Interreg Ελλάδα-Κύπρος
Ευρωπαϊκό Ταμείο Περιφερειακής Ανάπτυξης
ΕΥΡΩΠΑΪΚΗ ΕΝΩΣΗ
step2smart

Cross-Border Cooperation of Island Urban Areas to Improve Environmental Conditions using Intelligent Transportation Systems

Co-funded by the European Union (ERDF) and from National resources of Greece and Cyprus

https://greece-cyprus.eu/step2smart

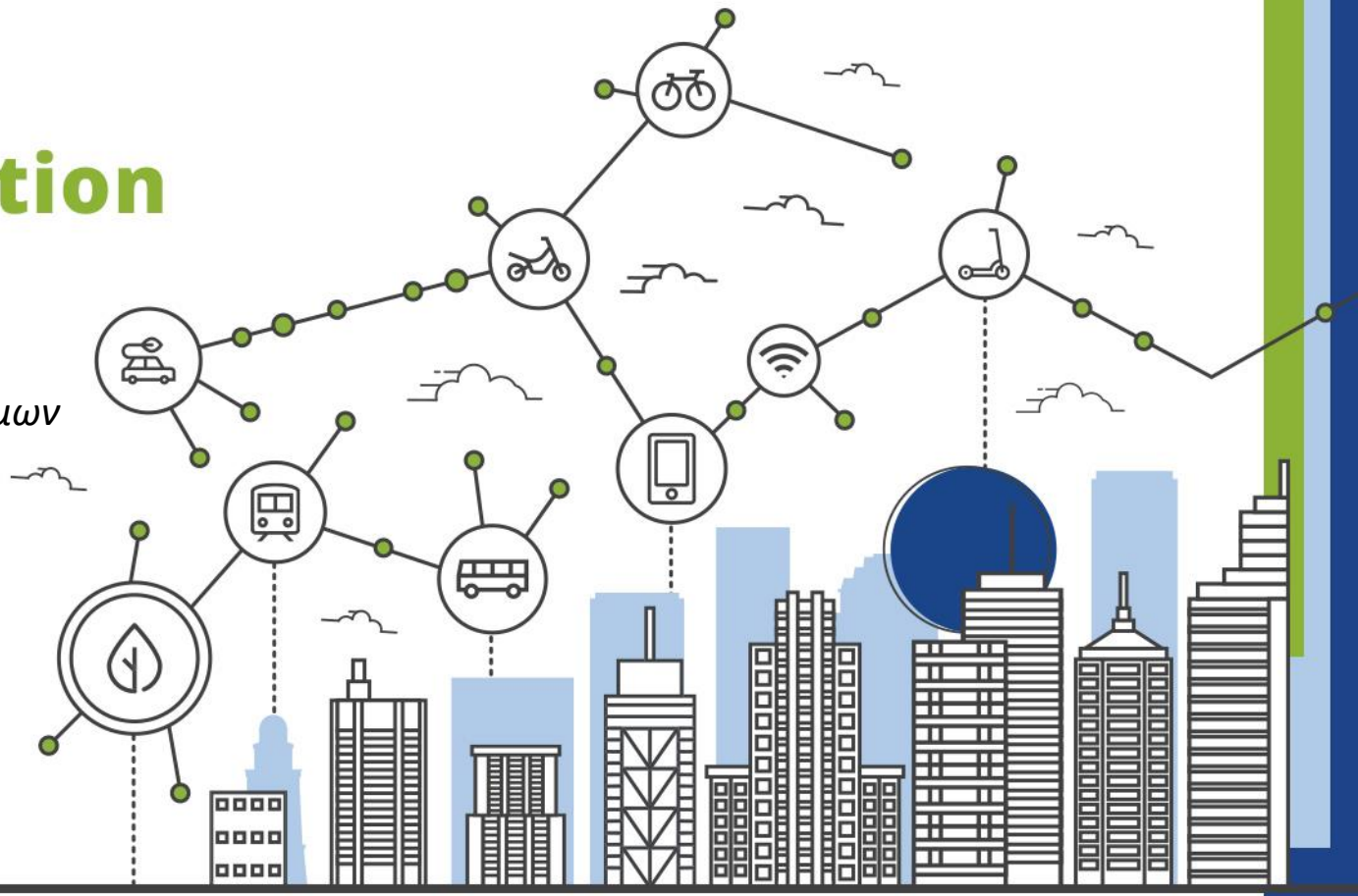
7th Conference

On Sustainable Mobility & Intelligent Transportation Systems

Πρόσβαση, ανταλλαγή και επαναχρησιμοποίηση δεδομένων μεταφορών και ο ρόλος τους στη δημιουργία Ψηφιακών Διδύμων των δικτύων μεταφορών

Γιώργος Χρίστου

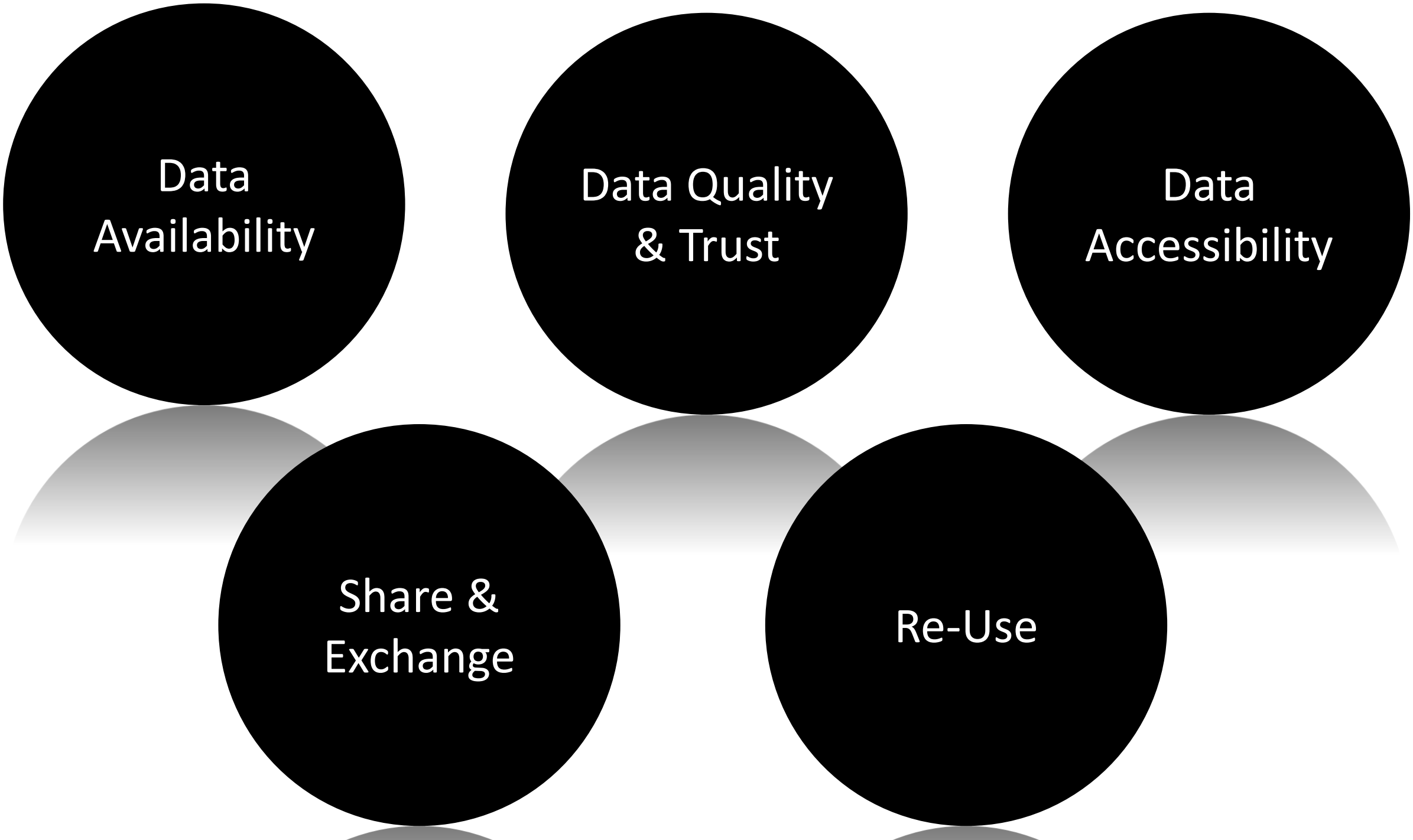
Κέντρο Αριστείας για Έρευνα και Καινοτομία ΚΟΙΟΣ, Πανεπιστήμιο Κύπρου

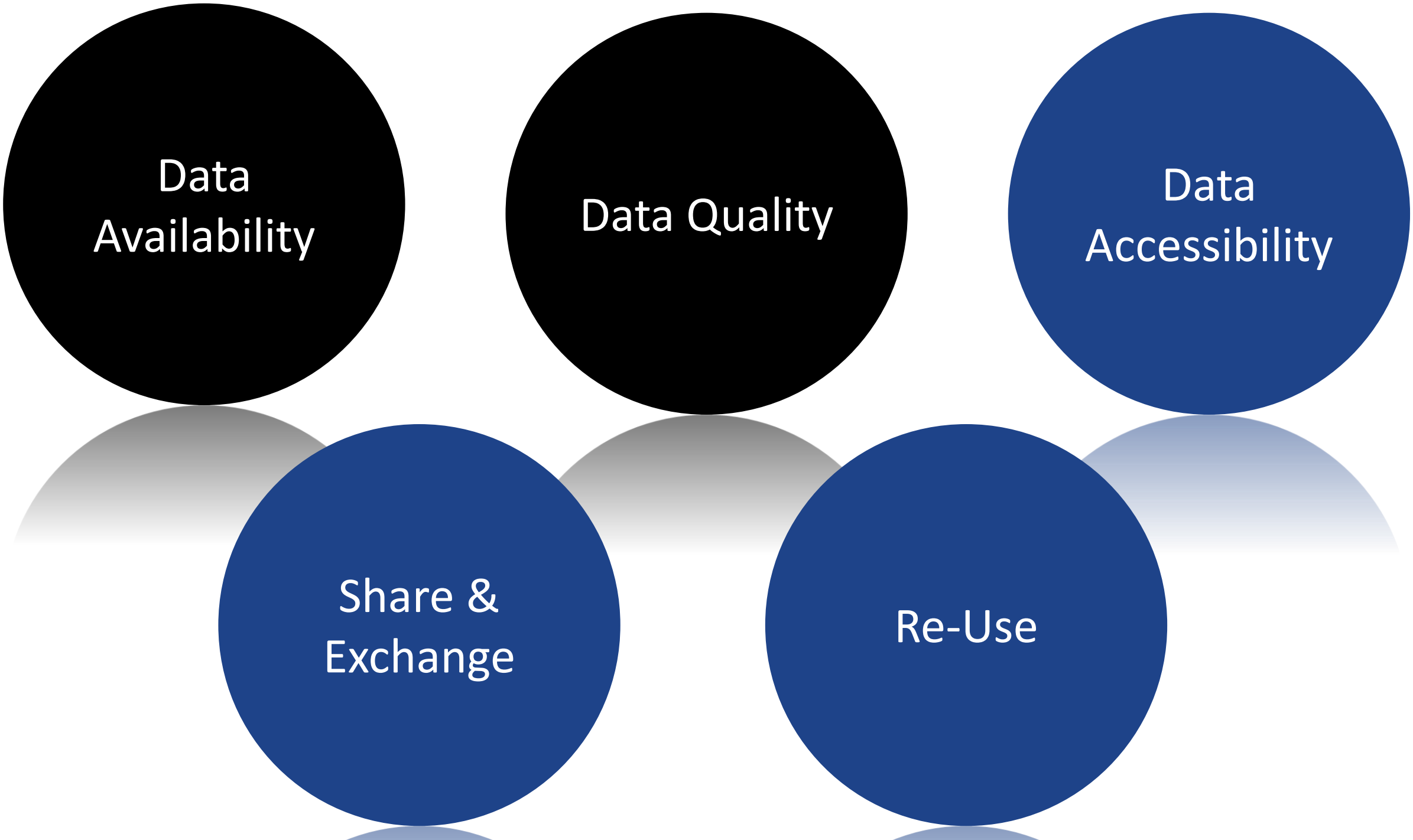


REPUBLIC OF CYPRUS
MINISTRY OF TRANSPORT, COMMUNICATIONS AND WORKS

DEPARTMENT OF PUBLIC WORKS

SUSTAINABLE MOBILITY SECTION


Data Availability
Data Quality & Trust
Data Accessibility
Share & Exchange
Re-Use


Data Availability
Data Quality
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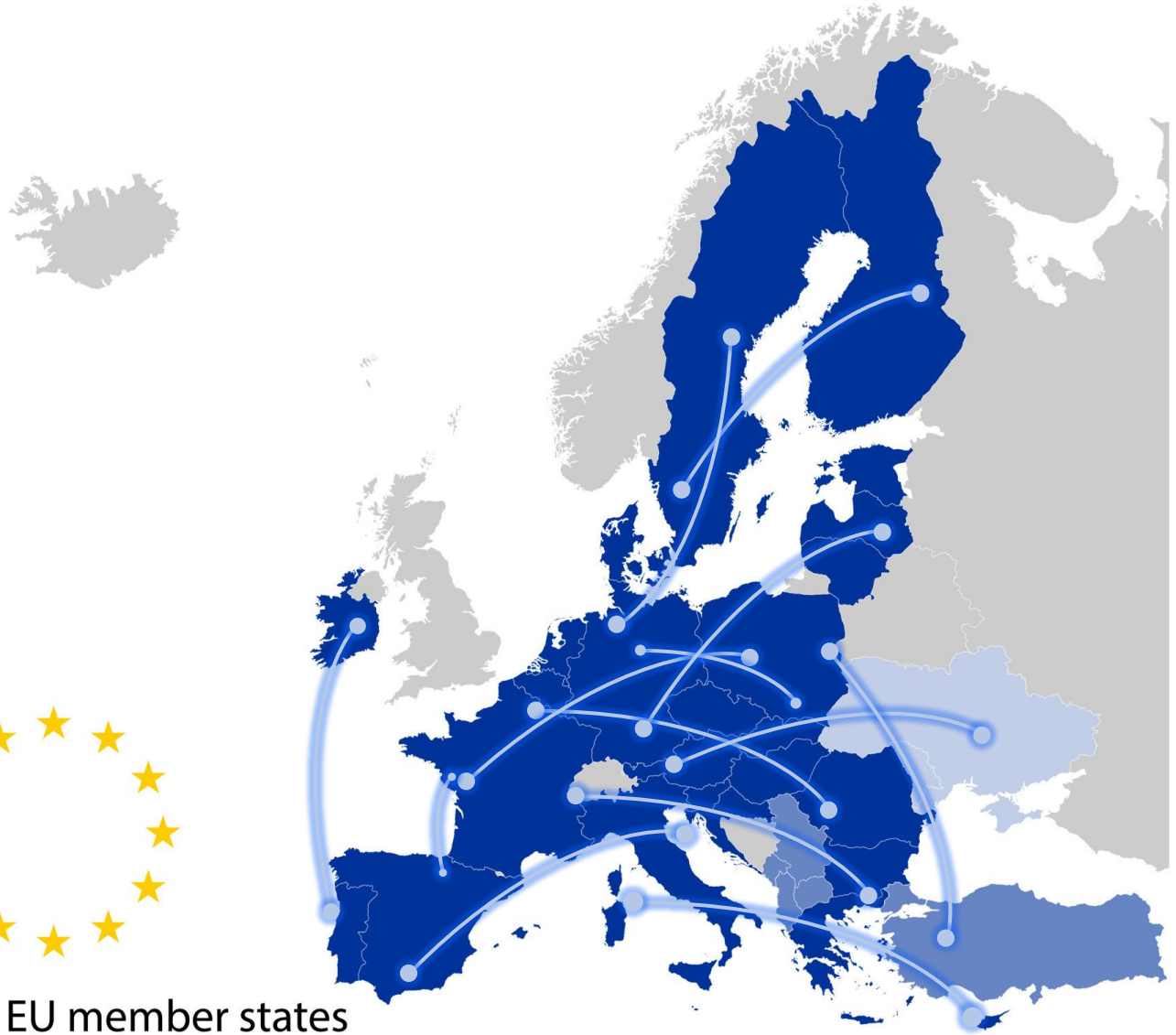
Share & Exchange
Re-Use

EUROPEAN UNION



EU member states
EU membership candidates
EU membership potential candidates

Goals on Harmonization

Data Collection

Data Storage

Dissemination of data

DIRECTIVE 2010/40/EU or ITS Directive

Optimal use of road, traffic and travel **data**

Continuity of traffic and freight management **ITS services**

ITS road safety and security **application**

Linking the **vehicle** with the transport **infrastructure**

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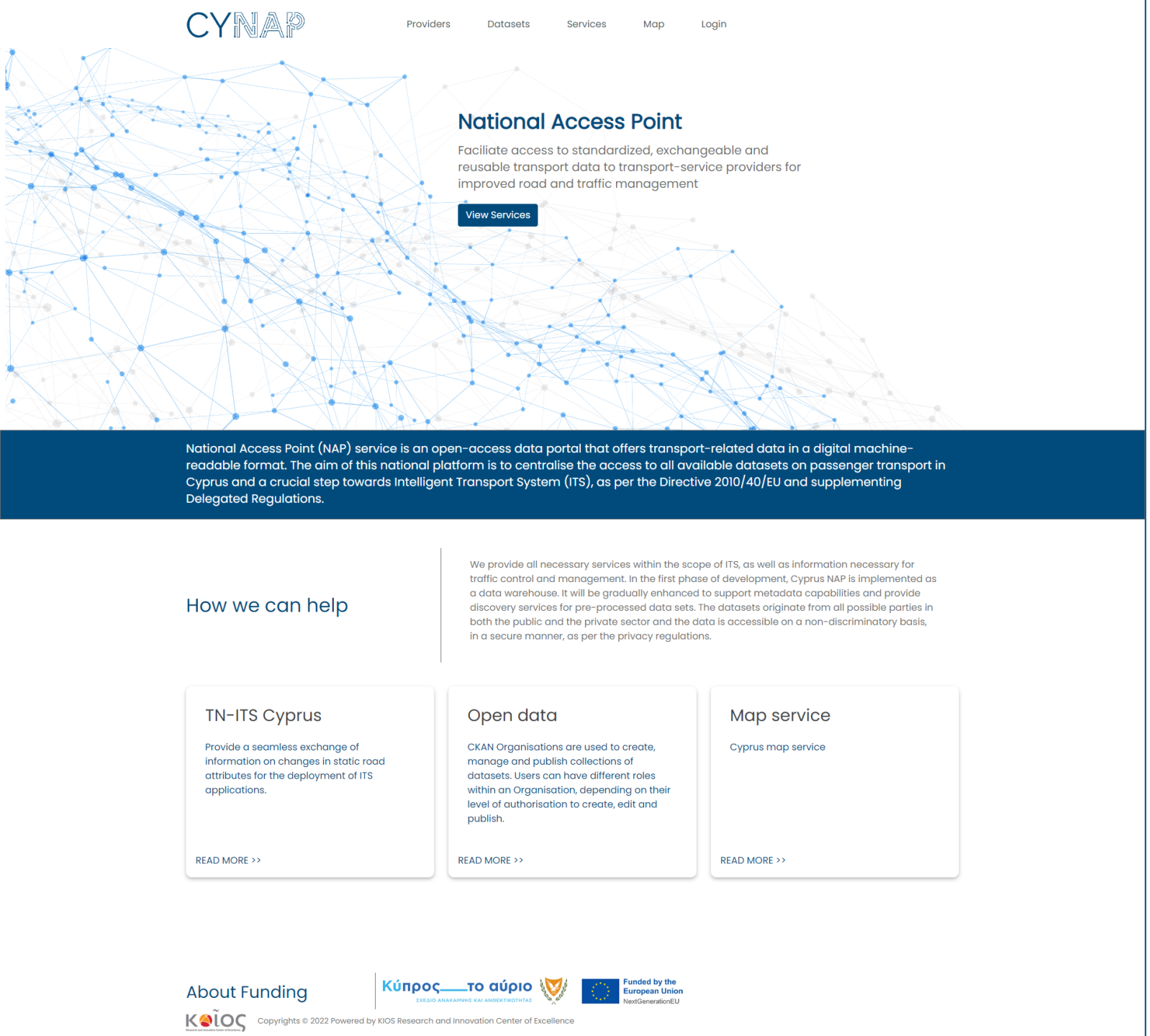
National Access Points

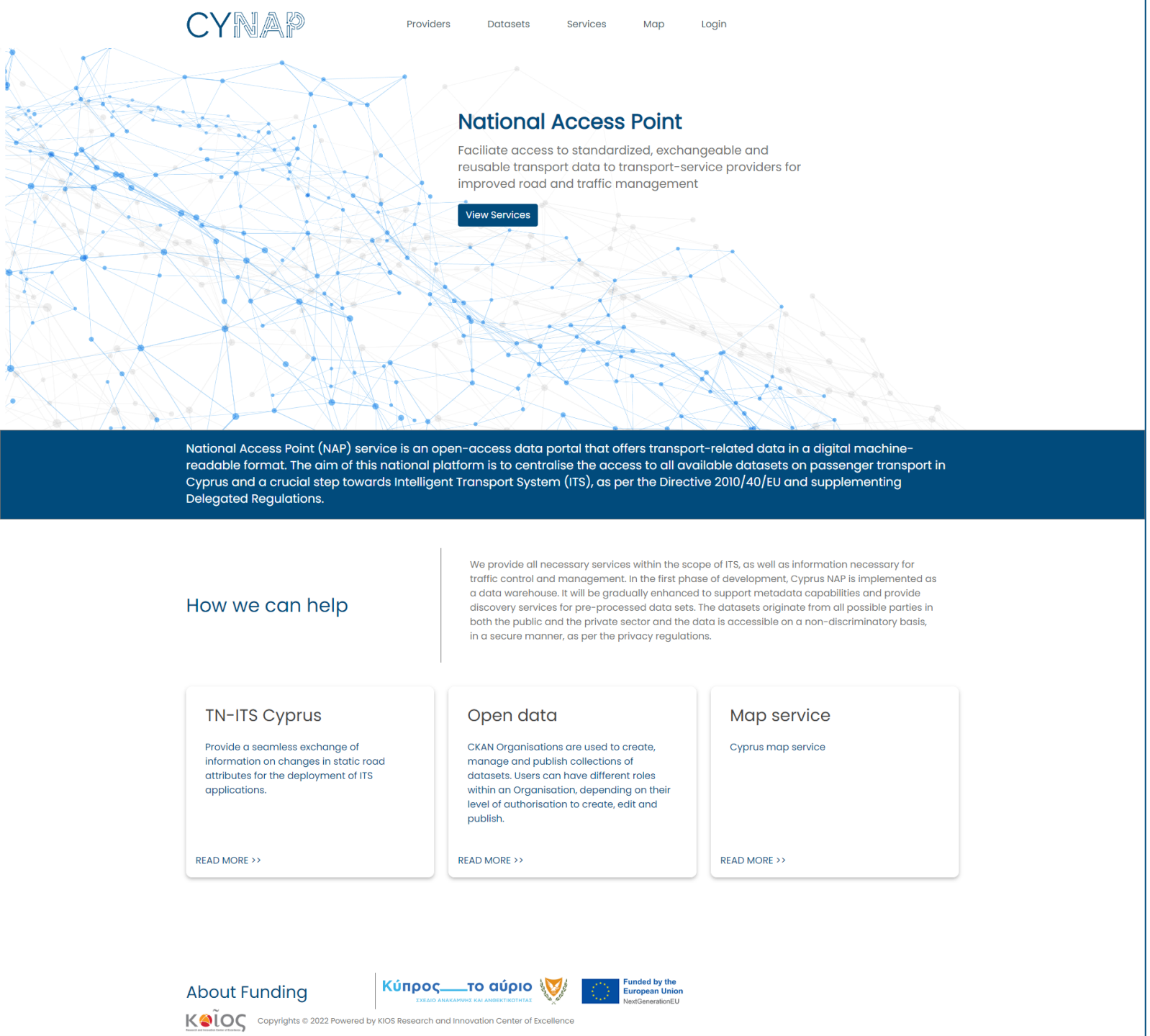


CYNAP

Data Collection

Data Discovery and Access Services

Data viewer and Traffic information



CYNAP

Data Accessibility

Share & Exchange

Re-Use

Data Categories

Mobility Data

Infrastructure data

National Access Point Coordination Organisation for Europe

Toward Digital Twins

- A digital twin is a virtual representation of an object or system that spans its lifecycle, is updated from **real-time data**, and **uses simulation**, **machine learning** and **reasoning** to help **decision-making** (**IBM**).
- Thus, it allows us to **improve the performance of physical entities** by **leveraging computational techniques**.

Digital Twin of Cyprus Road Network

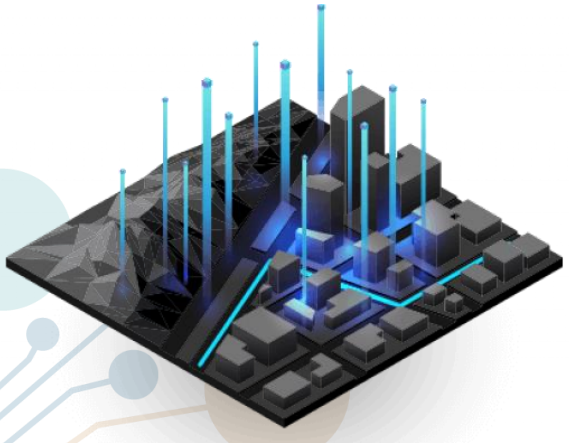
Energy &
Power Systems

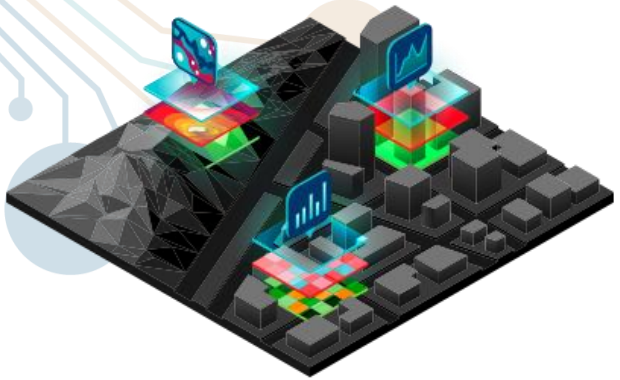
Water Systems &
Environmental
Monitoring

Intelligent
Transportation
Systems

Telecommunication
Systems &
Networks

Healthcare
Systems





Emergency
Management
Response

Digital Twin of Cyprus Road Network

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data.gov.cy

FixCyprus

ΤΜΗΜΑ
ΔΗΜΟΣΙΩΝ ΕΡΓΩΝ

waze

Conclusions

- 4th Industrial Revolution
- Connectivity
- Model and visualize simple and complex events
- Cyber-Physical systems

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Thank you for your attention

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KOΙΟΣ
Research and Innovation Center of Excellence

University of Cyprus