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Documind x READ

GenAI-assisted structural metadata generation for Bank of Greece's internal data hub

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Rome, 30/09/2025

Περιεχόμενα - Agenda

1 READ

- **1.1** The need
- **1.2** The ingredients
- **1.3** The recipe

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- **2.1** The challenge
- **2.2** The architecture
- **2.3** Key features

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Research & Economic Analysis Database

Bank of Greece's internal data hub

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The need

- Research & Economic Analysis Database
- Unified access to data for Research & Analysis purposes
- Demand driven by the Bank's Economists
  - Feature-wise and data-wise
- The offering includes:
  - Access to selected data published by various organisations (ranging from national to international)
  - Categorised across several dimensions (e.g., Providing Organisation, Subject Area, Publication etc.)
  - Automated data updates (e.g., on a scheduled basis)
  - Alerts for new/ revised data
  - Facility to easily retrieve the updated timeseries and feed further analysis downstream
- Not used for data dissemination/ reporting

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The ingredients

- Unified access → SDMX information model
- Data & Metadata management platform → .Stat Suite
- Metadata editing/ curation → FMR Workbench
- 2 personas
  - Economist – Research → .Stat Data Explorer
  - Economist – Analysis → .Stat Excel Add-in
- Capacity building → .Stat Academy, SDMX conferences and the community
- Multiple providers
  - SDMX APIs compatibility → SDMX Test Compatibility Kit
  - Non-SDMX: Human/ GenAI-assisted structural metadata generation (see Documind)
- Data Pipelines → Azure Pipelines (inspired by DBnomics)

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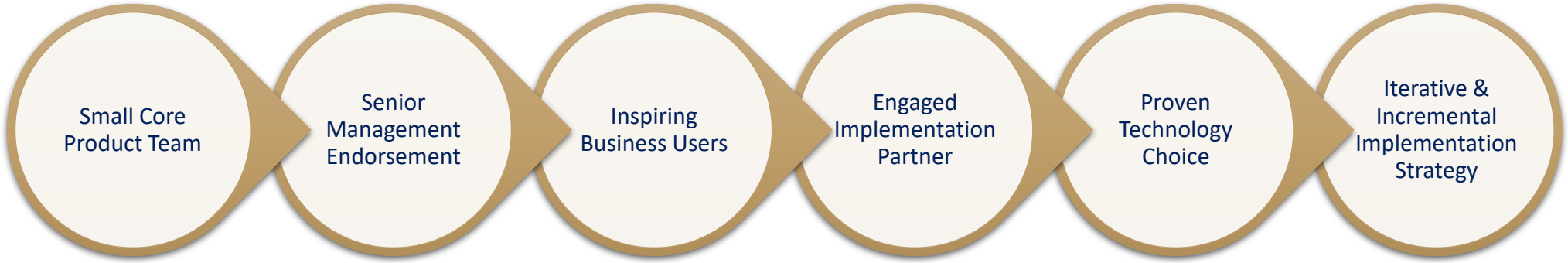
The recipe



Documind

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GenAI-assisted structural metadata generation

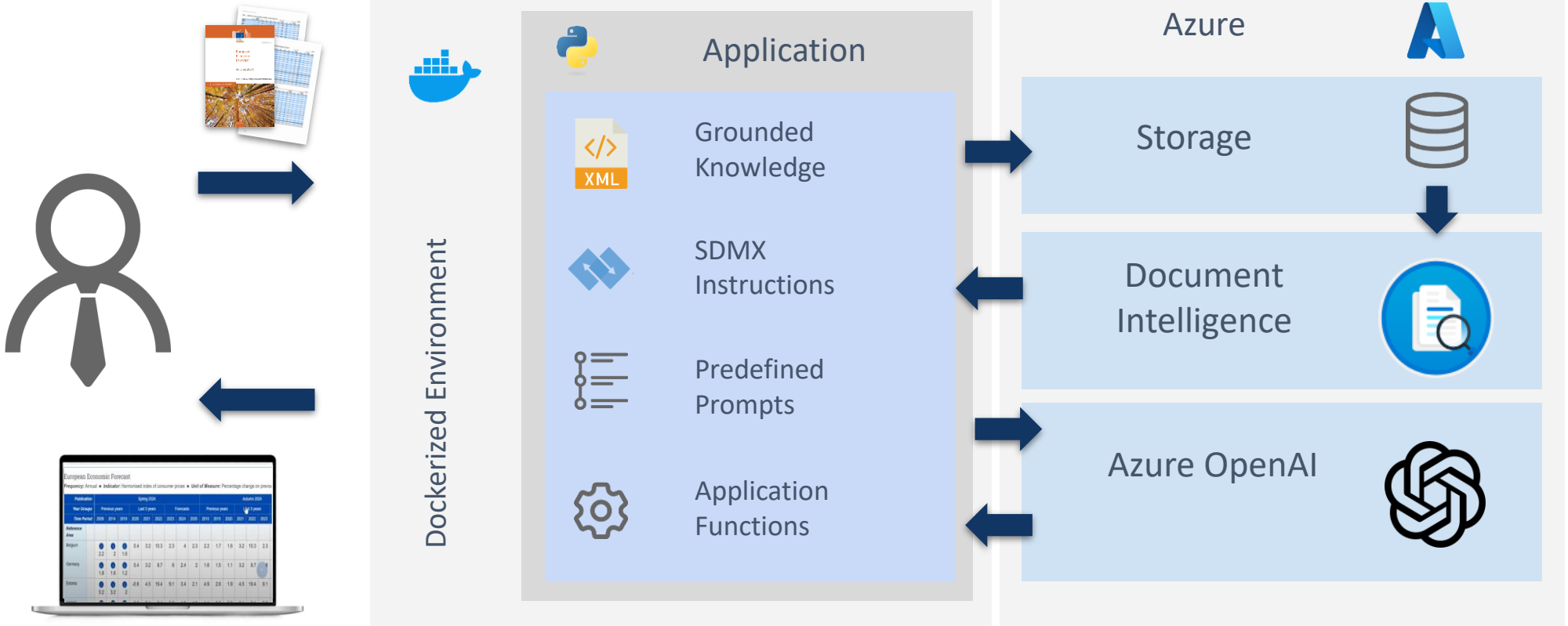
The Challenge

Publication each Q ~ 250 pages each

sdmx

1. XML Accurate
2. Precise
3. Trustworthy

Microservice Architecture

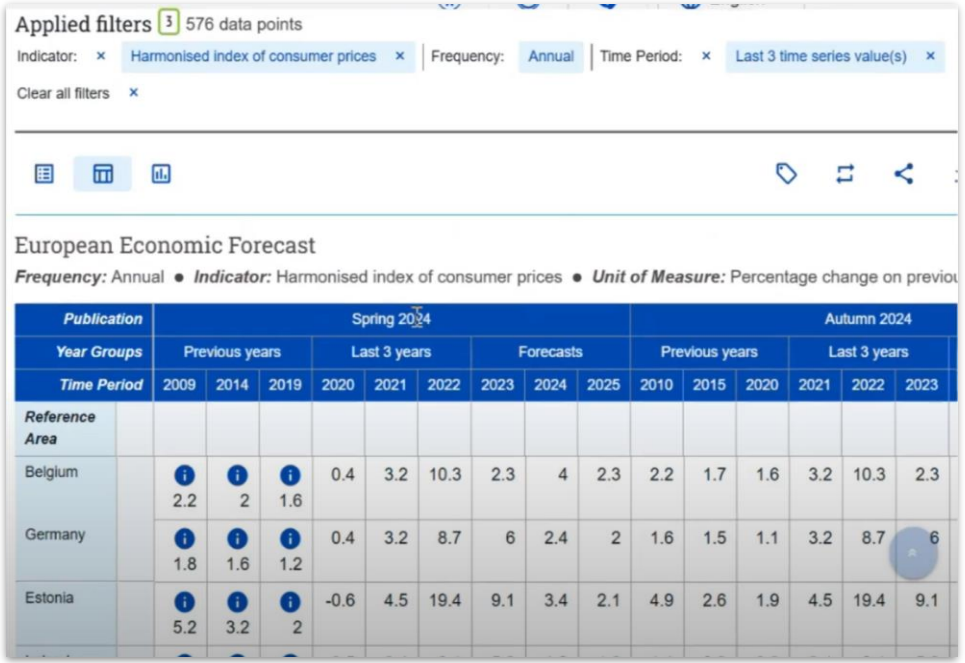


Our Solution: End-to-End Data Preparation

Table 17a: Harmonised index of consumer prices (national index if not available), (percentage change on preceding year, 2005-2025)

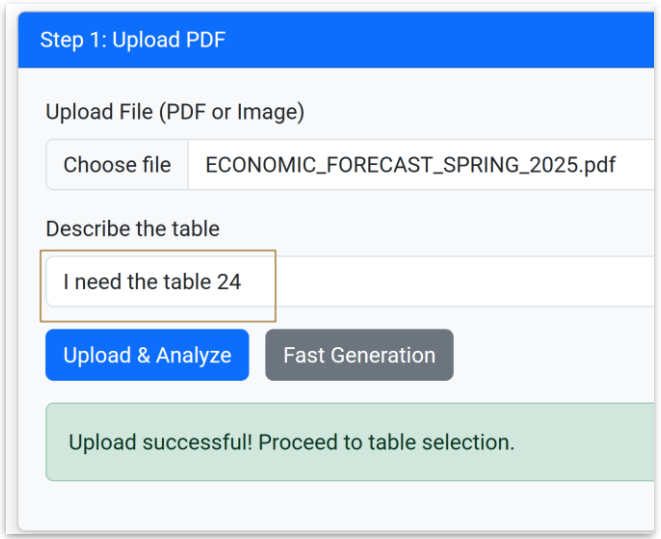
	5-year averages						Spring 2024 Forecast		
	2005 - 09	2010 - 14	2015 - 19	2020	2021	2022	2023	2024	2025
Belgium	2.2	2.0	1.6	0.4	3.2	10.3	2.3	4.0	2.3
Germany	1.8	1.6	1.2	0.4	3.2	8.7	6.0	2.4	2.0
Estonia	5.2	3.2	2.0	-0.6	4.5	19.4	9.1	3.4	2.1
Ireland	1.8	0.5	0.3	-0.5	2.4	8.1	5.2	1.9	1.8
Greece	3.1	1.3	0.3	-1.3	0.6	9.3	4.2	2.8	2.1
Spain	2.7	1.8	0.7	-0.3	3.0	8.3	3.4	3.1	2.3
France	1.7	1.6	1.0	0.5	2.1	5.9	5.7	2.5	2.0
Croatia	3.4	1.8	0.6	0.0	2.7	10.7	8.4	3.5	2.2
Italy	2.1	1.9	0.7	-0.1	1.9	8.7	5.9	1.6	1.9
Cyprus	2.2	1.9	-0.2	-1.1	2.3	8.1	3.9	2.4	2.1
Latvia	8.4	1.2	1.7	0.1	3.2	17.2	9.1	1.6	2.0
Lithuania	5.5	2.0	1.7	1.1	4.6	18.9	8.7	1.9	1.8
Luxembourg	2.7	2.4	1.2	0.0	3.5	8.2	2.9	2.3	2.0
Malta	2.5	1.9	1.3	0.8	0.7	6.1	5.6	2.8	2.3
Netherlands	1.6	1.8	1.2	1.1	2.8	11.6	4.1	2.5	2.0
Austria	1.9	2.3	1.5	1.4	2.8	8.6	7.7	3.6	2.8
Portugal	1.9	1.6	0.8	-0.1	0.9	8.1	5.3	2.3	1.9
Slovakia	2.8	2.0	1.2	2.0	2.8	12.1	11.0	3.1	3.6
Slovenia	3.0	1.8	0.9	-0.3	2.0	9.3	7.2	2.8	2.4
Finland	1.8	2.3	0.7	0.4	2.1	7.2	4.3	1.4	2.1
Euro area	2.1	1.7	1.0	0.3	2.6	8.4	5.4	2.5	2.1
Bulgaria	7.1	1.5	0.8	1.2	2.8	13.0	8.6	3.1	2.6
Czechia	2.7	1.7	1.6	3.3	3.3	14.8	12.0	2.5	2.2
Denmark	2.0	1.6	0.5	0.3	1.9	8.5	3.4	2.0	1.9
Hungary	5.1	3.2	1.8	3.4	5.2	15.3	17.0	4.1	3.7
Poland	2.8	2.2	0.8	3.7	5.2	13.2	10.9	4.3	4.2
Romania	6.8	4.0	1.5	2.3	4.1	12.0	9.7	5.9	4.0
Sweden	1.9	1.0	1.5	0.7	2.7	8.1	5.9	2.0	1.8
EU	2.3	1.8	1.0	0.7	2.9	9.2	6.4	2.7	2.2
United Kingdom	2.5	2.5	1.6	1.0	2.5	7.9	6.8	2.4	2.0
Japan	0.0	0.4	0.5	0.0	-0.2	2.5	3.3	2.8	2.2
United States	2.6	2.0	1.6	1.2	4.7	8.0	4.1	2.9	2.4

Before : Paper/PDF Unstructured

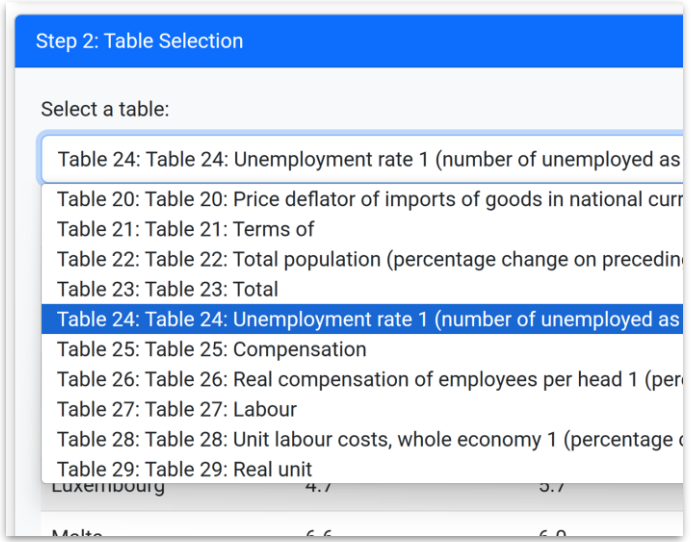


After: DWH Structured

Key Feature: Human-in-the-Loop

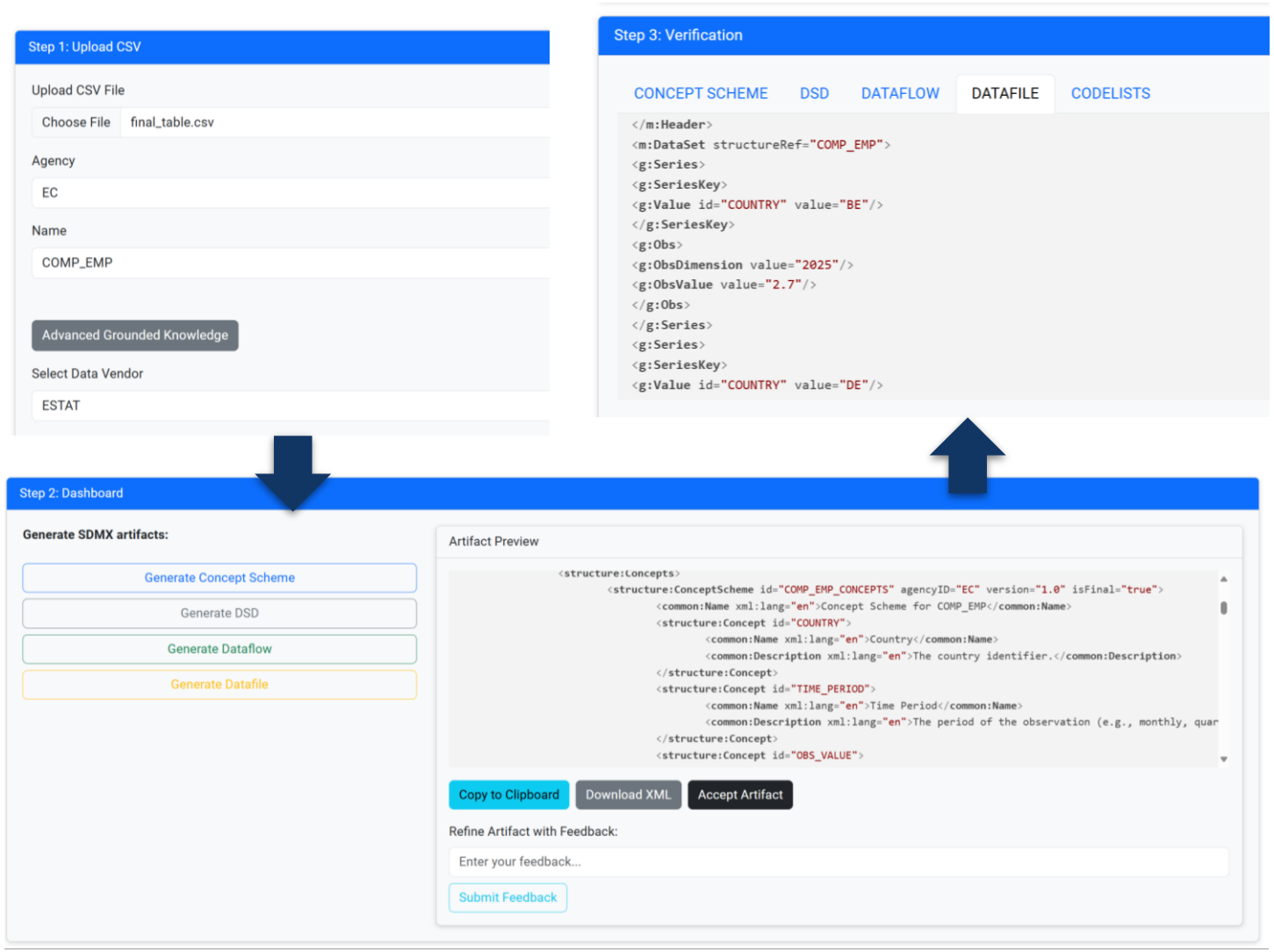


User selects verbally



System recommends

Artefact Generation



Thank you!

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Key Feature: Human-in-the-Loop

User suggest edits

System applies and keeps track of versioning

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