



AGRIFOOD
DIGITAL INNOVATION HUB



ITC

**INOVACIJSKO TEHNOLOŠKI GROZD
INNOVATION TECHNOLOGY CLUSTER**

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TECHNOLOGICAL AREAS



DATA SPACE



INTERNET OF THINGS



BIG DATA



BLOCKCHAIN



ARTIFICIAL INTELLIGENCE



EARTH OBSERVATION



ROBOTICS



FARM MANAGER



FARM to FORK



CircEco



ACCELERATOR

DOMAINS

Digitalna preobrazba kmetijstva

Kratke dobavne verige

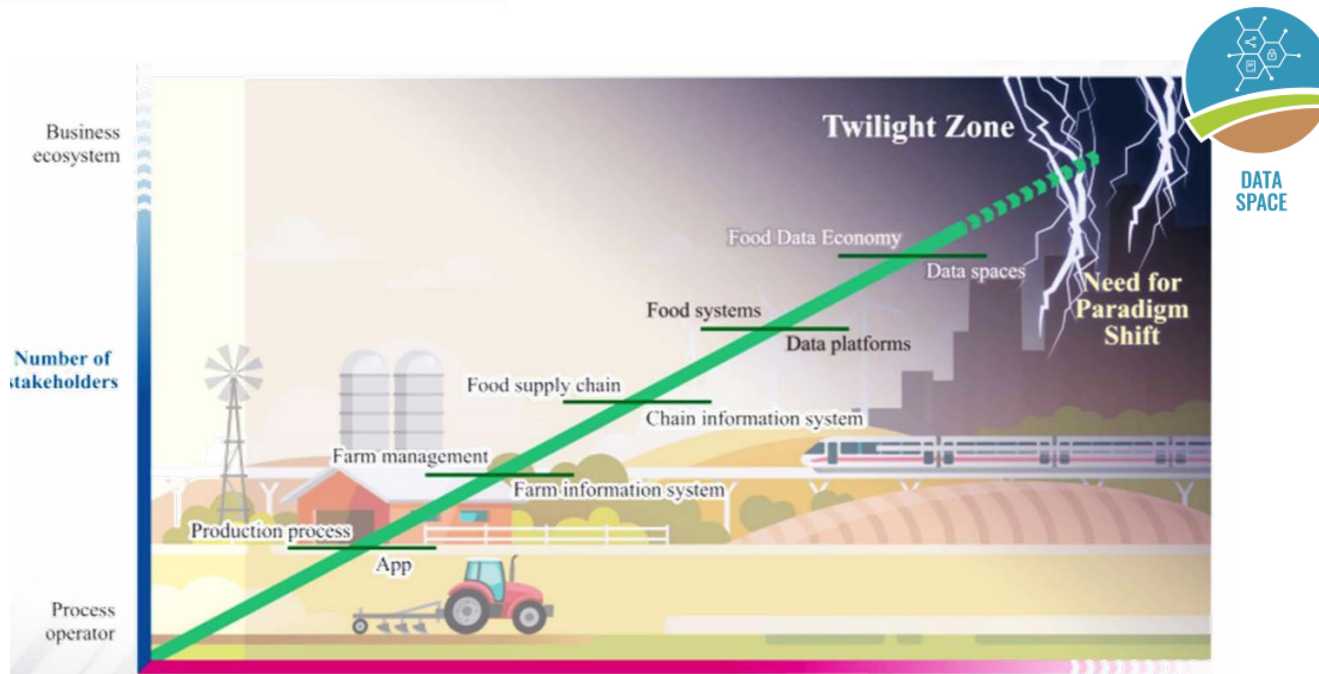
Kmetijstvo in turizem



ITC Murska Sobota je usmerjen v **medsektorsko inoviranje** ruralnih sektorjev, na osnovi vpeljave **Informacijsko komunikacijskih tehnologij (IKT)** in drugih pristopov, ki zagotavljajo trajnostni razvoj.

VIZIJA:

Postati ena od **najnaprednejših, digitaliziranih** ruralnih regij za **proizvodnjo in dobavo hrane** v Evropi, temeljujoč na **povezovanju vseh akterjev oskrbovalne verige!**



DIH Agrifood Podatkovni prostor

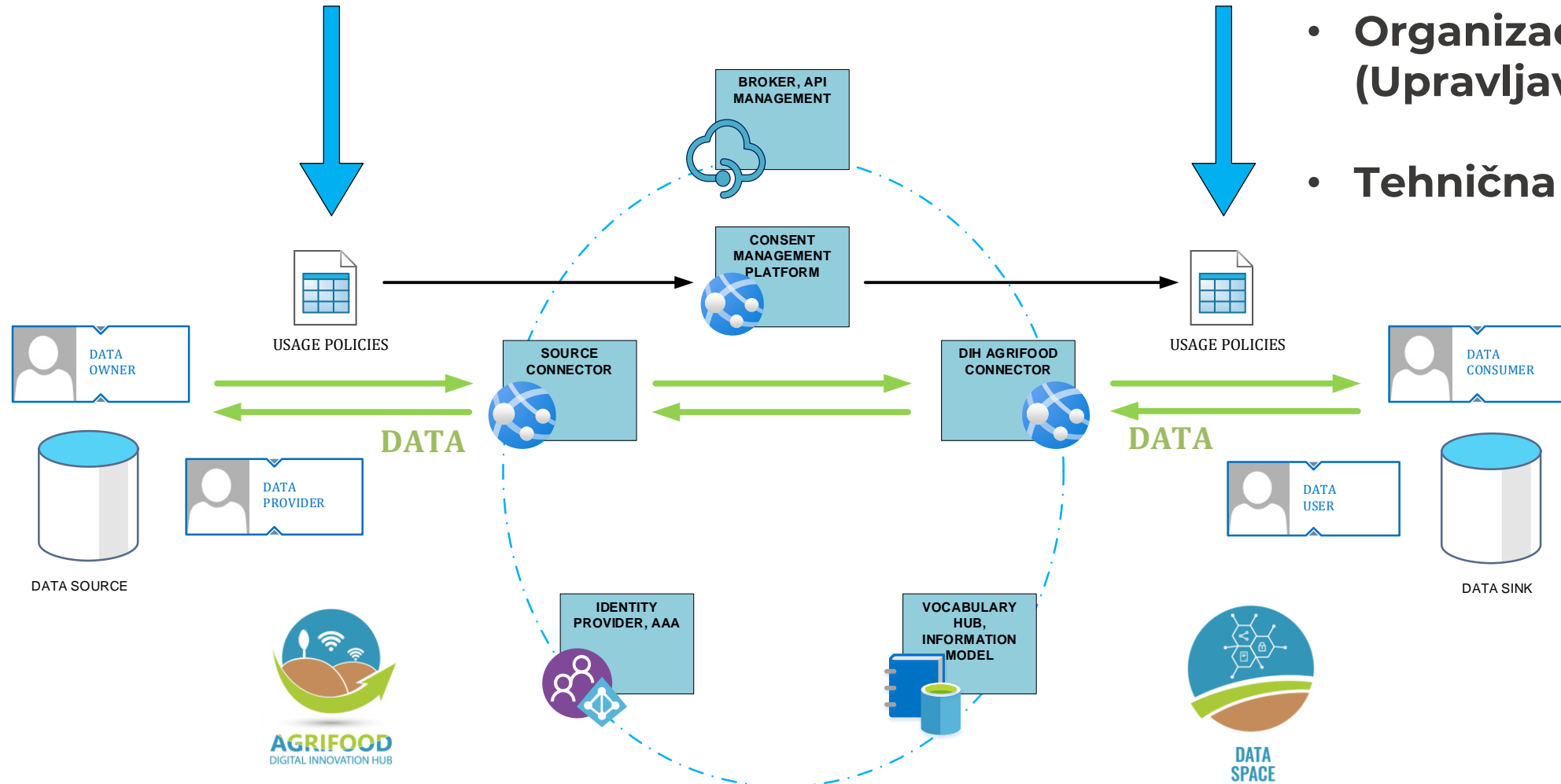
ITC, KGZS MS, FERİ

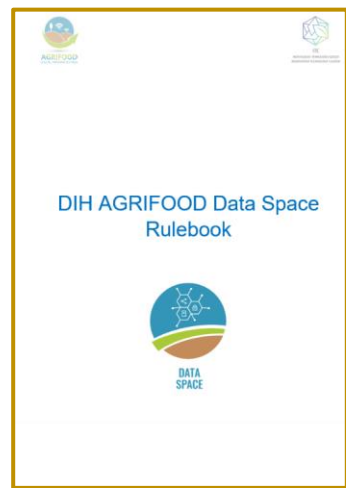
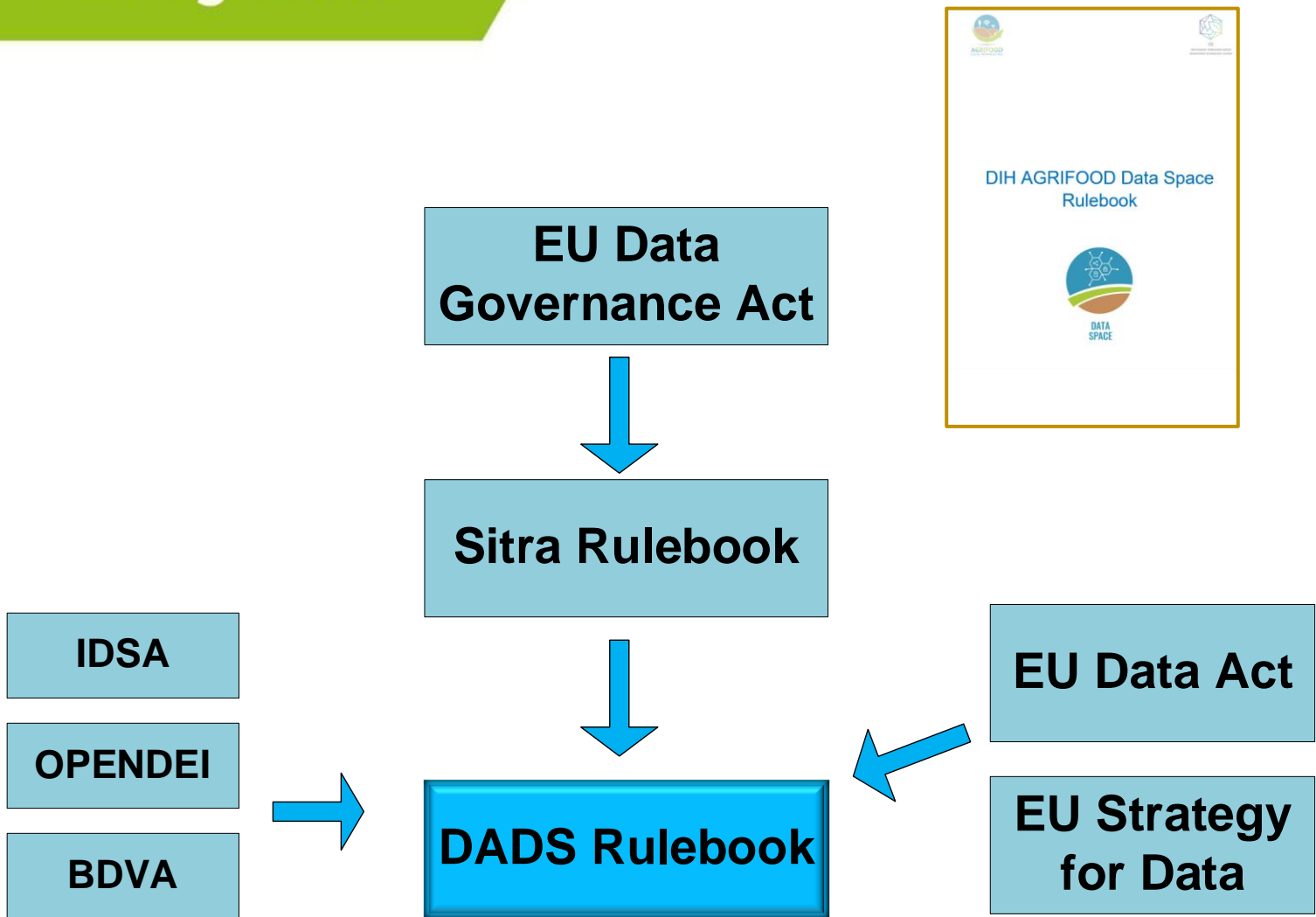
Podatkovni prostor je tehnična in organizacijska infrastruktura, ki omogoča pretok podatkov med različnimi deležniki in temelji na upravljavskem modelu, posameznega podatkovnega prostora. Le-ta mora biti generičen, tako da omogoča implementacijo različnih primerov uporabe (Use Case). Definicija podatkovnega prostora po **Data Space Support Centre (DSSC)**.

DIH AGRIFOOD Data Space (DADS) je federalno organizirana in upravljana platforma za deljenje podatkov iz agri-food sektorja, kjer se podatki delijo na osnovi vnaprej definiranih pogojev uporabe. Principi definiranja pogojev uporabe podatkov izhajajo iz **upravljavskega modela** (Governance Model), ki zagotavlja **nadzor in suverenost lastnikov podatkov, ter transparentnost toka podatkov** in delovanja platforme.

GOVERNANCE MODEL

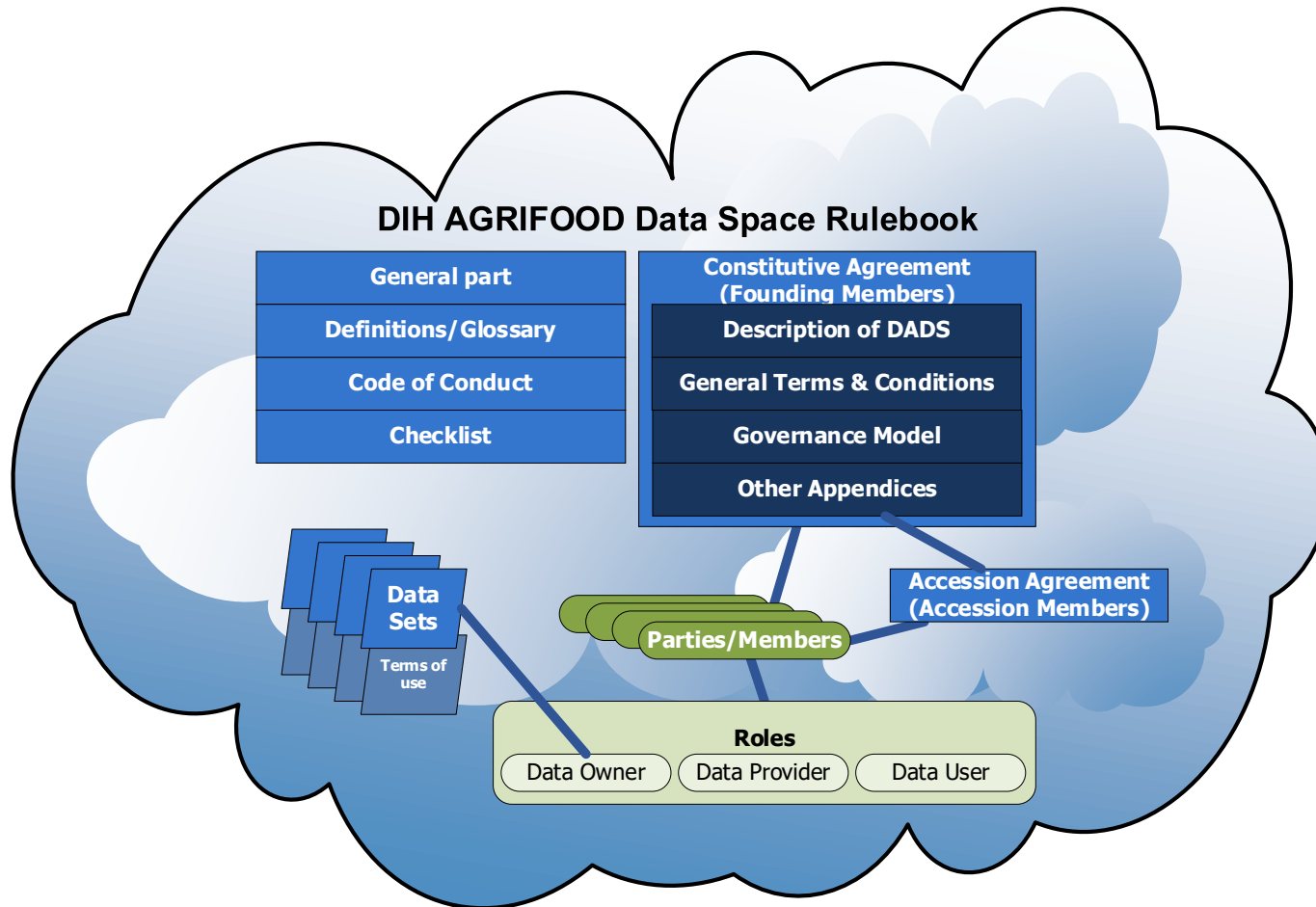
- Organizacijska infrastruktura (Upravljavski model)
- Tehnična infrastruktura





- Akt o upravljanju podatkov
- Sitra Rulebook za pošteno podatkovno ekonomijo
- Akt o podatkih
- Evropska strategija za podatke
- International Data Space Association
- OPENDEI Design Principles for Data Spaces
- Big Data Value Association





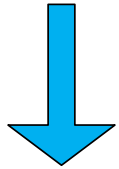
- Splošni del (uvod, opis DADS, vloge)
- Definicije izrazov (terminologija)
- Kodeks ravnanja (Code of Conduct)

- Splošni pogoji
- Upravni odbor
- Pogodbeni okvir (ustanovna pogodba, pristopna pogodba, pogoji uporabe podatkov)

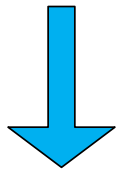
Upravljavski model temelji na sodelovanju vseh deležnikov – model skupnosti



Founding
Members

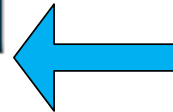


Steering
Committee



DADS
Management

Accession
Members



- Ustanovni člani delegirajo svoje predstavnike v upravni odbor
- Pridruženi člani so lahko prisotni na sejah upravnega odbora, nimajo pa glasovalnih pravic

Constitutive Agreement for establishment of DIH AGRIFOOD Data Space

PARTIES

- (1) ITC - INOVACIJSKO TEHNOLOŠKI GROZD MURSKA SOBOTA
 - (2) KMETIJSKO GOZDARSKA ZBORNICA SLOVENIJE, KMETIJSKO GOZDARSKI ZAVOD MURSKA SOBOTA
- (Together the "Founding Members".)

Appendix Description

- | Appendix | Description |
|----------|---|
| 1 | Description of the DIH AGRIFOOD Data Space (DADS) |
| 2 | General Terms and Conditions |
| 3 | List of Founding Members and Contact Details |
| 4 | Governance Model |
| 5 | Code of Conduct |

BACKGROUND AND PURPOSE

The Founding Members are contemplating the establishment of a DIH AGRIFOOD Data Space (DADS) in order to foster the digital transformation of the agri-food sector and ensure that data from the agri-food sector is shared on the basis of pre-known policies and rules defined by the data management model, respecting ethical principles and

2. General Terms and Conditions

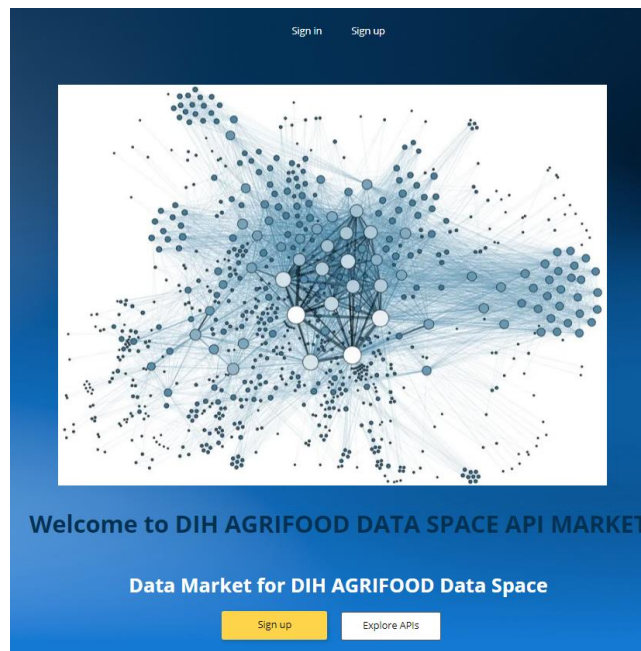
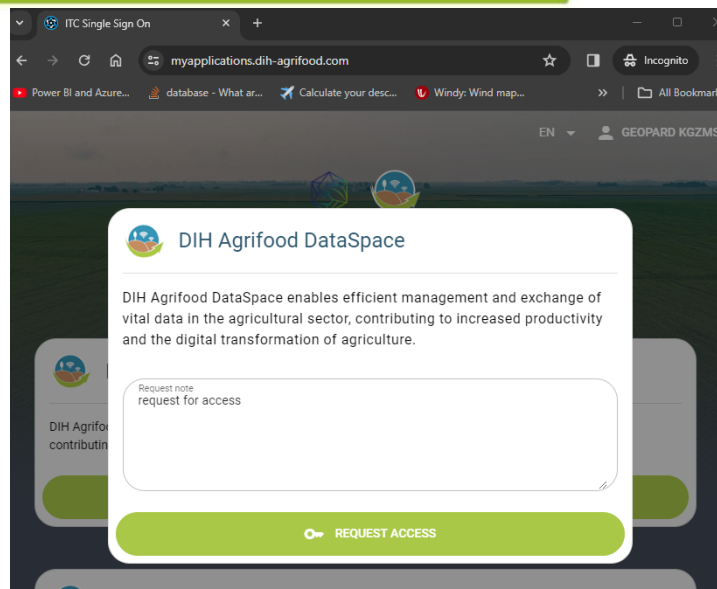
1 APPLICABILITY, SCOPE AND GOVERNANCE

- 1.1 The DIH AGRIFOOD Data Space (DADS) is established by the Constitutive Agreement, which is signed by the Founding Members.
- 1.2 The provisions of these General Terms and Conditions will become applicable to and legally binding on the data sharing agreements of the Founding Members and Accession Members to the DADS, as applicable.
- 1.3 In the event that a discrepancy arises between any of the terms and conditions established in the Constitutive Agreement, Accession Agreements and these General Terms and Conditions, including any of their appendices or schedules, any such discrepancy will be resolved in accordance with the following order of priority:
 - (i) the clauses of the Constitutive Agreement;
 - (ii) the clauses of any Accession Agreement(s);
 - (iii) Dataset Terms of Use and related Schedules;
 - (iv) these General Terms and Conditions; and
 - (v) other Appendices to the Constitutive Agreement in numerical order.
- 1.4 Any amendments to or derogations from these General Terms and Conditions must be agreed upon in the Constitutive Agreement in order to be valid.

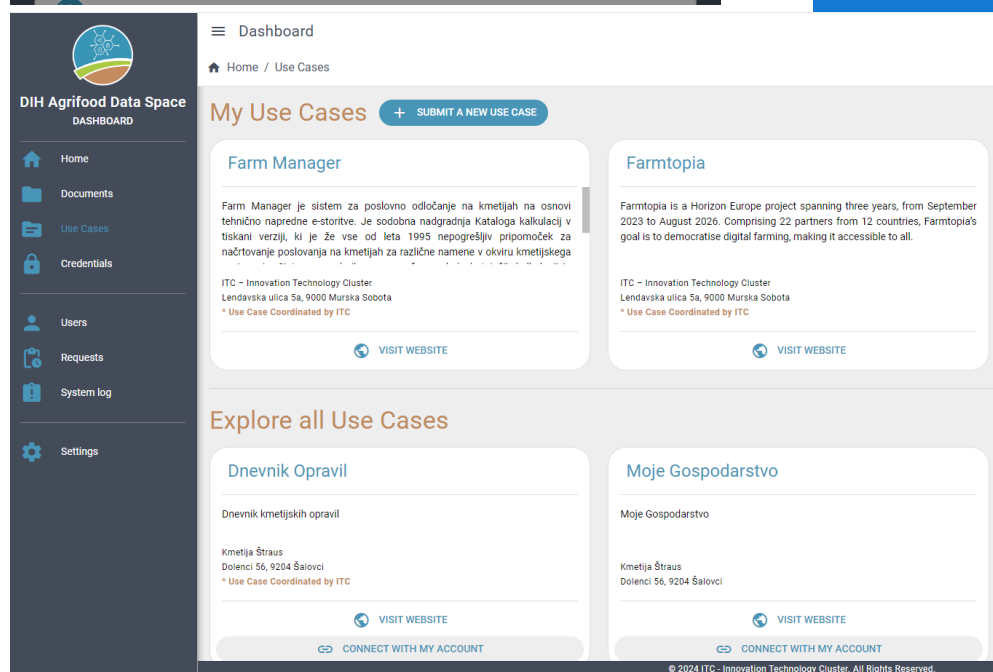
2 DEFINITIONS

- 2.1 In these General Terms and Conditions, the following capitalised terms and expressions have the following meanings, and the singular (where appropriate) includes the plural and vice versa:

"Accession Agreement" means the agreement that governs the admission of parties to



- Registracija uporabnikov
- Definiranje pogojev uporabe podatkov
- Definiranje zahtev po podatkih
- “Tržnica“ podatkov – Data Market
- Programski vmesniki (API)
- Zagotavljanje revizijske sledi (Data Provenance)



API Market

The API market is deeply intertwined with the data space, as data serves as the lifeblood of digital interactions and information exchange. In the context of the API market, the efficient and secure sharing of data has become a paramount concern, leading to the development of specialized APIs that focus on data accessibility, manipulation, and analytics.

Organizations leverage APIs to connect databases, cloud services, and other data repositories, enabling seamless data exchange between applications. This integration is fundamental for businesses seeking to create a unified view of their data and streamline operations.

As data flows through APIs, ensuring its security and governance is critical. API Market implement robust security measures to safeguard sensitive data during transit and at rest. Access controls, encryption, and authentication mechanisms are integrated into API Market to meet compliance requirements and protect against data breaches.

API Market in the data space increasingly support real-time data streaming. This is particularly essential for applications that require up-to-the-moment information, such as financial services, IoT platforms, and monitoring systems.

Standardized data formats, such as JSON (JavaScript Object Notation) and XML (eXtensible Markup Language), are commonly used in APIs to ensure consistency and interoperability.

APIs that adhere to these standards simplify data exchange and reduce friction in integration efforts. In the evolving landscape of data regulations and privacy concerns.

APIs must adhere to stringent data protection standards. API providers implement features like consent management, data anonymization, and audit trails to ensure compliance with regulations such as GDPR (General Data Protection Regulation) and others.

Our APIs




Senzemo API



DADS API 2

Moj... Kmetija Njive IOT Meteorološki podatki Analize in dokumenti Orodja



Preglednica gerkov

Številka gerka	Ime	Velikost(ha)	Dejanska raba	Pov.nadmorska višina(m)	Povprečni naklon(%)
4309024	ADANO	0.56	Njiva	287.18	10
4304853	ADANO	0.42	Trajni travnik	285.49	10
4304851	ADANO	0.57	Ekstenzivni sadovnjak	277.42	18
5854375	ADANO_1	0.27	Trajni travnik	268.17	10

Records per page: 10 1-4 of 4

KOPOP ukrepi

Zap.št.	Ime	Številka gerka	Leto

Kolobar

Zap.št.	Ime

Urejanje krožka Končna kalkulacija

Opis kmetije Proizvodnja Krma

KRMA ZA KRAVE	Proizvodnja/nakup skupaj			Proizvodnja/nakup za krave			Preračun	
	Količina (kg)	Cena (EUR/kg)	Vrednost (EUR)	Delež za krave (%)	Količina (kg)	Vrednost (EUR)	Količina kg/krav/dan	kg SS
DOMA PRIDELANA VOLUMINOZNA KRMA								
Paša								
Zelena krma								
Travna silaža	315.0€	0,05	15.750	65	204.7€	10.237,	9,7	3,4
Mrva	124.8€	0,10	12.480	60	74.88€	7.488	3,5	3,0
Koruzna silaža	730.6€	0,03	21.920	65	474.9€	14.248	22,	7,9

Dnevnik opravil SAŠA ŠTRAUS

Dnevnik opravil za leto 2023

Moji GERKI

Seznam Iskanje... Raba

Ukrep Glavni posevek Zadnje opravilo

ADANO 4304851 21.10.2023 Uporaba organski...

ADANO 4304853 Ni posevkov 12.07.2023 Košnja

ADANO 4309024 cesen 12.10.2023 Uporaba organski...

Zbirnik

Gnojila

FFS

Končna kalkulacija

Kmetijsko gospodarstvo:	Vrednost na kmetijo (EUR)	Vrednost na kravo (EUR)	Vrednost na kg mleka (EUR)	Delež (%)
Podatki za leto: 2022				
PRIHODEK				
Povprečno število krav v letu	57,62			
Prodano in porabljeno mleko - količina (kg)	306.946	5.327,07		
Prodajna cena mleka (EUR/kg)	0,48			
Vrednost prodanega in porabljenega mleka	146.192,82	2.537,19	47,63	83,26
Vrednost telet	23.250	403,51	7,57	13,24
Vrednost izločenih živali	6.144,11	106,63	2,00	3,50
PRIHODEK SKUPAJ	175.586,93	3.047,33	57,20	100
SPREMENLJIVI STROŠKI				
Vrednost prevedenih telic	21.600	374,87	7,04	21,10
Kupljena koncentrirana krma	21.251,08	368,81	6,92	20,76
Kupljena voluminozna krma	0	0	0	0

- Moje Gospodarstvo
- Dnevnik opravil
- Krožki za agrarno ekonomiko kmetije (Benchmark)
- FLW platforma
- Farm manager

- **Ozaveščenost uporabnikov** - predvsem lastnikov podatkov (kmetje) in ostalih deležnikov
- **ZAUPANJE!**
- **Razumevanje pomembnosti zaščite podatkov** vs. današnja “sprejemljiva” praksa
- **Zagotavljanje** tehnične in admin podpore za **vklučevanje uporabnikov** (posrednik - zaupanje)
- **Aktiviranje lastnikov podatkov** - kompleksnost upravljanja podatkov
- **Upravno/tehnični izzivi** v zvezi z zagotavljanjem in upravljanjem dovoljenj preko ponudnikov rešitev (Data providers)
- **Harmonizacija** (tehnična, funkcionalna, upravljavska) podatkovnih prostorov
- **Financiranje** razvoja in **vklučevanja uporabnikov** (tržni poslovni model ne bo jasen še nekaj časa)



**Kako pojesti slona ki se imenuje
podatkovni prostor?**

Grižljaj po grižljaj!

Hvala za pozornost!

Daniel Copot

daniel.copot@itc-cluster.com

Miran Bunderla

miran.bunderla@itc-cluster.com

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<https://mapping.dih-agrifood.com>