numeric results and/or visual representations for a multi-unit structure for a land plot associated with at least a portion of the land plot data.

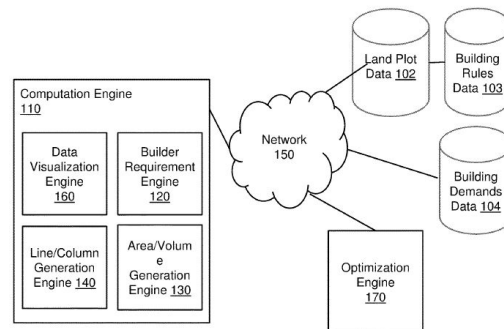
(22) Filed: **May 26, 2023**

(51) Int. Cl. **G06F 30/13** (2020.01)

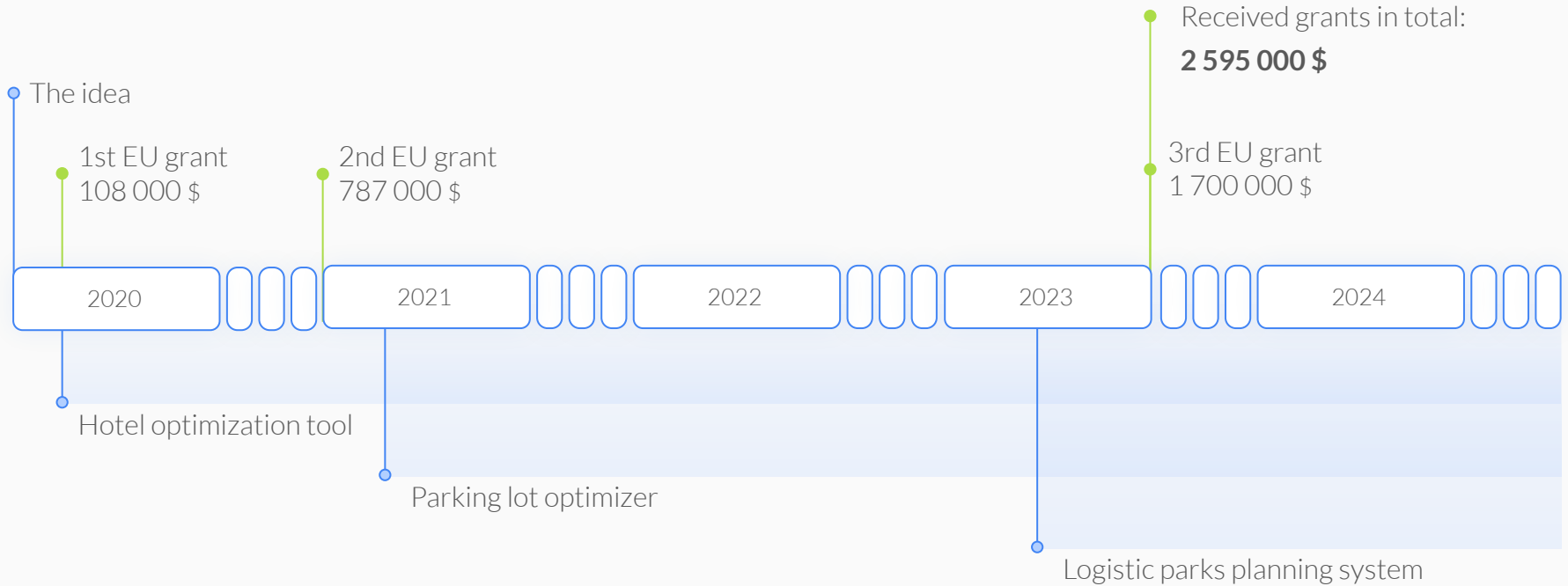
(52) U.S. Cl. **G06F 30/13** (2020.01)

(58) Field of Classification Search **G06F 30/13**
CPC G06F 30/13
See application file for complete search history.

20 Claims, 8 Drawing Sheets



Timeline OutlineAI



Architectural Design Process

Pre-Design

Explore alternative design concepts and move forward with the one preferred concept.

Schematic Design

Get to know the Investors criteria and conduct research on the site.

Design Development

Solidify most of the major design decisions and coordinate with consultants.

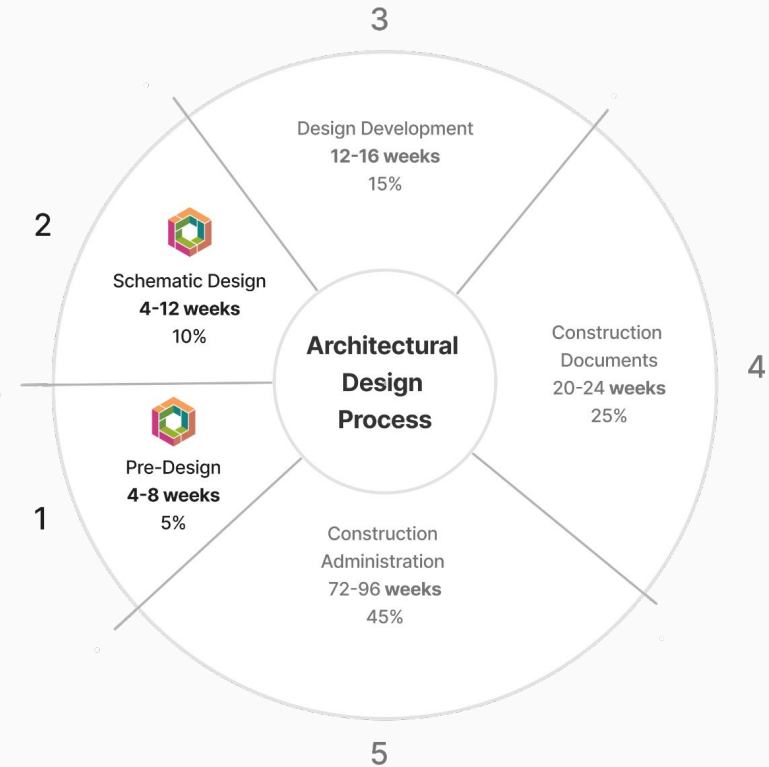
Construction documents

Prepare the technical documents and drawings needed to obtain building permit approvals.

Construction Administration

Observe project construction and assure that the design intent remains consistent on through to completion.

Fact: Pre-design and schematic design are created multiple times more frequently than other types of architectural documentation.



Feasibility studies before Outline AI

WHO NEEDS THE SERVICE?

Developers & Investors

Maximize property value, reduce costs & time, and evaluate potential real estate in hours instead of weeks.

Property Owners

Maximize your property value by optimizing possible density and shorten your buyers' decision making process.

Architectural offices

Save time and costs, shorten the schematic design phase from weeks to days.

Real Estate Agents & Consultants

Regardless of whether your client is buying, selling, appraising or needs other consultancy, our AI provides data to help them do it better.

Banks and investment funds

Evaluate the property value and make decisions based on accurate and verified data.

WHO DOES THE WORK?

Architects

With traditional design tools and it takes them usually weeks with no certainty that the solution is maxed out.

THE OUTCOME

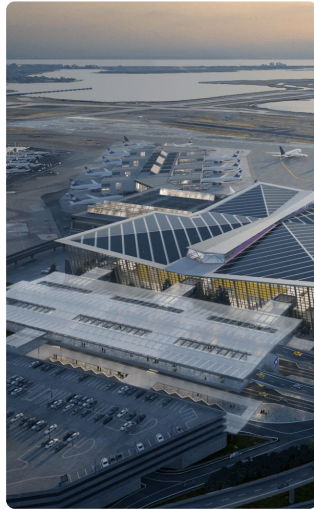
Basic inaccurate drawings
Non optimal solution
Insufficient data for further analysis
Long time- missed opportunities
Limited solutions

Fact: There is a vast number of entities that require feasibility studies, and with Outline AI, they can do so without involving architects.





Tailored solution in progress



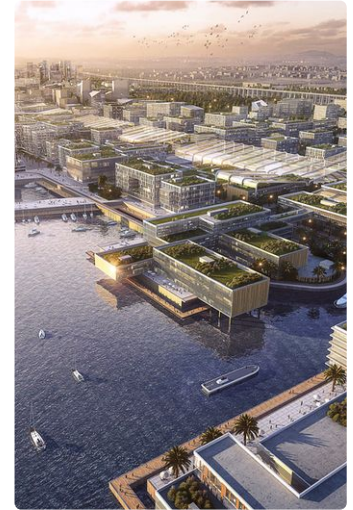
ferrovial

Tailored solution in progress



AECOM

Tailored solution in progress

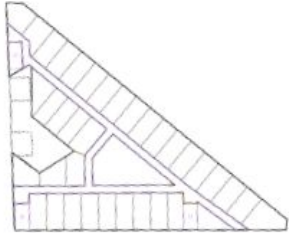
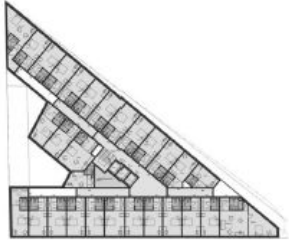
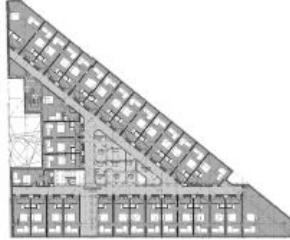


Tekuma Frenchman
URBAN DESIGN + INNOVATION

Tailored algorithm delivered



OutlineAI vs human architect

Solution	OutlineAI	Investor 1st approach	Investor 3rd approach	Difference
Number of apartments for repetitive storey	36	29	34	2 - 7
Total number of apartments in the building	180	145	170	10 - 35
Floor plan				~6% more apartments in total



OutlineAI vs human architect

Existing parking

525

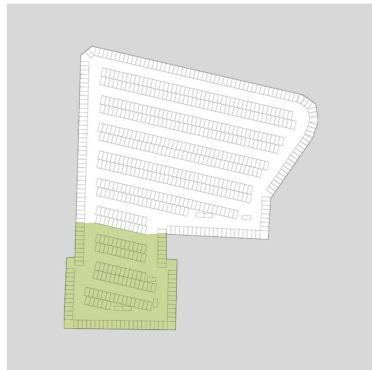
spots



Algorithm

702

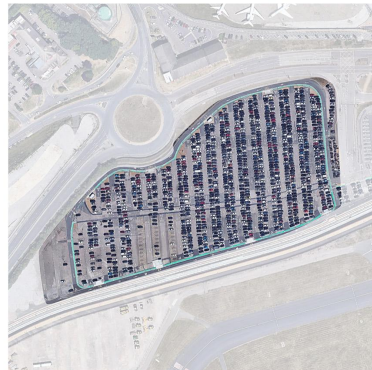
spots



Existing parking

1292

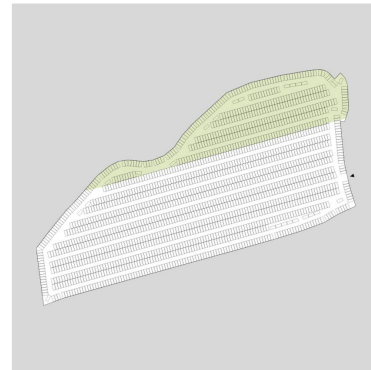
spots



Algorithm

1721

spots



177 more spots
or **42 259 ft²** green area

426 more spots
or **98 403 ft²** green area

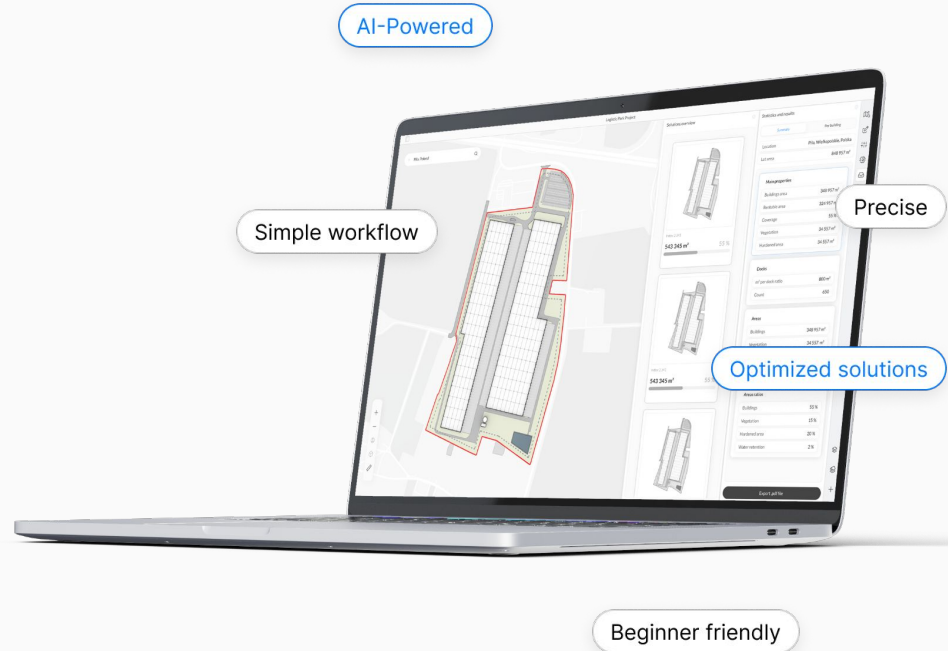


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by a single touch

Set settings

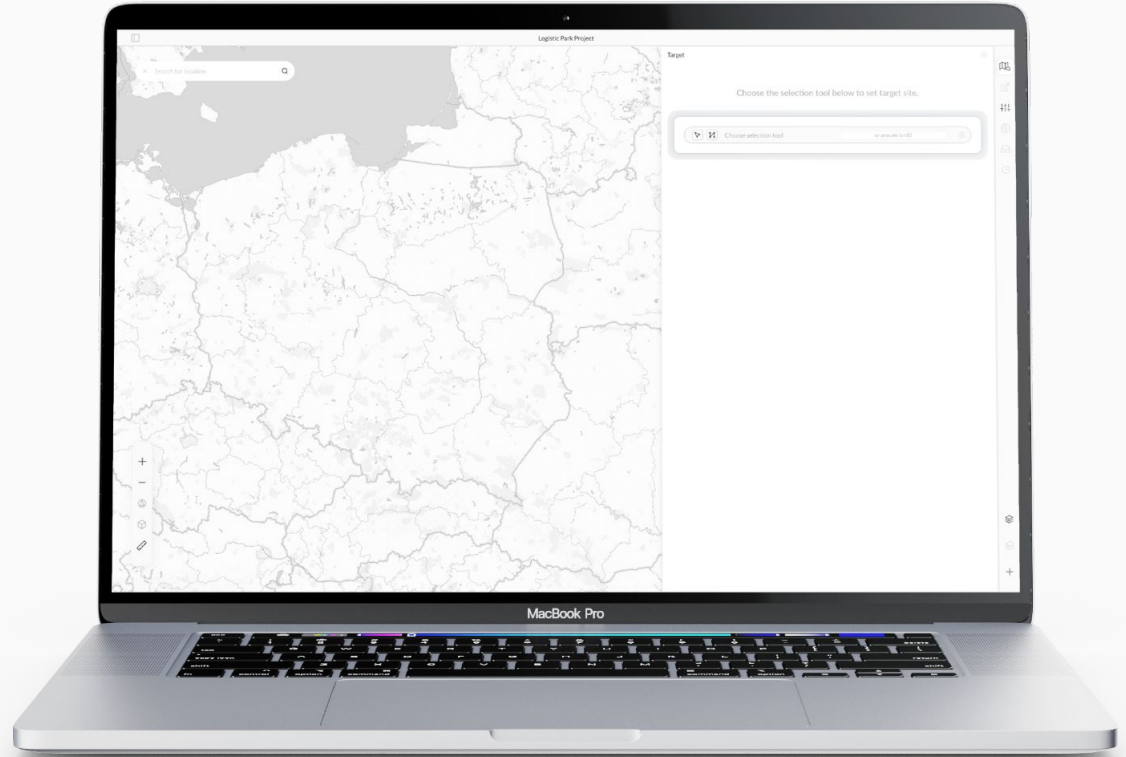
use single click preset or provide manually

Optimize

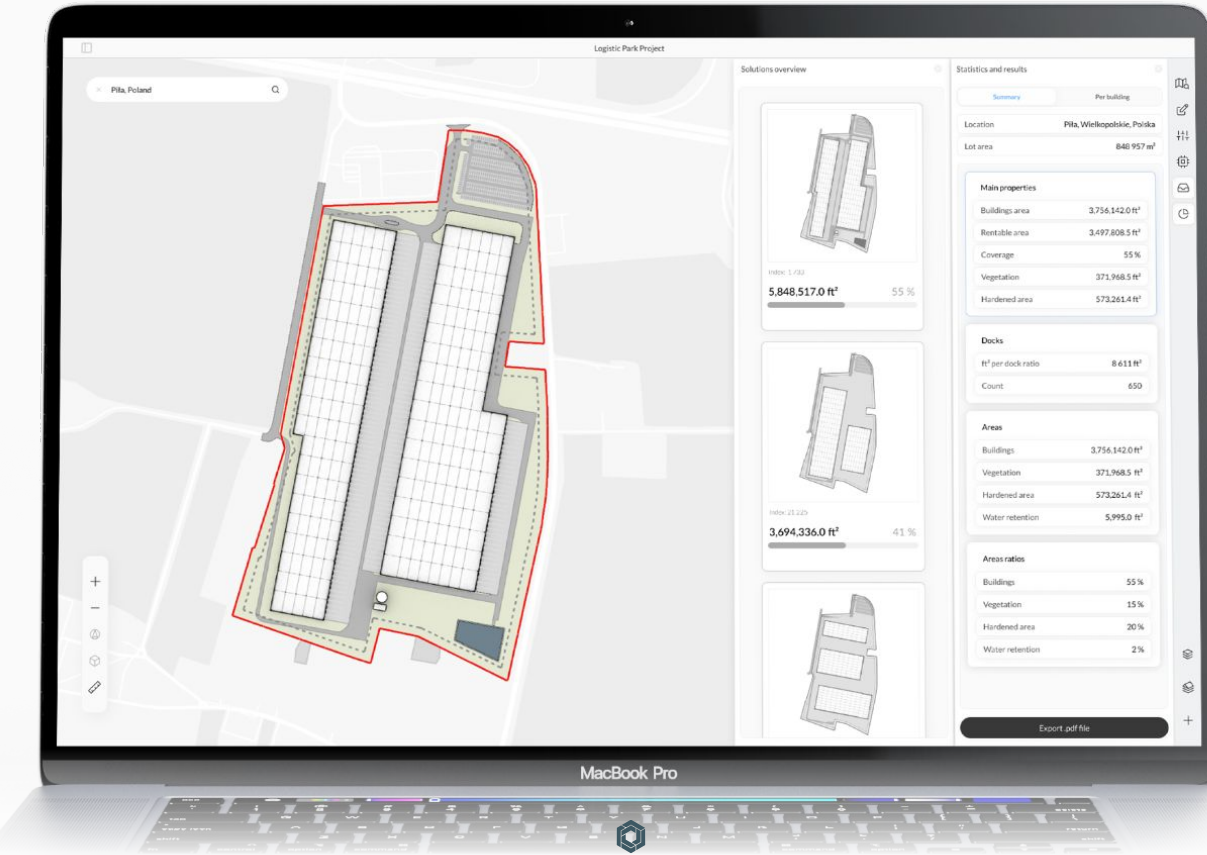
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analyse the selected design in any of your designing softwares



and choose the best project that suits your needs.



Pricing offer

Demo

For testing purposes.

Free

Features:

- ✓ 50 analysis available
- ✓ multiple lot selection
- ✓ reporting and analytics - limited
- ✓ GIS data available - limited
- ✓ 2fa - limited
- ✓ E-mail customer support available for 30 days

Basic

For individual architects, investors and other freelancers.

\$ 149 / month / 1 seat

Demo + features:

- ✓ Unlimited geolocation
- ✓ Manual site drawing
- ✓ Report export in pdf file
- ✓ Map dwg exporting
- ✓ Manual settings available
- ✓ Full GIS data access
- ✓ 24/7 chat customer support

✓ 2 week free trial available

Pro

For teams searching for work automatization

\$ 299 / month / 1 seat

Basic + features:

- ✓ Unlimited sites
- ✓ Project pdf and dwg export
- ✓ Full reporting and analytics
- ✓ Collaborative mode available
- ✓ 50 users
- ✓ Visual warehouse customization
- ✓ Custom settings presets
- ✓ 24/7 chat and phone CS

✓ 2 week free trial available

Enterprise +

For businesses with specified and individual needs.

Start at \$ 2 000 / month

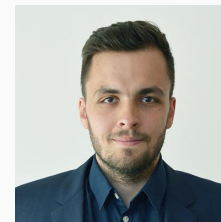
Pro + features:

- ✓ Data encryption
- ✓ Unlimited users
- ✓ Individual onboarding
- ✓ Customizable features and integrations
- ✓ .svg & 3d models export
- ✓ Designated customer success manager

* Contact sales for details



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