Data, value and services
for Smart Cities and Communities

D4P EU Green week
Javier Orozco, DG CNECT
Unit C3 Technologies for smart communities

6th June 2023

- Difficulty to access and reuse of private data with public interest (B2G)

Data donorship

Data sharing pools

Public procurement

Tender clauses

Current operational models do not scale up

'More secure and regular data sharing across the EU could help public administrations use private sector data for the public good.'
(High-Level Expert Group on B2G Data Sharing)

Source: Digitranscope project

Tailored to the needs

Scalability of solutions

Interoperability

No vendor lock-in

City Ecosystem of Data Providers, Data Users and (services) Innovators

COMPANIES

CONSUMERS / USERS

START-UPS & APP DEVELOPERS

URBAN DATA PLATFORM

data exchange – matchmaking – rules & standards – tools & services

GOVERNMENT(S)

SEMI-PUBLIC ORGANISATIONS

CITIZENS

NGOs
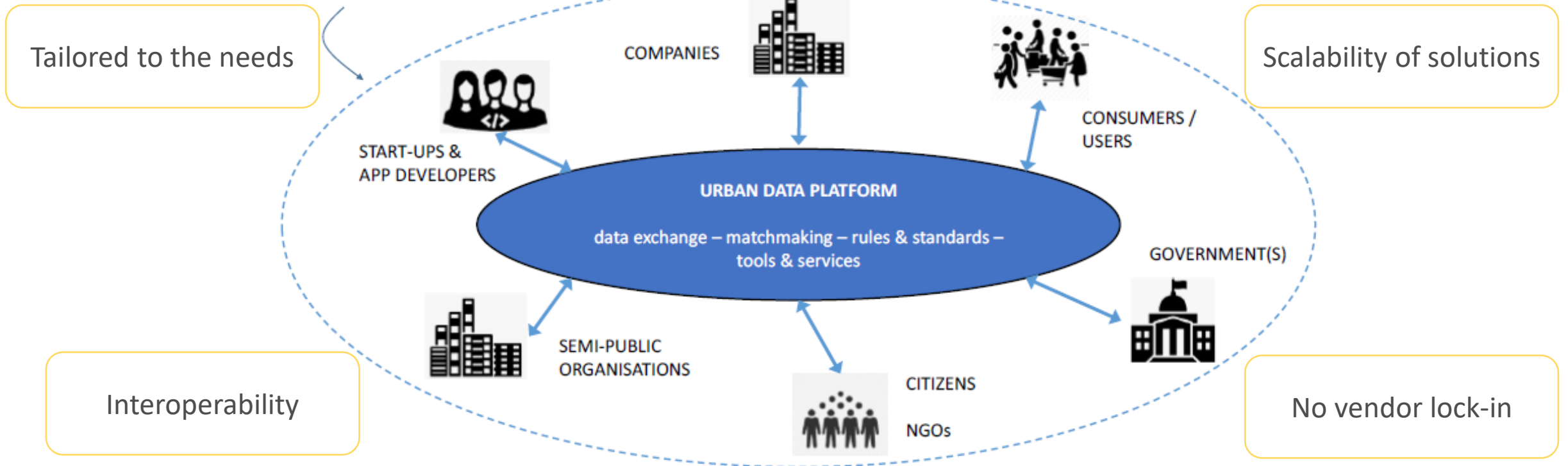
A **Local Digital Platform** is the "operating system" on which digital services can be provided to smart cities and communities, integrating data flows within and across city systems by exploiting modern technologies, such as sensors, cloud services, mobile devices, analytics, etc.

Smart and Sustainable City Ecosystem

Application building block & Smart Green services

AI

TEFs

Analytics and Intelligence

Local Digital twins

Interoperability

Local Data Platforms

Data

Data space for climate-neutral and smart cities

Infrastructure

Sustainability Goals

People & Skills

Capacity Building & Scaling-up at EU level

Data Governance & Stewardship

Cybersecurity & Privacy

Technology & Value Chains

Digital Transformation

Processes

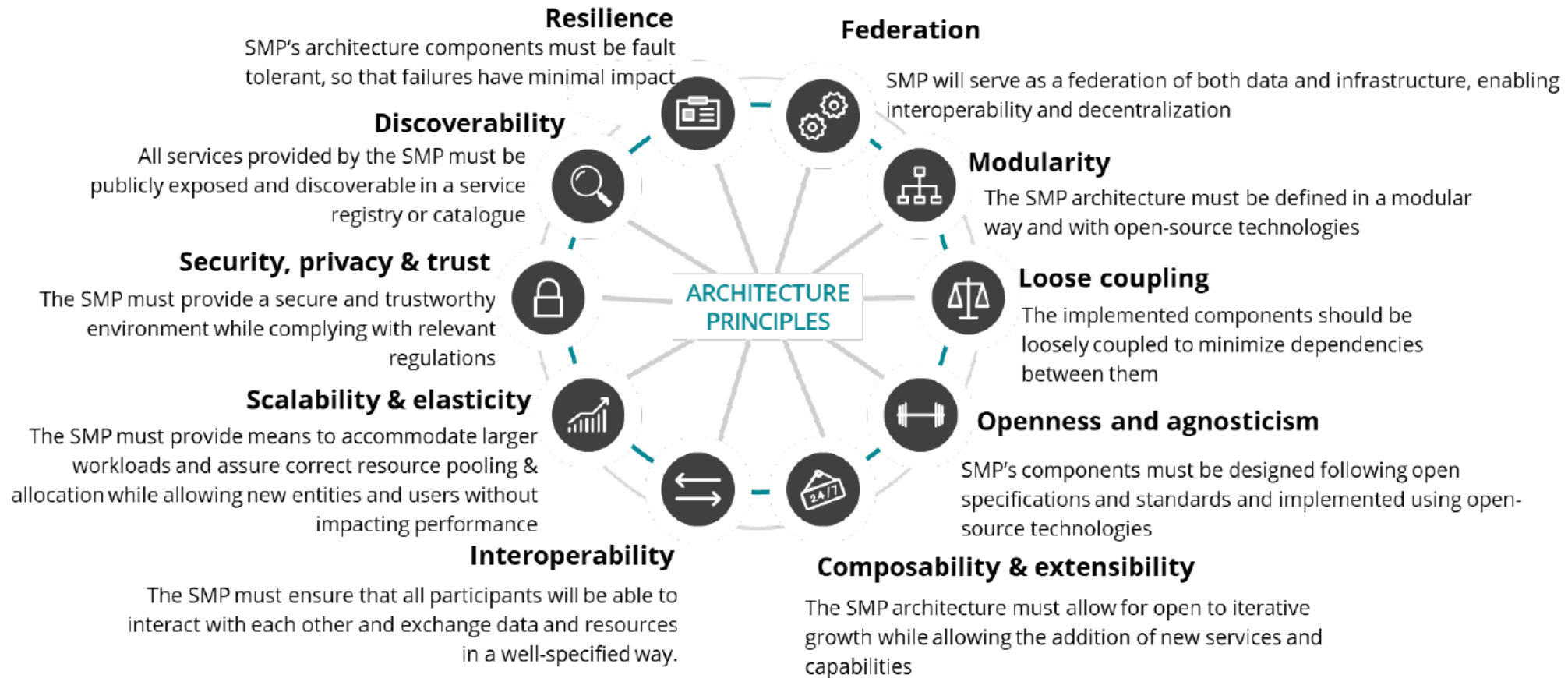AI EDIHs for smart cities

AI TEFs for smart cities

European Commission

Smart Middleware Platform

Resilience
SMP's architecture components must be fault tolerant, so that failures have minimal impact.

Federation
SMP will serve as a federation of both data and infrastructure, enabling interoperability and decentralization

Discoverability
All services provided by the SMP must be publicly exposed and discoverable in a service registry or catalogue

Modularity
The SMP architecture must be defined in a modular way and with open-source technologies

Security, privacy & trust
The SMP must provide a secure and trustworthy environment while complying with relevant regulations

Loose coupling
The implemented components should be loosely coupled to minimize dependencies between them

Scalability & elasticity
The SMP must provide means to accommodate larger workloads and assure correct resource pooling & allocation while allowing new entities and users without impacting performance

Openness and agnosticism
SMP's components must be designed following open specifications and standards and implemented using open-source technologies

Interoperability
The SMP must ensure that all participants will be able to interact with each other and exchange data and resources in a well-specified way.

Composability & extensibility
The SMP architecture must allow for open to iterative growth while allowing the addition of new services and capabilities

ARCHITECTURE PRINCIPLES

Architecture principles

- Exploit the long tradition of EU in cultural and media content
  - Involving European content creators, in particular SMEs, in the design of engaging immersive environments
- Implement CitiVerse prototypes
  - By identifying and building visualization solutions and multi-dimensional models
- Leverage the latest EU technology providers
  - To plan and integrate various data sources together to develop and train AI in a new specific metaverse context
- Propose recommendations for a robust, open and interoperable CitiVerse legal framework
  - Compatible with EU values and laws

- Concrete use cases for the CitiVerse
  - Focus on the pilot areas of the data space for Smart Communities: sustainable mobility, climate resilience, energy flows, zero-pollution and any other within the New European Bauhaus – or combinations of them.
  - Built on existing EU data infrastructure and interconnected Local Digital Twins
  - Minimum lasting 12 months and involving private and public sector from 3 eligible countries.
- A roadmap
  - To expand in Europe using MIM-compliant standards and EU technology solutions
- A recommendation for a CitiVerse platform
  - Interoperable and open
  - According to the EU values and policy landscape

Type of action	Simple grant – 50% costs
Indicative budget	EUR 15 million (several projects, 2-5 Million Euro)
Indicative time	2023 (11/5-26/9) – projects to start around April 2024 (tbc)
Indicative duration of the action	30 months
Implementation	European Commission
Type of beneficiaries	All entities
Security	Call restricted on the basis of art. 12(6) of the DEP Regulation

Thank you!

European Parliament Think Tank - Artificial Intelligence and Urban Development (fresh from the print):

https://www.europarl.europa.eu/thinktank/en/document.html?reference=IPOL_STU(2021)690882

European Commission