



DataBench

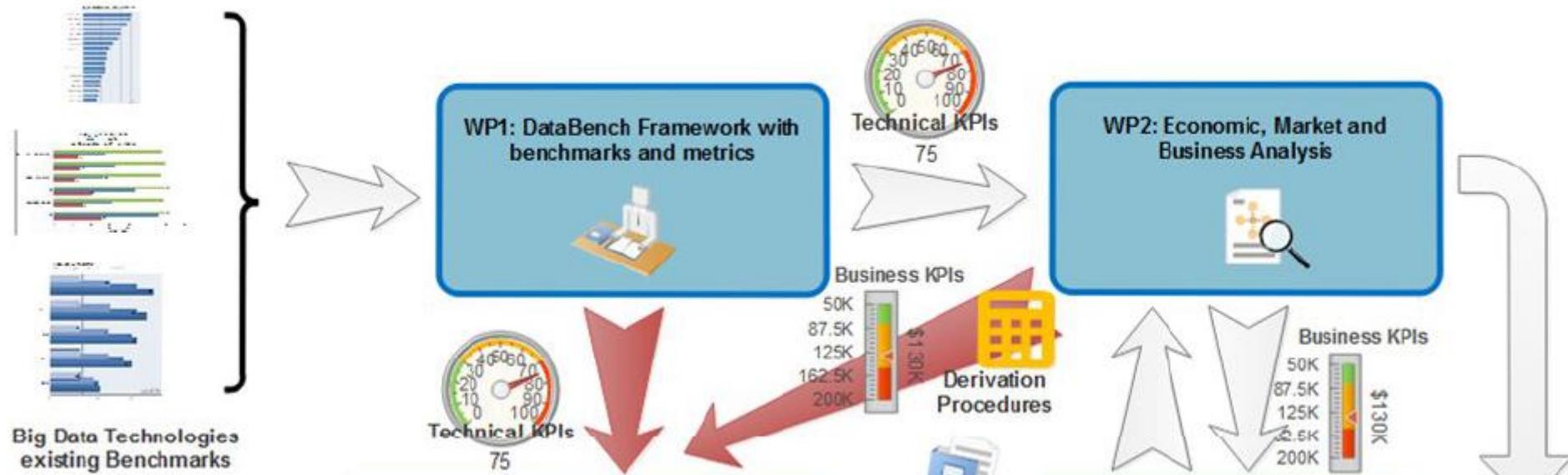
Evidence Based Big Data Benchmarking to Improve Business Performance

DataBench Framework

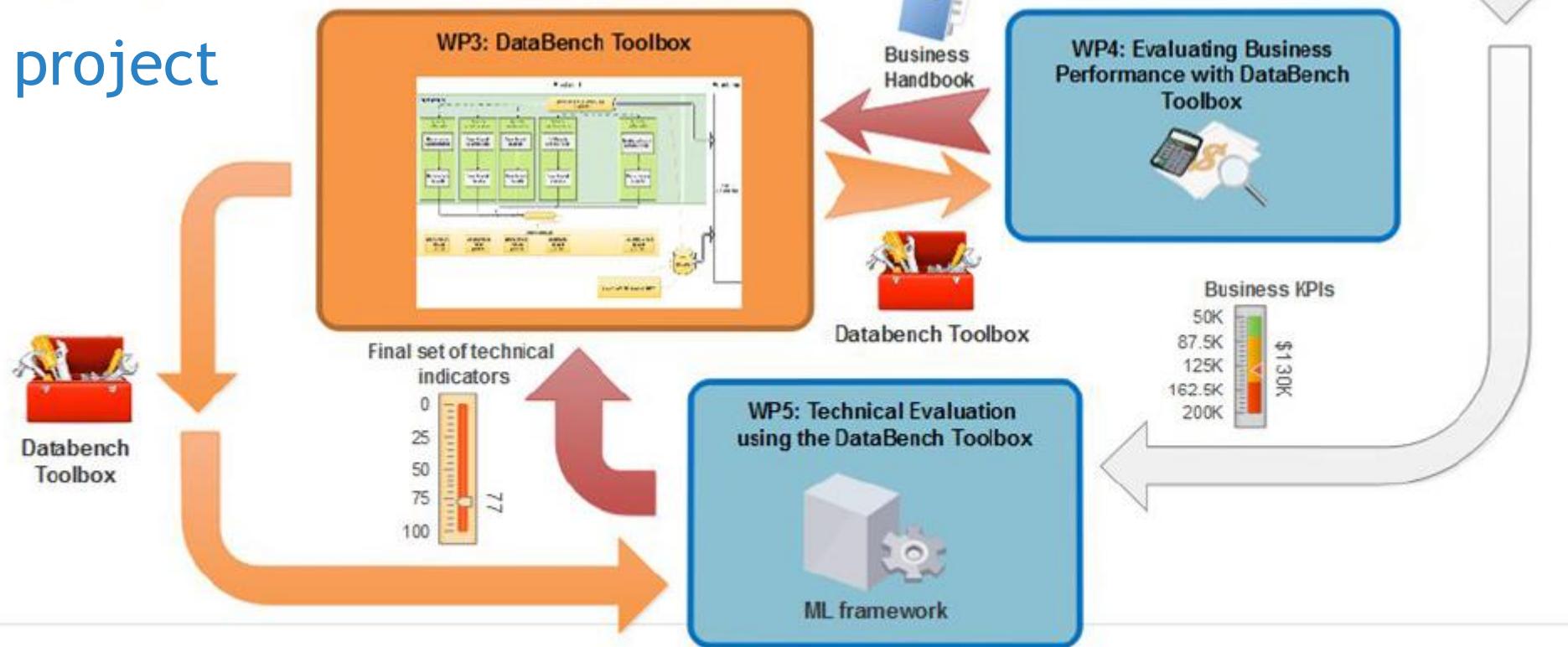
Dr. Arne J. Berre, SINTEF



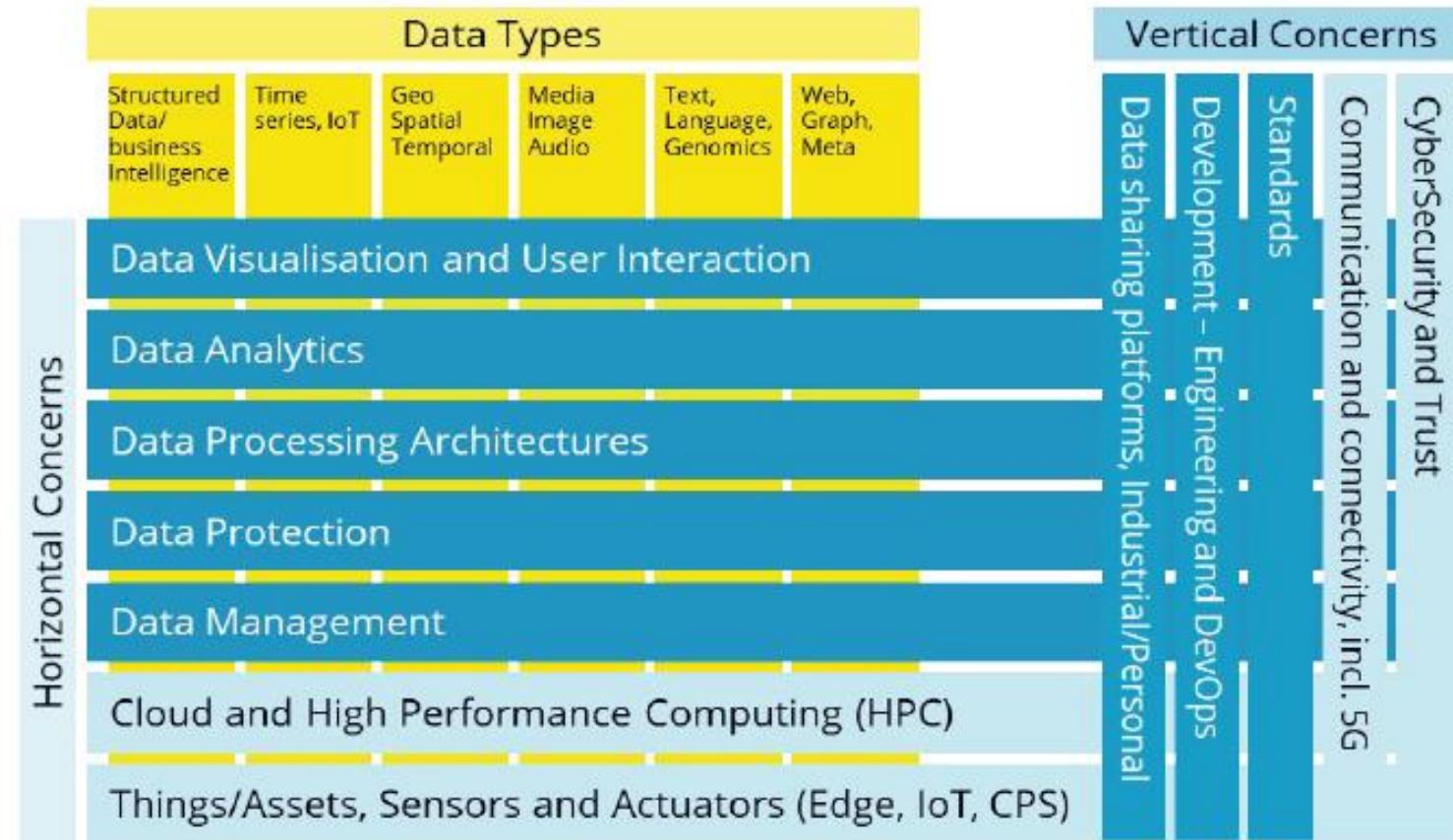
Frankfurt Big Data Lab
GOETHE UNIVERSITÄT



DataBench project structure



BDVA Reference Model as a foundation for the DataBench Framework



WP1 Deliverables - in extended BDVA Model

D1.1

Industry Requirements
and sector specific
specifications and KPIs (M12)



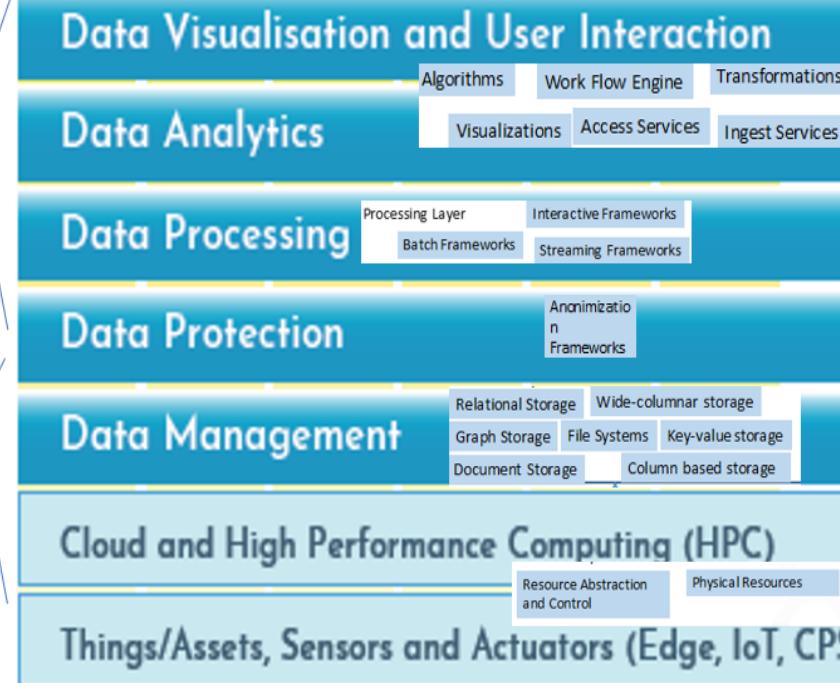
DataBench Framework –
with Vertical Big Data
type benchmarks (M18)

D1.2



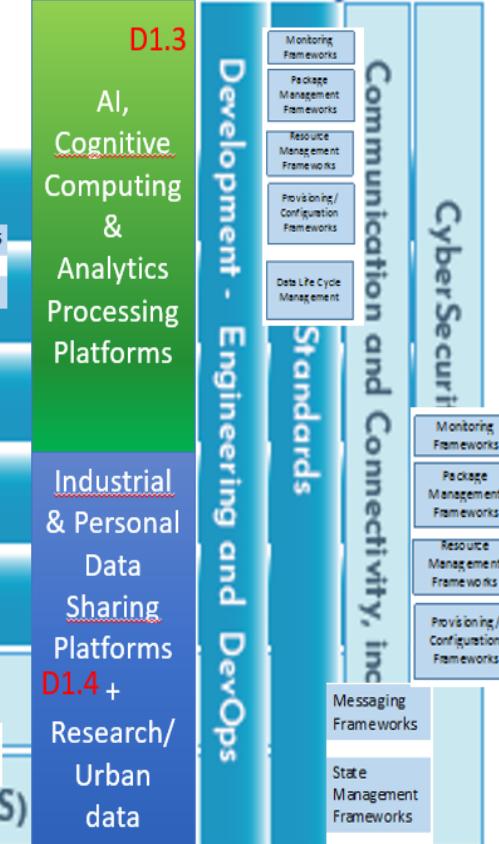
Horizontal Benchmarks –
Analytics and Processing
(M24)

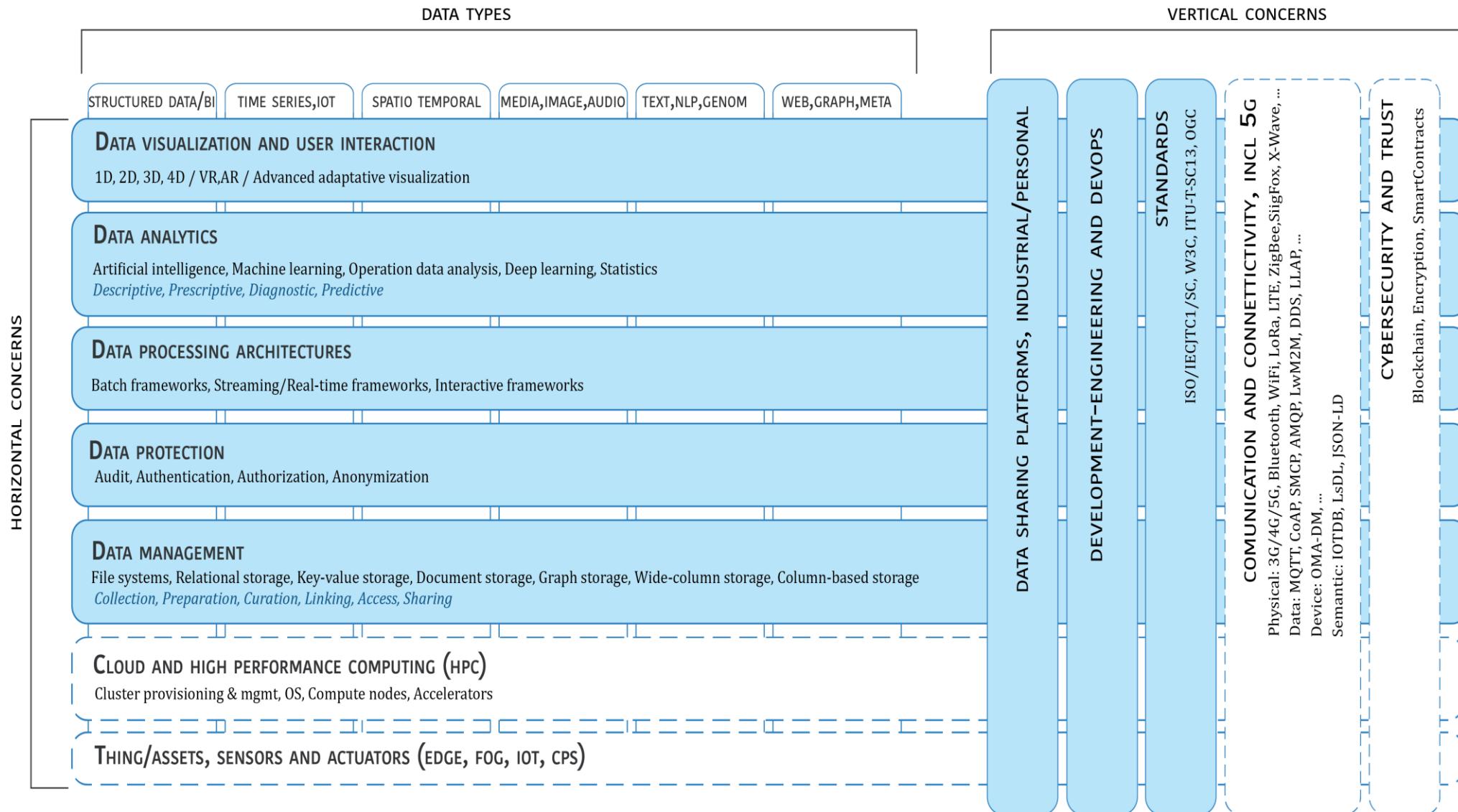
D1.3



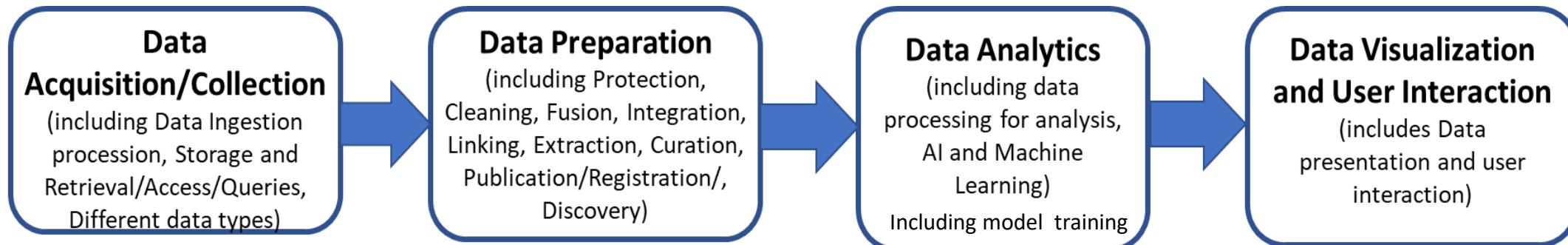
Horizontal Benchmarks –
Data Management
(M24)

D1.4

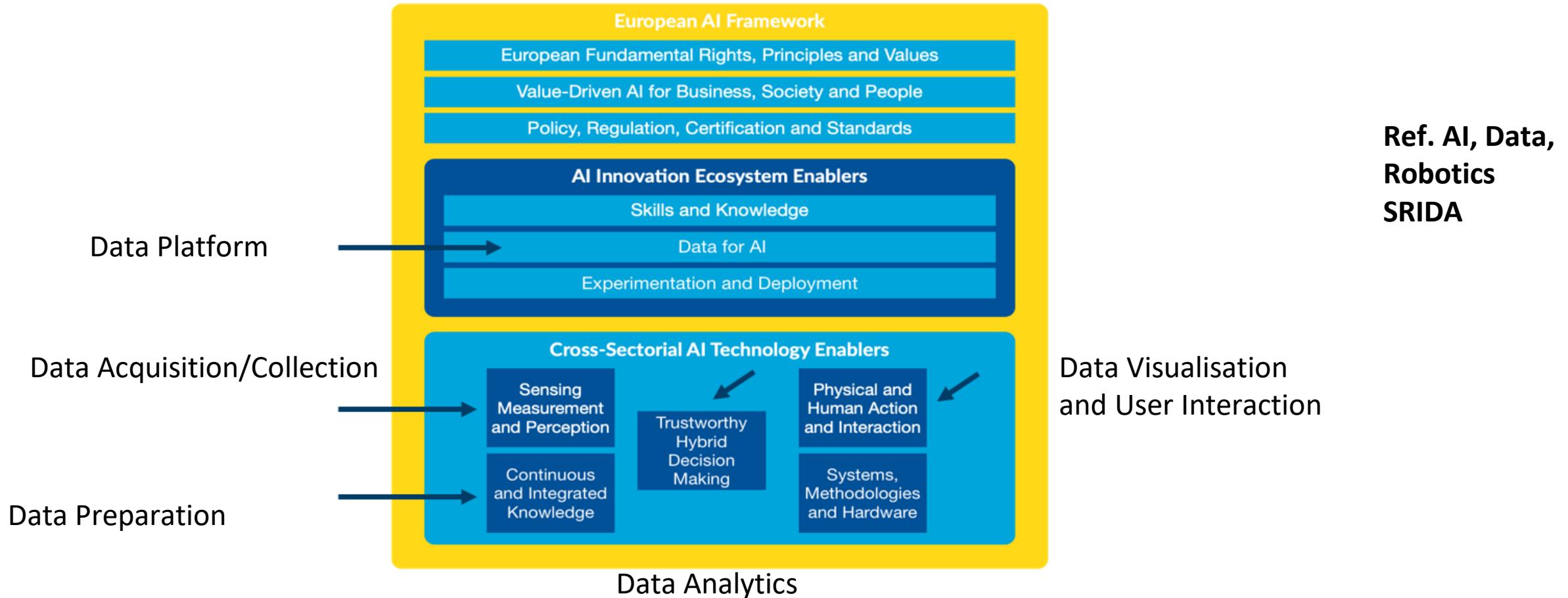




Top Level Generic Big Data Pipeline



Data driven AI Pipeline



DataBench Framework Matrix



DataBench Framework Matrix																																					
Verticals, incl. Data types	ASPECTS																																				
	Business	X	X		X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X					
	Transport		X																X		X																
	Manufacturing																																				
	Energy																																				
	Bioinformatics						X																														
	Health																																				
	Telecommunication																		X																		
	Finance																																				
	Social Media																																				
	General Micro-benchmark			X	X	X		X	X																												
	Standardized Benchmark	X	X						X																												
	MetaData																		X	X	X	X															
	Graph, Network								X	X																											
	Text, Web			X	X		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X					
	NLP																		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
	Image, Audio																			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
	Spatio Temp																			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
	Time Series, IoT		X																		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
	Structured, BI	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
	Visual Analytics																																				
	Industrial Analytics (Descriptive, Diagnostic, Predictive, Prescriptive)																																				
	Machine Learning, AI, Data Science																																				
	Streaming/Realtime Processing																																				
	Interactive Processing	X	X			X		X																													
	Batch Processing	X	X	X	X	X	X	X	X																												
	Data Privacy/Security																																				
	Data Governance/Mgmt																																				
	Data Storage	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X					
	Communication & Connectivity																																				
	Cloud Services & HPC, Edge																																				
Benchmarks																																					

Selection
of
Benchmarks
In
DataBench
Toolbox

Big Data and AI Benchmarking Communities

- TPC ([http://www\(tpc.org/](http://www(tpc.org/)) - Transaction Processing Performance Council
- SPEC (<https://www.spec.org/>) - Standard Performance Evaluation Corporation
- STAC (<https://stacresearch.com/>) - STAC Benchmark Council
- LDBC (<http://www.ldbcouncil.org/>) – Graph and semantic data benchmarks
- Hobbit Community (<https://project-hobbit.eu>)
- BigDataBench (<http://prof.ict.ac.cn/>)

There are also emerging communities in particular related to benchmarking of analytics/machine learning/AI that can be interacted with in the future.

- MLPerf - <https://mlperf.org/>
- AI Bench - <http://www.benchcouncil.org/AIBench/index.html>
- ...

Contacts

 info@databench.eu

 @DataBench_eu

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