



BUSINESS-ACTIVITY: CONSTRUCTION

GIS services allow to assess business activity of construction companies using ERS data. This assessment provides informational support to insurance, lending and financial institutions and companies involved in construction of large scale complex facilities or owning segmented assets:

- usage of scoring models to determine lending rates and mitigating operational risks
- resources allocation oversight
- acceleration and simplification of efforts of lending institutions in their operations with land assets, commercial and residential properties
- managerial decision quality enhancement investment and lending.

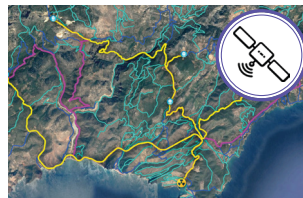


Capabilities

As a result of space image processing within three days customer is provided with a geoanalytical report comprising of updates on facility construction progress and activity assessment of construction equipment operations.

It is possible to establish a monitoring of business activity with various levels of detail and frequency, even on a daily basis.

- assessment of construction status
- facility development progression with imagery validation
- estimation of displaced soil volumes with an accuracy up to 95% when using stereo imagery
- estimation of number of construction equipment and its operating activity
- estimation of number of construction materials and their usage dynamics.



COUNTRY LEVEL

Space images of large coverage.

Selection of a site, surveying, designing, logistics, ecological, social and economic situation monitoring.



FACILITY LEVEL

Space mono and stereo surveying. Multipass radiolocation.

Volumes evaluation, facility construction, equipment availability, construction safety.



ON-SITE LEVEL

UAV imagery, video cameras at the facility, 3D scanning.

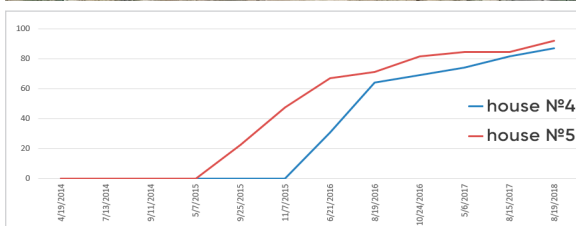
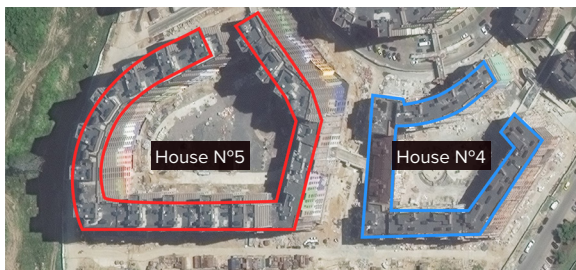
Detailed local monitoring of construction progress.



LOCAL LEVEL

Video cameras, 3D scanning, other sensors.

Detailed local monitoring of construction progress, both inside structures, and at a unit level.



Facility	House N°4	House N°5
Work stage	Building construction	Building construction
Condition	Finishing works, improvement of a territory	Building construction
Dynamics in comparison with a previous report	Low dynamics	Low dynamics
Availability degree	87%	92%
Availability progress in comparison with a previous report	5%	8%
Advances and slippages on schedule, month	-13	-14



Reliability assessment

Integrated assessment of reliability and validity of a developer is implemented through comparing time frames of a facility construction stipulated in a schedule with actual data collected during space monitoring.

- comparison of construction stages with scheduled works, assessment of advances and slippages on schedule
- integrated reliability assessment of a developer
- activity ratings of developers and competitors
- estimation of costs for construction activities.

Construction material storage



Iron rings

Concrete box units

Reinforcement

Contractor	Facility	Area, hectares per km	Date	Commitment fulfillment	Slippage	Construction is frozen	Construction paces			Grade (0-10)	Solvency level
							Rapid	Average	Slow		
Developer 1	Highway	1 100	2018	Yes	No	No	8	2	-	8	High
Developer 2	Residential house	5	2019	Yes	No	No	-	3	2	5	Average
Developer 3	Underbridge	4	2017	No	1 year	Yes	-	-	1	2	Low