



The New Way of
GLOBAL BUSINESS



SC&P
Smart City and Partners

Smart Cities, Digitalization and Applications

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- Smart City & Partners A.Ş
- www.smartcityandpartners.com



SC&P and Businesses

2

- It was founded in Ankara in 2019 as a Technology Development and Application Company.

Software



Smart City Management Platforms,
Field Workforce Tracking Software

IOT & E4,5.0 Technologies



- LoRa, Bluetooth, Etc. Protocols
- Original electronic Design
- Hardware and Installation.
- Software, Monitoring and Analysis.

Remote Sensing Applications



- Pollution Monitoring
- Crop Monitoring
- Earth Objects Monitoring
- Change Detection

Energy Consultancy



- Consumption Analysis
- Sustainability Analysis
- Production Feasibility
- Investment Feasibility



2019

Start Up

- Partnership Agreements
- Software Architecture Complete
- First Module Produced, Tested

2020

Overseas Expansion

- East Europe Projects
- Germany Projects
- Smart City Modules Developed
- Energy Sustainability Works

2021

R & D Investments

- Mechatronics - Robotic Solution Partnership
- LoRa Modules Production and Applications
- Sustainable Energy Consultancy

2022

Growth

- Strategic Partnership
- Share Sale

Development Plan

May 2021

"Coming together is a **start**; keeping together is **progress** ; Working together is a **success** .."



Energy, Sustainability and Environmental Services



Services



Plant Based Energy Consumption
Analysis



Energy Production Portfolio Study



Feasibility, Study and Permits



Financing



Installation and Commissioning



Some Examples and Structure of Smart City Management Software



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Software Platform Structure



- Each Module,
- It can work separately and together.
- Can be integrated into existing systems.
- Development and Replacement Can Be Done.
- Its own Map infrastructure is available.
- Services are available from our own servers.

Our Most Used Smart City Management Softwares;

1. Smart Green Area Management System (Parks and Gardens),
2. Intelligent Spraying and Sanitation Module (Environmental Protection)
3. Intelligent Outreach Distribution and Monitoring Module (Outreach)
4. Intelligent Solid Waste Collection and Monitoring Module (Environmental Cleaning)
5. Subcontractor Management System (Science works, Park Gardens and Other)
6. Smart Road Maintenance and Inventory Registration System (Akome, Science Works and Other)
7. Smart Asset/Real Estate Registration, Management, Valuation System (Real Estate, ICT's)
8. Smart Monitor and Inspection System (Police, Veterinary, Environmental Control)
9. Instant Satisfaction Survey App
10. Institution Document File Search Engine (including paper, map, Project, web...)
11. IOT and AI Software

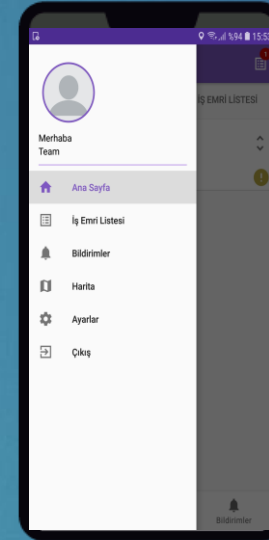
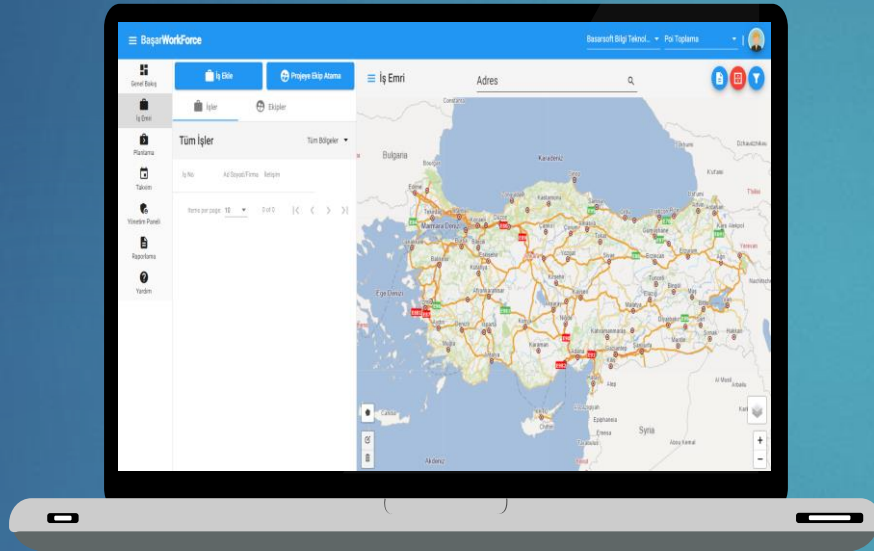
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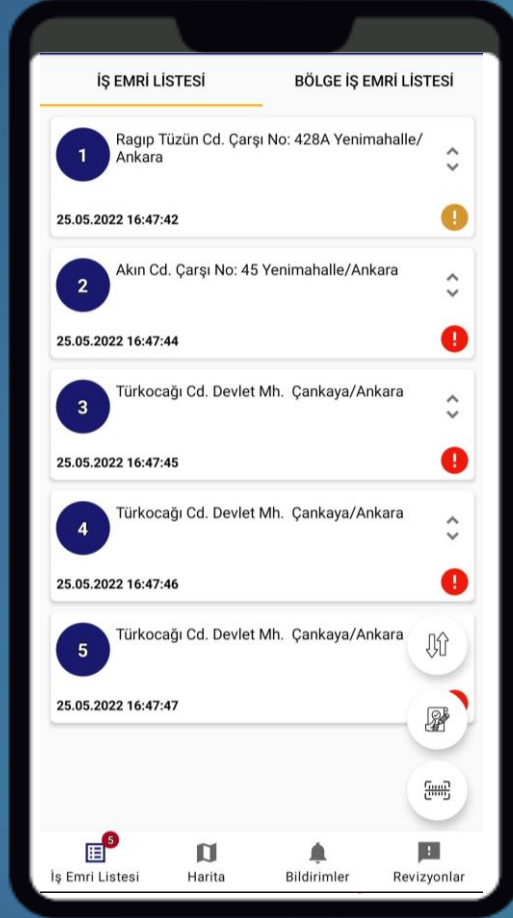
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It is a cloud-based service. There is a web app for managers and a mobile app for field teams.



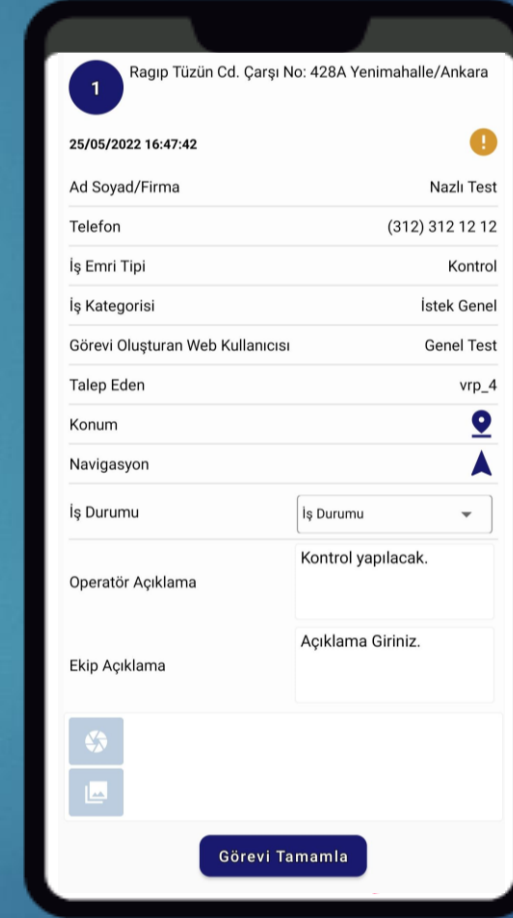
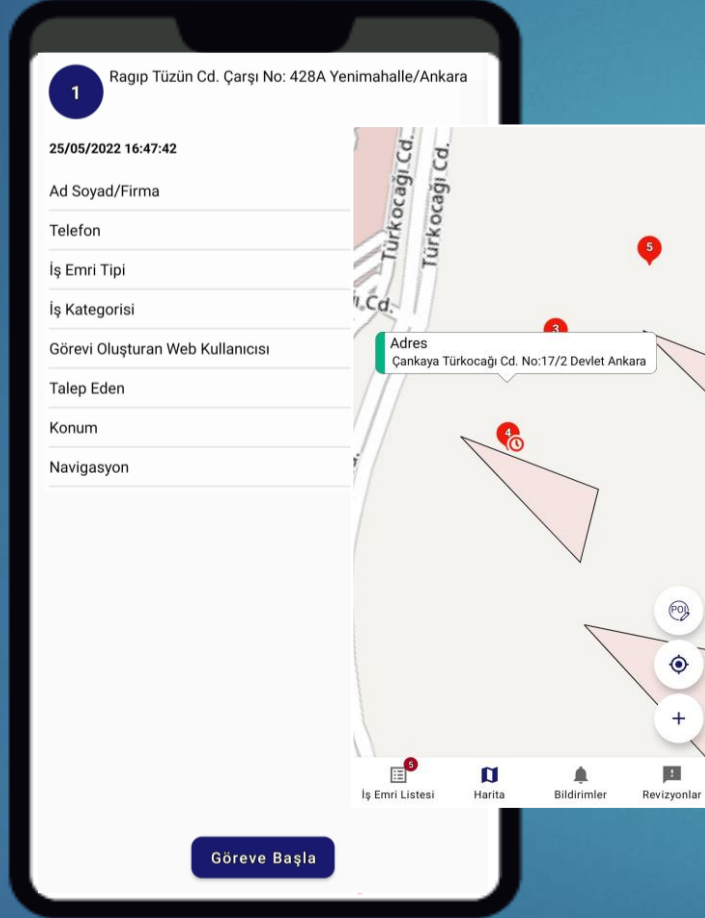
With Mobile App ;



- Through the Firstline Teams mobile app, Teams can view and track jobs and details to complete tasks.

With the Mobile Application;

- The field team completes the work order with the start task button.



- You can view the work details by clicking on the work order.



Bekleyen İş Sayısı

Anlık

10

Son Güncelleme: 2021-04-10 22:54:12



Sahada Aktif Olan İş Sayısı

Anlık

11

Son Güncelleme: 2021-04-10 22:54:12



Tamamlanan İş Sayısı

Anlık

1

Son Güncelleme: 2021-04-10 22:54:12



İptal Edilen İş Sayısı

Anlık

0

Son Güncelleme: 2021-04-10 22:54:12



Tamamlanan İş Sayısı Yüzdesi

Anlık

%5

Son Güncelleme: 2021-04-10 22:54:12



Tamamlanmamış İş Sayısı Yüzdesi

Anlık

%50

Son Güncelleme: 2021-04-10 22:54:12



0

Son Güncelleme: 2021-04-10 22:54:12

Soru Madde Sayısı

Anlık

0

Son Güncelleme: 2021-04-10 22:54:12

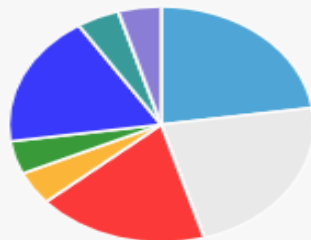
All Missions Track Instantly and In
The Desired Time Interval Edilir



İş Tipi

Anlık

Sulama Ağaç Bakımı Çiçek Dikimi Çim Biçimi
Budama Tadilat Tesisat Elektrik

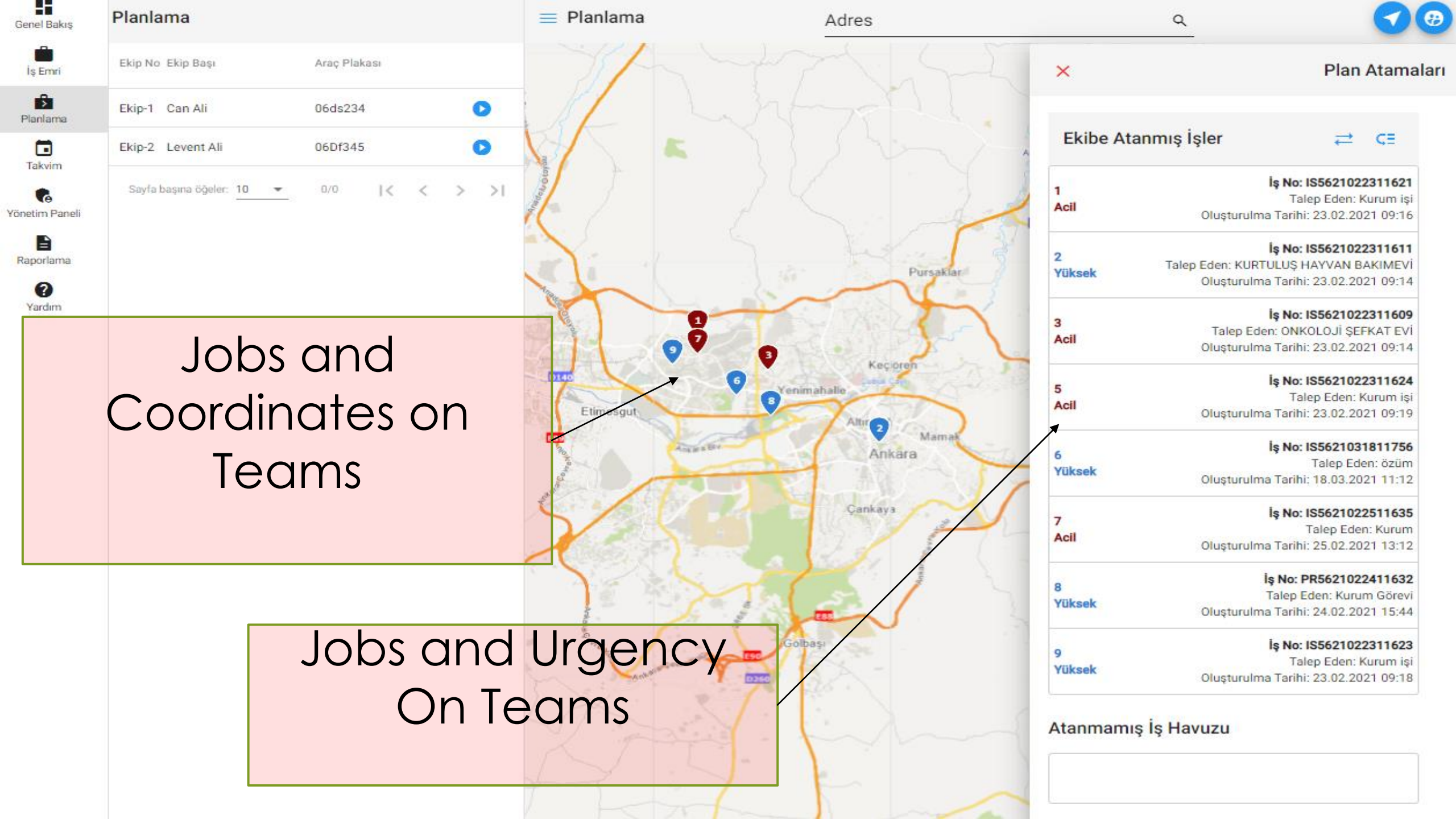


İş Kategorisi

Anlık

İstek Periyodik





Jobs and
Coordinates on
Teams

Jobs and Urgency
On Teams

Ekibe Atanmış İşler

- | | |
|-------------|---|
| 1
Acil | İş No: IS5621022311621
Talep Eden: Kurum işi
Oluşturulma Tarihi: 23.02.2021 09:16 |
| 2
Yüksek | İş No: IS5621022311611
Talep Eden: KURTULUŞ HAYVAN BAKIMEVİ
Oluşturulma Tarihi: 23.02.2021 09:14 |
| 3
Acil | İş No: IS5621022311609
Talep Eden: ONKOLOJİ ŞEFKAT EVİ
Oluşturulma Tarihi: 23.02.2021 09:14 |
| 5
Acil | İş No: IS5621022311624
Talep Eden: Kurum işi
Oluşturulma Tarihi: 23.02.2021 09:19 |
| 6
Yüksek | İş No: IS5621031811756
Talep Eden: özüm
Oluşturulma Tarihi: 18.03.2021 11:12 |
| 7
Acil | İş No: IS5621022511635
Talep Eden: Kurum
Oluşturulma Tarihi: 25.02.2021 13:12 |
| 8
Yüksek | İş No: PR5621022411632
Talep Eden: Kurum Görevi
Oluşturulma Tarihi: 24.02.2021 15:44 |
| 9
Yüksek | İş No: IS5621022311623
Talep Eden: Kurum işi
Oluşturulma Tarihi: 23.02.2021 09:18 |

Atanmamış İş Havuzu

IOT (internet of things) Technology Solutions



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What is IOT (Internet of Things)?

- ▶ The Internet of Things, or IoT, is a system of human-to-human data transfer capability provided by interrelated computing devices, mechanical and digital machines, objects, animals, or humans, and unique identifiers (UIDs).
- ▶ The Internet of Things - a person with a heart monitor implant, a farm animal with a biochip transponder, a car with built-in sensors to alert the driver when tyre pressure is low, or any other natural or man-made.
- ▶ An object that can be assigned an Internet Protocol (IP) address and transfer data over a network.
- ▶ An IoT ecosystem consists of web-enabled smart devices that use embedded systems such as processors, sensors, and communications hardware to collect, send, and act on data from their environment.
- ▶ IoT devices share sensor data that they collect by connecting to an IoT gateway or other edge device where data is sent to the cloud for local analysis or analysis. Sometimes these devices communicate with other relevant devices and act on the information they receive from each other.
- ▶ Devices do most of the work without human intervention.

Our capabilities



Card and Module Design



Programming and Software



Analysis and Analytics



Installation & Montage



Service and Update



Administrator Monitoring Screens (Dashboards)





IOT (Internet of Things) Jobs

- Any Sensor Data and Control Order;
- continuous
- Long Distance,
- Without electricity,
- Forwarding and managing,
- Independence from Local Networks.
- Remote Intervention and Monitoring
- Analysis and Analytics

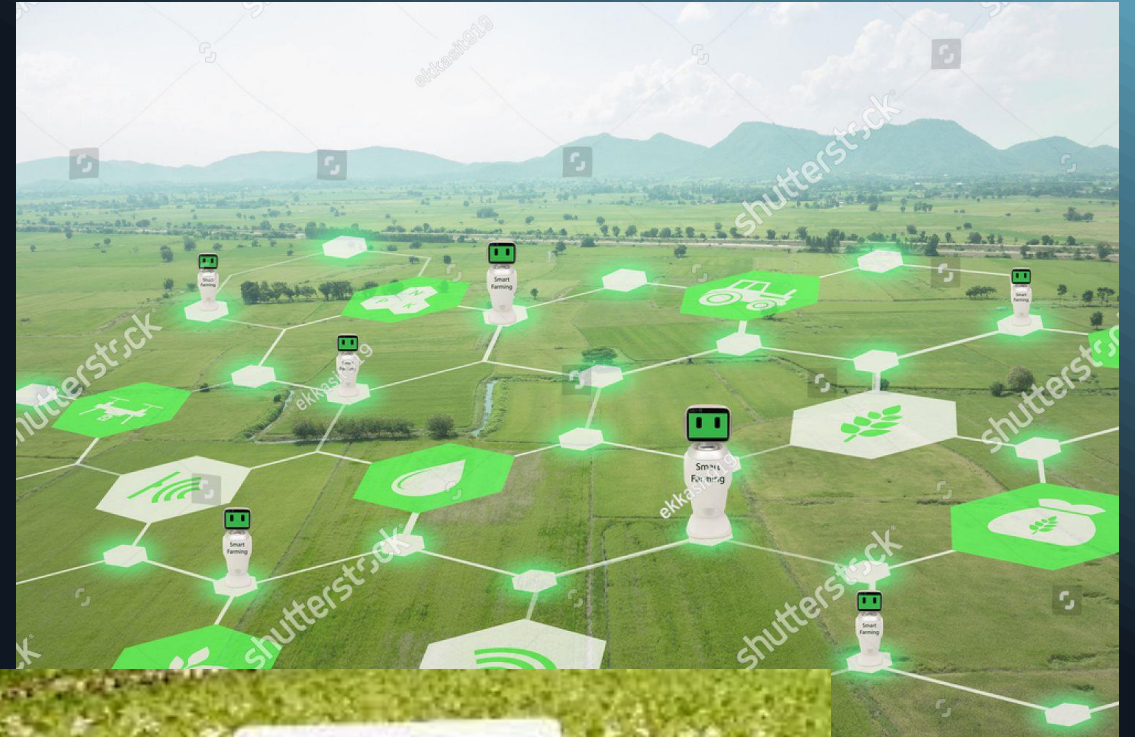
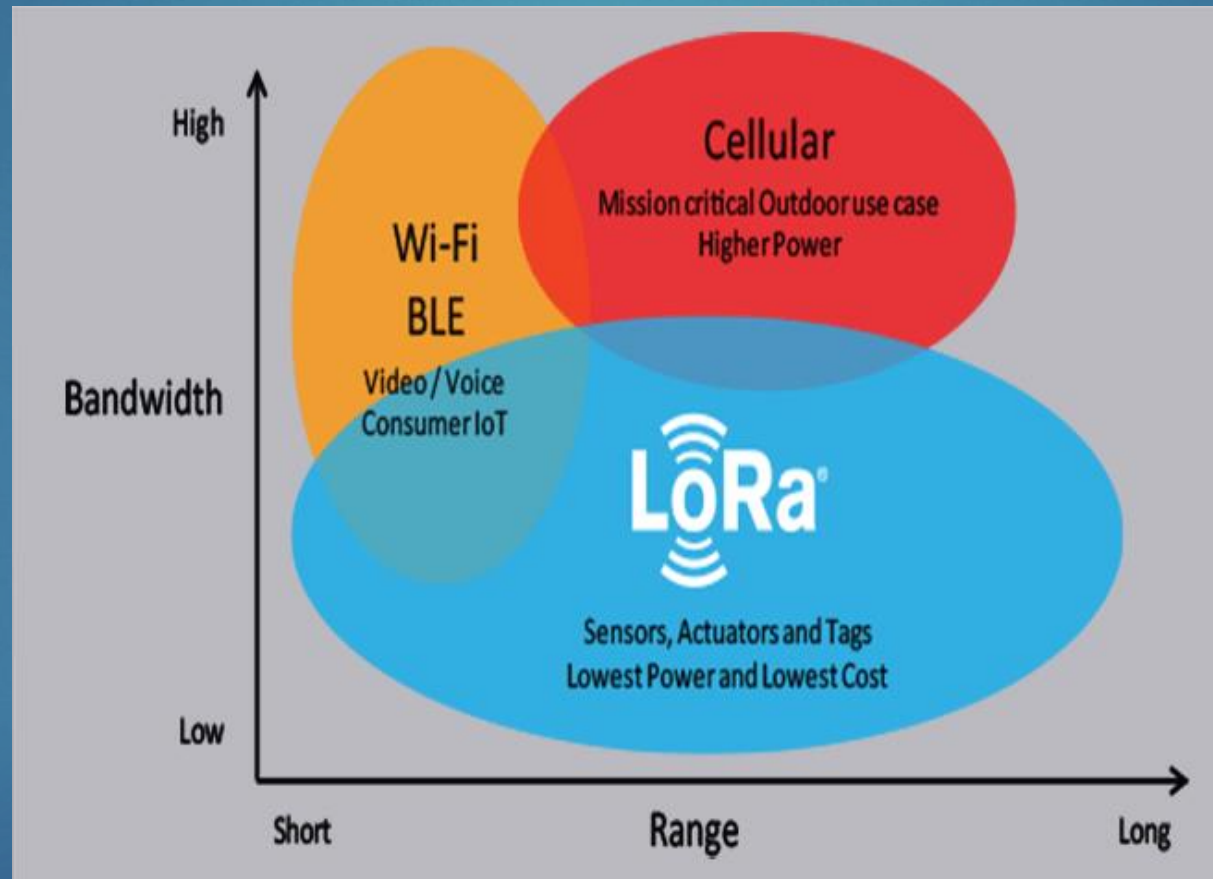


IMAGE ID: 692141314
www.shutterstock.com

san 2021

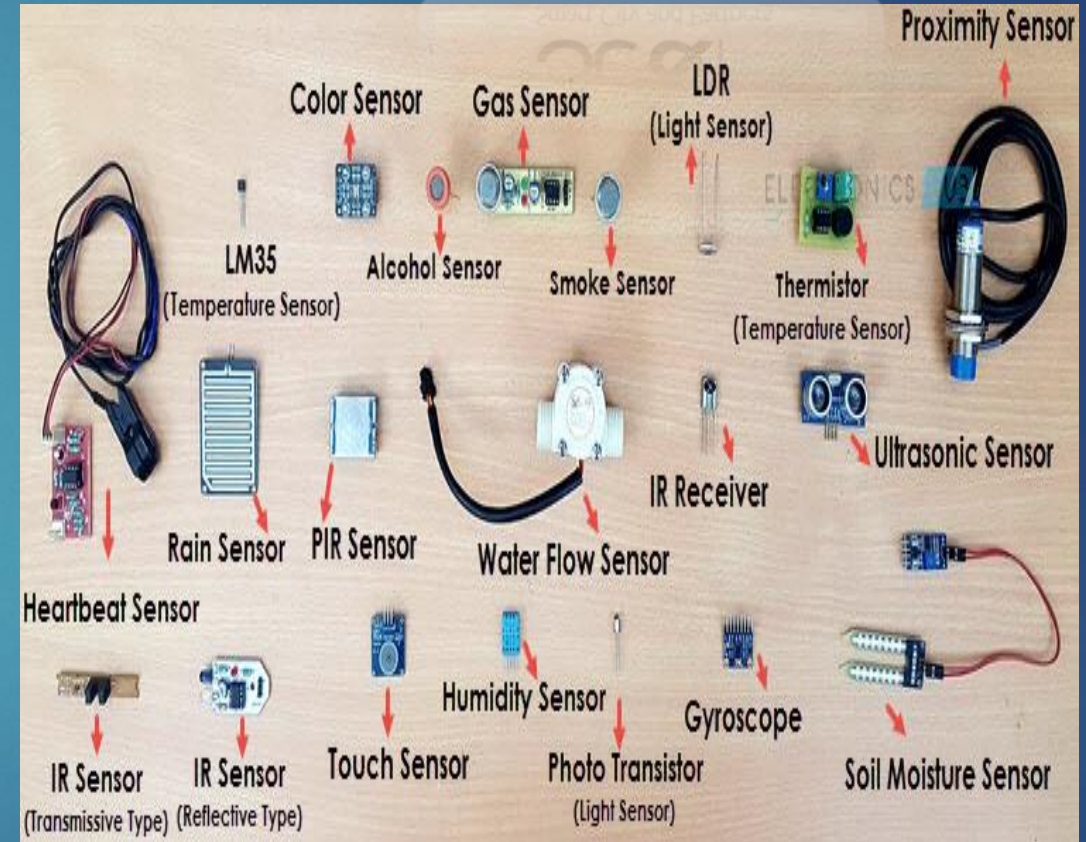
IOT Protocols Used



Some Sensors We Use



- Humidity sensor
- Position sensor
- Magnetic Sensor (Hall Effect Sensor)
- Microphone (Sound Sensor)
- Tilt Sensor
- Flow and Level Sensor
- PIR Sensor
- Touch sensor
- Strain and Weight Sensor
- Temperature sensor
- Proximity sensor
- Accelerometer
- IR Sensor (Infrared Sensor)
- Pressure sensor
- Light sensor
- Ultrasonic sensor
- Smoke, Gas and Alcohol Sensor
- Touch sensor
- Color Sensor





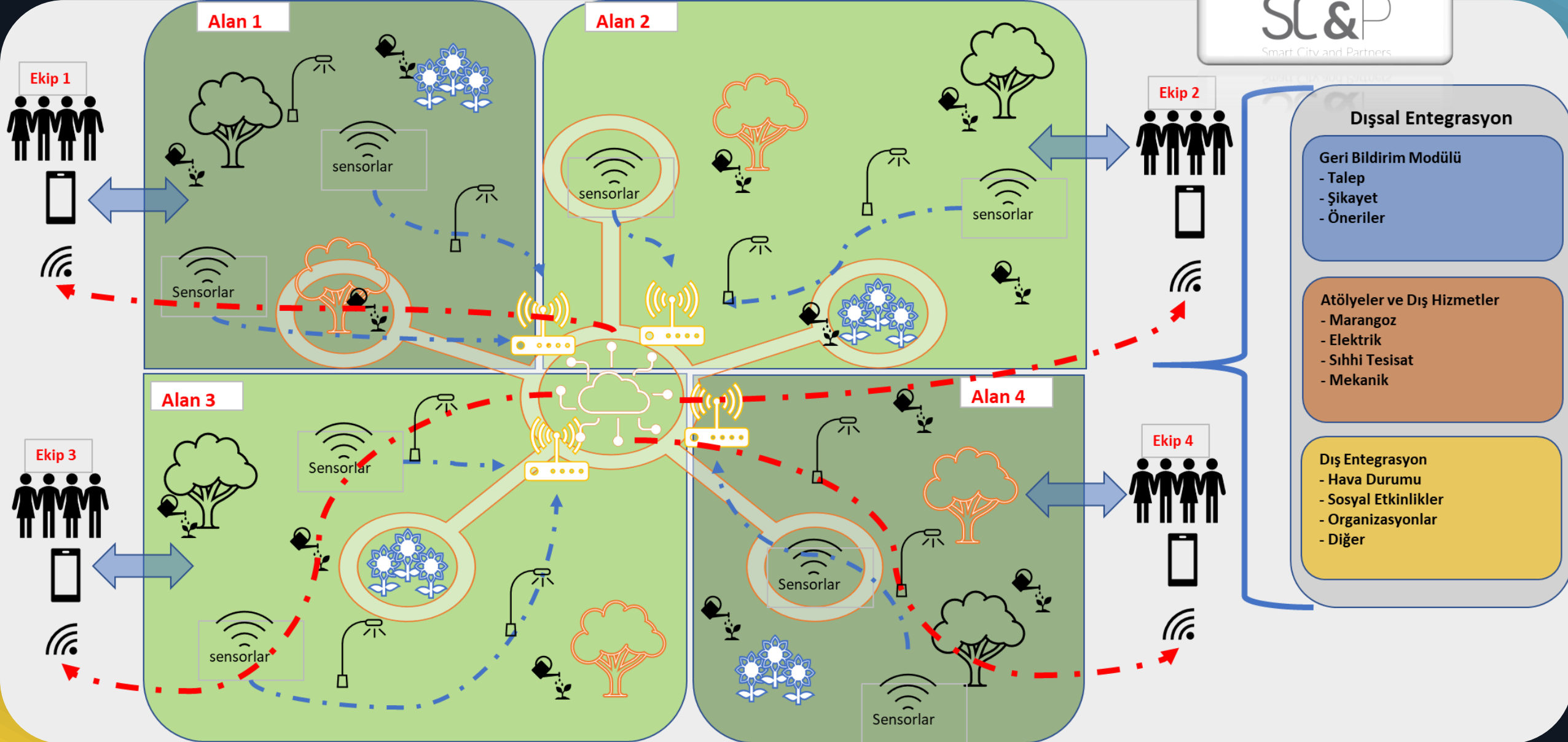
IOT (Internet of Things) Systems

SAMPLE APPLICATIONS

Smart Green Areas Management System



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ANKARA HABERLERİ

Akıllı sistemler tasarruf sağlayacak

Hürriyet Haber 23.05.2021 - 23:51 | Son Güncelleme : 24.05.2021 - 08:17

Yenimahalle Belediyesi, yakın zamanda kullanıma açılan Murat Karayalçın Kent Meydanı'nda, kullanılan teknolojiler sayesinde yüzde 40'a varan su tasarrufu ile işçilik, bakım maliyetlerinde ciddi oranda tasarruf sağlayacak.



Hürriyet Haber



Uygulanan Akıllı Yeşil Alanlar (AYA) ve Nesnelerin İnterneti (İOT) sistemiyle, yeşil alanlara yerleştirilen nem sensörleri ile toplanan veriler sonrasında ihtiyaç kadar sulama yapılırken, akıllı aydınlatma sistemi de enerjiden tasarruf sağlayacak. Ayrıca meydana kullanılan haberleşme teknolojisi ile ihtiyaç halinde personele gereksinim duyulmadan sisteme uzaktan müdahale edilebilecek.



Genel

Genel Haberleri

Haberler > Yenimahalle'de 'Akıllı Yeşil Alan' dönemi

Yenimahalle'de 'Akıllı Yeşil Alan' dönemi

23.05.2021 14:13



PAYLAŞ f t G+ e

Yenimahalle Belediyesi, pandemi boyunca yenileme işlemini sürdürdüğü ve yakın zamanda vatandaşın kullanımına açtığı Murat Karayalçın Kent Meydanı'nda, su ve bakım maliyetlerinden tasarruf etmek amacıyla son teknolojiyi kullanıyor.

Batıkent bölgesinde vatandaşların sıklıkla uğradığı Murat Karayalçın Kent Meydanı'na Akıllı Yeşil Alanlar (AYA) ve Nesnelerin İnterneti (İOT) sistemi ile baştan aşağı yenileyen Yenimahalle Belediyesi, meydana ve çevresindeki yeşil alanda kullandığı son teknoloji sistemler sayesinde yüzde 40'a varan su tasarrufu ve işçilik, bakım maliyetlerinde ciddi oranda tasarruf sağlayacak.

TÜRKİYE'DE İLK AKILLI YEŞİL ALAN

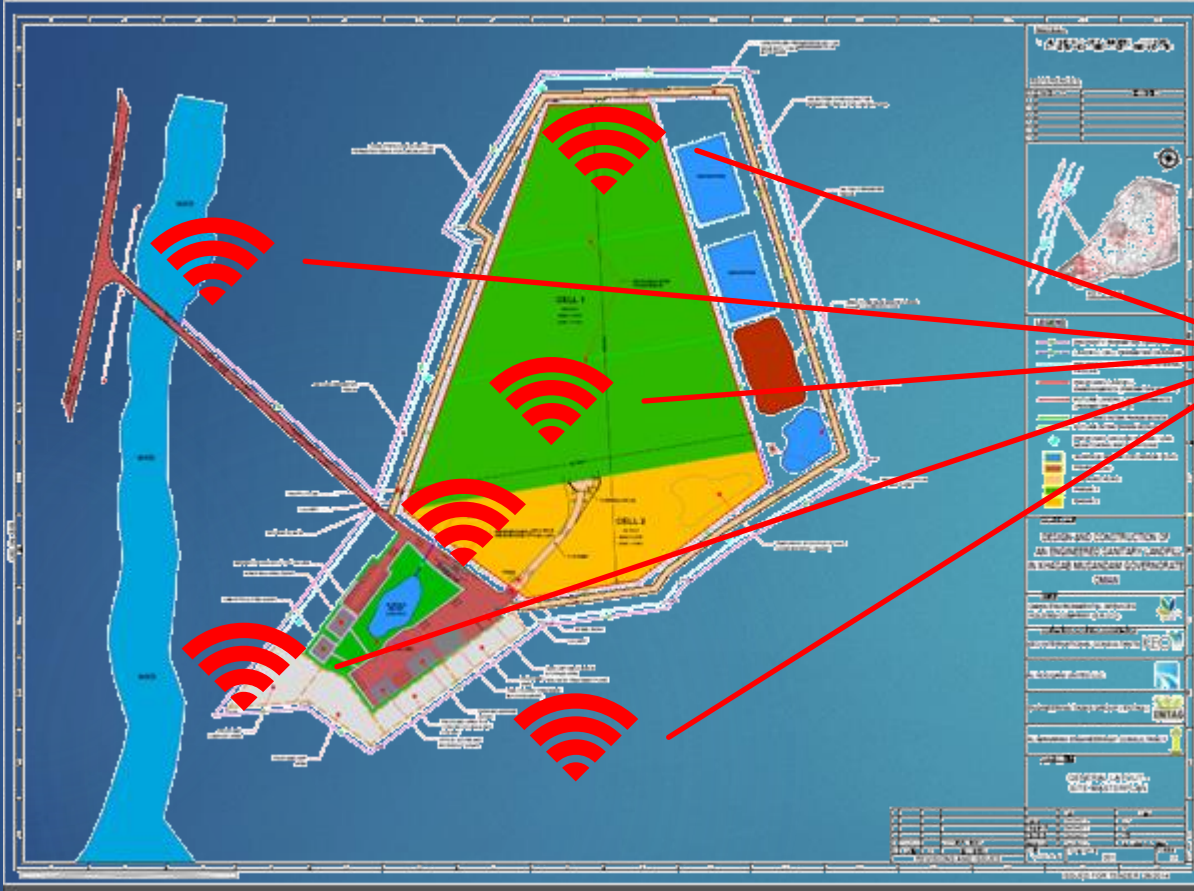
Türkiye'nin ilk akıllı yeşil alan olma özelliğini taşıyan Batıkent Murat Karayalçın Kent Meydanı'nda uygulanan AYA ve İOT sistemi sayesinde, yeşil alanlara yerleştirilen nem sensörleri ile toplanan veriler sonrasında ihtiyaç kadar sulama yapılırken, akıllı aydınlatma sistemi de enerjiden tasarruf sağlayacak. Mevcut bitki örtüsünün ideal bakımını sağlayacak sistem sayesinde, su kaçakları da önceden tespit edilebilecek. Ayrıca meydana kullanılan haberleşme teknolojisi ile ihtiyaç halinde personele gereksinim duyulmadan sisteme uzaktan müdahale edilebilecek.

"SU VE ENERJİ TÜKETİMİNE DİKKAT ETMELİYİZ"

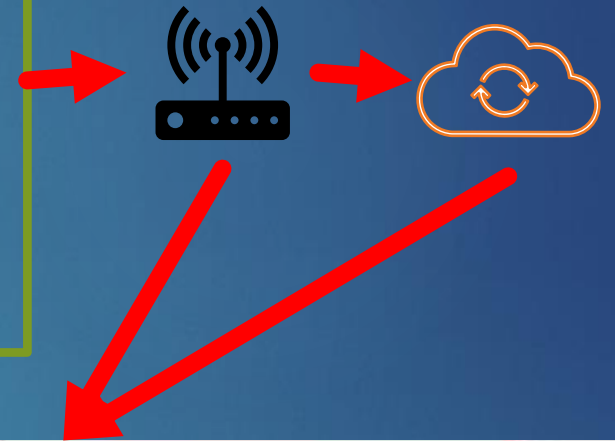
Yenimahalle'nin ve kentün geleceği için yapılan yatırımlarda su ve enerji tasarrufuna büyük önem verildiğini belirten Yaşar, "Dünyamızın kısıtlı olan kaynaklarını kullanırken çok dikkatli olmanın zamanı geldi ve geçiyor. Yenimahalle Belediyesi olarak ilçemize kazandırdığımız yeşil alanlarda ve parklarda su ve enerji tasarrufunu ön planda tutuyoruz. İlçenin simgesi haline gelen Batıkent Murat Karayalçın Kent Meydanı'nda da bu konuda gereken hassasiyeti gösterdik ve ekiplerimiz tasarruf için son teknolojiye sahip sistemleri kullandı. Gelecek nesillere yaşanabilir bir dünya bırakmak istiyorsak şimdiden su ve enerji tüketimimize dikkat etmeliyiz" dedi.

Turkey's First Smart Park in the Press

Monitoring Waste sites



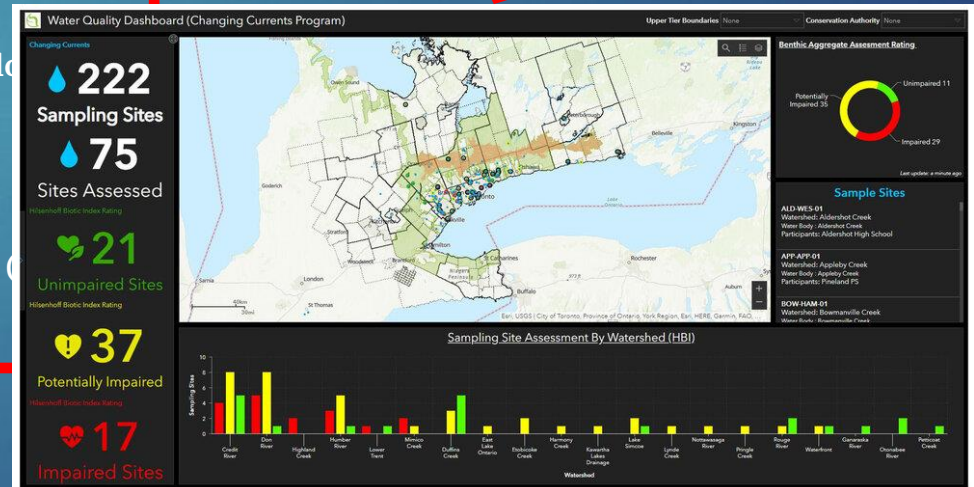
- ▶ Carbon Dioxide
- ▶ methane
- ▶ Ambient Heat
- ▶ Surface/Bottom Heat
- ▶ moisture
- ▶ Conductivity
- ▶ Leaching



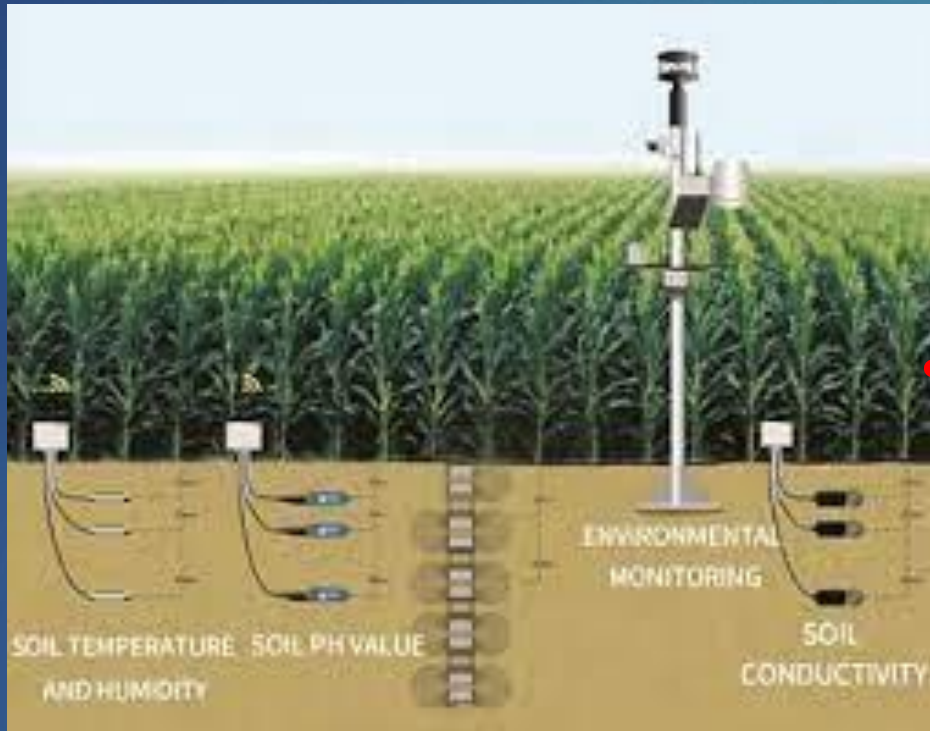
Monitoring of Seas and Streams



- ▶ Ph
- ▶ Dissolved oxygen (DO),
- ▶ Oxidation reduction potential (ORP),
- ▶ Conductivity (salinity),
- ▶ Blur
- ▶ temperature
- ▶ Dissolved ions
 - ▶ Fluoride (Fluoride (F⁻), Calcium (Ca²⁺), Nitrate (NO₃⁻), Chloride (Cl⁻),
 - ▶ Iodine (I⁻), Cupric (Cu²⁺), Bromide (Br⁻), Silver (Ag⁺),
 - ▶ Fluorine Ammonia (BF₄⁻),
 - ▶ Ammonia (NH₄), Lithium (Li⁺), Magnesium (Mg²⁺), Nitrite (NO₂⁻),
 - ▶ Perchlorate (ClO₄), Potassium (K⁺), Sodium (Na⁺).



Smart Agriculture



- ▶ Ph
- ▶ moisture
- ▶ Conductivity (salinity),
- ▶ temperature
- ▶ Minerals



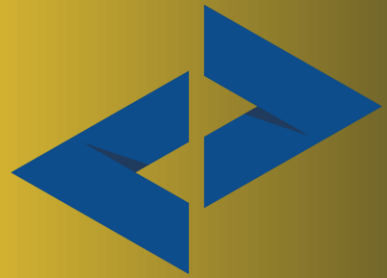
Mining and Underground Works Monitoring



- ▶ Air quality sensors are used to monitor concentrations of CO₂, CH₄, CO, SO₂, H₂S, NO₂ and others. Monitoring gas concentration provides adaptive control of ventilation.
- ▶ All Employees and vehicles can be monitored with Beacons



Remote Sensing Solutions

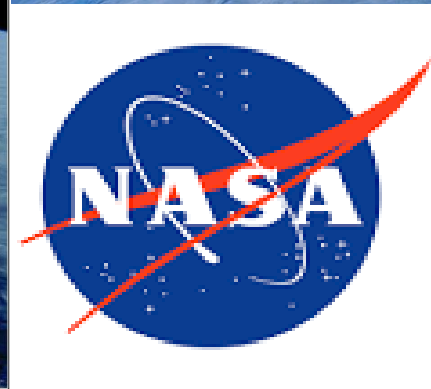
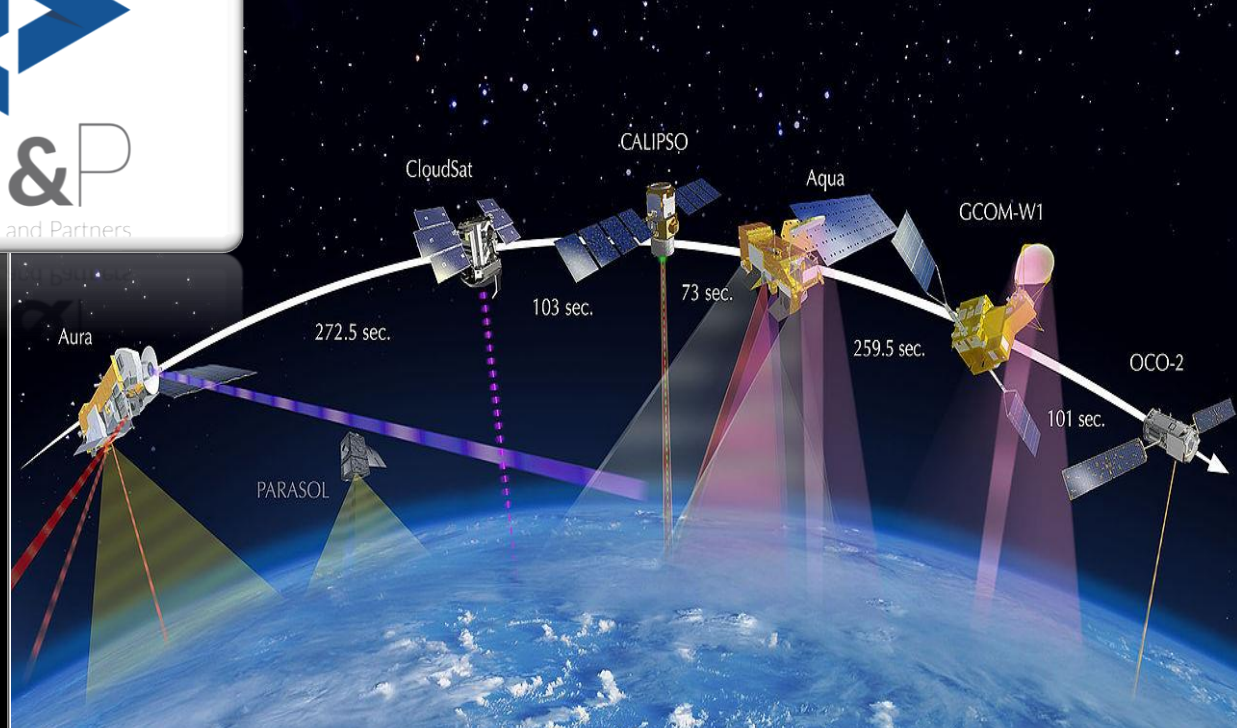
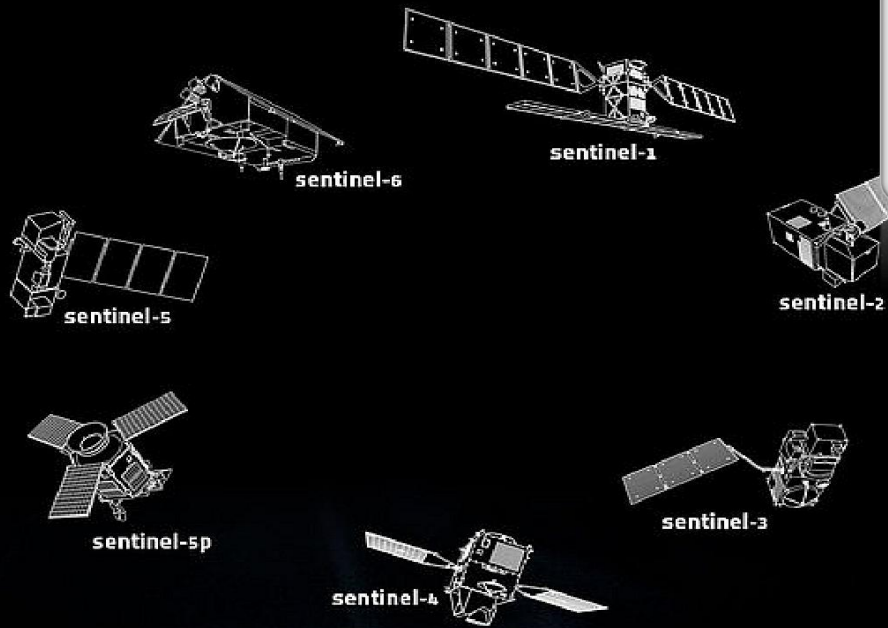


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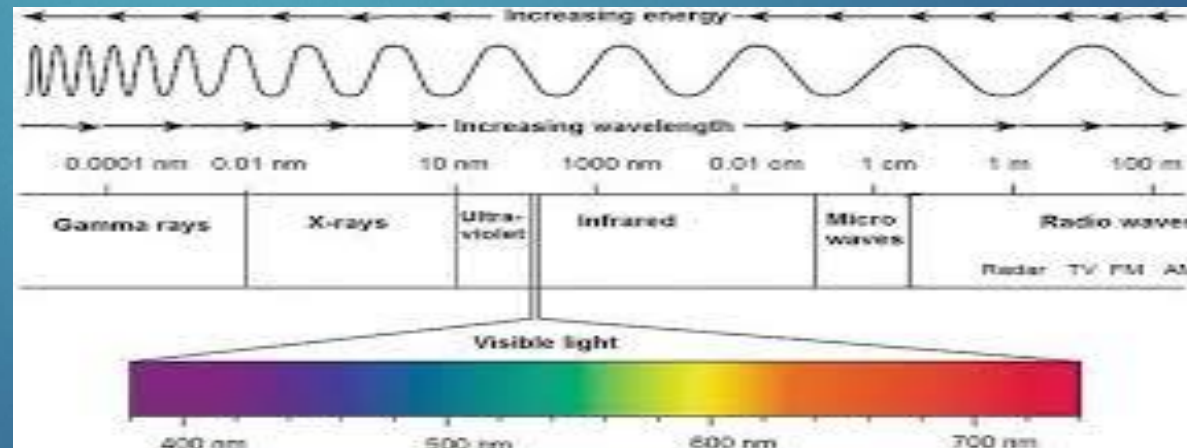
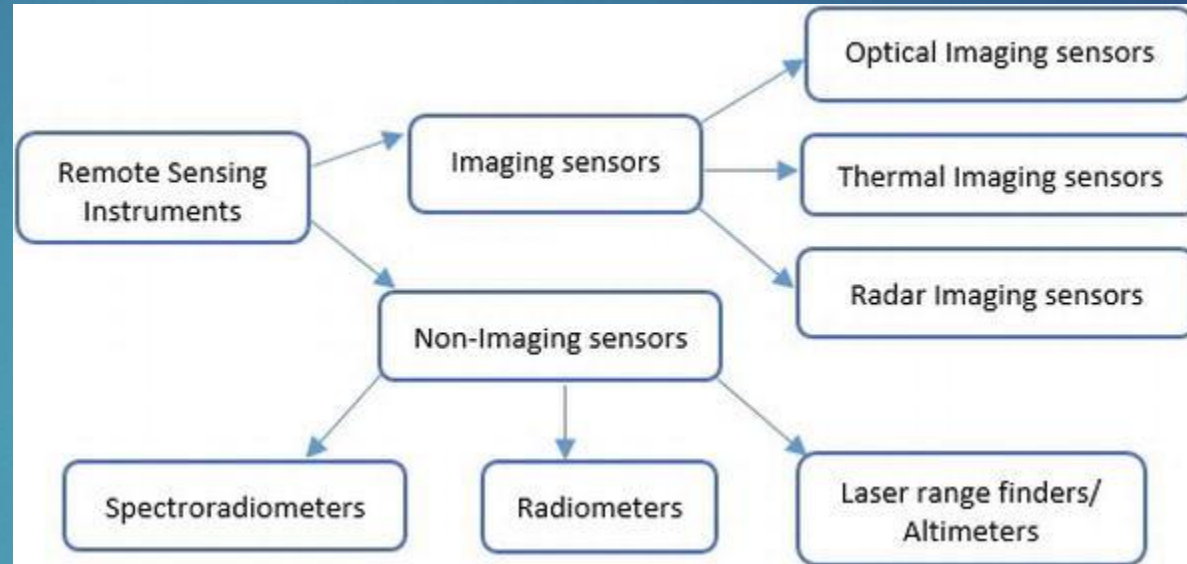


Institutions and Satellites Where We Receive Data



What Sensor Data We Use ?

- ▶ Optical 13 bands
- ▶ Lidar
- ▶ SAR
- ▶ Infrared
- ▶ Thermal
- ▶ Radar Altimeter
- ▶ Batimetre
- ▶ Spectrometers



What We Can Detect Remotely ?



- ▶ Stream, Lake, Marine Pollution and Health,
- ▶ Air Pollution,
- ▶ Agricultural Products,
- ▶ Soil Moisture and Yield,
- ▶ Forest Health and Biomass,
- ▶ Flood and Flood Simulations,
- ▶ Forest Fires and Potential,
- ▶ Zoning Irregularities,
- ▶ Change Analysis and Detection,

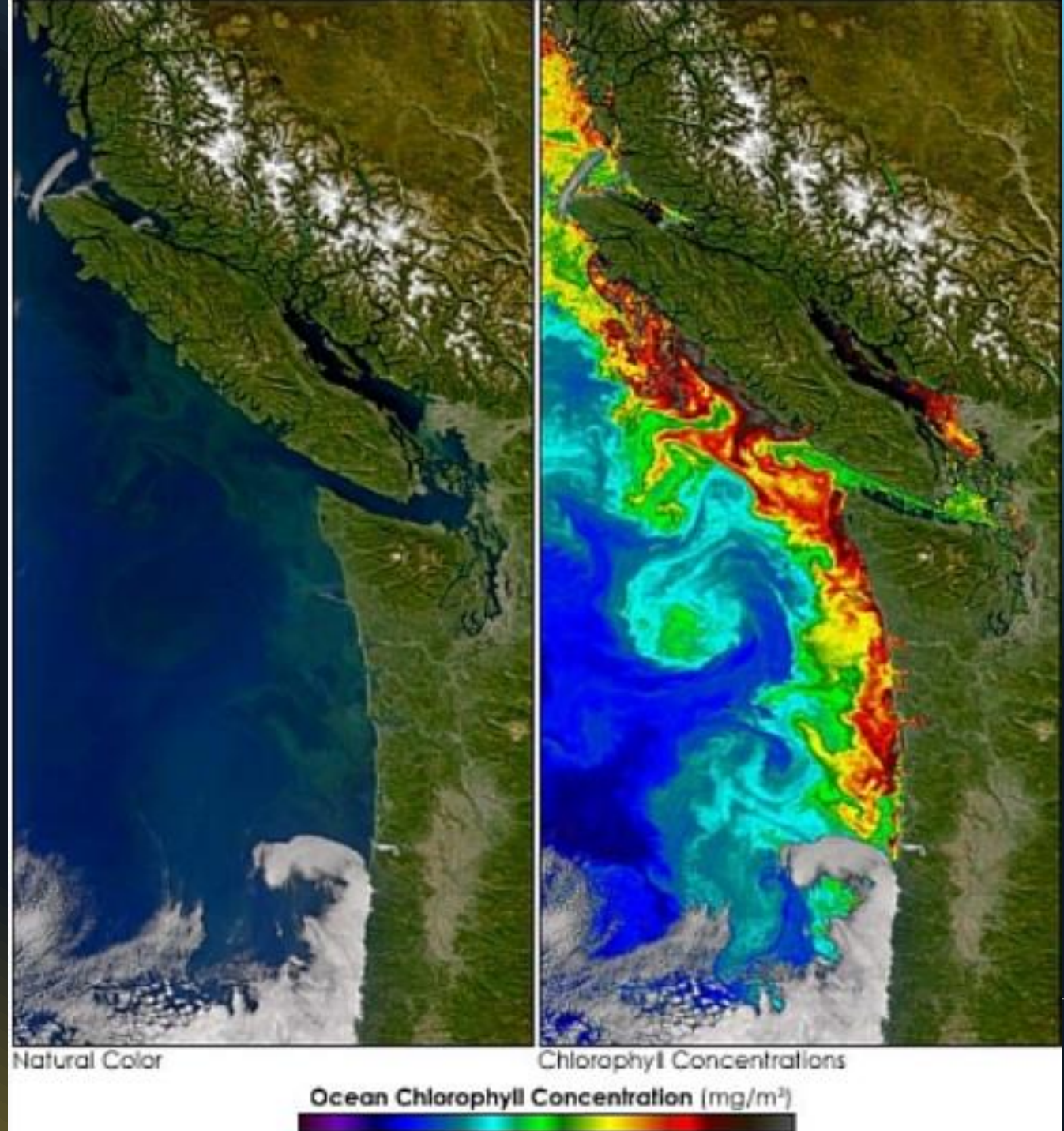


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Marine and Coastal Pollution

- Sediment,
- Colour
- Photoplankton,
- Oil and Hydrocabons,
- Garbage Islands



Natural Color

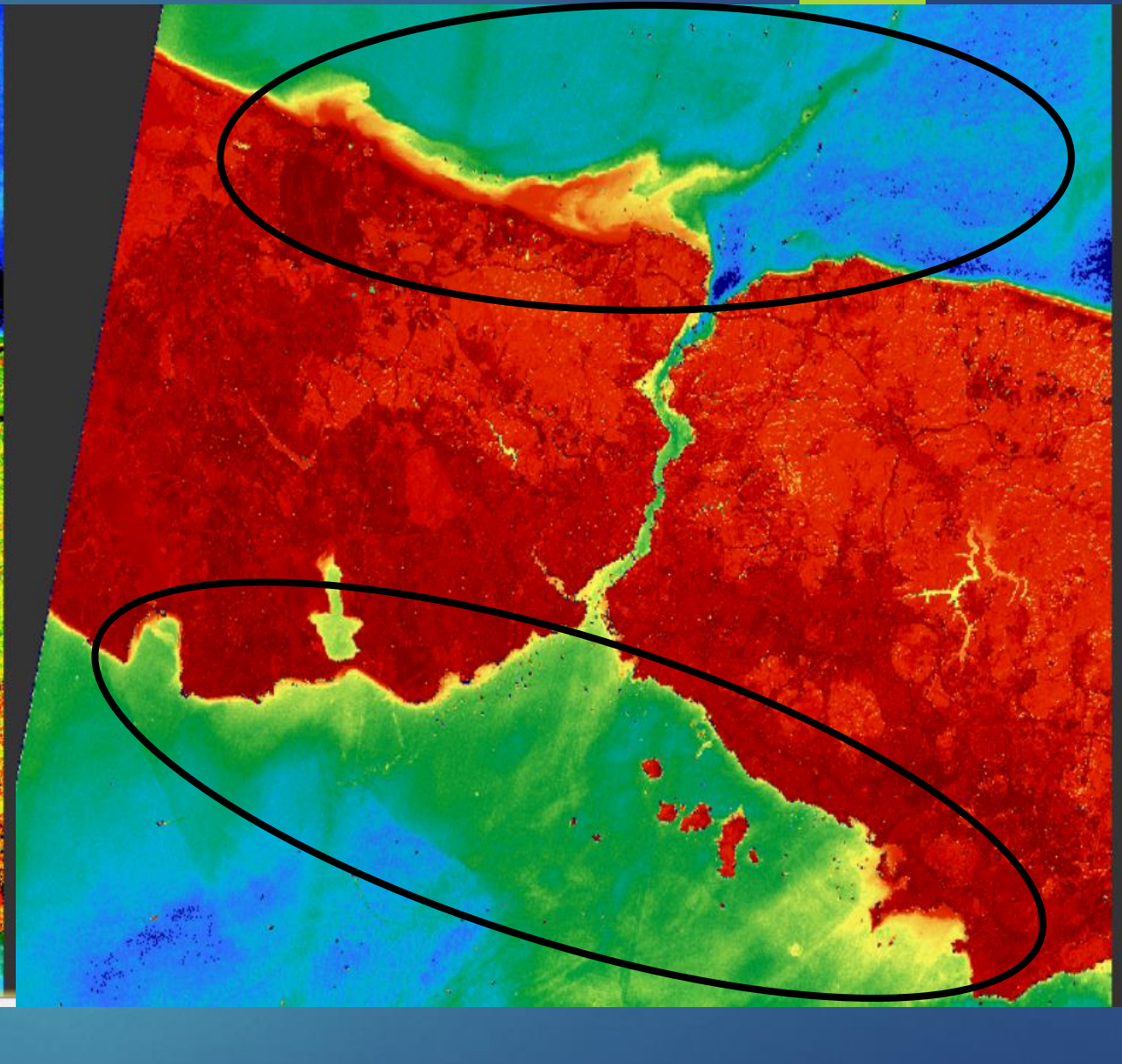
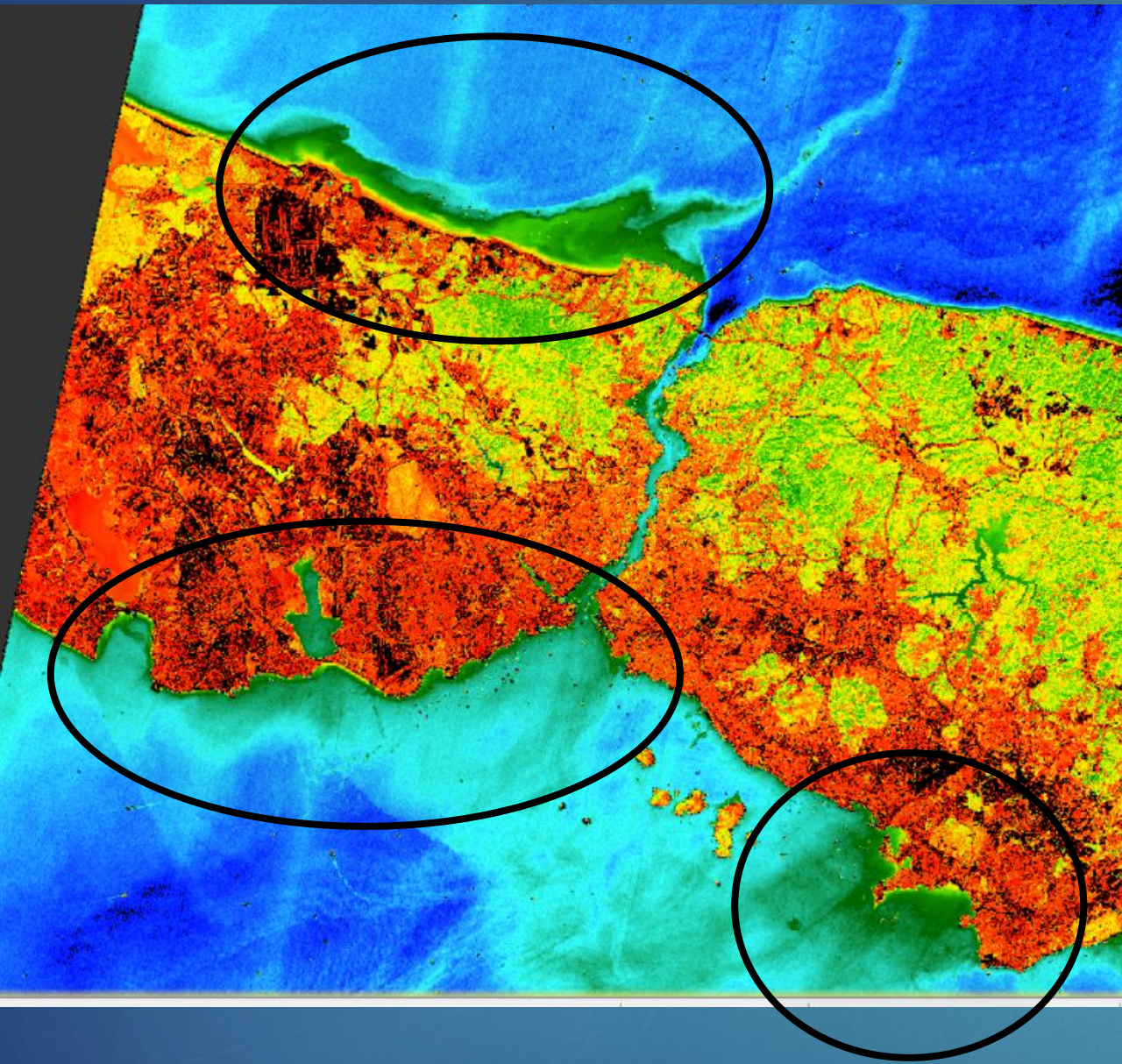
Chlorophyll Concentrations

Ocean Chlorophyll Concentration (mg/m³)

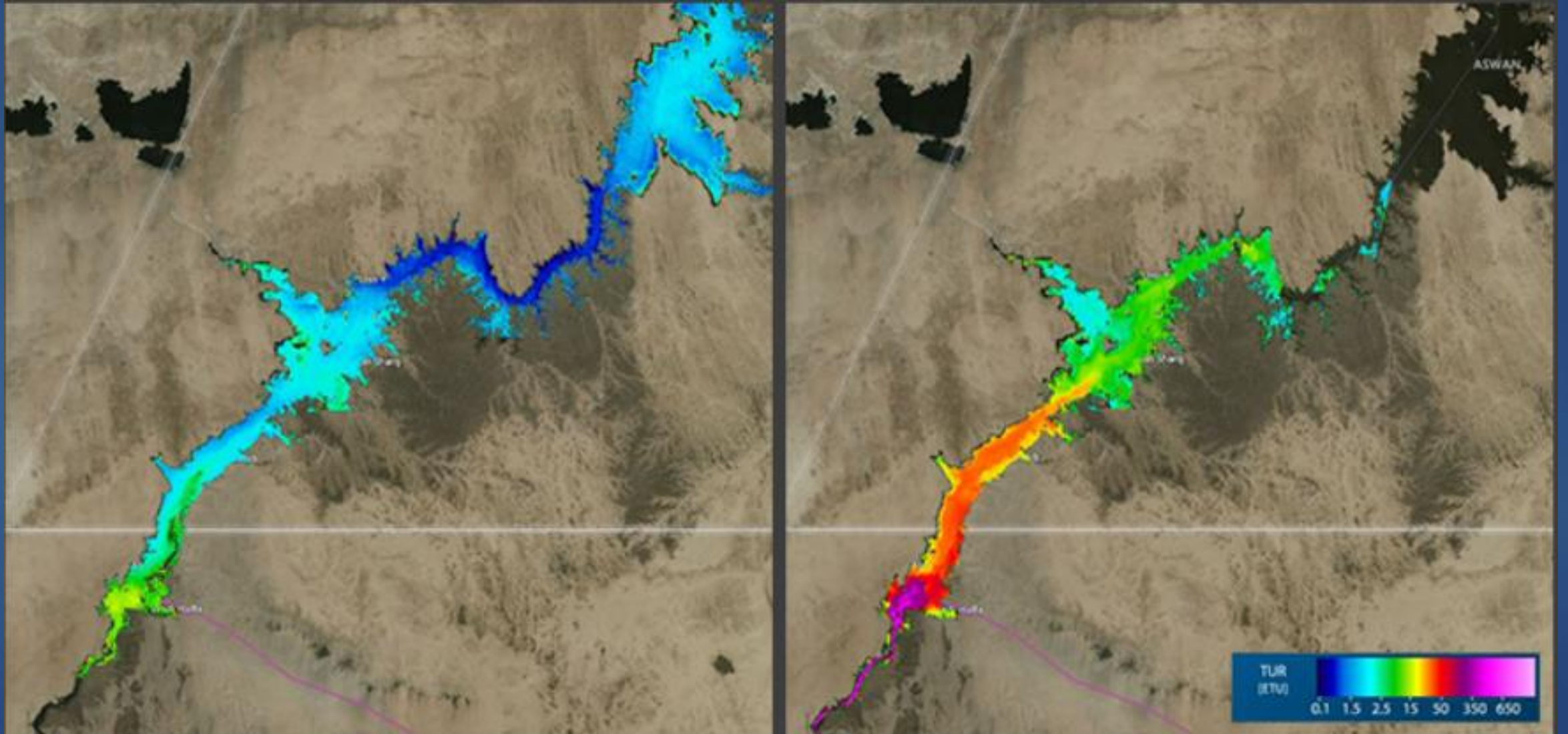
Istanbul Case Study

- ▶ Date: 26.09.2021
- ▶ Time: 08:41 – 08:47
- ▶ Sentinel 2A satellite
- ▶ 12 bands different wavelength
- ▶ Infra Red Monitoring
- ▶ SAR Data

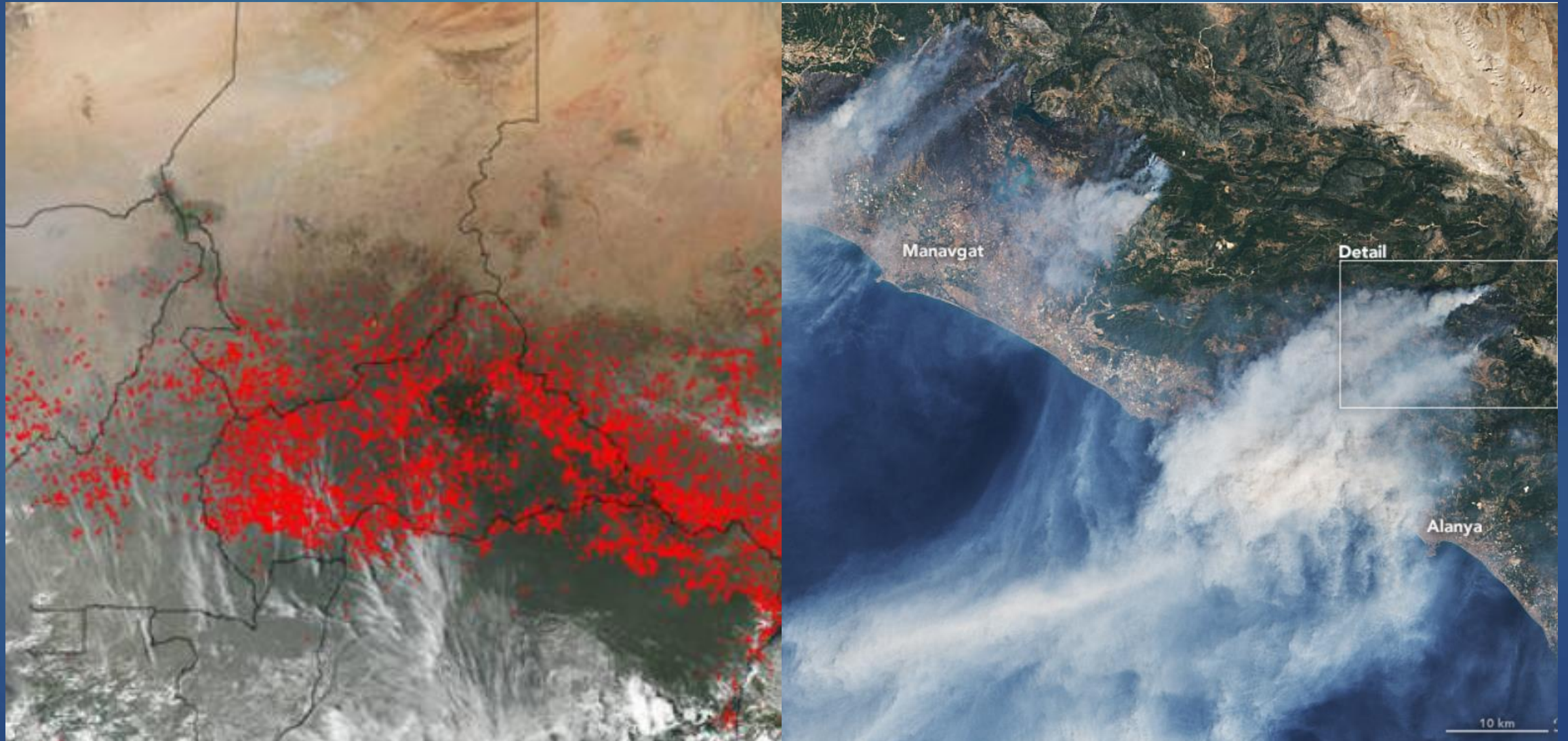




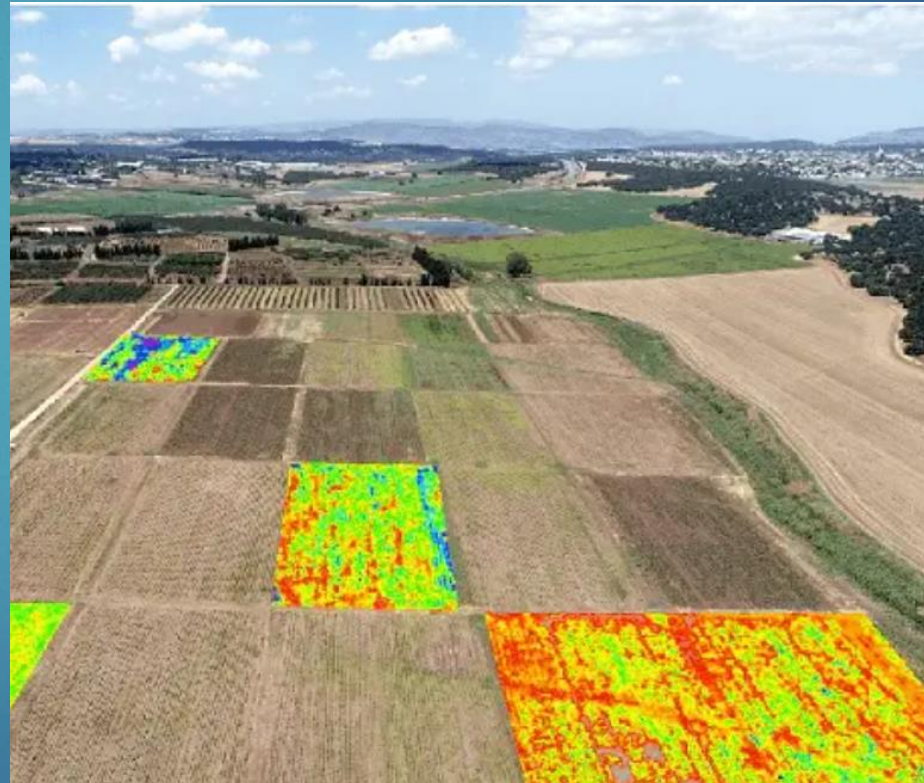
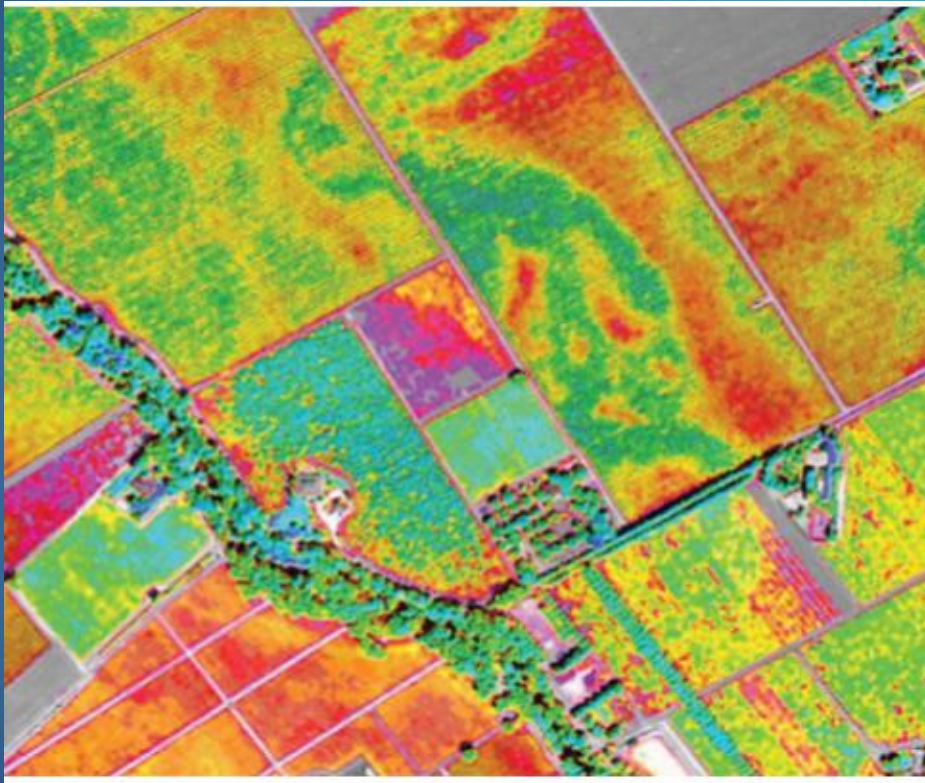
Stream and Reservoir Monitoring

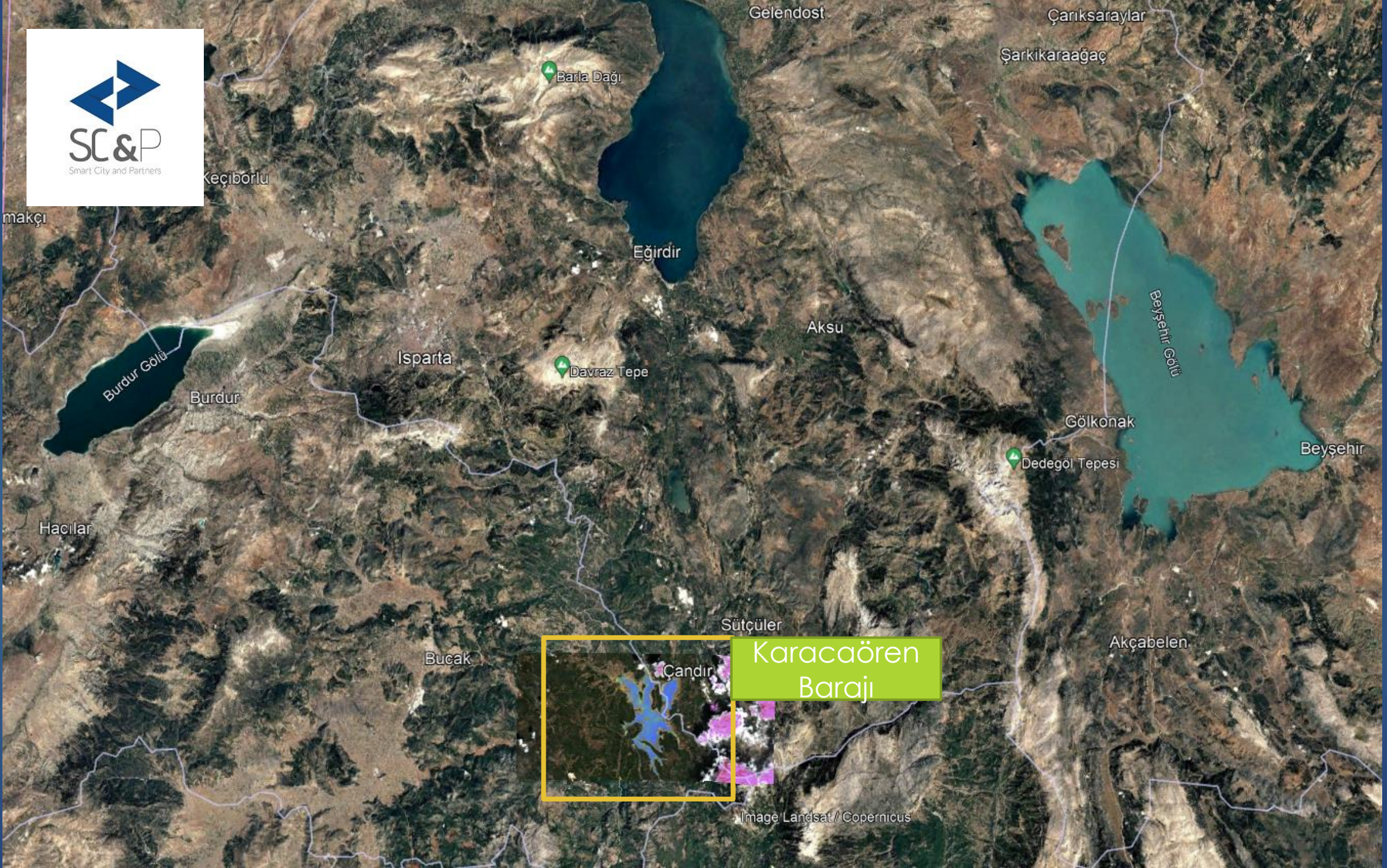


Fire & Wildfire Monitoring



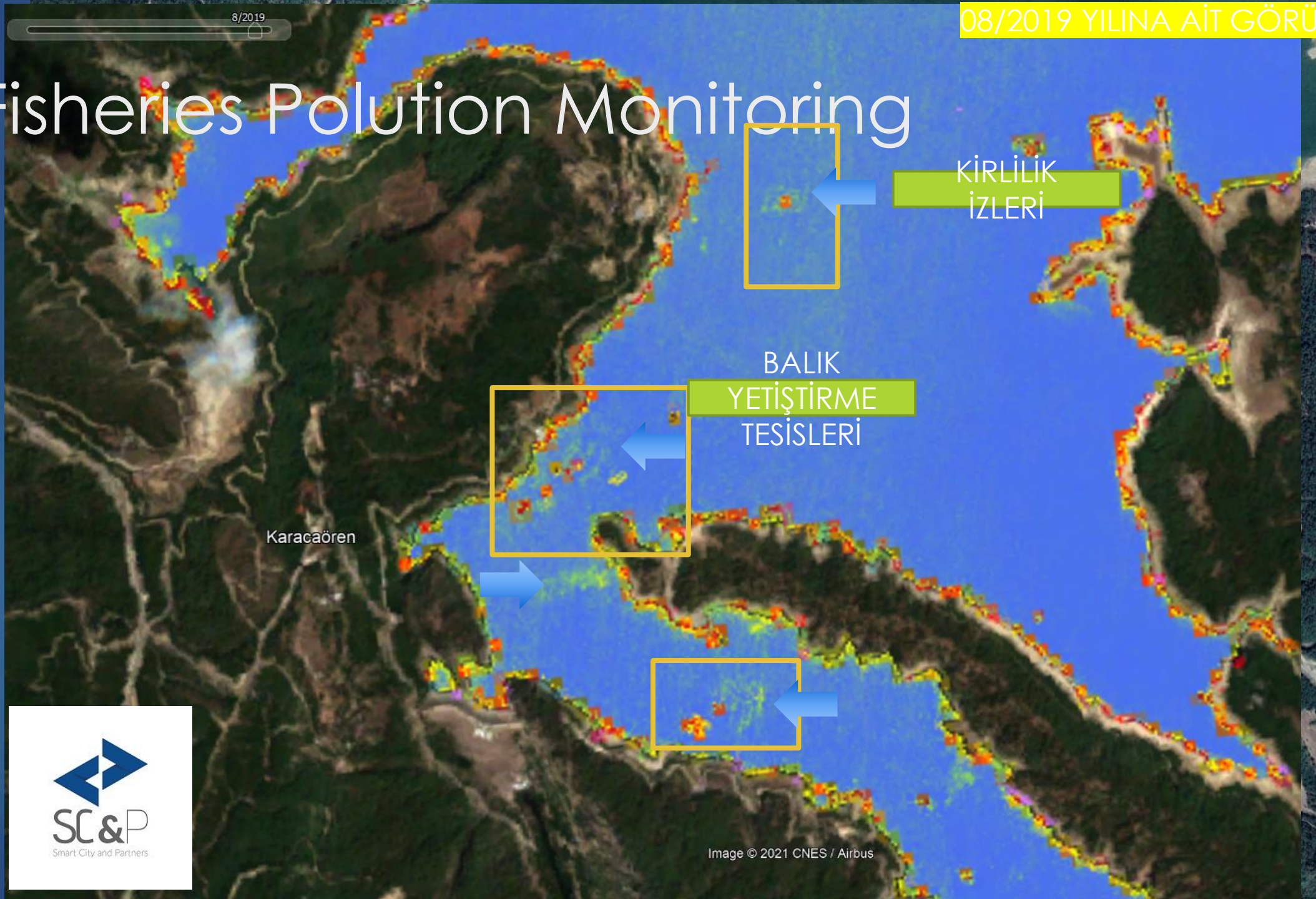
Agriculture, Plant Species and Health





Karacaören
Barajı

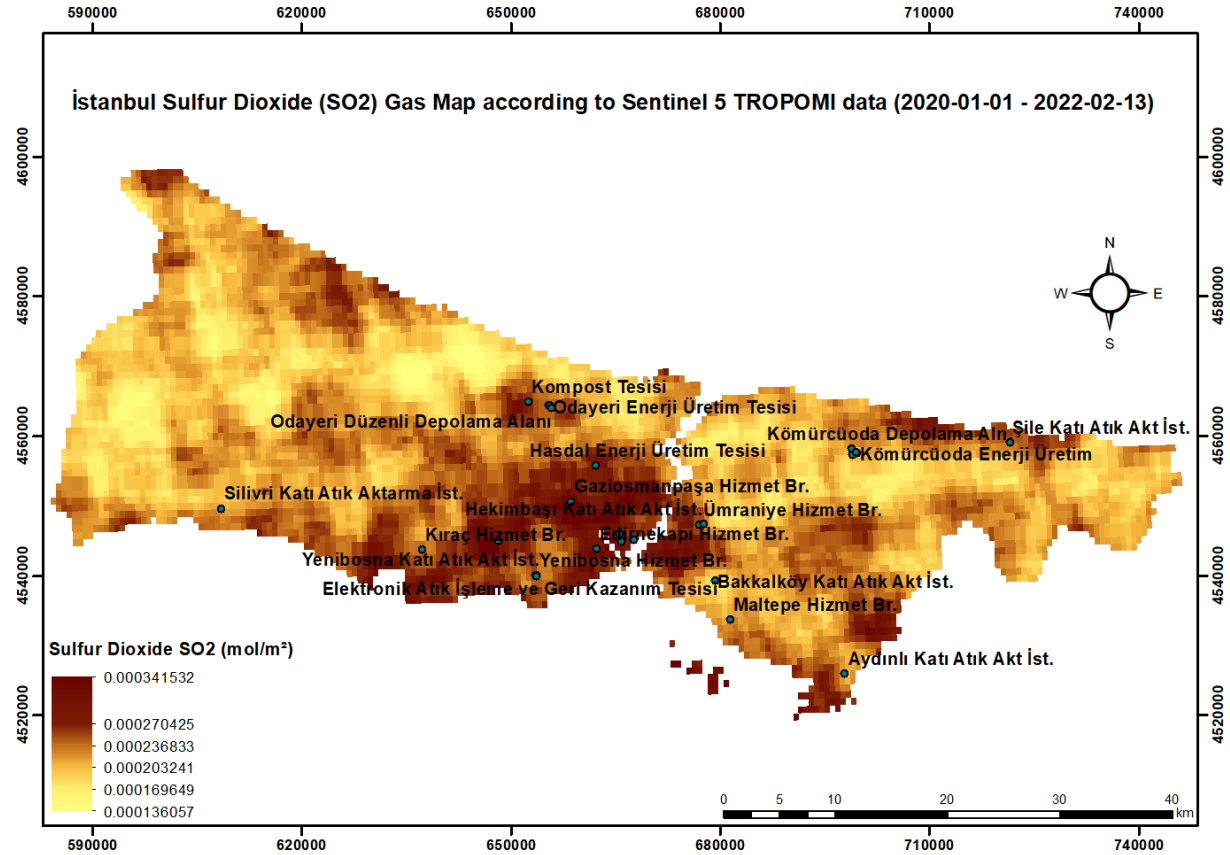
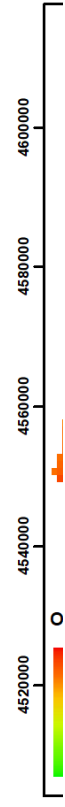
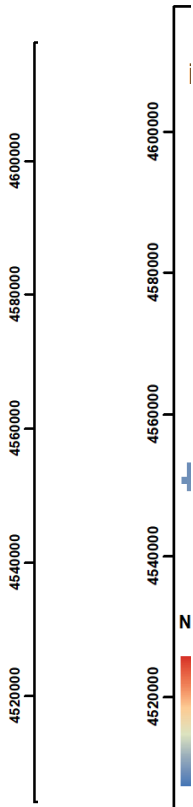
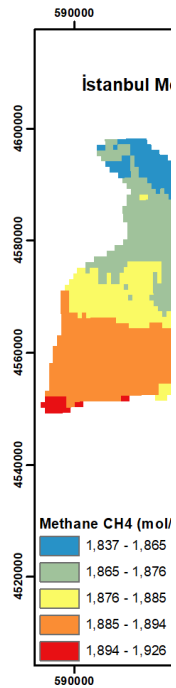
Fisheries Pollution Monitoring



Change Tracking

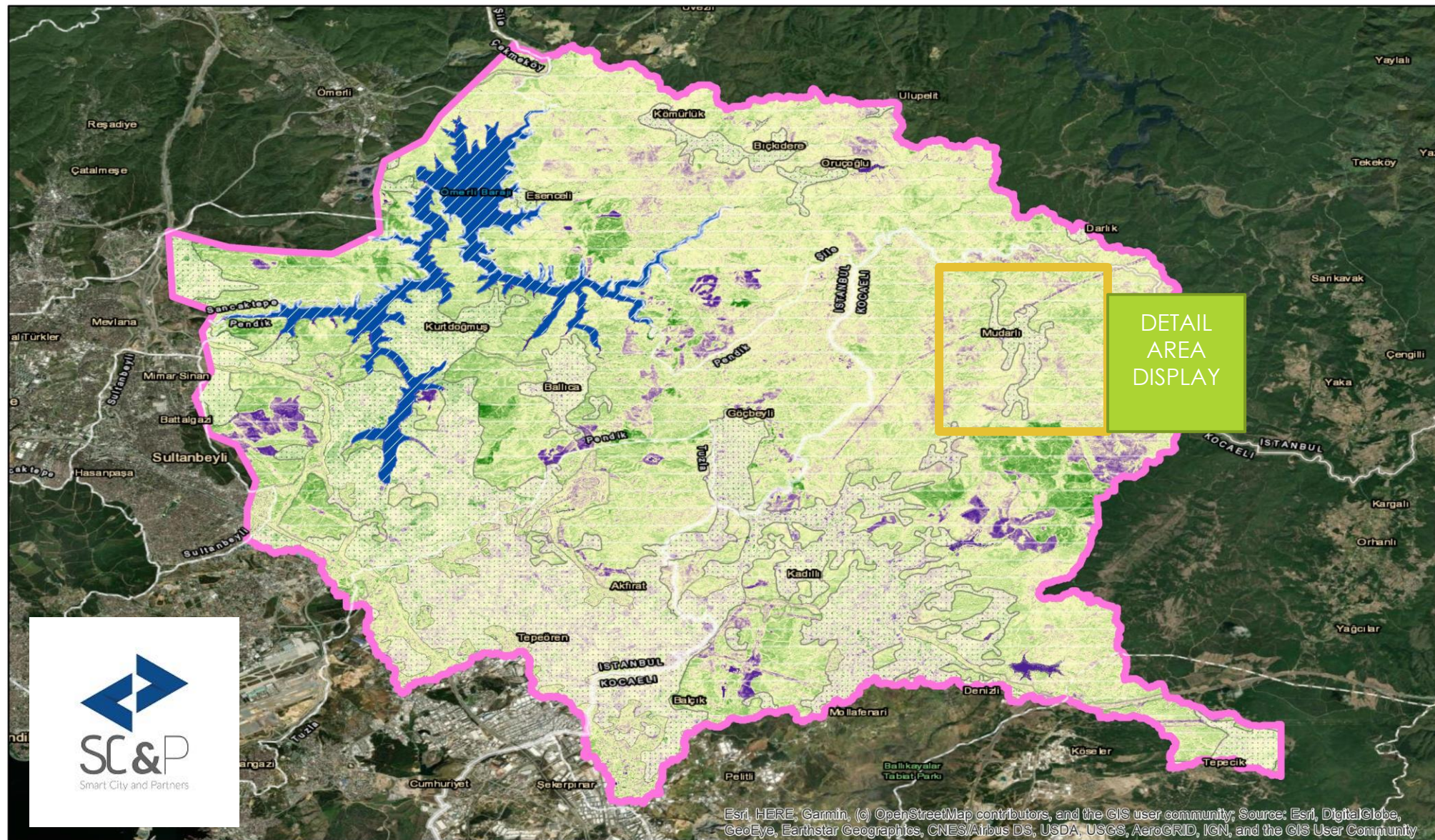


Air Pollution Monitoring



Humidity index (NDMI Difference) Fark tarihi: 2021-2017

The green tones seen on the analysis sheet indicate that the humidity is high and the purple tones show that the humidity is low..



Anahtar

- Ömerli havza sınırı
- Orman alanları 2018
- Tarım alanları 2018

Değer

- High : 1.1632
- Low : -1.51005

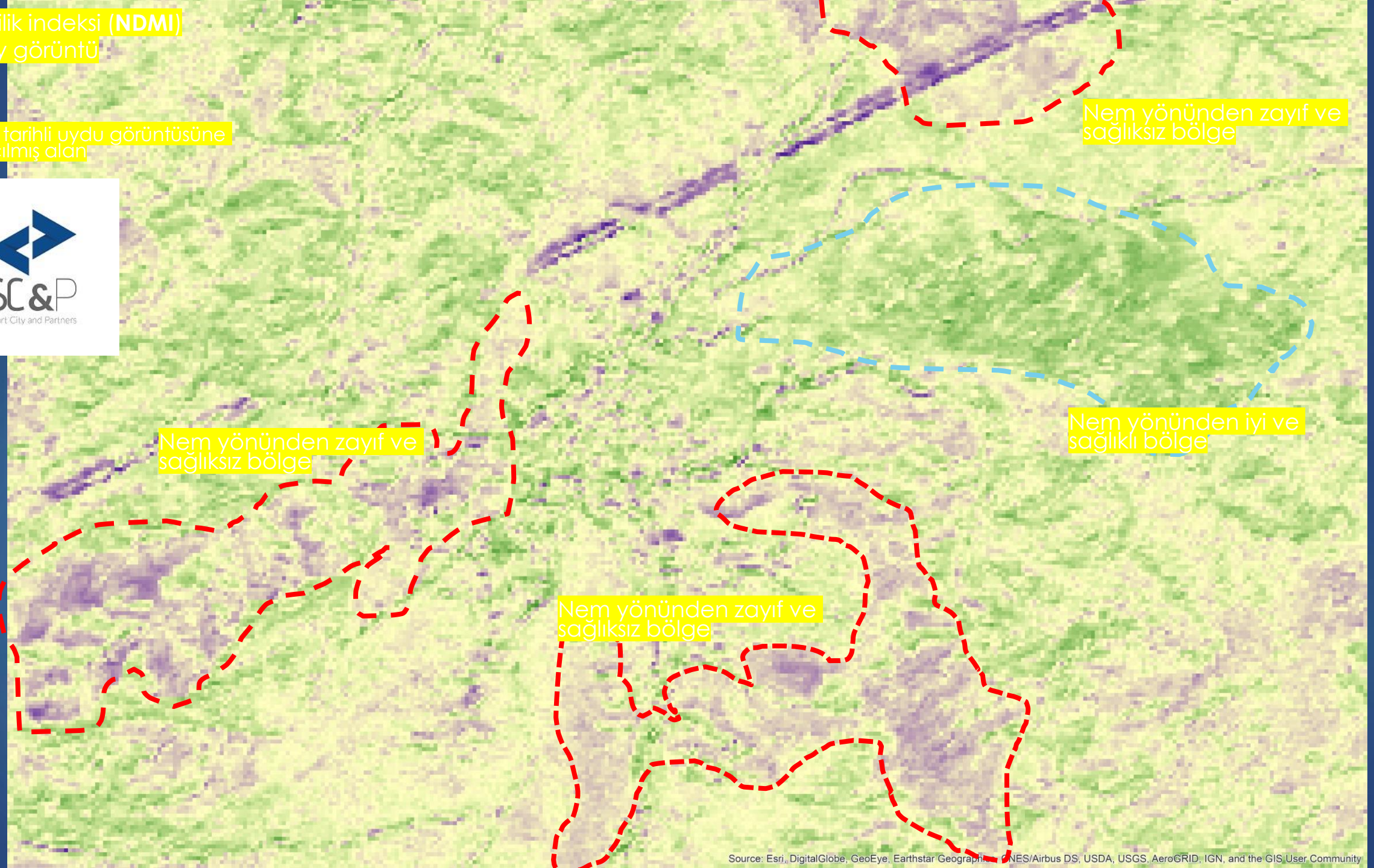
NDMI-STS 2021-2017 Farkı

Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community; Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Nemlilik indeksi (NDMI)

Detay görüntü

2021-09 tarihli uydu görüntüsüne göre açılmış alan



Nem yönünden zayıf ve sağlıklı bölge

Nem yönünden zayıf ve sağlıklı bölge

Nem yönünden iyi ve sağlıklı bölge

Nem yönünden zayıf ve sağlıklı bölge

Video/Image Analysis Image Processing Solutions



System Installation and Operation



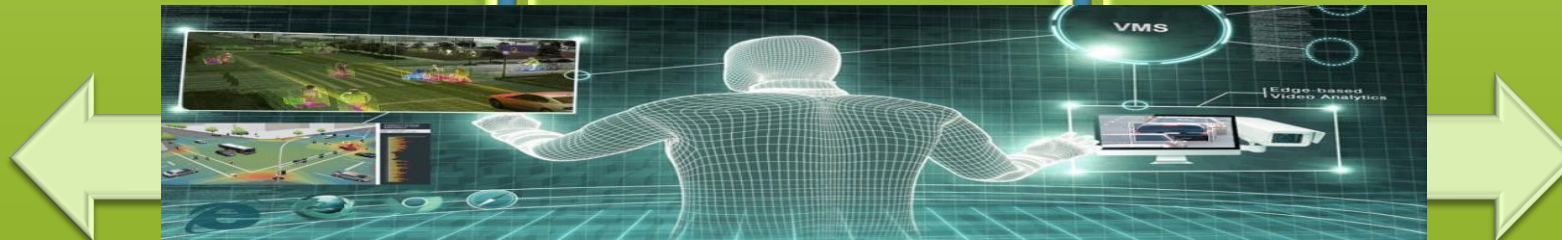
Cameras



Software



Machine Learning

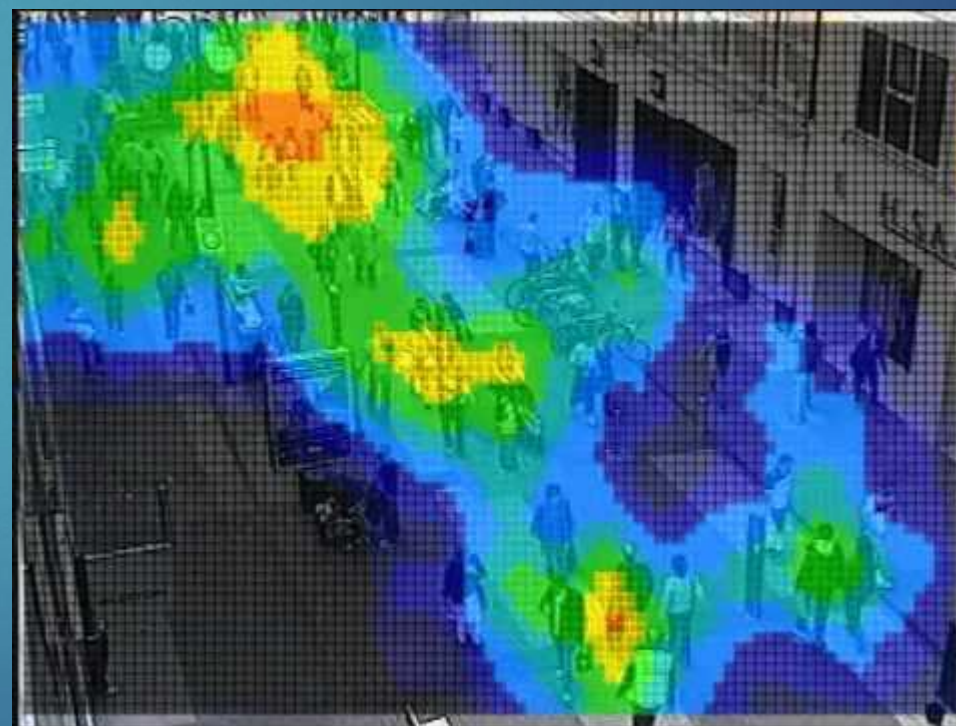


Application in Real Life

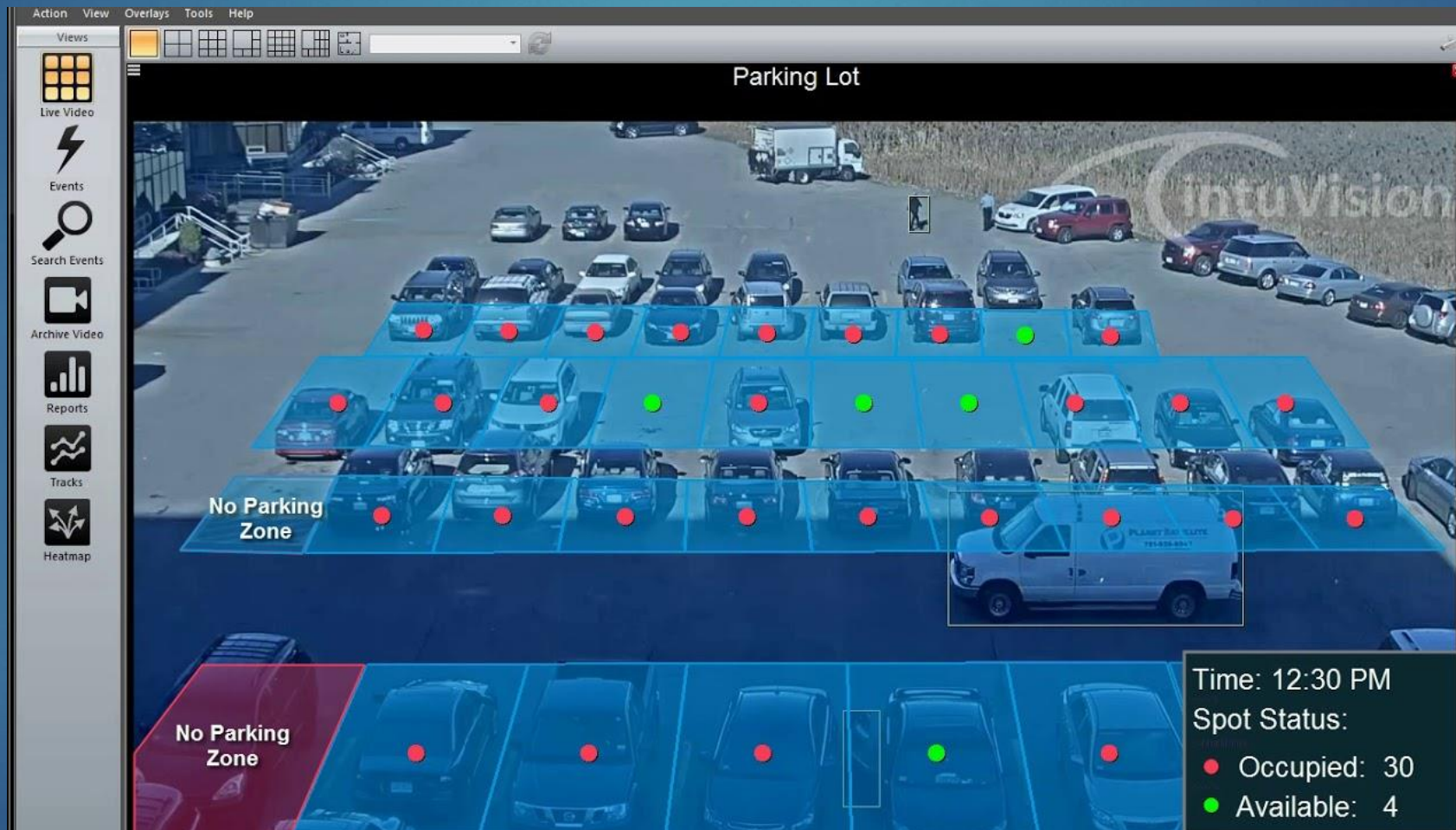
- ▶ Crowd Management
- ▶ People Counting, Personnel Tracking
- ▶ Demographic Analysis (Separation of Women, Men, Children)



- ▶ Use and Density of Enclosed Spaces
- ▶ Outdoor Density and Usage Analysis



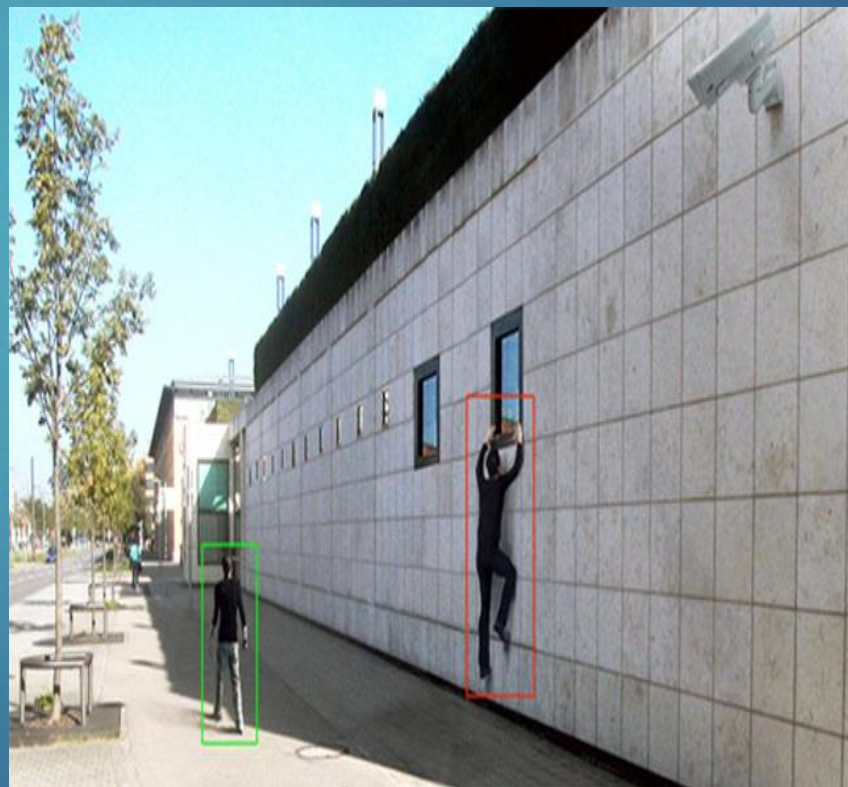
► Parking Usage and Density



- ▶ Area, Object, Activity Usage and Preference Analysis



- ▶ Security and Behaviour Tracking
- ▶ Personnel Follow-up and Occupational Health and Safety Control
- ▶ Detection of forgotten or abandoned items





City Pod (Public Smart Meeting Room)

DESIGN, HARDWARE AND PRODUCTION BY SC&P.

EVERY RIGHT RESERVED

City Pod Nedir?

- ▶ Offices and Meeting Environments Closed Worldwide during the Pandemic.
- ▶ Many Companies Started Working From Home.
- ▶ Reciprocal Meetings and Meetings Moved to Digital Platform.
- ▶ In Europe, City Pods are placed in parks and old areas through municipalities for hourly meetings and meetings.
- ▶ purpose:
 - ▶ Creating a work environment
 - ▶ To ensure the continuation of the economy and jobs.
 - ▶ Supporting Students.
 - ▶ Next generation municipal service.



City Pod Services?



SC&P
Smart City and Partners



Aydınlatma



Wi-Fi



Isıtma



Yönetim Uygulaması



Dış Ortam İzolasyonu



Operating Protocol



- ▶ The availability of all Pods can be seen with the mobile phone.
- ▶ The preferred time of the Pod to be used is reserved for a fee.
- ▶ At the time of booking, qr reading is made and the Pod door opens and usage begins.
- ▶ When the usage period expires, the Pod's electricity and services are cut off.
- ▶ It allows controlled access to electricity in public places. Provides a comfortable working environment in the open area in the city for users.
- ▶



Thanks

Hoping to work with you

SMART CITY AND PARTNERS – SC&P A.Ş - ANKARA

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