



Intelligent and Efficient Travel Management for European Cities

The In-Time Package

Short presentation



In-Time is a Pilot Type B Project funded by the European Commission, DG Information Society and Media in the CIP-ICT-PSP-2008-2 Programme



Terms and Conditions

1. Introduction

The In-Time package contains the documentation and technical specification of the In-Time data and service model which defines the In-Time interface as described in the official In-Time project documentation. The official In-Time project documentation is available on the public project website www.in-time-project.eu.

The In-Time package is the initial result of the research and development pilot project In-Time; it is only intended to be used for popular science and information purposes. The In-Time package only shall be used for testing, research and developing purposes on a non-profit and non-commercial basis at its users' own risk; all intellectual property rights shall be retained.

The In-Time package is only available for registered users. In order to download and use the package the user has to register on the website www.in-time-project.eu and to accept to comply and adhere to these terms and conditions by clicking the "I accept" button at the end of this document.

2. Use of the In-Time package

In order to access certain information, material or services, the user may be required to provide information about itself (such as identification or contact details). The user agrees that any information given to the In-Time consortium will be accurate, correct and up to date.

The user shall use its best efforts to use the In-Time package in a professional, first-class manner in order to preserve and enhance the goodwill of the project and to retain all intellectual property rights associated with the In-Time package. The user agrees that it will not engage in any activity that interferes with or disrupts the In-Time package or any services related thereto.

The In-Time package shall only be used for research and development purposes on a non-profit and non-commercial basis in accordance with these terms and conditions. The user agrees to use the In-Time package and any information and material related thereto only for purposes that are permitted by the terms and conditions imposed by the In-Time consortium and any applicable law, regulation or generally accepted practices or guidelines.

The user acknowledges and agrees to be solely responsible for (and the In-Time consortium has no responsibility vis-à-vis the user or vis-à-vis any third party) any breach of obligations under these terms and provisions and for the consequences of any such breach. In the event of a violation of these terms and conditions, the user shall indemnify and hold the In-Time consortium harmless from and against any claims or damages (whether direct, indirect, incidental, consequential, punitive or damages for loss of profit, business interruption, loss of programmes or other data), including where a third party brings a claim.

The In-Time consortium shall have the right at any time to amend these terms and conditions or to impose, as necessary, other terms of use or requirements not provided herein, in particular, the user shall be obliged to comply and adhere to any further copyright and proprietary notices.

3. Consideration

The user may use the current version of the In-Time package free of charge for non-profit and non-commercial purposes in compliance with these terms and conditions.

4. Intellectual property

The In-Time package has been developed and designed by taking into account several European and International standards, including DATEX 2, IFOPT, SIRI, NAPTAN, Transmodel, TPEG, Journeyweb, standards from the ISO 19000 series, OGC and OASIS. The user acknowledges and agrees that all legal rights, title and interest, including intellectual property rights of such standards at all times shall be and remain with their respective title holders.

Furthermore, the user acknowledges and agrees that all legal rights, title and interest, including intellectual property rights of the design of the In-Time package interface as the work of the integration, harmonization and implementation of a multiple/cross domain, common data and service interface and all information and material related thereto at all times shall be and remain with the In-Time consortium.

For the interpretation of these terms and conditions "intellectual property" shall mean tradeò marks, trade names, patents, inventions, design rights, copyrights, and all other similar proprietary rights, including, where such rights are obtained or enhanced by registration, any registration of such rights or applications or rights to apply for such registrations.

The In-Time package, its content as well as all information and material made available by the In-Time consortium to the user neither may be reproduced nor made accessible to third parties without the In-Time consortium's consent. The In-Time consortium may at any time demand that all such information and material shall be returned by the user to the In-Time consortium without having to state reasons.

The user undertakes to refrain from doing anything that might endanger, jeopardize or infringe the ownership or any other intellectual property rights associated to the In-Time package. In particular, the user agrees that it shall not register or attempt to register any of the intellectual property rights in any jurisdiction and shall not challenge the title of such rights.

The user shall hold harmless and indemnify the In-Time consortium from and against any and all suits, claims, actions, demands, expenses, damages, liabilities, penalties, costs (including reasonable legal expenses and attorney's fees) resulting directly or indirectly from any claims, lawsuits or actions raised by or initiated by any third party alleging the infringement of any third party intellectual property right as a result of or in connection with the use of the In-Time package.

5. Exclusion of warranties

Considering that the user may use the In-Time package free of charge, the In-Time consortium disclaims all warranties and liabilities, either express or implied, relating to the availability, continuance, quality, completeness, accuracy, fitness for purpose or achievement of a particular result or non-infringement with respect to the In-Time package, its content and all other information, material or documentation that is contained therein, delivered by, resulting from or otherwise related to the In-Time package and all services provided in relation thereto, including support or other technical services, and disclaims all warranties and liabilities that the outputs will be free from error. No advice or information, whether oral or written, obtained by the user from the In-Time consortium or through or from services shall create any warranty. The user explicitly acknowledges that the In-Time package, its content or any information and material related thereto may contain misprints, mistakes or inconsistencies and that the In-Time consortium shall not be held liable for any of such errors or faults.

In particular, the In-Time consortium does not provide any warranty with regard to the intellectual property rights related to or resulting from In-Time package, including the standards referred to by the In-Time package. The In-Time consortium does not warrant that the intellectual property rights are valid and subsisting, in full force and effect and have or will not be cancelled, expired or abandoned.

Any information, data, conclusion or recommendation related to the In-Time package, including all material or other documentation as well as services, only is provided on the basis that such information, data, conclusion and recommendation is verified by the user prior to the use and that the user will be solely responsible for any damage that results therefrom. All information, material and services are provided "as is" and "as available".

6. Limitation of liability

The user expressly understands and explicitly agrees to use the In-Time package and all information, material and services related thereto at its sole risk and liability.

The In-Time consortium explicitly excludes its liability to the fullest extent permitted by law. In particular, the In-Time consortium shall in no event be liable for any damages (whether direct, indirect, incidental, consequential, punitive or damages for loss of profit, business interruption, loss of programmes or other data) in connection with or related to the use or failure to use, modification, availability (including any permanent or temporary cessation), accuracy, completeness and the quality related to the In-Time package, its content and any other information and material related thereto, whether based on contract or statutory law or other rules and regulations and whether negligent or otherwise. In particular, the In-Time consortium shall not be liable for any violation of intellectual property rights by the user related to the In-Time package, its content, information and material.

7. Provision of the In-Time package

The In-Time package is still being tested and constantly amended, and, consequently, subject to revision from time to time. The In-Time consortium reserves the right, at its own discretion, to amend and modify the In-Time package, its content and information and material related thereto at any time without any prior notice. The user acknowledges and agrees that the form and nature of services provided with respect to the In-Time package may change from time to time without prior notice.

As part of this continuing innovation, the user acknowledges and agrees that the In-Time consortium may stop at any time (permanently or temporarily) providing or prevent the user from accessing the In-Time package and any information, material and services (or any features within the services) related thereto at the In-Time consortium's sole discretion, without prior notice. The In-Time consortium explicitly reserves the right, at its own discretion, to discontinue, limit, suspend or to terminate the provision of the In-Time package, its content as well as any information, material and services related thereto at any time without any prior notice.

8. Termination

The user agrees to remain bound by these terms and conditions (as amended from time to time) for as long as the user remains using the In-Time package and the information and material as well as the services related thereto. The In-Time consortium may terminate these terms and conditions at any time with immediate effect.

Notwithstanding the before mentioned, the right to use the In-Time package automatically ends on March 31, 2012.

This section shall not affect the In-Time consortium's rights regarding the provision of the In-Time package as set out above.

9. Governing law and jurisdiction

These terms and conditions shall be interpreted and governed in all aspects according to the laws of the Republic of Austria with exclusion of the UN-Convention on the International Sale of Goods (CISG) and without regard to its conflict of law provisions.

The Vienna Commercial Court shall have exclusive jurisdiction to settle any dispute or claim arising out of or in connection with these terms and conditions or its subject matter or formation (including non-contractual disputes or claims).

10. Severance

If and for so long as any provision of these terms and conditions (or any part thereof) shall be deemed to be judged invalid for any reason whatsoever, such invalidity shall not affect the validity or operation of any other provision of these terms and conditions except only so far as shall be necessary to give effect to the construction of such invalidity, and any such invalid provision shall be deemed severed from these terms and conditions without affecting the validity of the balance of these terms and conditions.

11. Entire Agreement

These terms and conditions constitute the whole agreement between the In-Time consortium and the user and supersede all previous agreements relating to its subject matter.

In-Time in a nutshell

The In-Time concept

In-Time defines a general, pan-European technical service infrastructure to support the efficient **provision** and **operation** of **Multimodal Real Time Traffic and Travel Information (RTTI)** services to road and transport users.

The **interoperability** between different systems and data/service sources is the key aspect of the In-Time infrastructure. This is achieved through a Service-Oriented, distributed Architecture (SOA) where nodes – content and service providers – are inter-connected via a **B2B, Multi-standard, Commonly Agreed Interface (CAI)** defined on the basis of EU **open standards** in the domain of **ITS, geo-spatial data** and **Web Services**.

Based on the CAI, In-Time provides a way to enable easy access to and use of essential contents and services underlying multi-modal travelling, including **individual traffic, public transport, weather, location**

based services, flight, freight and **intermodal journey planning**.

Who can benefit from In-Time?

In-Time is conceived to facilitate the cooperation between local **content/service providers** – e.g. Local Authorities, Transport Service Operators, etc. – and **Traffic Information Service Providers (TISPs)** in the provision of value-added RTTI services to travellers.

The In-Time CAI enables standardised access to local RTTI services and information provided by **Regional Data/Service Servers (RDSS)** in any city or geographical area implementing In-Time. By using the In-Time access layer, TISPs are able to access local data and services via a standardised interface bundling all transport information in the area, and exploit these to offer enhanced services to the road and transport end user.



How is this achieved?

In-Time defines a layer – the In-Time CAI – which is **built on-top** of existing systems. The In-Time CAI is made of **'adapter components'**, built on the basis of

the In-Time technical specifications, that provide a transformation from local data/service formats to the common format supported by the CAI. In-Time "adapters" thus make contents and services in the addressed RTTI domains understandable and accessible by any In-Time TISP.

The adaptation to the common interface format doesn't require internal modifications of existing services: TISPs can simply add adapters to their services, while RDSSs can set up additional components on top of existing systems.

The specification of the interface is **platform independent** to ensure openness and flexibility in the process of implementation. Furthermore, the In-Time CAI is also **modular**: one can build adapters solely for the specific content and service which will be provided through In-Time. For example a Traffic Control Centre can simply set up the Road Traffic Information part of the interface to get interoperability in this domain.

This modularity and flexibility, ensured by the In-Time architectural distributed approach, allow cities to easily make services and contents available for the end users via existing and future TISPs applications without any further adaptation as long as both parties are In-Time compliant. Reversing the perspective, In-Time enlarges the possibilities for TISPs to easily extend their service offerings whenever new cities becomes "In-Time compliant".

Who has used In-Time so far?

The first European cities adopting the In-Time CAI include: Brno, Bucharest, Florence, Munich, Oslo and Vienna.

Starting from the In-Time EU co-funded pilot project activities, three TISPs (Fluidtime Data Services GmbH, GEO Solutions NV and Telmap Ltd.) developed applications connected to the six cities through the In-Time interface.

The infrastructure, currently operative, is ready to host any **In-Time follower** (cities and TISPs).

How to become an In-Time follower

Organisations such as Traffic Control Centres, Public Transport operators, private service providers, local

authorities etc. who are able to provide information or services related to a **city** in the domain of traffic and transport can bring the city itself to become an *In-Time follower* as long as the In-Time B2B Commonly Agreed Interface is used for such provision of data and services.

Key steps to be considered to become an In-Time follower include:

1. Preliminary steps:
 - Identification of domains to be covered (e.g. traffic, public transport, journey planning etc.) in relation to the domains currently supported by In-Time
 - Analysis of the scope/purposes for the delivery of information and services (including an analysis of target users, actors involved, geographical coverage, etc.)
2. Feasibility analysis:
 - Check of actual availability of the necessary data/services (considering aspects of different nature: technical, legal, privacy-related etc.)
 - Identification of an adequate technical infrastructure to implement In-Time (existing or to be provided by an external technology provider, which is a possibility allowed by the distributed nature of the In-Time architecture)
3. Technical activities:
 - Design of the local In-Time Commonly Agreed Interface (based on the In-Time specifications and on local requirements)
 - Set up of the In-Time CAI and of the necessary In-Time adapters and of the technical infrastructure to run the system (based on In-Time specifications)

Once the local interface is established and operative, contents and services become accessible to and "understandable" by In-Time TISPs and can be provided via TISPs' applications to the end users.

Traffic Information Service Providers, on the other hand, can become In-Time followers as long as they are able to provide services for the end user by using data and services made available by cities via the In-Time B2B interface.

The In-Time package

The "**In-Time Package**" has been prepared to provide **In-Time Follower Cities** and **TISPs** with the technical documentation and material necessary to understand, set-up and use the In-Time infrastructure.

Specifically, the **In-Time Interface Specifications** provide full references for the implementation, deployment and operation of the necessary components of the In-Time B2B Commonly Agreed Interface (CAI).

It includes ready-to-use material such as XML schemas and WSDL definitions, building blocks of the In-Time web services and a code library, derived from the above definitions, which gives reference C# and Java class definitions suitable for start writing applications using the In-Time services.

The package also includes the In-Time conceptual Data Model describing the data model behind the B2B CAI for all domains covered by In-Time (individual traffic, public transport, weather, location based services, flight, freight and intermodal journey planning). It is encoded in Unified Modelling Language, UML, to easily understand how the interface is structured and to identify all its features in details.

In-Time package content:

- In-Time **conceptual Data Model** encoded in Unified Modeling Language, UML.
- The **Application Schema** of Geography Markup Language (GML) derived from the Data Model as the **exchange format** for In-Time data.
- **WSDL files**, also generated from the conceptual definition of In-Time services.
- XML schema definitions (**XSD-files**) for each Application Schema of the In-Time Data Model. XSD files are the starting point for the concrete use of the In-Time specifications as they enable the automatic generation of code libraries, the configuration of OGC's WFS and WMS etc.
- A **code library** in C# and Java.
- An **introductory guide** with links to download publicly available **full documentation** providing detailed explanation of the principles, architectural design, standards and enabling implementation technologies underlying the definition of the In-Time infrastructure.