

Deliverable D8.1a

PoC Identification and Design

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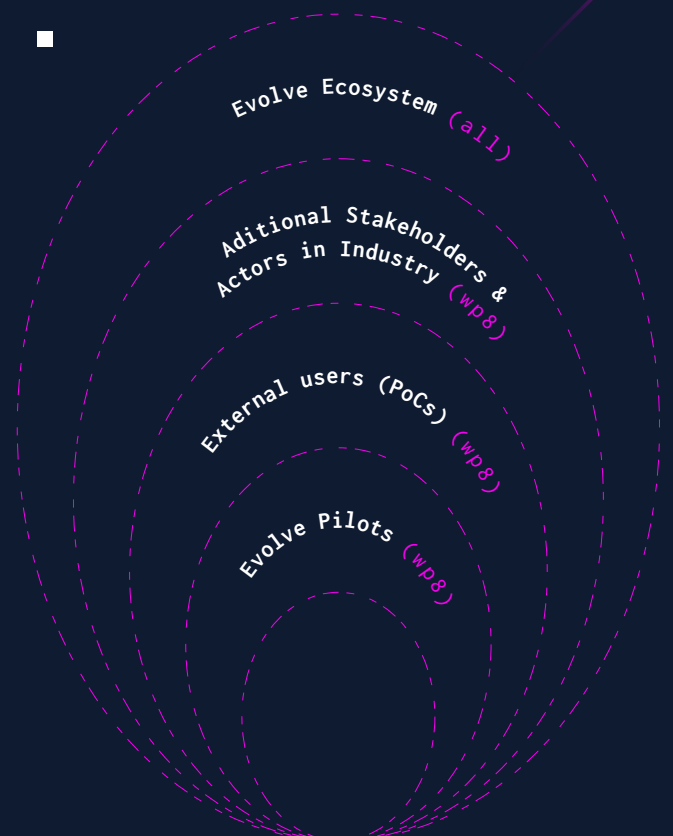
GOALS OF THE DELIVERABLE

- Define and describe the process for identifying proof of concepts (POCs) to be run on the EVOLVE testbed;
- Develop an EVOLVE value proposition and describe EVOLVE ecosystem development activities performed;
- Describe the identified POCs in a unified structure.

EVOLVE VALUE PROPOSITION

The EVOLVE testbed combines High Performance Computing Efficiency, Big Data Performance, and Cloud Convenience for 'Your' applications within one platform.

- The EVOLVE testbed is an advanced computing platform with HPC features and systems software (High Performance Computing Efficiency).
- The EVOLVE testbed has a versatile big-data processing stack for end-to-end workflows (Big Data Performance).
- The EVOLVE testbed features ease of deployment, access and use.



EVOLVE BENEFITS FOR PROOF-OF-CONCEPTS

- The advantages of EVOLVE: ‘Your’ Application on ‘Our’ Platform:
 - Reduce time to market for new products and services by exploiting an HPC-grade computing system;
 - Development and operational costs are reduced;
 - Benefit from greater performances with Big Data analytics;
 - Easy to deploy, easy to maintain, easy to use;
 - Secure and private.
- Try out our platform: Help us tailor the platform to your market needs.
 - Gain a competitive advantage by scaling-up your datasets while still reducing computation time;
 - Experience the performance of your application increasing transparently thanks to the innovations introduced throughout the course of the project;
 - Get full-stack support from academic and industrial experts.

EVOLVE BENEFITS FOR PROOF-OF-CONCEPTS

POC (OWNER)	MANAGEMENT	DATA SCIENTIST	IT
Status detection of vehicle assistance systems (VIF)	<ul style="list-style-type: none"> •Accelerate performance of big data analytics •Try out combined HPC, cloud and data analytics 	<ul style="list-style-type: none"> •Accelerate computation •Fast storage •Easy access to high performance computing features •Benefit from GPUs and FPGAs 	<ul style="list-style-type: none"> •Run business logic over large datasets
Population genetics study (FORTH)	<ul style="list-style-type: none"> •Competitive advantage of large data •Accelerate performance with fast storage 	<ul style="list-style-type: none"> •Accelerate computation •Benefit from GPU •Productivity-oriented/user-friendly use of an HPC platforms 	
Improvement of PT service performance - non real time analysis (Memex-Tiemme)	<ul style="list-style-type: none"> •Reduced time required to carry out the assessment of bus service performance •Improved usability for bus operator technicians 	<ul style="list-style-type: none"> •Accelerate computation •Interactive visualisation tools 	<ul style="list-style-type: none"> •Provide IT solutions able to cope with the needs of small-medium size bus operators which are the larger part of the bus companies
Improvement of service operation - real time analysis (Memex-Tiemme)	<ul style="list-style-type: none"> •Possibility to use data about travelling time of buses to take “real-time” decisions in case of service disruption (i.e. re-routing, etc.) 	<ul style="list-style-type: none"> •Accelerate computation •Interactive visualisation tools 	<ul style="list-style-type: none"> •Provide IT solutions able to cope with the needs of small-medium size bus operators which are the larger part of the bus companies
Learning acceleration for retail AI (DDN)	<ul style="list-style-type: none"> •Competitive advantage of large data set •Accelerate performance with fast storage 	<ul style="list-style-type: none"> •Benefit from GPUs and FPGA in one platform 	

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