



ANTARES
&
Agriculture 4.0

Vladimir Crnojević

About BioSense

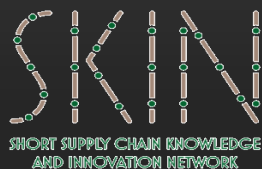
- R&D institute for Information Technology in Biosystems
- Established in 2015
- Public institute – First public start-up
- Dynamic multidisciplinary international organization
- Main focus – IT in Agriculture and Food
- 70 permanent staff
- 50 part-time staff



Antares



diatomic



AgriDEMO-F2F

3





16 H2020 projects

Funded Projects
2.684^{17,38%}
of total

Project Participations
6.111^{8,47%}
of total

EU Contribution (EUR)
1,25G^{4,52%}
of total

Number of project participations and EU Contribution by organisation

Legal Name 	Country 	EU Contribution (EUR)	Project Participations
Totals		1.251.687.644 €	6.111
BIOSENSE INSTITUTE - RESEARCH AND DEVELOPMENT INSTITUTE FOR INFORMATION TECHNOLOGIES IN BIOSYSTEMS	Serbia	21.239.349 €	16
TARTU ULIKOOL	Estonia	18.791.525 €	56
TURKIYE BILIMSEL VE TEKNOLOJIK ARASTIRMA KURUMU	Turkey	17.564.621 €	51
ENERGOCHEMICA TRADING AS	Slovakia	15.675.968 €	2
INSTYTUT CHEMII BIOORGANICZNEJ POLSKIEJ AKADEMII NAUK	Poland	14.272.826 €	37
UNIWERSYTET WARSZAWSKI	Poland	13.815.263 €	48
Masarykova univerzita	Czech Republic	13.773.956 €	38
NEMZETI KUTATASI FEJLESZTESI ES INNOVACIOS HIVATAL	Hungary	13.738.143 €	10
CESKE VYSOKE UCENI TECHNICKE V PRAZE	Czech Republic	13.639.438 €	46



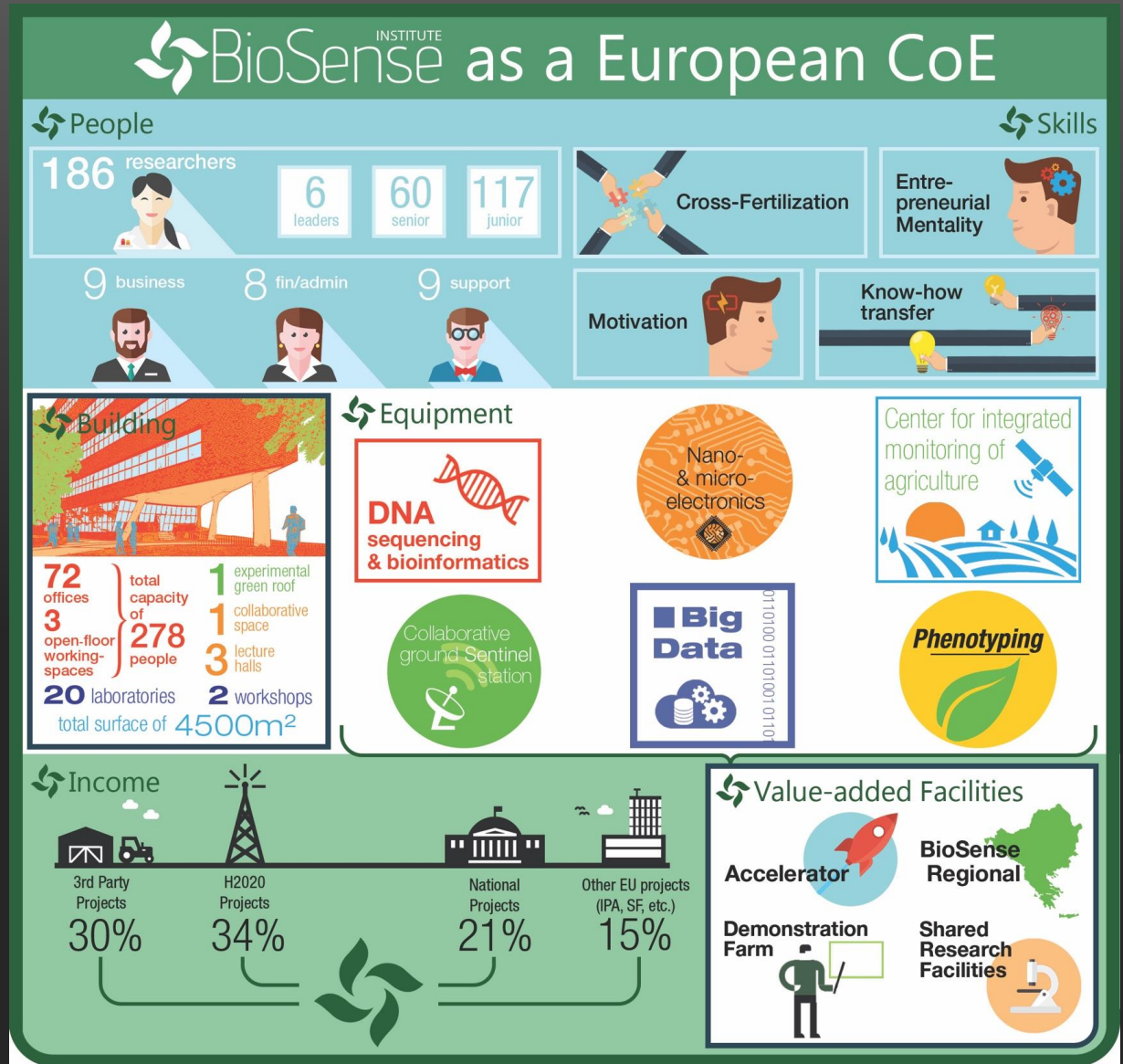
Antares

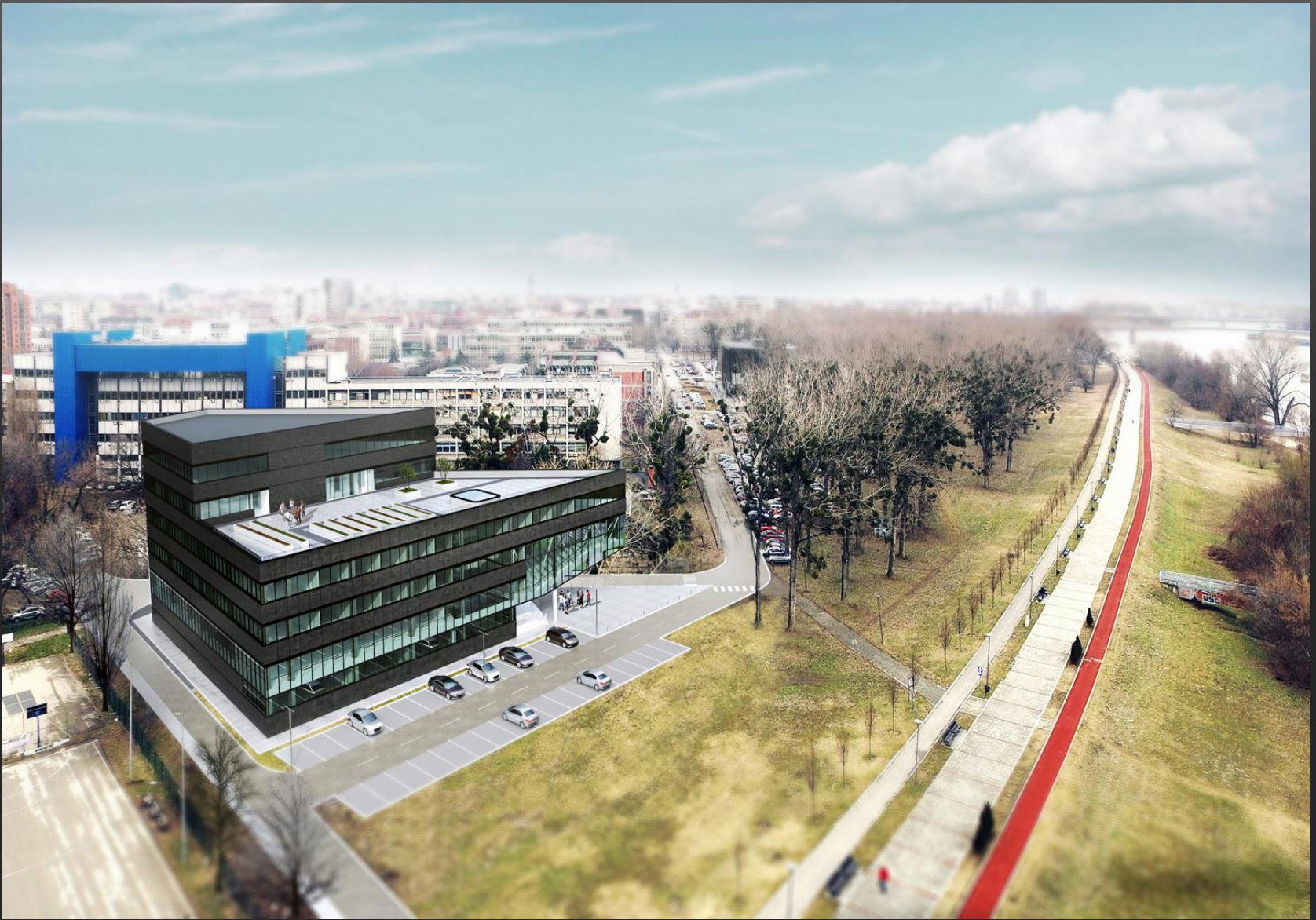


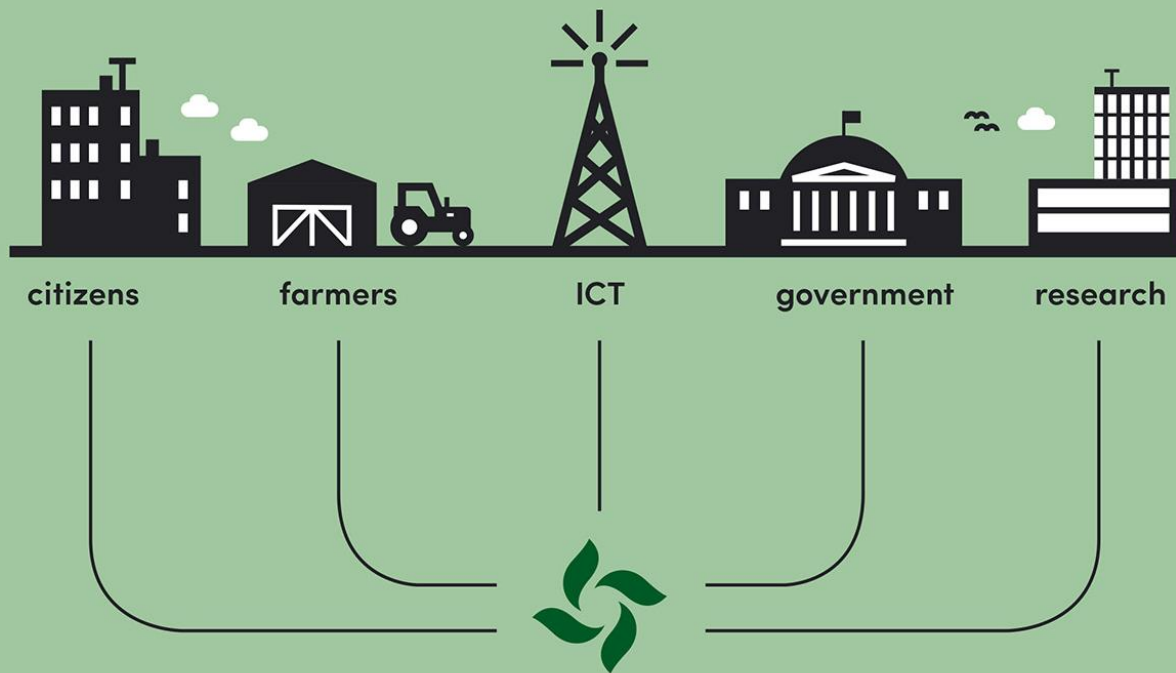
Република Србија
Министарство просвете,
науке и технолошког развоја

List	EU Rank	Final Score	Coordinator		Topic	Type of Action	Number
			Organisation	Country			
Main list	1	13,5	BIOSENSE INSTITUTE - RESEARCH AND DEVELOPMENT INSTITUTE FOR INFORMATION TECHNOLOGIES IN BIOSYSTEMS	RS	WIDESPREAD-01-2016-2017	SGA-CSA	739570
Main list	2	13	Nemzeti Kutatasi, Fejlesztési es Innovacios Hivatal	HU	WIDESPREAD-01-2016-2017	SGA-CSA	739592
Main list	3	12,5	FYZIKALNI USTAV AV CR V.V.I	CZ	WIDESPREAD-01-2016-2017	SGA-CSA	739573
Main list	4	11,5	UNIVERSITY OF CYPRUS	CY	WIDESPREAD-01-2016-2017	SGA-CSA	739551
Main list	5	11,5	LATVIJAS UNIVERSITATES CIETVIELU FIZIKAS INSTITUTS	LV	WIDESPREAD-01-2016-2017	SGA-CSA	739508
Main list	6	11	FUNDACAO PARA A CIENCIA E A TECNOLOGIA	PT	WIDESPREAD-01-2016-2017	SGA-CSA	739572
Main list	7	10,5	UNIVERZA NA PRIMORSKEM UNIVERSITA DEL LITORALE	SI	WIDESPREAD-01-2016-2017	SGA-CSA	739574
Main list	8	10,5	INSTITUTE OF MOLECULAR BIOLOGY AND BIOTECHNOLOGY	BG	WIDESPREAD-01-2016-2017	SGA-CSA	739582
Main list	9	10,5	TRENCIANSKA UNIVERZITA ALEXANDRA DUBCEKA V TRENCINE	SK	WIDESPREAD-01-2016-2017	SGA-CSA	739566
Main list	10	10,5	Nemzeti Kutatasi, Fejlesztési es Innovacios Hivatal	HU	WIDESPREAD-01-2016-2017	SGA-CSA	739593
Reserve list	11	10,5	LEFKOSIA MUNICIPALITY	CY	WIDESPREAD-01-2016-2017	SGA-CSA	739578
Below available budget	12	10	NARODNE LESNICKE CENTRUM	SK	WIDESPREAD-01-2016-2017	SGA-CSA	739590
Below available budget	13	10	SLOVENSKA AKADEMIA VIED	SK	WIDESPREAD-01-2016-2017	SGA-CSA	739559

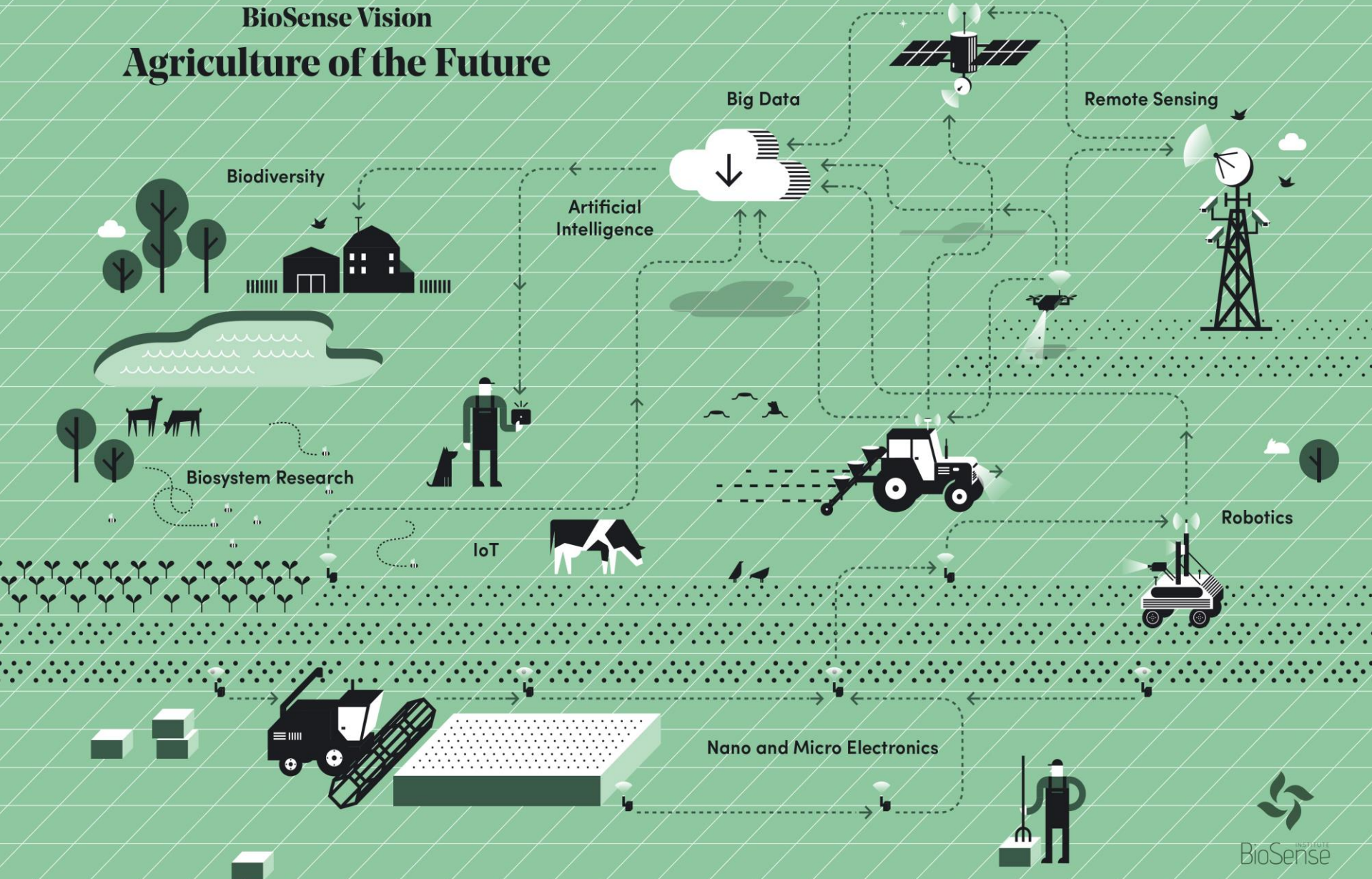
- 28M EUR
- Invest in human potential
- Invest in infrastructure
- Build scientific excellence
- Link with stakeholders







BioSense Vision Agriculture of the Future

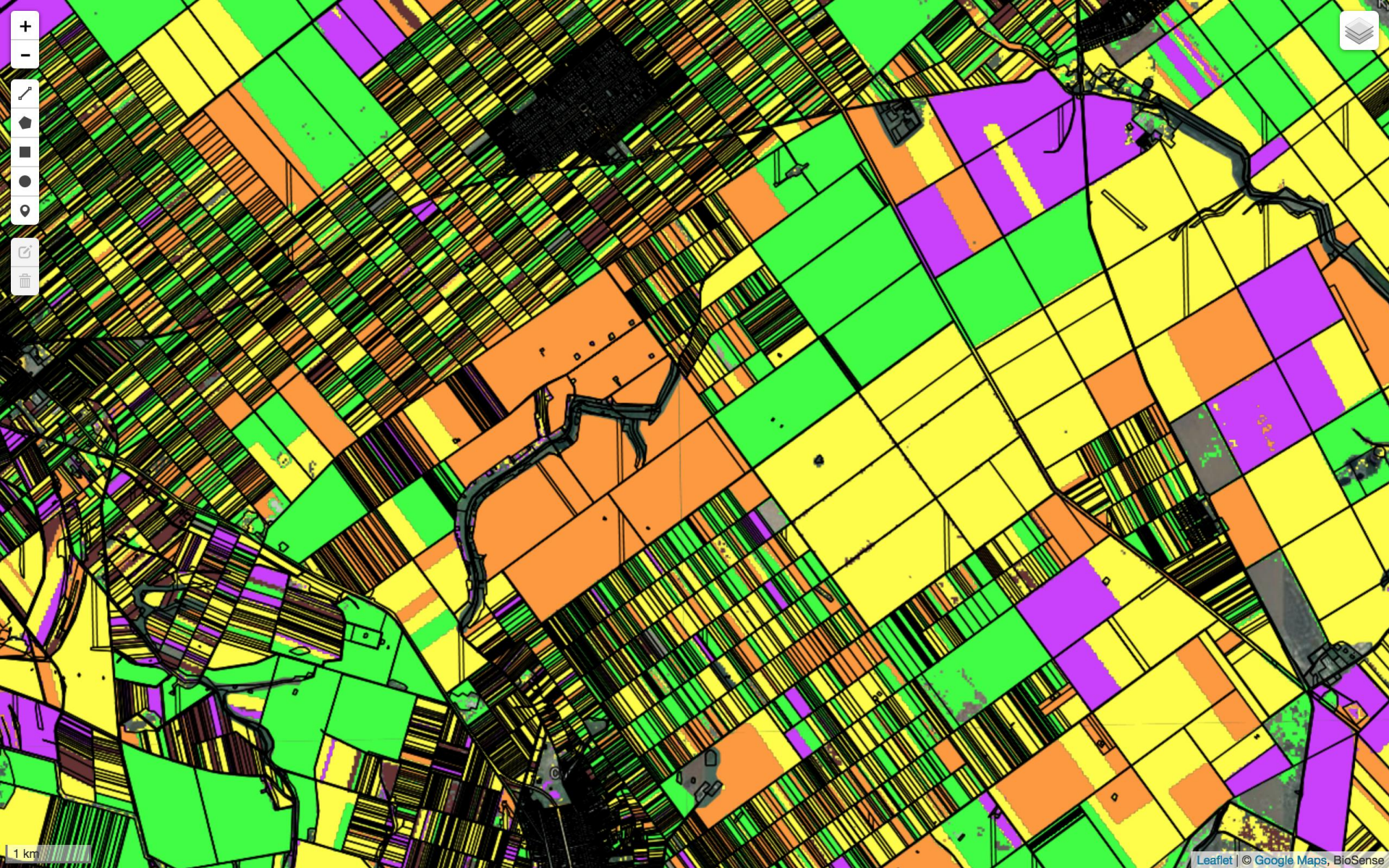


BORN EQUAL

Same sun, same rain, same wind... yet so different.
And in a special way.

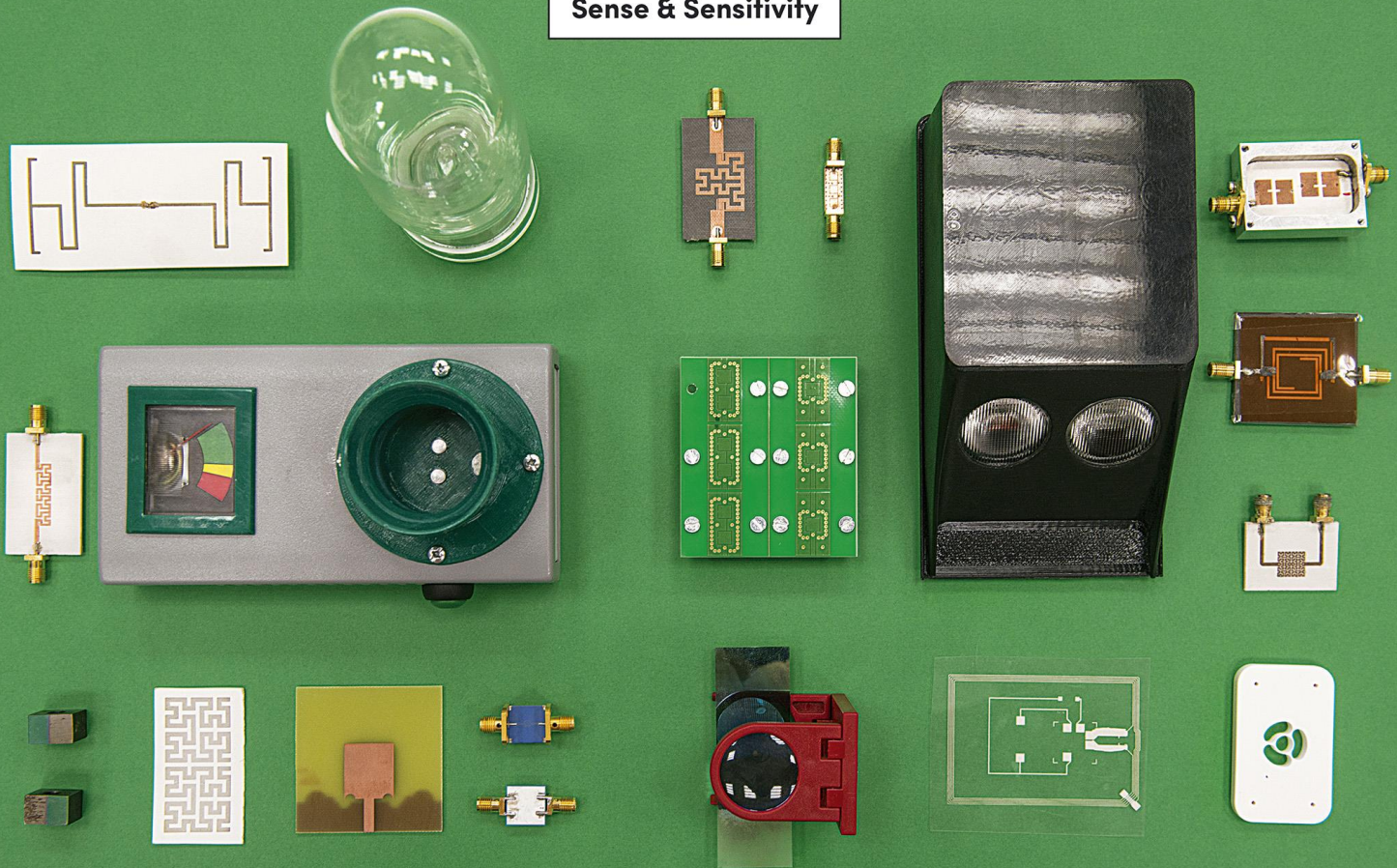
Waveform corresponds to gradually changing soil properties.



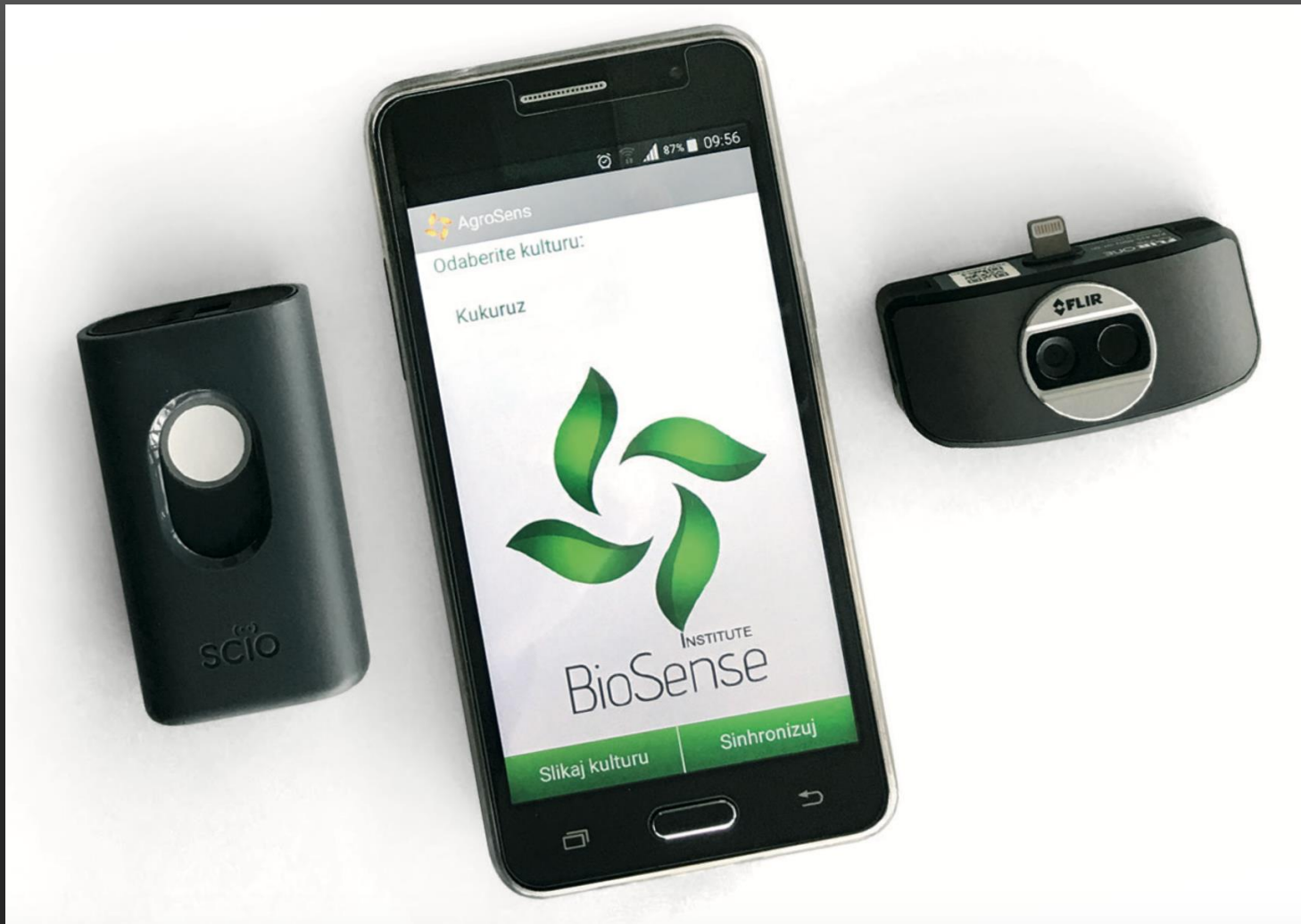


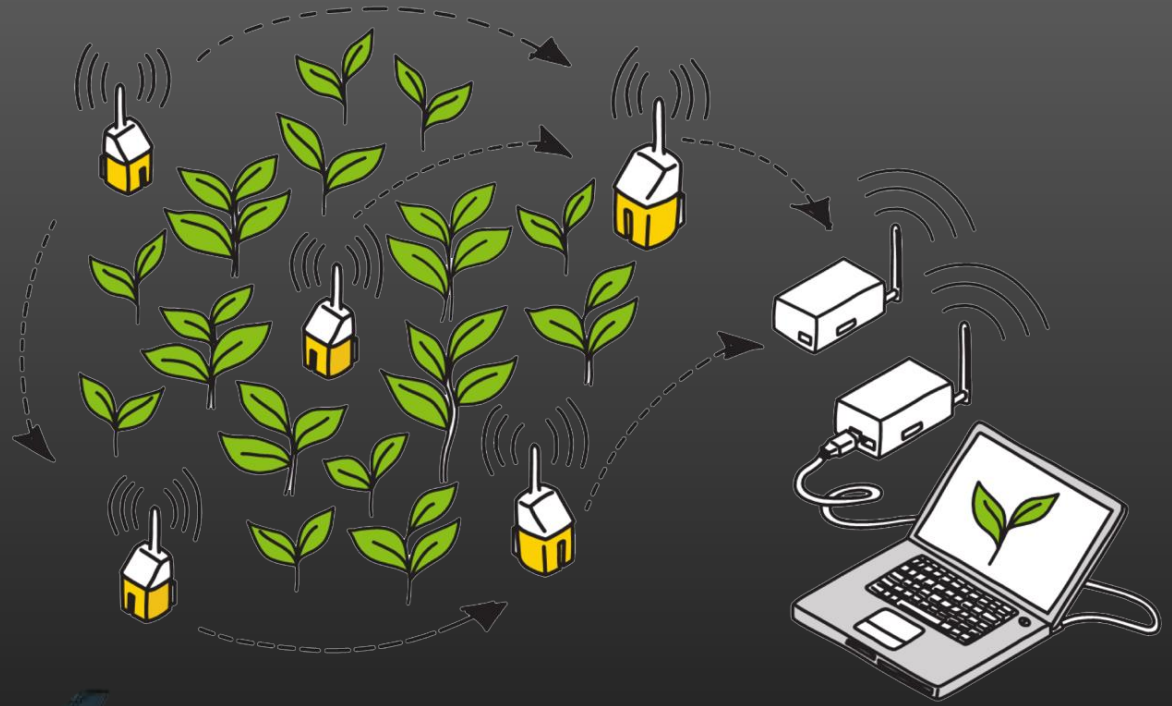


Sense & Sensitivity



Components and sensing devices developed by BioSense Institute

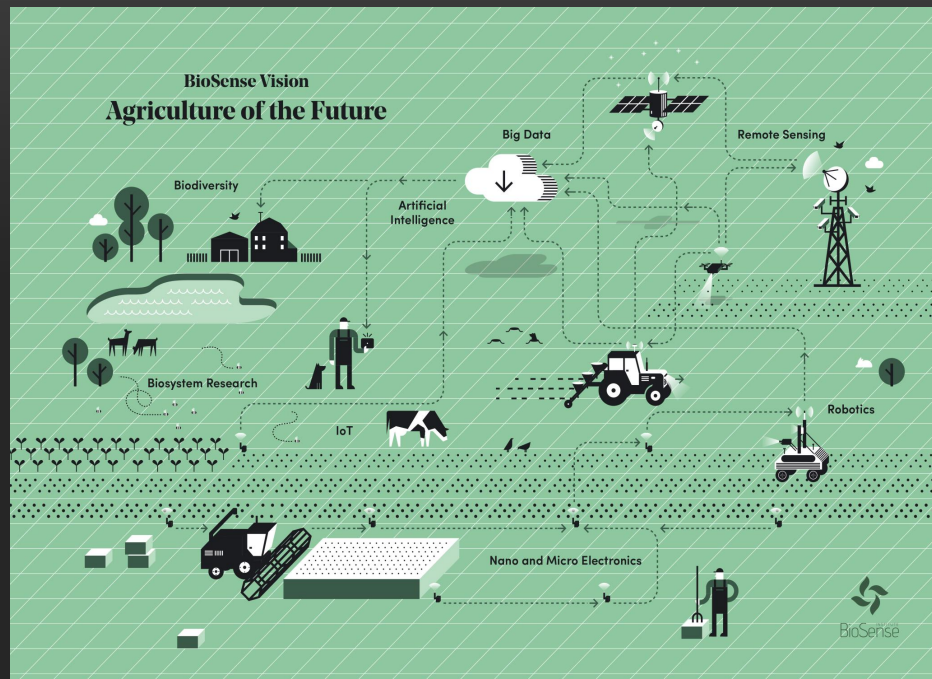








AgroSense





Map operations

Create parcel

Region

NOVI SAD

Catastar region

FUTOG

Parcel number

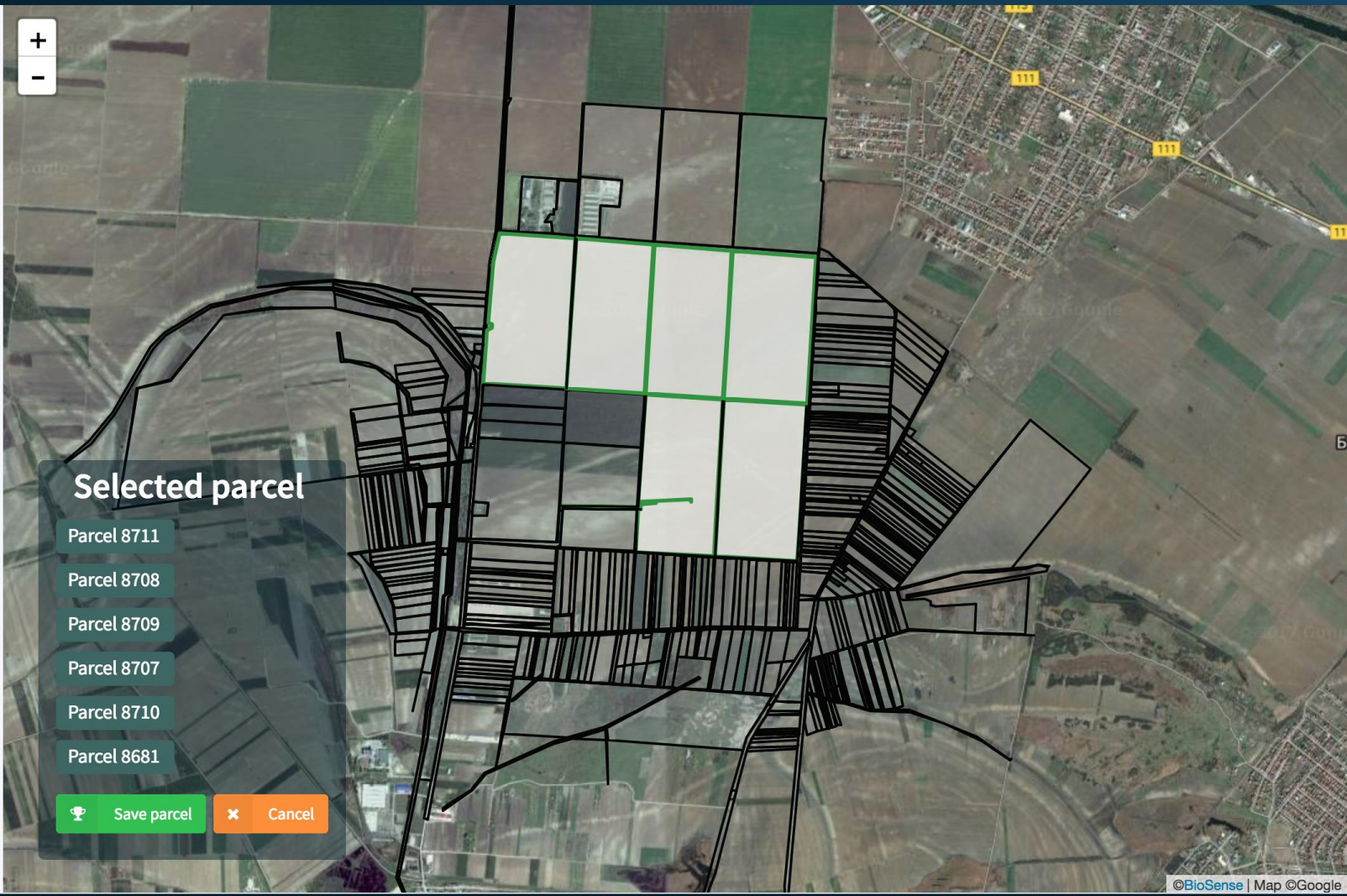
8711



Don't know parcel number? [Draw it!](#)

Find my parcel

Pictures



Selected parcel

Parcel 8711

Parcel 8708

Parcel 8709

Parcel 8707

Parcel 8710

Parcel 8681



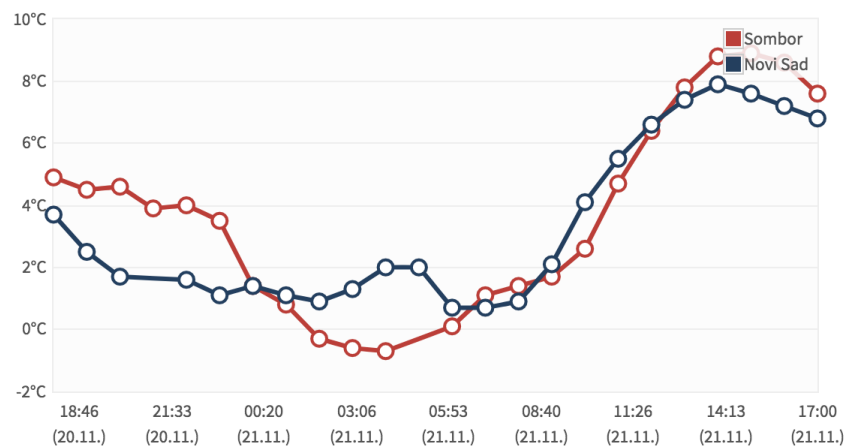
Save parcel



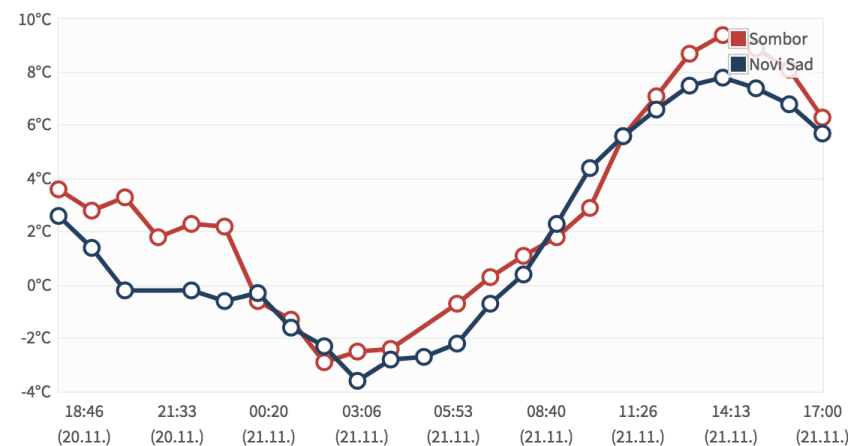
Cancel



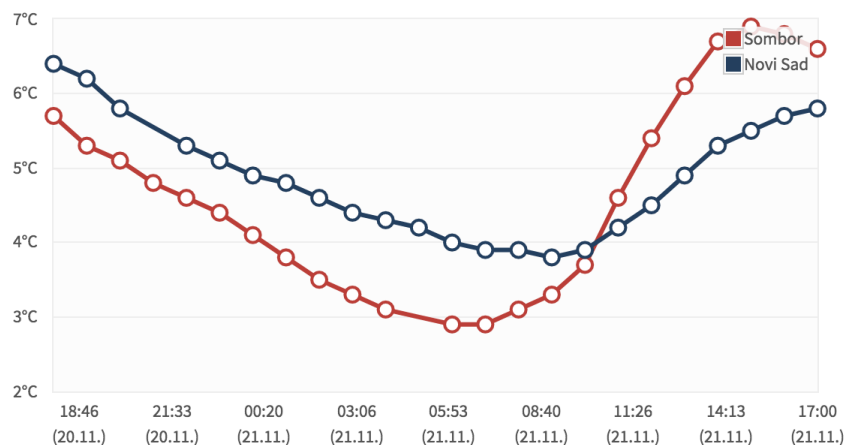
Temp. 2m above ground



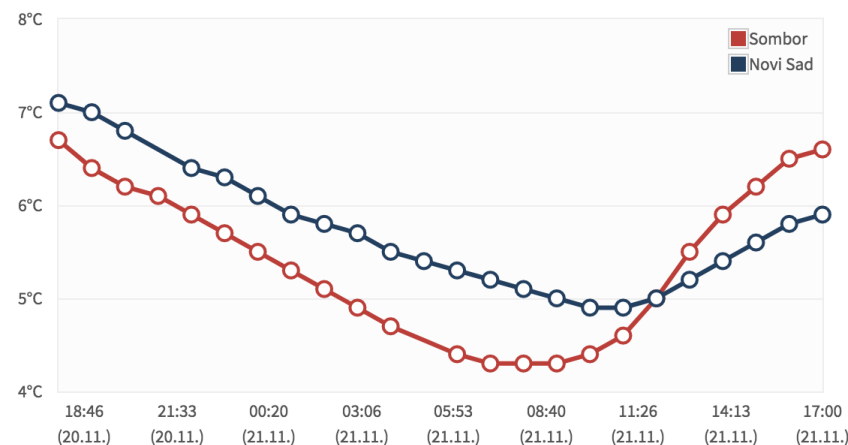
Temp. 5 cm above ground



Temp. 5 cm below ground



Temp. 10 cm below ground





Picture

Date 25.07.2017.

Picture



Comment

[Edit](#) [Delete](#)



Planting

Date	09.07.2017.
Production type	Field crop
Crop	Soybean
Type/Hybrid	Favorit
Plants/ha	600000
Depth	5 (cm)
Row spacing	70 (cm)
Seed quantity	105 (kg/ha or s.j./ha)
Unit price of the product	32,00 Serbian Dinar



Operation price / parcel 9.852,00
Serbian Dinar

[Edit](#)
[Delete](#)

Fertigation

Date	09.07.2017.
Type of fertilization	Pre-sowing
Fertilizer type	npk 20:20:20
Quantity	120 (l/ha or kg/ha)
Unit price of the product	56,00 Serbian Dinar
Product price / ha	553,00 Serbian Dinar
Product price / parcel	36.589,00 Serbian Dinar
Operation price / ha	352,00 Serbian Dinar
Operation price / parcel	32.145,00 Serbian Dinar

[Edit](#) [Delete](#)

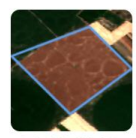




15.05.2017.



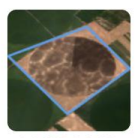
04.06.2017.



24.06.2017.



04.07.2017.



14.07.2017.



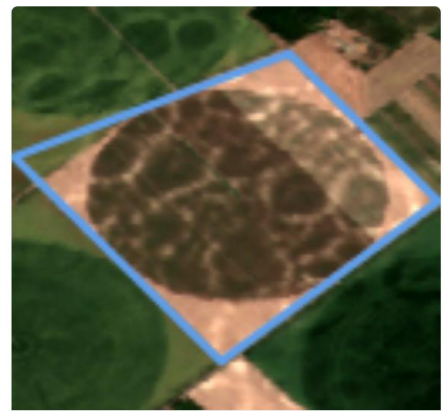
03.08.2017.



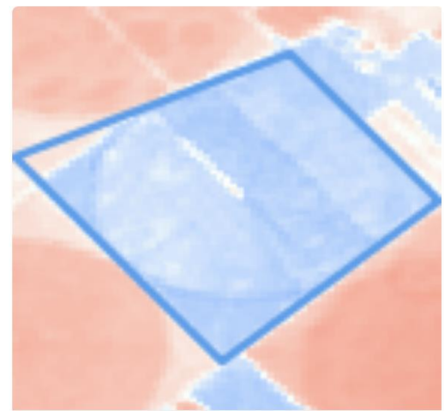
23.08.2017.



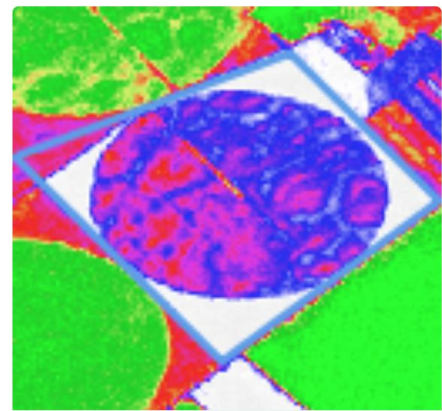
22.09.2017.



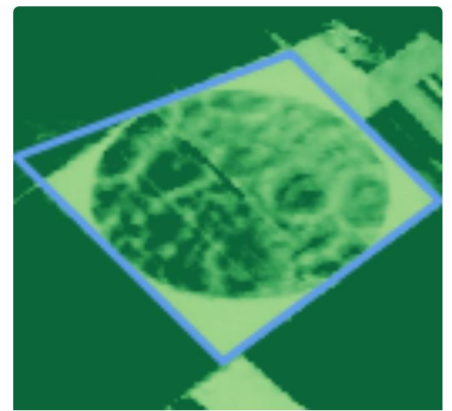
RGB



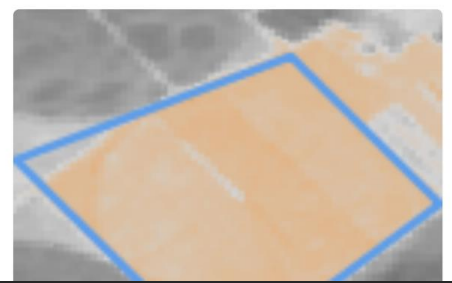
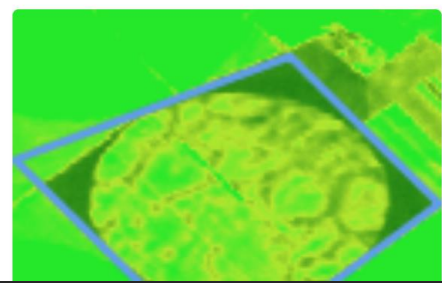
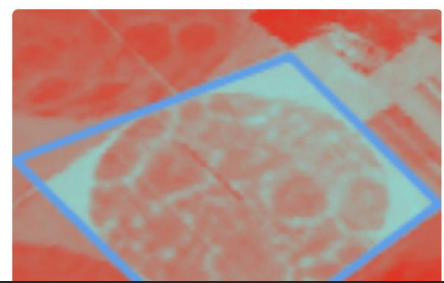
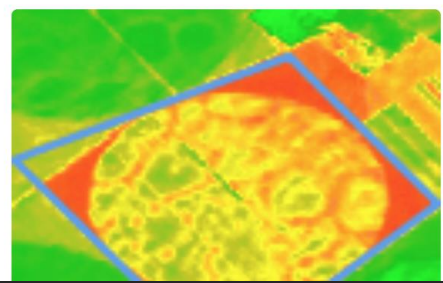
NDMI



EVI



SR





Create new analysis

Table data

Show 10 entries

Search:

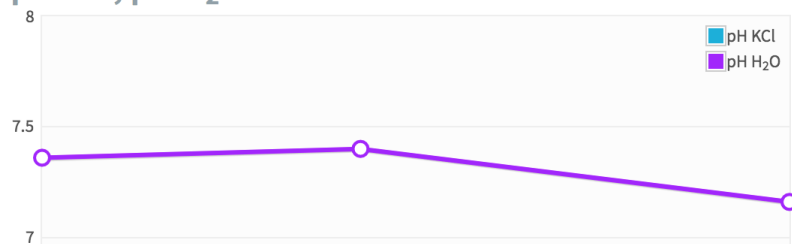
#	Date	Depth (cm)	pH KCl	pH H ₂ O	Humus	Al-P ₂ O ₅	Al-K ₂ O	Total N	CaCO ₃	Notes
1	05.07.2017.	30 cm	6.28	7.16	3.35%	45.5 mg/100g	39.6 mg/100g	0.167%	7.42%	Delete
2	10.10.2016.	30 cm	6.52	7.4	3.27%	28.5 mg/100g	35.5 mg/100g	0.163%	7.41%	Delete
3	25.03.2016.	30 cm	6.4	7.36	3.29%	21.4 mg/100g	41.9 mg/100g	0.164%	7.38%	Delete

Showing 1 to 3 of 3 entries

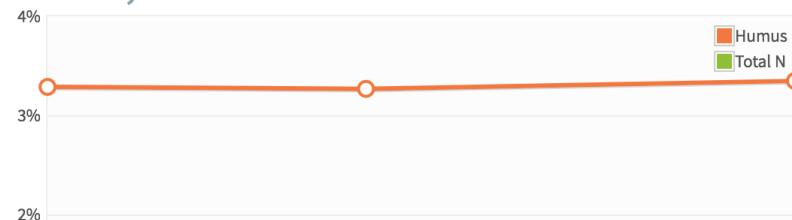
Previous 1 Next

Graph data

pH KCl, pH H₂O



Humus, total N

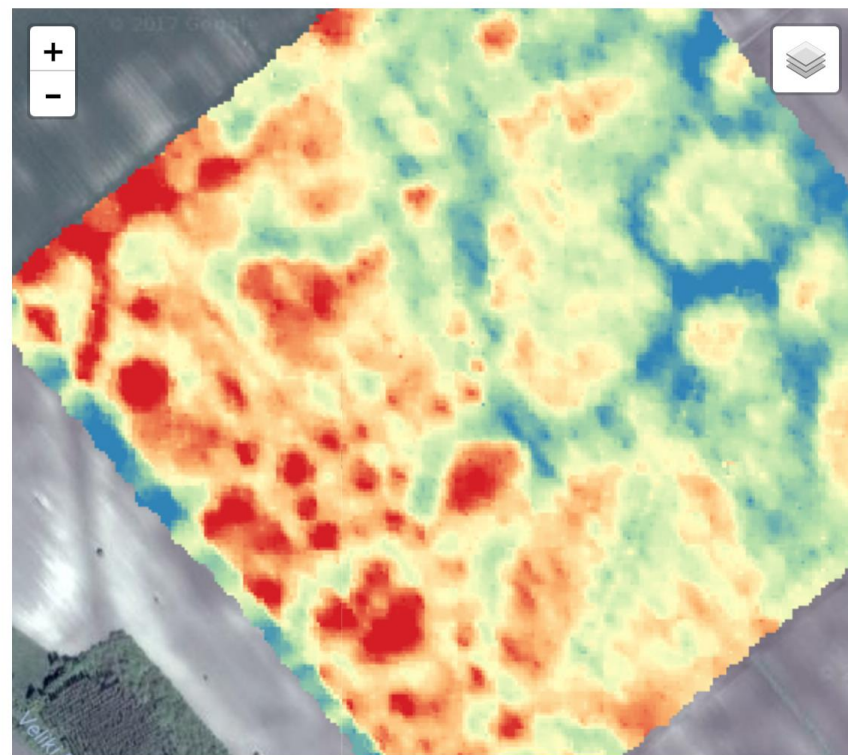
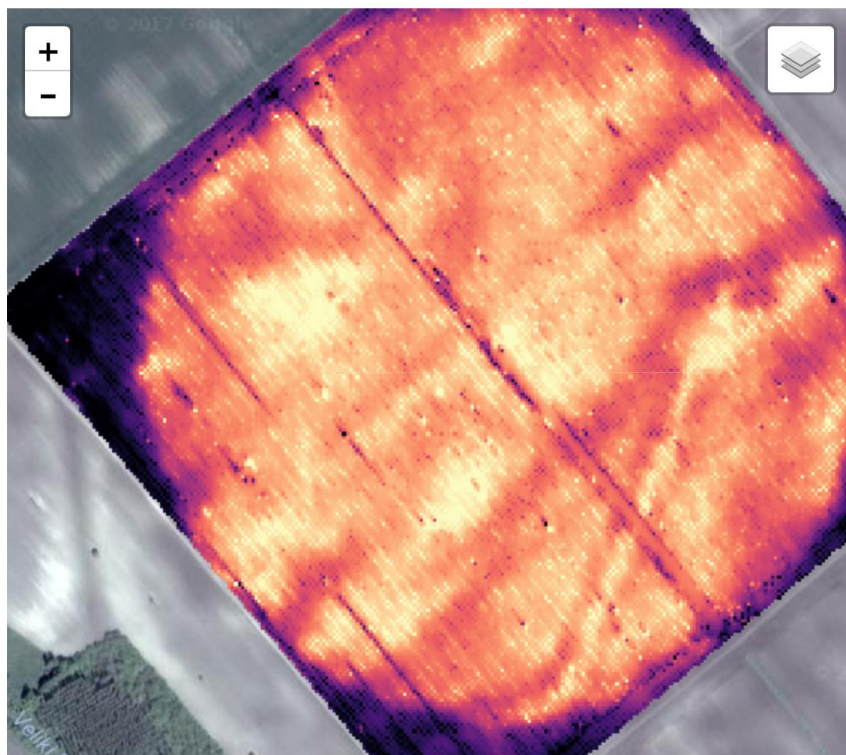




BioSense jug

- Weather
- Meteo data
- Activity
- Satellites
- Soil analysis
- Pictures
- Parametar maps
- My sensors
- Basic

Create new map of parameters





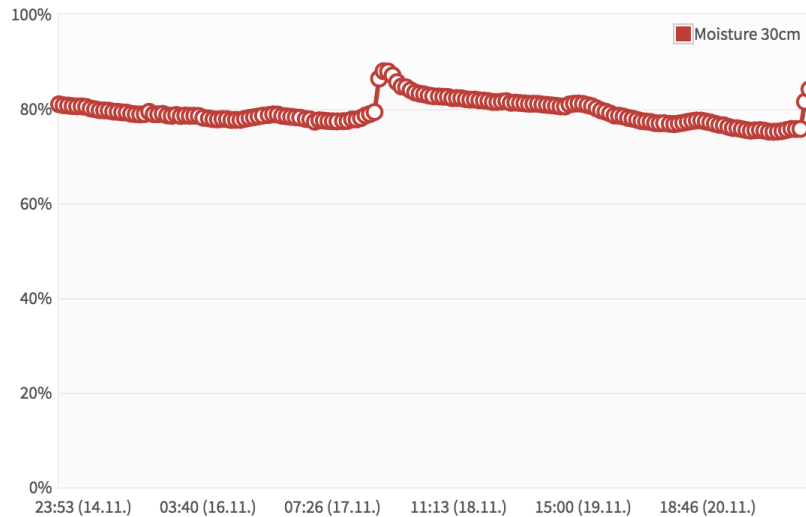
BioSens jug

Weather Meteo data Activity Satellites Soil analysis Pictures Parametar maps **My sensors** Basic

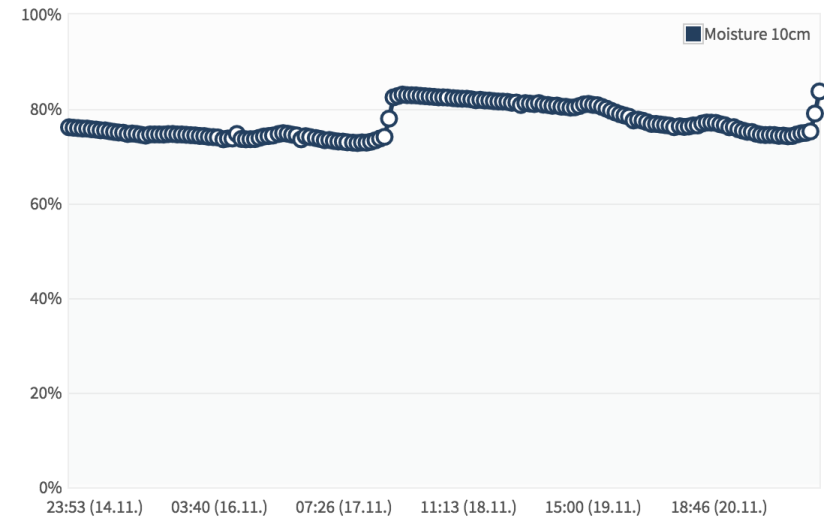
Data for the last: 6h 24h 3 days **7 days**

Reload

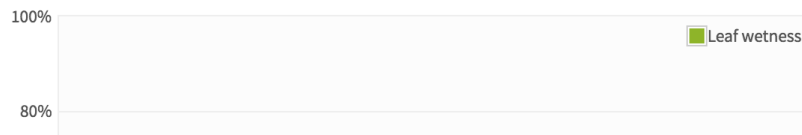
Moisture 30cm



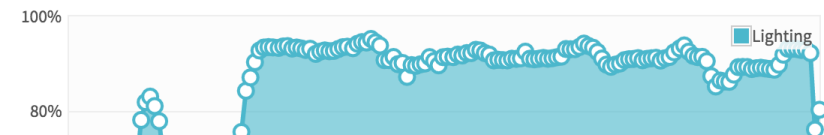
Moisture 10cm



Leaf wetness



Lighting

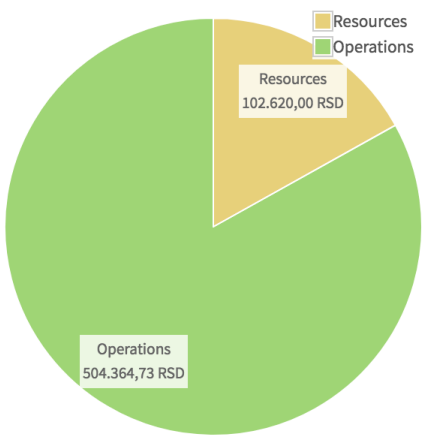




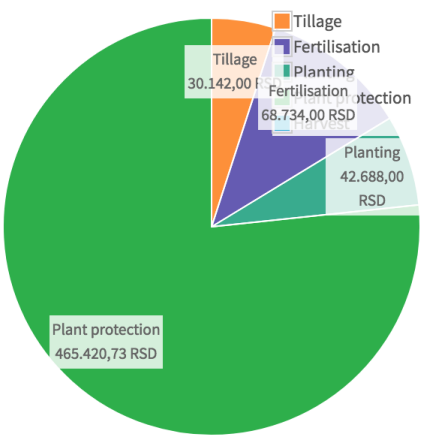
5	09.07.2017.	Planting	Soybean, Favorit	4.800,00	21.236,00	32,00	2.344,00	21.452,00
6	09.07.2017.	Plant protection	Weed control (Herbicides), Sencor plus	9.850,00	74.123,00	98,00	3.423,00	14.569,00
7	09.07.2017.	Tillage	Seedbed preparation, 4 cm	1.520,00	12.354,00	0,00	0,00	0,00
8	09.07.2017.	Tillage	Plowing, 20 cm	5.900,00	12.365,00	0,00	0,00	0,00
9	03.07.2017.	Tillage	Deep ripping, 40 cm	1.200,00	5.423,00	0,00	0,00	0,00

Showing 1 to 9 of 9 entries

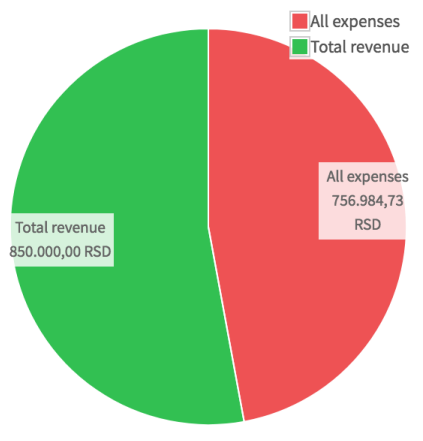
Resources and operations

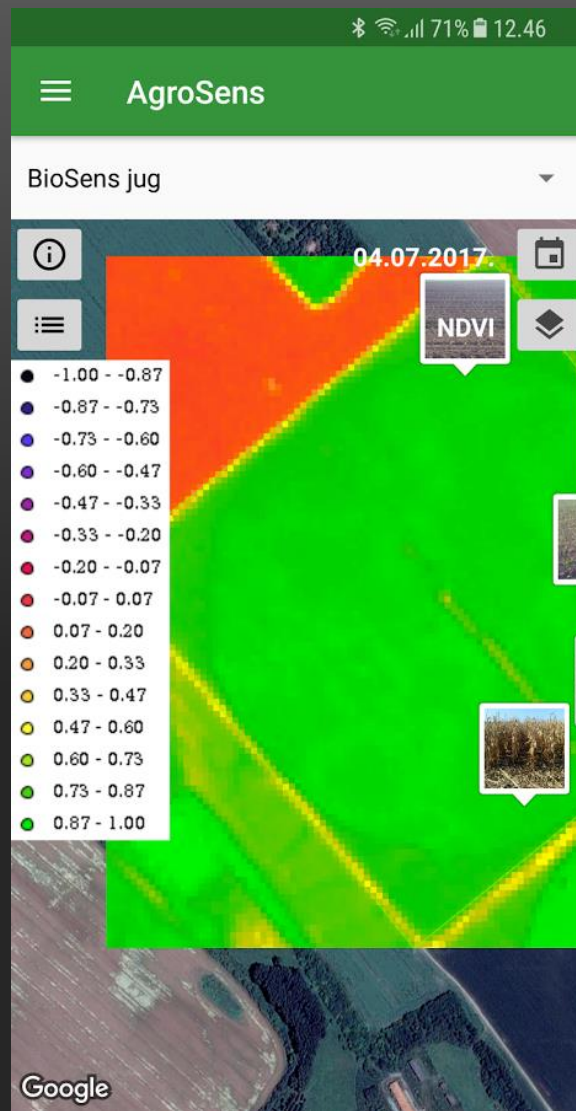
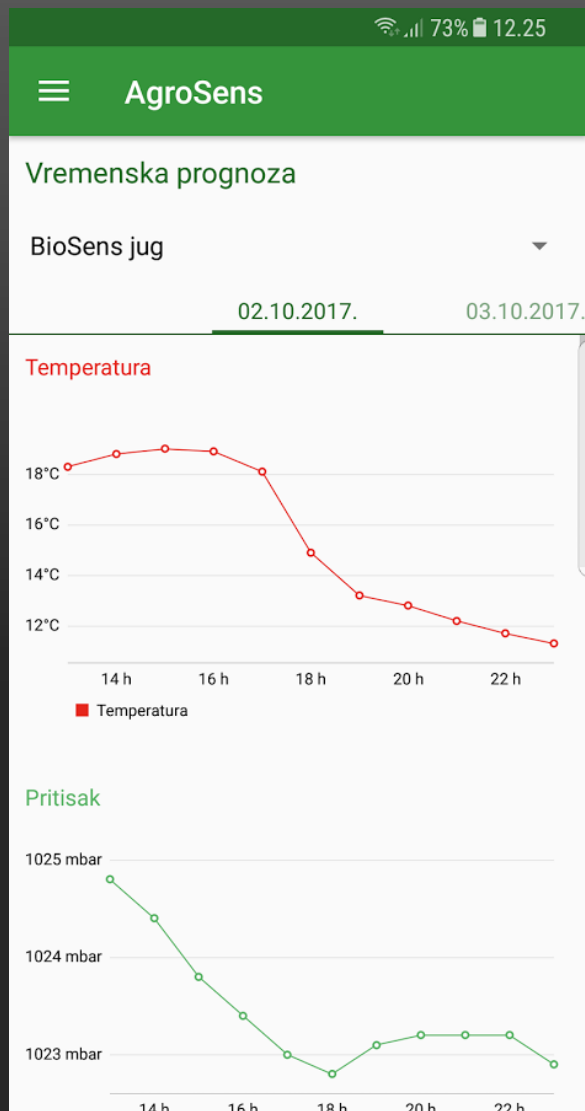


Total expense



Profit





AgroSens

Parcela: BioSens jug

Komentar:

10.06.2017.

Parcela: BioSens jug

Komentar:

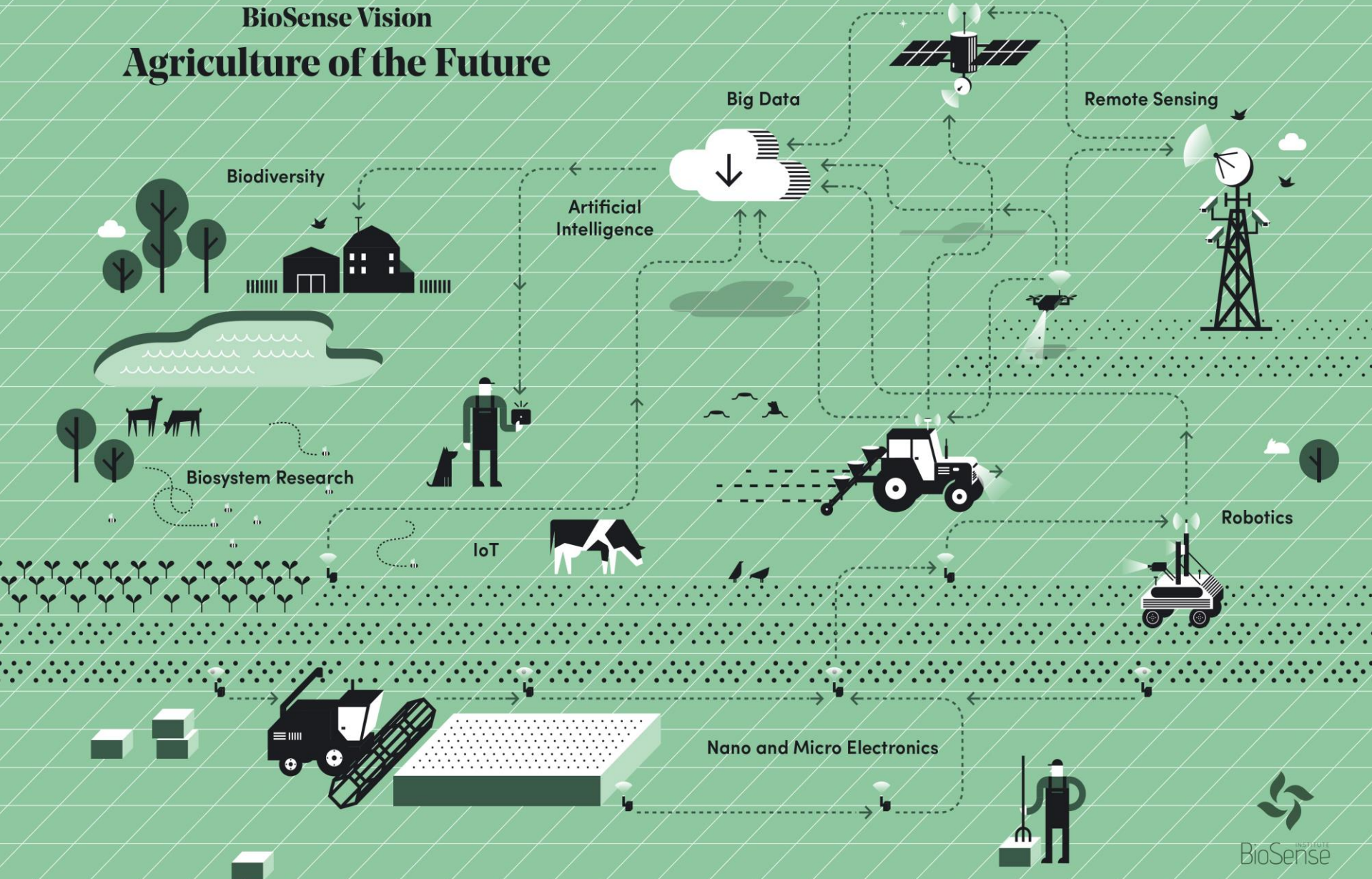
03.06.2017.

Nega useva

Tip nege: Agrotehičke mere

Agrotehnička mera: Međuredno kultiviranje

BioSense Vision Agriculture of the Future





syngenta
CROP CHALLENGE

BioSense

Novi Sad, Serbia

BROUGHT TO YOU BY

informs®

No.1 in 2017



Seed selection algorithm

- Maximise yield & Minimise risk
- 5-10% yield increase with 0 investment





BioSense^{INSTITUTE}

www.BioSense.rs