



## D2.6 Service Interoperability Solutions Toolbox

Document Identification			
Status	Final	Due Date	31/12/2022
Version	1.0	Submission Date	23/12/2022

Related WP	WP2, WP3, WP4, WP5, WP6, WP7	Document Reference	D2.6
Related Deliverable(s)	DE4A wiki	Dissemination Level (*)	PU
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Keywords :
DE4A Wiki, Interoperability, toolbox, Pilots, reference architecture, SDG

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## Document Information

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Document History			
Version	Date	Change editors	Changes
0.0	06/12/2022	Mavi Cristache	Structure and first draft
0.1	12/12/2022	Harold Metselaar	Restructure document
0.2	14/12/2022	Harold Metselaar	Revision (all sections)
0.3	15/12/2023	Harold Metselaar	Removal of sections, adding images, editorial
0.4	16/12/2022	Harold Metselaar	Full revision; Editorial walkthrough; Clean version for review
0.5	19/12/2022	Harold Metselaar	Incorporated feedback from reviewers. Cleaned up version for QA.
0.6	22/12/2022	Julia Wells (Atos)	QA for submission
1.0	23/12/2022	Ana Piñuela (Atos)	Final version for submission

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### Style Disclaimer

This document is drafted using Oxford English spelling, which is British English spelling in combination with the suffix *-ize* in words like *realize* and *organization*. This choice was made to reconcile the DE4A default UK English spelling convention with the limitations of ArchiMate, where diagrams were labelled in US English (with *z* instead of *s*).

References to generic third persons are made by means of the singular *'they'* (and its variants *them*, *their*, *themselves*).

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## List of Acronyms

Abbreviation / acronym	Description
AS4	Applicability Statement 4, an open standard for the secure and payload-agnostic exchange of Business-to-business documents using Web services
BPMN	Business Process Model and Notation
BRIS	Business Register Interconnection System
DBA	Doing Business Abroad – one of the three DE4A pilots
DC	Data Consumer, consists of the roles DE and DR. A single organization might perform both roles or outsource for example the DR role to another organization and only perform the DE role.
DE	Data Evaluator
DE4A	Digital Europe for All
DO	Data Owner
DoA	Description of Action
DP	Data Provider, consists of the roles DT and DO. A single organization might perform both roles or split up in individual roles and outsource for instance the DT role.
DR	Data Requestor
DT	Data Transferor
Dx.y	DE4A formal Deliverable x.y (e.g. D2.5)
EBSI	European Blockchain Services Infrastructure
EC	European Commission
e-SENS	Electronic Simple European Networked Services
ESSIF	The European Self-Sovereign Identity Framework
IM	Intermediation
IMI	Internal Market Information System
ISA <sup>(2)</sup>	Interoperability Solutions for Public Administrators programme
LKP	Lookup
LSP	Large scale pilot
MA	Moving Abroad – one of the three DE4A pilots
MS	European Union Member State(s)
OOP	Once-Only Principle
OOTS	Once-Only Technical System
PEPPOL	A set of technical specifications that can be implemented in existing eProcurement solutions and eBusiness exchange services to make them interoperable between disparate systems across Europe. <a href="https://peppol.eu/what-is-peppol/">https://peppol.eu/what-is-peppol/</a>
S&N	Subscription and Notification
SA	Studying Abroad – one of the three DE4A pilots
SDG	Single Digital Gateway
SDGR	Single Digital Gateway Regulation

Abbreviation / acronym	Description
SSI	Self-sovereign identity
STORK/STORK2	Secure idenTity acrOss boRders linKed 2.0 <a href="https://ec.europa.eu/digital-building-blocks/wikis/display/EIDCOMMUNITY/STORK+2.0+Project">https://ec.europa.eu/digital-building-blocks/wikis/display/EIDCOMMUNITY/STORK+2.0+Project</a>
TOOP	The Once Only Principle Project
UC(#)	Use case of the DE4A pilots
USI	User Supported Intermediation
VC	Verifiable Credential
VP	Verifiable Presentation
WP	Work Package

## Executive Summary

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This document accompanies the DE4AWiki, which is in fact the real deliverable D2.6, the “Service interoperability solution toolbox”

In the technical work packages of DE4A, as well as in the technical task team and in DE4A participating organizations, different levels and types of specifications and documentation were created during the project. This process is fraught with the risk that project documentation becomes scattered, and structuring attempts are more often than not too late to be effective.

To prevent this, DE4A includes as part of WP2 Architecture Vision and Framework tasks, a deliverable aimed at maintaining a documentation overview and thus maximizing the value of all the specifications, documentation and guidelines that work packages produce: T2.4/D2.6 Service interoperability solution toolbox. This toolbox has been given the form of an online wiki, located at [https://wiki.de4a.eu/index.php/DE4A\\_Service\\_Interoperability\\_Solutions\\_Toolbox](https://wiki.de4a.eu/index.php/DE4A_Service_Interoperability_Solutions_Toolbox).

This document explains the concept behind the Wiki, i.e., maximizing the value of DE4A deliverables and specifications. Furthermore, it connects the DE4A reference architecture with the Pilots and the various technical specifications. Finally, it provides a high-level Site Map to aid navigating and finding the relevant information.

One of the lessons learned is that a Wiki is a useful tool for developing the DE4A project deliverables themselves. It is a user friendly platform where people can freely collaborate and contribute to a deliverable. This is in fact how the Project Start Architecture (PSA) 2nd iteration was constructed, before exporting it to Word document and formally submitting it.

**Disclaimer:** The Wiki will undergo updates as the DE4A Pilots 2nd iteration will be finalized in 2023.

It is foreseen that the Wiki remains available for at least two years after project close out.

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# 1 Introduction

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## 1.1 Purpose of the document

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The present document provides an overview of the Wiki, explaining the main concept behind it and acting as an access guide.

As foreseen by the project, “this toolbox is the central, long-term deliverable of WP2 and will take the form of a structured, online architecture repository that extends from the content of the Architecture Framework (D2.1) [1] and prior work of e-SENS. The toolbox includes (pointers to) prior work in CEF, ISA, ISA2 and LSPs (e.g.: TOOP, PEPPOL, STORK, STORK2) and aims to be comprehensive at the level of European technical interoperability. It includes new DE4A common components and implementation method and Pilot insights.”

The reference architecture has a horizon beyond Single Digital Gateway. The Wiki will remain available after DE4A is completed, for the duration of two years.

## 1.2 Structure of the document

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This document has the following structure:

- ▶ Chapter 1 – the current chapter
- ▶ Chapter 2 - Development of the Wiki. The concept behind the Wiki and process used to develop it
- ▶ Chapter 3— This chapter deals with the structure of the Wiki. The main sections are presented with links to the Wiki

## 1.3 Relation to other DE4A deliverables

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The DE4A Wiki brings together the various deliverables of DE4A workpackages, in particular:

- ▶ WP2: Architecture Vision and Framework
- ▶ WP3: Semantic Interoperability Solutions
- ▶ WP4: Cross-border Pilots for Citizens and Business and Evaluation
- ▶ WP5: Common Component Design & Development
- ▶ WP6: Sustainable impact and new governance models
- ▶ WP7: Legal and ethical compliance and consensus building

and catalogues them in view of a reference architecture. The content of the deliverables can partially be found on the Wiki, while in case of publicly available (approved) deliverables, links are included to the EU portal to allow the reader to look them up.

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## 2 Development of the wiki

### 2.1 Concept behind the DE4A wiki

The following diagram depicts the conceptual structure that was used for implementing the DE4A Wiki. It reflects the connections at different levels of specifications (conceptual/logical/physical).

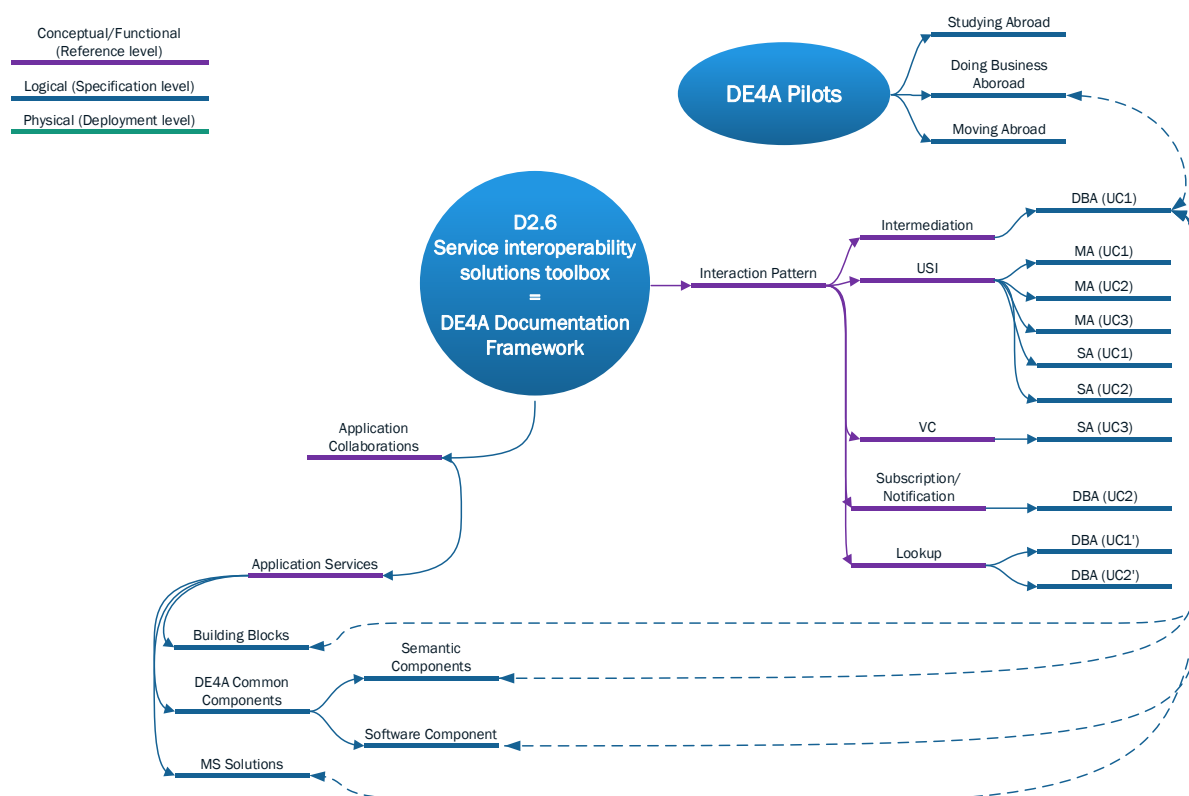


Figure 1: Mindmap DE4A Wiki with levels of abstraction

The DE4A Wiki is centred around the DE4A Pilots in combination with the reference architecture. They are connected in multiple ways. The multi-pattern architecture relates to the pilots through the Use Cases which use the interaction patterns. On the other hand, the architecture is expressed in Application Collaborations which in the end consist of Building Blocks, Common Components and Member State specific Solutions again linking to the Use Cases.

The Conceptual/Functional level (purple) contains the Reference Interaction Patterns (Intermediation, User-Supported Intermediation (USI), Verifiable Credentials (VC), Subscription/Notification and Lookup), the Application Collaborations and Application Services<sup>1</sup>.

The logical level (blue) contains the biggest part of the specifications of the project. Here we link the specific solution architecture descriptions under the reference implementation patterns and list specific (candidate) building blocks and common component specifications to the application services.

On this level, the solution architectures of the Pilot Use Cases are cross-linked with the Building Blocks of the library – as indicated by the dashed lines in Figure 1.

<sup>1</sup> The Application Services were not elaborated in great detail. The focus shifted to Application Collaborations and the components and interfaces they constitute.

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The physical level (green) of abstraction is not included in the mind map. DE4A open sources all developed code and technical specifications in a public DE4A repository.

*Example:*

The Pilot Studying Abroad uses the USI pattern for Use Case1 which in turn relates to Common Components and Building Blocks. They are part of Application Collaborations which in turn describe the architecture.

## 2.2 Roles and maintenance of the Wiki

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The DE4A Wiki was a combined effort of the project coordinated by WP2. Several Workpackages and Pilots contributed to the Wiki. Joint Wiki Editor meetings acted as the board of editors. Some project deliverables were first written using the Wiki, after they were published in Word format and formally submitted.

In order to contribute, i.e., have editing rights, one needs a user account with permissions. Otherwise, the Wiki is read only. A few users have administrator rights and can perform additional tasks.

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# 3 Sitemap DE4A Wiki

## 3.1 Main page

The image below shows the landing page of the DE4A Wiki. The left part acts as a menu containing some important links (shortcuts) to other areas of the Wiki. The main page is split in several sections with information grouped per topic. There are links to the various sections and subsections of the Wiki.

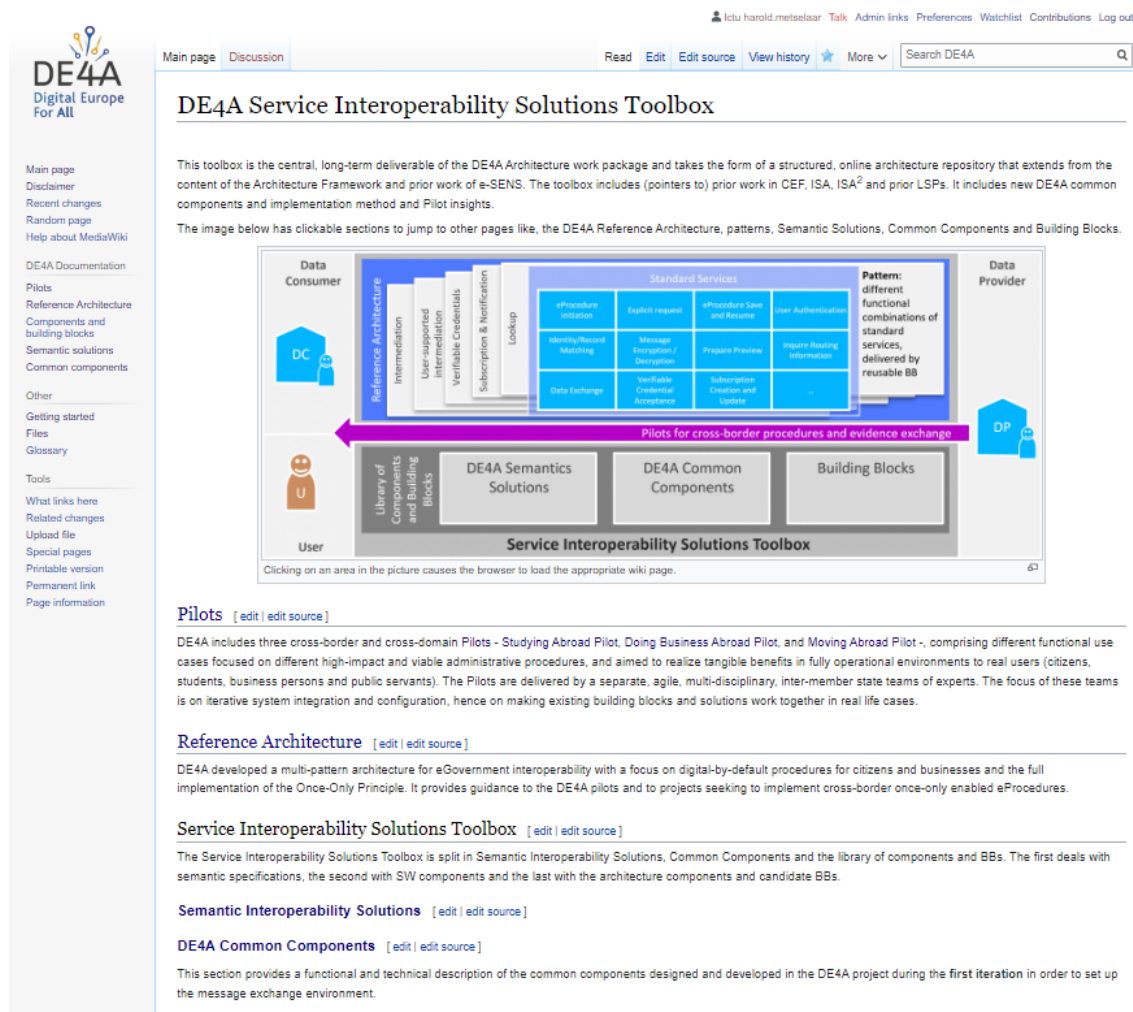


Figure 2: Main Page

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Table 1: Main sections

Item on main page	Description
Pilots <a href="https://wiki.de4a.eu/index.php/Pilots">https://wiki.de4a.eu/index.php/Pilots</a>	Links to dedicated page introducing the three pilots
Reference architecture <a href="https://wiki.de4a.eu/index.php/Reference_Architecture">https://wiki.de4a.eu/index.php/Reference_Architecture</a>	Introduces and links to the pages further detailing the five interaction patterns
Service Interoperability Solutions Toolbox	Section grouping together links to the Semantic Interoperability Solutions, Common Components and the library of components and BBs.
Semantic interoperability solutions <a href="https://wiki.de4a.eu/index.php/DE4A_Semantic_interoperability">https://wiki.de4a.eu/index.php/DE4A_Semantic_interoperability</a>	Introduces and links to the pages further detailing the main concepts of semantic interoperability in DE4A
DE4A Common Components <a href="https://wiki.de4a.eu/index.php/DE4A_Common_Components">https://wiki.de4a.eu/index.php/DE4A_Common_Components</a>	Provides a functional and technical description of the common components designed and developed in the DE4A project during the first iteration.
DE4A common specifications and components (2 <sup>nd</sup> iteration) <a href="https://wiki.de4a.eu/index.php/DE4A_common_specifications_and_components_it2">https://wiki.de4a.eu/index.php/DE4A_common_specifications_and_components_it2</a>	Provides an overview of the common components and specifications required for the evidence exchanges in the second iteration
Library of Components and Building Blocks <a href="https://wiki.de4a.eu/index.php/Library_of_components_and_building_blocks">https://wiki.de4a.eu/index.php/Library_of_components_and_building_blocks</a>	Introduces and links to dedicated pages of DE4A application components and BBs
Legal and ethical compliance <a href="https://wiki.de4a.eu/index.php/Legal_and_ethical_analysis">https://wiki.de4a.eu/index.php/Legal_and_ethical_analysis</a>	Introduces the part of the Wiki that deals with legal and ethical issues

Zooming in on the top part of the main page. The toolbox is structured according to the Architecture Framework [1] and the reference architecture included in the DE4A Project Start Architecture [2][3]. This is depicted in the image (Figure 3), which in fact represents a high-level sitemap of D2.6 (this document). The image depicts the major sections of the Wiki, which are also clickable.

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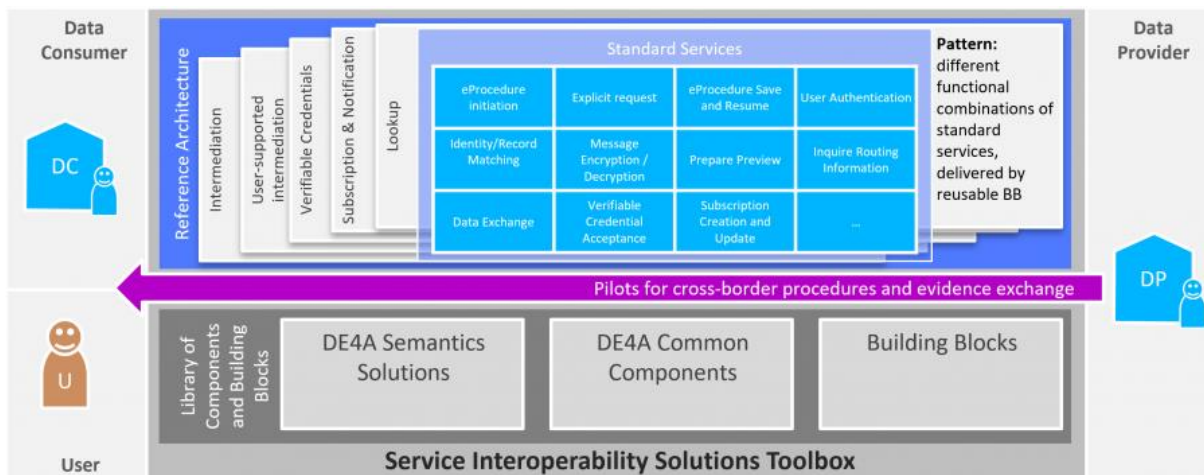


Figure 3: Structure of the Service Interoperability Solutions Toolbox

### Example

Clicking on “Reference Architecture” in the upper left part of the image redirects to that section.

The following areas are clickable:

- ▶ Reference Architecture [https://wiki.de4a.eu/index.php/Reference\\_Architecture](https://wiki.de4a.eu/index.php/Reference_Architecture)
- ▶ Intermediation Pattern [https://wiki.de4a.eu/index.php/Intermediation\\_Pattern](https://wiki.de4a.eu/index.php/Intermediation_Pattern)
- ▶ User-supported Intermediation Pattern
  - [https://wiki.de4a.eu/index.php/User-supported\\_Intermediation\\_Pattern](https://wiki.de4a.eu/index.php/User-supported_Intermediation_Pattern)
- ▶ Verifiable Credentials Pattern
  - [https://wiki.de4a.eu/index.php/Verifiable\\_Credentials\\_Pattern](https://wiki.de4a.eu/index.php/Verifiable_Credentials_Pattern)
- ▶ Subscription and Notification Pattern
  - [https://wiki.de4a.eu/index.php/Subscription\\_and\\_Notification\\_Pattern](https://wiki.de4a.eu/index.php/Subscription_and_Notification_Pattern)
- ▶ Lookup Pattern [https://wiki.de4a.eu/index.php/Lookup\\_Pattern](https://wiki.de4a.eu/index.php/Lookup_Pattern)

Pilots for cross-border procedures and evidence exchange:

- ▶ Vertical purple bar DE4A Pilots <https://wiki.de4a.eu/index.php/Pilots>

Library of Components and Building Blocks:

- ▶ DE4A Semantic Solutions [https://wiki.de4a.eu/index.php/DE4A\\_Semantic\\_interoperability](https://wiki.de4a.eu/index.php/DE4A_Semantic_interoperability)
- ▶ DE4A Common Components [https://wiki.de4a.eu/index.php/DE4A\\_Common\\_Components](https://wiki.de4a.eu/index.php/DE4A_Common_Components)
- ▶ Building Blocks [https://wiki.de4a.eu/index.php/Building\\_Blocks](https://wiki.de4a.eu/index.php/Building_Blocks)

## 3.2 Pilots

<https://wiki.de4a.eu/index.php/Pilots>

A landing page containing general information about all three pilots (detailed below). Mission, goals and added value of a DE4A ecosystem are described. The page also contains pilot specific sections with links to their respective pages.

Pilot specific sections:

1. Studying Abroad Pilot [https://wiki.de4a.eu/index.php/Studying\\_Abroad\\_Pilot](https://wiki.de4a.eu/index.php/Studying_Abroad_Pilot)

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2. Doing Business Abroad Pilot [https://wiki.de4a.eu/index.php/Doing\\_Business\\_Abroad\\_Pilot](https://wiki.de4a.eu/index.php/Doing_Business_Abroad_Pilot)
3. Moving Abroad Pilot [https://wiki.de4a.eu/index.php/Moving\\_Abroad\\_Pilot](https://wiki.de4a.eu/index.php/Moving_Abroad_Pilot)

The pilot specific pages follow a similar structure. They contain a short description of the pilot, a link to a section describing objectives and goals as well as links to the pilot's use cases and deliverables.

### 3.3 Reference architecture

[https://wiki.de4a.eu/index.php/Reference\\_Architecture](https://wiki.de4a.eu/index.php/Reference_Architecture)

A dedicated page introducing the reference architecture. Explaining the time horizon of WP2 deliverables to put them into context.

- ▶ D2.1 Architecture Framework [1]
- ▶ D2.4 Project Start Architecture (PSA) - First iteration [2]
- ▶ D2.5 Project Start Architecture (PSA) - second iteration[3]

The page also contains links to the five interaction patterns:

- ▶ Intermediation Pattern [https://wiki.de4a.eu/index.php/Intermediation\\_Pattern](https://wiki.de4a.eu/index.php/Intermediation_Pattern)
- ▶ User-supported Intermediation Pattern
- ▶ [https://wiki.de4a.eu/index.php/User-supported\\_Intermediation\\_Pattern](https://wiki.de4a.eu/index.php/User-supported_Intermediation_Pattern)
- ▶ Verifiable Credentials Pattern [https://wiki.de4a.eu/index.php/Verifiable\\_Credentials\\_Pattern](https://wiki.de4a.eu/index.php/Verifiable_Credentials_Pattern)
- ▶ Lookup Pattern [https://wiki.de4a.eu/index.php/Lookup\\_Pattern](https://wiki.de4a.eu/index.php/Lookup_Pattern)
- ▶ Subscription and Notification Pattern
- ▶ [https://wiki.de4a.eu/index.php/Subscription\\_and\\_Notification\\_Pattern](https://wiki.de4a.eu/index.php/Subscription_and_Notification_Pattern)

The pages for Intermediation, USI and VC following a similar pattern:

- ▶ A list of Use Cases(s) where it applied
- ▶ Working hypotheses and implementation principles
- ▶ Based on the Interdisciplinary topics ([https://wiki.de4a.eu/index.php/Interdisciplinary\\_Questions](https://wiki.de4a.eu/index.php/Interdisciplinary_Questions)) for that pattern relevant topics are elaborated. The implications and or limitations of the chosen approach are documented.
- ▶ Business process collaboration
- ▶ The overall process is modelled in some using the BPMN language and explained.
- ▶ Business Activities of the Intermediation Pattern
- ▶ A table lists all activities in the diagram, documenting the role, activity type and a description per activity.
- ▶ Some sections detailing the conversation between the participating actors in the format from actor, to actor, the message send and a description.
- ▶ Process realization
- ▶ These viewpoints detail how the earlier mentioned activities are served by processes. The processes are allocated to Application Collaborations. These viewpoints are the link between business architecture and application architecture. There is a diagram per actor with an overall description explaining the flow with links to the relevant Application Collaborations.
- ▶ Application collaborations
- ▶ A list of all used Application Collaborations completes the description of the pattern.
- ▶ The pages for the Lookup & S&N patterns are slightly different.
- ▶ They largely follow then same structure as for the other patterns. Additionally Legal considerations and Design decisions are documented. For S&N some functional variants are mentioned.
- ▶ In case of the Lookup pattern a possible future extension is elaborated as well.

### 3.4 Semantic interoperability solutions

[https://wiki.de4a.eu/index.php/DE4A\\_Semantic\\_interoperability](https://wiki.de4a.eu/index.php/DE4A_Semantic_interoperability)

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A general page introducing WP3’s Semantic Framework. It contains an image (Figure 4) putting the information desk and canonical evidences in context.

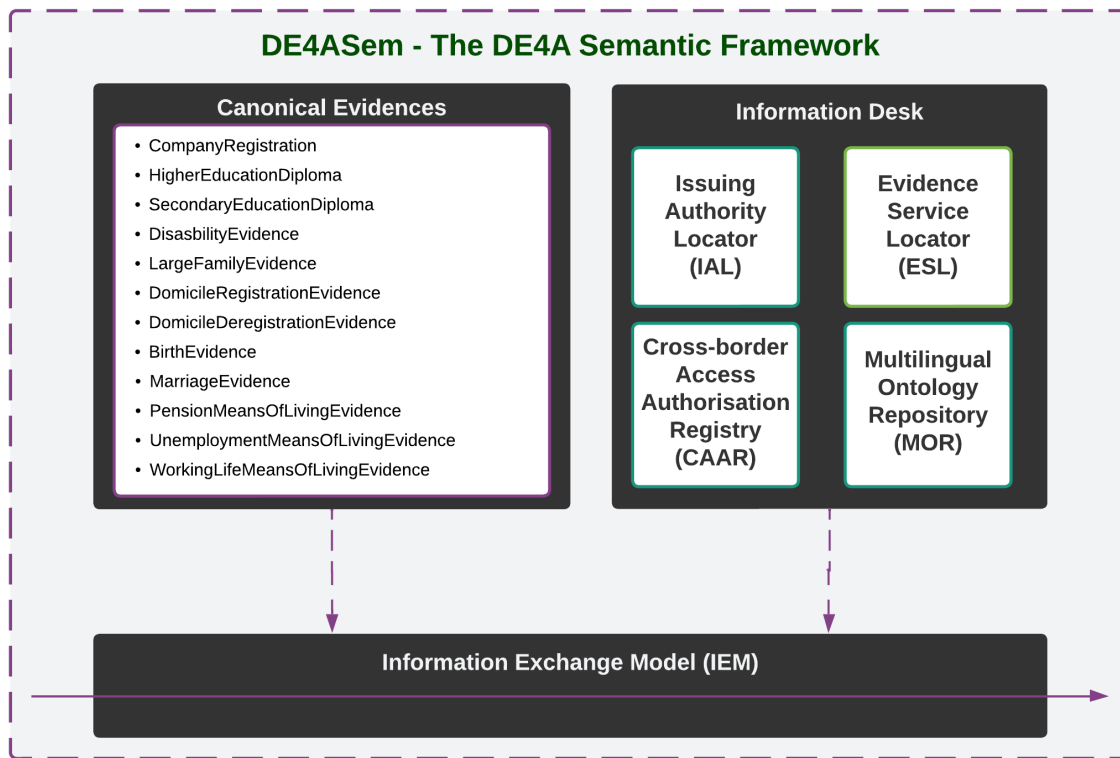


Figure 4: DE4A Semantic Framework

The landing page also contains a table with links to the major components. Each component has its own page. Another section puts the components into context of the information desk Application Collaboration and provides a cohesive description.

### 3.5 DE4A components (1<sup>st</sup> iteration)

[https://wiki.de4a.eu/index.php/DE4A\\_Common\\_Components](https://wiki.de4a.eu/index.php/DE4A_Common_Components)

This page gives an overview of the common components and specifications required for the evidence exchanges. The following high-level diagram (Figure 5) provides an overview. The main focus is on the 1<sup>st</sup> iteration of the pilots.

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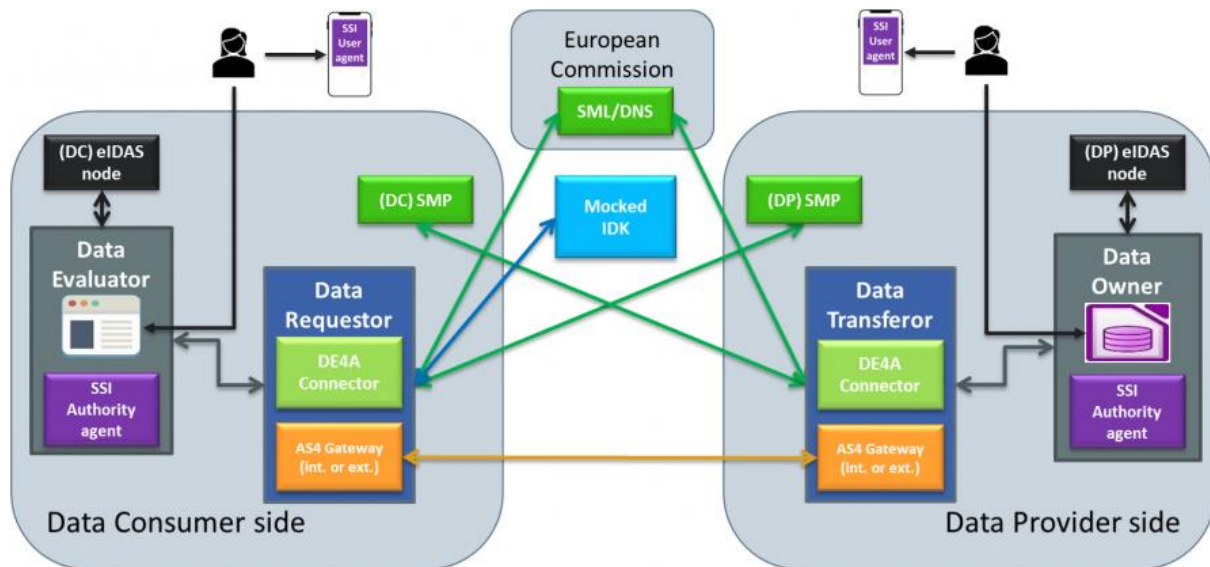


Figure 5: Common Components

A table listing the major components with links to their own pages and a small description.

- ▶ DE4A Connector [https://wiki.de4a.eu/index.php/DE4A\\_Connector](https://wiki.de4a.eu/index.php/DE4A_Connector)
- ▶ SML, SMP and AS4 Gateway
- ▶ [https://wiki.de4a.eu/index.php/Usage\\_of\\_third\\_party\\_specifications\\_and\\_components](https://wiki.de4a.eu/index.php/Usage_of_third_party_specifications_and_components)
- ▶ Mocked IDK
- ▶ [https://wiki.de4a.eu/index.php/Usage\\_of\\_third\\_party\\_specifications\\_and\\_components](https://wiki.de4a.eu/index.php/Usage_of_third_party_specifications_and_components)
- ▶ SSI Authority Agent [https://wiki.de4a.eu/index.php/DE4A\\_SSI\\_Authority\\_Agent](https://wiki.de4a.eu/index.php/DE4A_SSI_Authority_Agent)
- ▶ SSI Edge Agent [https://wiki.de4a.eu/index.php/DE4A\\_SSI\\_Edge\\_Agent](https://wiki.de4a.eu/index.php/DE4A_SSI_Edge_Agent)

The landing page contains several sections and subsections grouping together information with links to dedicated pages.

- ▶ Common specifications
- ▶ Common Components
- ▶ Testing infrastructure
- ▶ DE4A Member States Infrastructure

### 3.6 DE4A common specifications and components (2<sup>nd</sup> iteration)

This acts a landing page for common specifications and components with a focus on iteration 2 of the Pilots. There are several sections grouping together information with links to dedicated pages.

- ▶ Getting started guide [https://wiki.de4a.eu/index.php/Getting\\_started\\_guide](https://wiki.de4a.eu/index.php/Getting_started_guide)
- ▶ Checklist for Connectathons
  - [https://wiki.de4a.eu/index.php/DE4A\\_Checklist\\_for\\_Connectathon](https://wiki.de4a.eu/index.php/DE4A_Checklist_for_Connectathon)
- ▶ Common specifications
  - A special mention for the communication diagrams for each of the patterns
- ▶ [https://wiki.de4a.eu/index.php/Common\\_behaviour\\_and\\_interactions\\_between\\_components](https://wiki.de4a.eu/index.php/Common_behaviour_and_interactions_between_components)
- ▶ Common Components
  - The DE4A Connector as well as an installation guide.
- ▶ Testing infrastructure
  - Links to the DE4A Playground and Sample datasets.
- ▶ DE4A Member States Infrastructure
  - This contains useful information for pilots and participants thereof.

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## 3.7 Library of components and Building Blocks

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[https://wiki.de4a.eu/index.php/Building\\_Blocks](https://wiki.de4a.eu/index.php/Building_Blocks)

The landing page for the components and Building Blocks.

### 3.7.1 Application components

The user can navigate to the Application Components via the Application Collaborations:

- ▶ eProcedure Portal [https://wiki.de4a.eu/index.php/EProcedure\\_Portal](https://wiki.de4a.eu/index.php/EProcedure_Portal)
- ▶ Information Desk [https://wiki.de4a.eu/index.php/Information\\_Desk](https://wiki.de4a.eu/index.php/Information_Desk)
- ▶ Evidence Interchange Management
  - [https://wiki.de4a.eu/index.php/Evidence\\_Interchange\\_Management](https://wiki.de4a.eu/index.php/Evidence_Interchange_Management)
- ▶ Trust Architecture [https://wiki.de4a.eu/index.php/Trust\\_Architecture](https://wiki.de4a.eu/index.php/Trust_Architecture)
- ▶ Data Logistics [https://wiki.de4a.eu/index.php/Data\\_Logistics](https://wiki.de4a.eu/index.php/Data_Logistics)
- ▶ Evidence Portal [https://wiki.de4a.eu/index.php/Evidence\\_Portal](https://wiki.de4a.eu/index.php/Evidence_Portal)
- ▶ Evidence Retrieval [https://wiki.de4a.eu/index.php/Evidence\\_Retrieval](https://wiki.de4a.eu/index.php/Evidence_Retrieval)
- ▶ Authority Agent [https://wiki.de4a.eu/index.php/Authority\\_Agent](https://wiki.de4a.eu/index.php/Authority_Agent)
- ▶ User Agent [https://wiki.de4a.eu/index.php/User\\_Agent](https://wiki.de4a.eu/index.php/User_Agent)
- ▶ Cross-border Subscriptions [https://wiki.de4a.eu/index.php/Cross-border\\_Subscriptions](https://wiki.de4a.eu/index.php/Cross-border_Subscriptions)
- ▶ EProcedure Back-office [https://wiki.de4a.eu/index.php/EProcedure\\_Back-office](https://wiki.de4a.eu/index.php/EProcedure_Back-office)

Each link leads to a landing page for that specific Application Collaboration. Those pages follow a similar structure. First, there is a description of the collaboration in which specific (pattern dependent) features are mentioned as well. Second, a number of diagrams are presented graphically, visualizing the collaboration. Depending on the specifics, there can be one or more diagrams. Some collaborations are pattern specific, while others are applicable to more than one pattern.

This is followed by a table with the participating application components, with a short description and links to specific pages where the components are elaborated in more details.

### 3.7.2 Building blocks

An assessment of the candidate Building Blocks (BB) took place in two separate phases.

In the first phase, as part of the PSA 1st iteration, the approach assessment of the BBs was drawn up, and a quick scan was performed. The approach and results can be found on a dedicated page:

[https://wiki.de4a.eu/index.php/Building\\_Blocks](https://wiki.de4a.eu/index.php/Building_Blocks)

The second phase of the assessment took place after the Pilot's implementation and usage of some of the BBs by means of a questionnaire. The approach and results can be found on a dedicated page:

[https://wiki.de4a.eu/index.php/Second\\_phase](https://wiki.de4a.eu/index.php/Second_phase)

## 3.8 Legal and Ethical Guidance

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A specific landing page is dedicated to the legal and ethical analysis in DE4A. On this page, more information can be found on past and ongoing activities.

[https://wiki.de4a.eu/index.php/Legal\\_and\\_ethical\\_analysis](https://wiki.de4a.eu/index.php/Legal_and_ethical_analysis)

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## 4 Conclusions

This document accompanies the DE4AWiki, which is in fact the real deliverable, the “Service interoperability solution toolbox” :

[https://wiki.de4a.eu/index.php/DE4A\\_Service\\_Interoperability\\_Solutions\\_Toolbox](https://wiki.de4a.eu/index.php/DE4A_Service_Interoperability_Solutions_Toolbox)

“This toolbox is the central, long-term deliverable of WP2 and will take the form of a structured, online architecture repository that extends from the content of the Architecture Framework (D2.1) [1] and prior work of e-SENS. The toolbox includes (pointers to) prior work in CEF, ISA, ISA2 and LSPs (e.g.: TOOP, PEPPOL, STORK, STORK2) and aims to be comprehensive at the level of European technical interoperability. It includes new DE4A common components and implementation method and Pilot insights.” (Project Description of the Action, DoA).

In the technical work packages of DE4A, as well as in the technical task team and in DE4A participating organizations, different levels and types of specifications and documentation were created during the project. DE4A includes as part of WP2 tasks, a deliverable aimed at maintaining the overview thus maximizing the value of all the specifications, documentation and guidelines that work packages produce: T2.4/D2.6 Service interoperability solution toolbox (this document).

The Wiki connects the DE4A deliverables and specifications and puts them in the context of the WP2 reference architecture which has a horizon beyond the SDG.

One of the lessons learned is that a Wiki is a useful tool for developing the deliverables themselves. It is a user friendly platform where people can freely collaborate and contribute to a deliverable. Several deliverables and specifications were developed in this way.

The Wiki will undergo updates as the Pilot 2nd iteration will be finalized in 2023. It is foreseen that the Wiki remains available for at least two years after project close out.

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