

Forward-looking policy making, how can GeoAI help answer societal challenges?

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**DIGITAAL
VLAANDEREN**



**Vlaamse
overheid**



APICA – Port of Antwerp Bruges



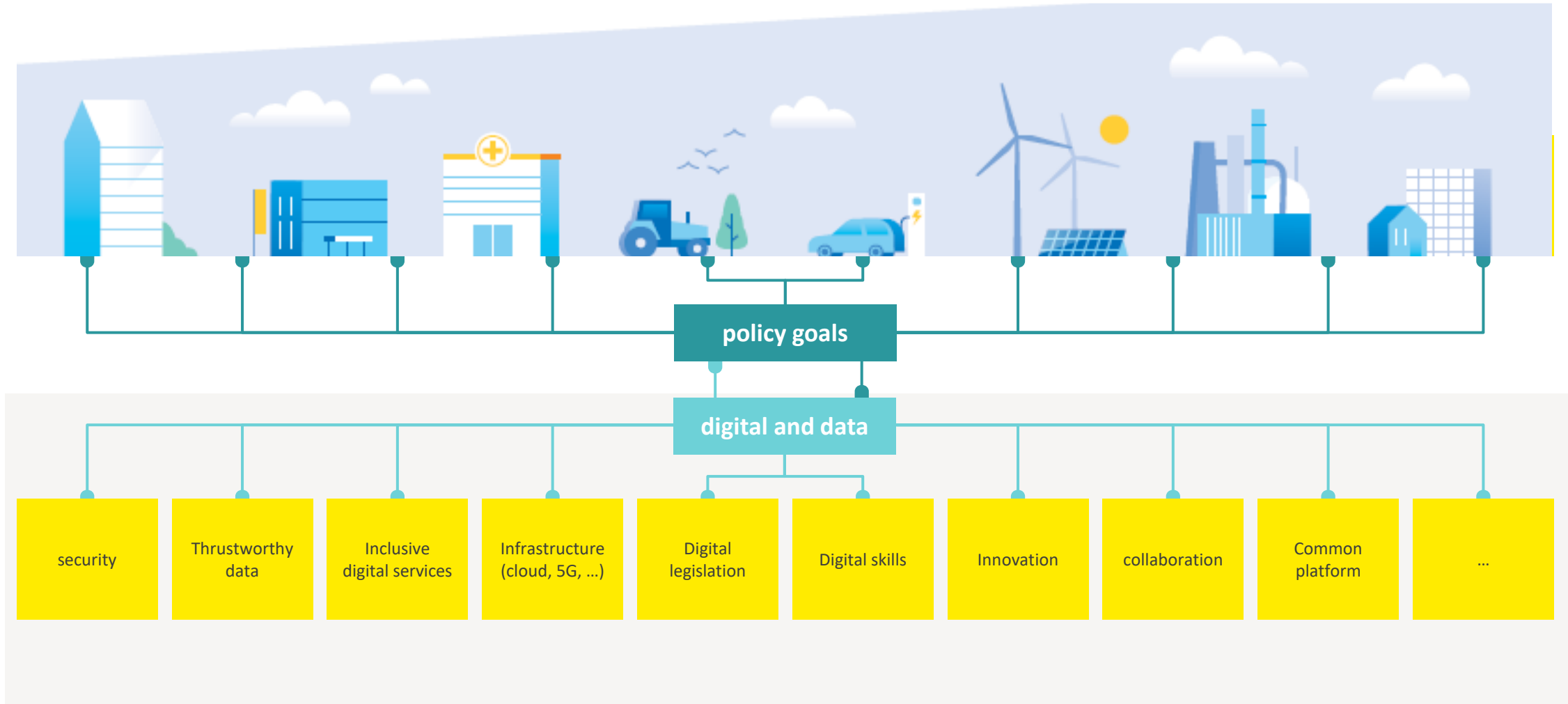
How can GeoAI help answer societal challenges?



POLICY

Digital Strategy for Flanders

A modern government harnessing digital and data to deliver societal impact and better serve citizens, businesses and associations.



Digital Strategy for Flanders

9 key priorities set the strategic direction.

From these, more than 30 action points are derived.

These actions support the 4 pillars (citizen, entrepreneur, government, and infrastructure), which together form the foundation of Flanders' digital decade in line with the **European digital agenda**.

Everyone
(continuously)
prepared for the
digital future

Strengthen digital
entrepreneurship

Datadriven
government

[Vlaamse datastrategie | Vlaanderen.be](#)

Embracing the
power of AI in a
responsible way

User centric:
inclusive digital
public services with
proactive solutions

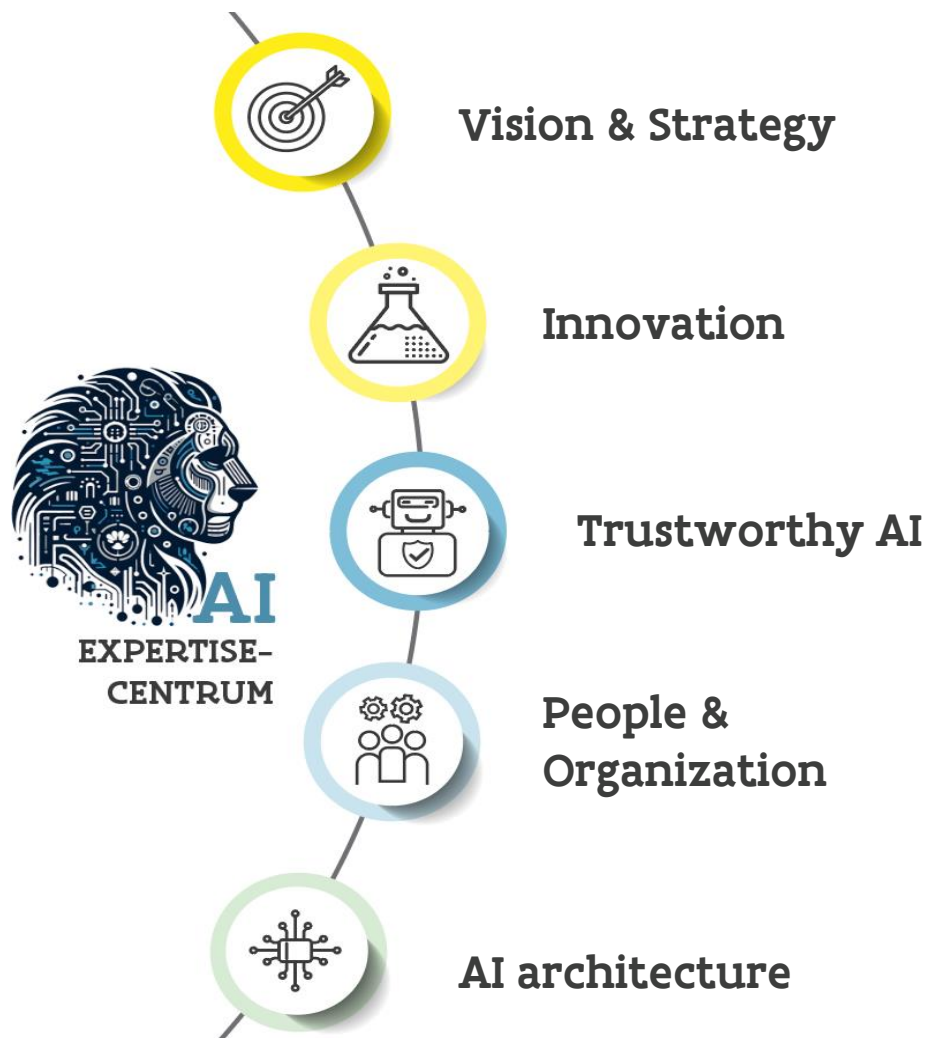
Digitally secure
Flanders

Sustainable Digital
Infrastructure

Government as a
Platform

Focus on societal
impact

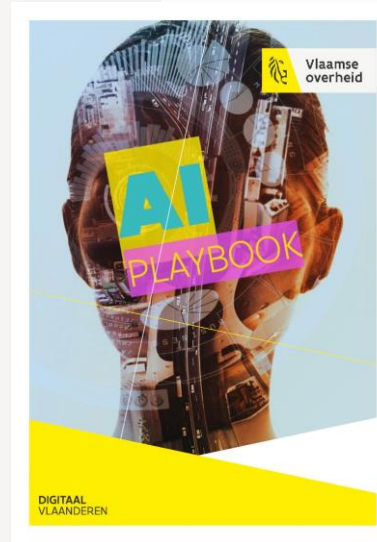
AI Expertise Center – To adopt AI in a responsible way



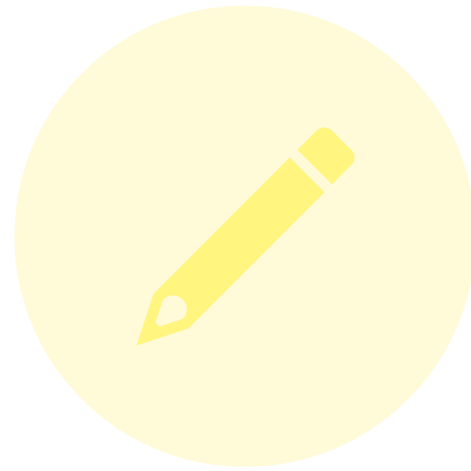
Formulating a **clear AI ambition** and underlying **objectives** that are translated into an AI **roadmap**, determining the role of AI within the organization and how AI contributes to the organization's policy plan and strategic objectives.

Some initiatives:

- * AI strategy
- * **AI Playbook**
- * AI Advisory Board



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PRACTICE

Digital Twins Program – 8 Use Cases - Reusable Building Blocks – Better decisions



Liveable
Neighbourhoods



Tunnel
Safety



Dynamic Traffic
Management
(Operational)



Dynamic Traffic
Management
(Policy)



Environmental
Assessment
Processes



Water Systems &
Infrastructure
Management



Storm Surge Barrier
Nieuwpoort



Smart
Nature

- ❖ 8 Projects cross domain
- ❖ 1 Coordinated DT Programme
- ❖ Reusable Building Blocks
- ❖ Digital Twin Reference Architecture
- ❖ Collaboration & Governance Model

2025 – Analysis and
Selection Use Cases

Q4 '25 – Validated Plan

2026 Implement !

Digital Twins - Use case on water & coastal management

“A digital replica of the storm surge barrier in Nieuwpoort that integrates real-time observations and risk information to simulate flooding and operational scenarios.”



Objectives:

- **Simulate and test storm surge scenarios**
 - Simulating combinations of storm surge, tides and river discharge, and testing operational choices such as opening and closing the barrier.
- **Assess risks and impacts**
 - Assessing flood risks for the hinterland based on water levels, weather forecasts and potential failure scenarios.
- **Support operational control and decision-making**
 - Visualisations and dashboards for real-time monitoring, early warnings, and support for both operational and policy decisions related to water safety.

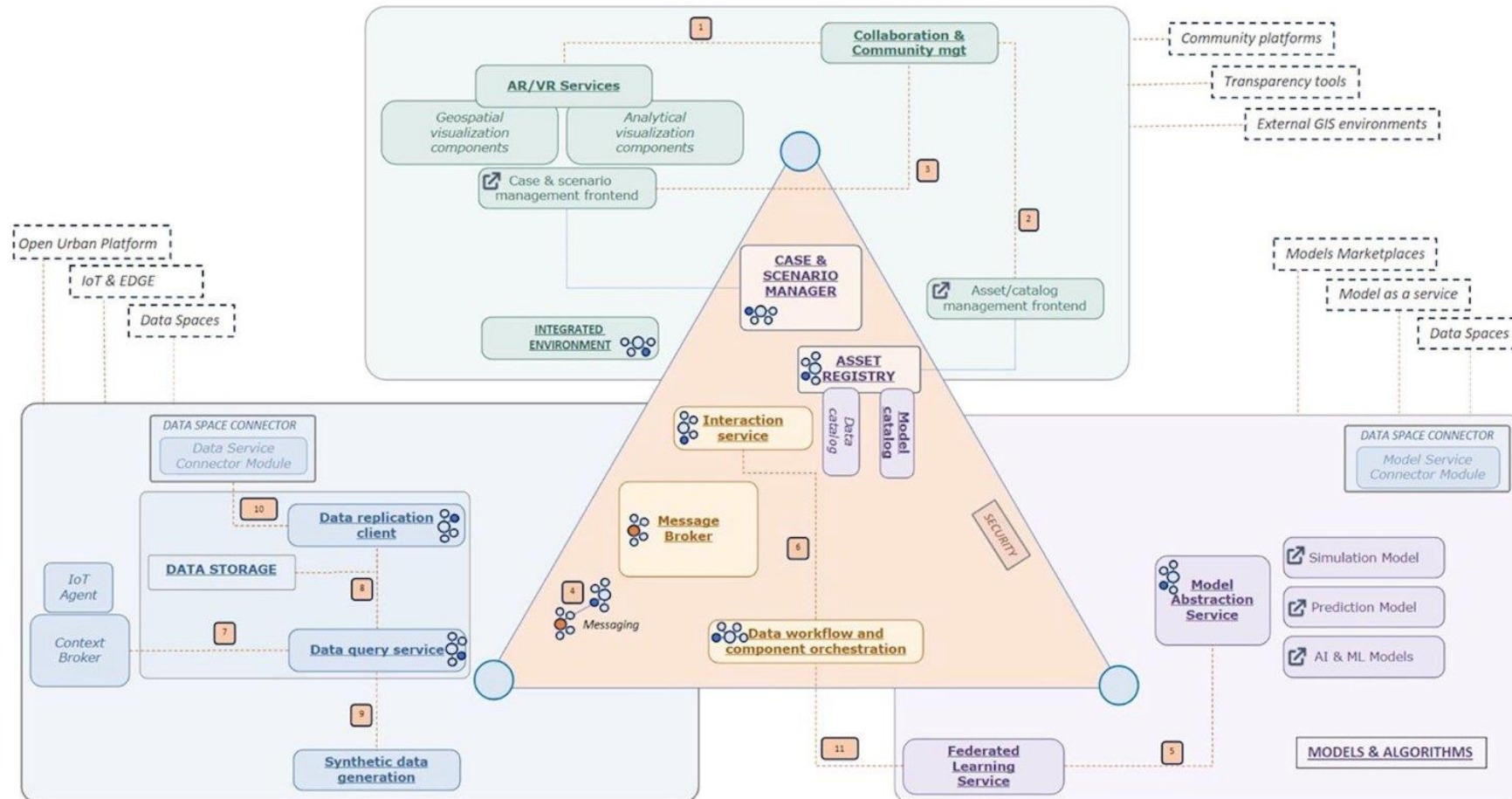
DIGITAL TWIN REFERENCE ARCHITECTURE - CONCEPT

Local Digital Twin as an orchestrator between data, AI and user environments

USER ENVIRONMENTS dashboards, operational systems, GIS

DATA

Tides & surges
Infrastructure sensors
Operational data
River levels
Flood prone areas
Urban structure
...



AI

Tide models
Hydrodynamic flood models
Weather prediction models
...

Source: European Commission – DG CNECT, LDT Toolbox, CNECT/2022/OP/0098, Figure 3 (LDT Reference Architecture – Building Blocks).

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RESEARCH

MISSION



We Grow - REGENERATIVE SPACE



Flanders is a highly populated and densely used region

Growth in one domain often leads to conflicts with others (e.g. nature vs. agriculture, short term vs. long term, ...)

Need for a systemic approach of spatial questions rather than sectoral approaches (energy, housing, climate, water, housing, ...) for the same space

Chat with your maps



I'm a spatial planner, working on a vision for sustainable development in Antwerp City Centre. What are the current challenges?



Hi!
Here's what I have found for the Statistical Sector "Antwerp-Centre" in Antwerp, Flanders, Belgium based on the data present in the Lokale Leefkwaliteit tool.

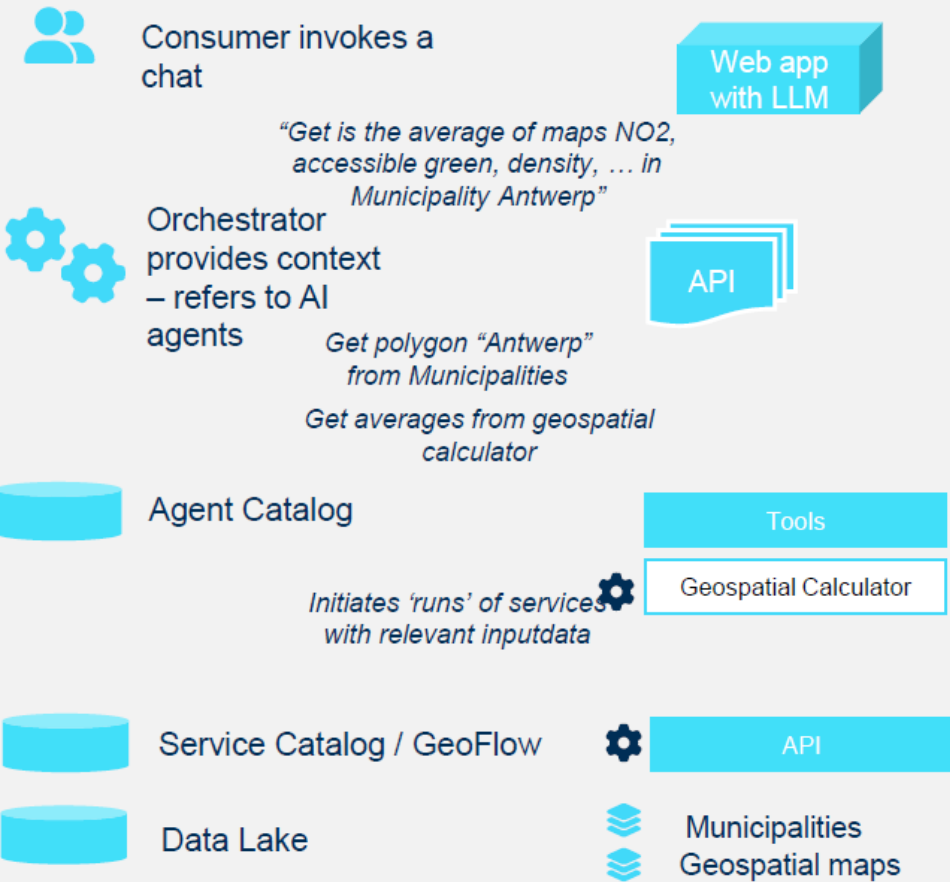
- KPI 1: **air pollution** from traffic, shipping and industry
- KPI 2: high demand for **housing** combined with limited space
- KPI 3: **flooding and heat stress** due to paving, limited access to green spaces for (vulnerable) residents

Would you like to **summarize** this already in a report? Or do you want to **explore** more data, perhaps even do a **simulation**?

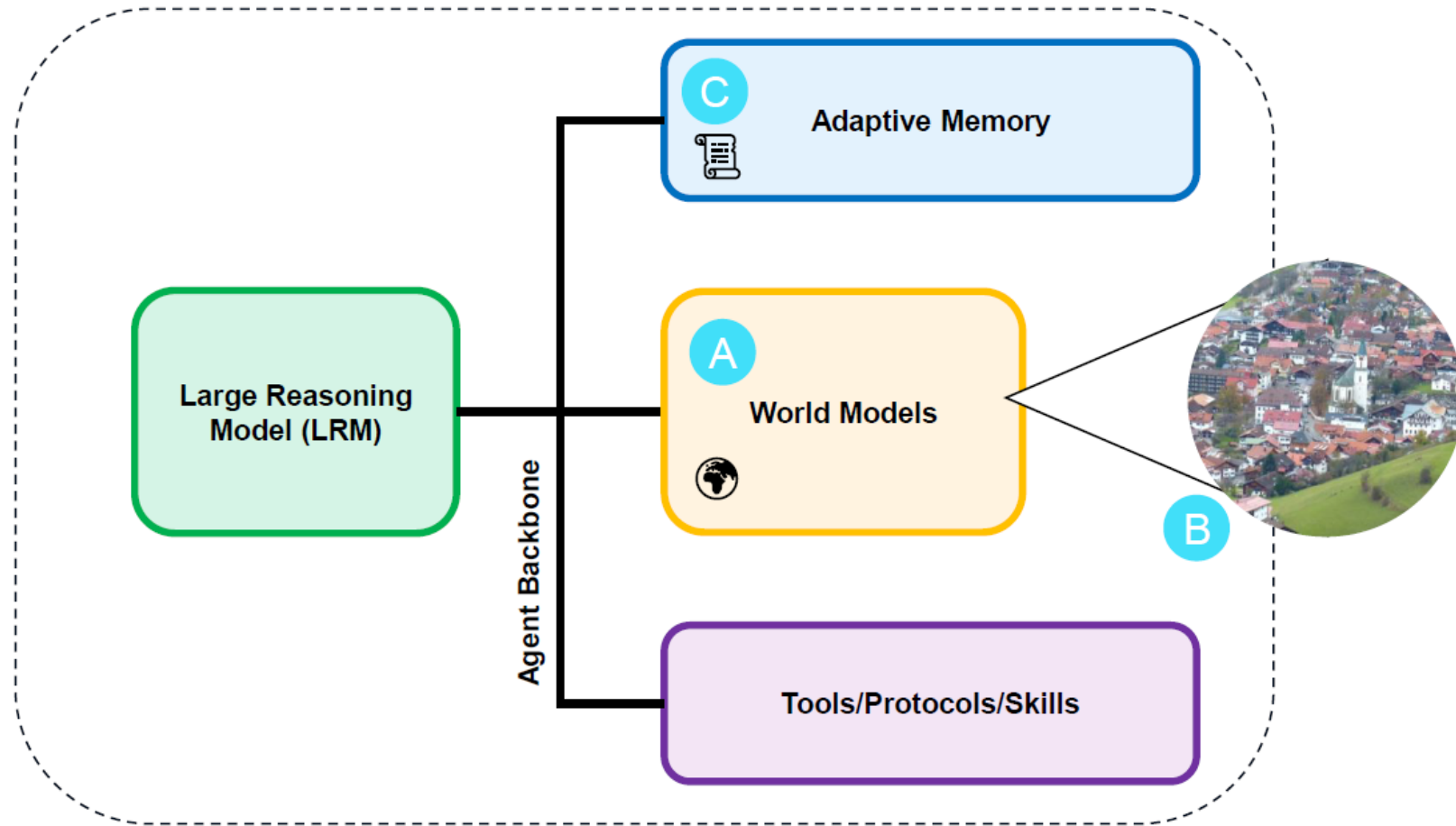


Thinking...

What are potential measures with benefits for all sectors?



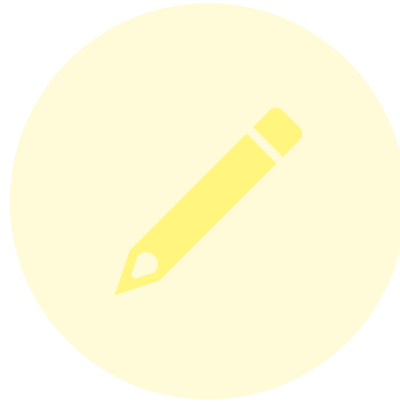
Fizzy Framework – “Physical AI” Agents



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POLICY



PRACTICE



RESEARCH

#Trefdag26

TREFDAG VLAANDEREN DIGITAAL 2026

SOEVEREIN in een **VERBONDEN** wereld

22 OKTOBER 2026 | FLANDERS EXPO GENT