European ITS Framework Architecture

D12 – Update to Version 3

Main Document – Description for Framework Architecture changes

November 2004

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Author(s):	Richard Bossom (STC)
Project manager:	**R.A.P. Bossom (STC)**

Abstract: This document describes the changes that have been made to Version 2 of the European ITS Framework Architecture to produce Version 3.

Keyword list: FRAME-S, European ITS Framework Architecture, Update Requests, Version 3, ITS Architectures.

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	Name	Date
Prepared	*Richard Bossom*	*November 2004*
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Authorised	*Richard Bossom*	*November 2004*

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Version	Date	Summary of Changes
1.0	November 2004	None, first issue.

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Executive Summary

This Document provides a description and supporting notes for the modifications that have been made to produce Version 3 of the European ITS Framework Architecture. The descriptions are intended to provide guidance for users of the Framework Architecture about what has changed from the previous Version (2).

The descriptions of the modifications themselves are contained in the Annexes to the Main Document produced for the Version 2 update (D11). The first of these Annexes contains comments on the Update Requests and the reasons for the changes they describe being made, or not. The second Annex contains the text of the actual Update Requests as submitted by some of the European ITS Framework Architecture Users.

1. Introduction

1.1 Scope

This document provides a description and supporting information relating to the modifications made to the European ITS Framework Architecture to create Version 3 from Version 2. The document is intended to provide guidance and background information for those wishing to use the updated Framework Architecture and its Deliverable Documents.

1.2 Document Structure

The first section of this document (2) contains an overview of the Update, including background information. Section 3 provides details of the changes that have been made to the Framework Architecture Documentation.

Background information about the changes included in this update are provided by the Appendices to the Version 2 Update Document (D11). The first of these Appendices contains comments on the Update Requests and the reasons for the changes they describe being made, or not. The second Appendix contains the text of the actual Update Requests as submitted. The use of these Appendices should minimise the amount of documentation that has to be read by those looking for details of what has been changed in the Framework Architecture.

1.3 List of Abbreviations

Any abbreviations not listed below are listed in the main document that describes the Version 3 of the European ITS Framework Architecture, Functional Viewpoint (D3.1).

DFD	Data Flow Diagram
EITSFA	European ITS Framework Architecture
MISRA	Motor Industry Research Association

2. Overview of the Update

2.1 Introduction

This section provides an overview description of the changes that have been made to Version 2 of the European ITS Framework Architecture to create Version 3. The Documentation for Version 3 (including this Document) is available from the FRAME Web Site at http://www.frame-online.net .

2.2 European ITS Framework Architecture - Issue History

Version 2 of the European ITS Framework Architecture was produced by the FRAME Project and released in August 2004. It contained updates to the Functional Viewpoint to create a reference level in the Framework Architecture. More information can be found in the Update to Version 2 document D11, which is again available from the FRAME Web Site.

2.3 Reason for this Update to produce Version 3

This update to the European ITS Framework Architecture has been made to incorporate many of the changes that have been requested by some of its users. A full list of the change requests that were submitted to the FRAME Project is in included in Appendix 2 to the Update to Version 2 document D11 – see above. As can be seen, for various reasons some of the requests have been rejected for the time being, although they may be reconsidered when more and/or better justifications are received.

2.4 Affected parts of the European ITS Framework Architecture

Only the following parts of the European ITS Framework Architecture are affected by this update.

D2.2   European ITS User Needs, including Version 5 of the User Needs Excel Workbook.

D3.1   European ITS Framework Viewpoint, Functional Architecture, Main Document

D3.1   European ITS Framework Viewpoint, Functional Architecture, Annex 1 Function Specifications – deleted

D3.1   European ITS Framework Viewpoint, Functional Architecture, Annex 2, Data Flow Definitions – deleted

D3.1   European ITS Framework Viewpoint, Functional Architecture, Annex 3, Data Store Definitions - deleted

D3.6   European ITS Framework Architecture, Overview, Annex 1 Trace Tables - deleted

With the exception of the three Annexes, the above documents plus this Document are available from the "LIBRARY" page of the FRAME Web Site (see above) in PDF (Adobe Acrobat) format. The four Annexes have not been updated because the Function Specifications and User Needs to Function relationships, plus Data Flow and Data Store Definitions are now available through the FRAME Browsing Tool. This Tool has the advantage of providing interactive access to the Specifications and Definitions and is also available from the FRAME Web Site – see above. It can be accessed using a "standard" Internet Browser. All other Framework Architecture Documents available from the "LIBRARY" page of the Web Site remain unchanged.

It must also be noted that the documents in the above list replace those of the same name and title that were included in previous versions of the European ITS Framework Architecture. Older versions of the three Annexes to D3.1 that have been deleted will no longer be relevant.

3. Details of the Update – Changes to the Documents

3.1   Introduction

The changes that have been to each of the European ITS Framework Architecture Documents listed in the previous section are slightly different. They are listed briefly on the third page of each Document and are reproduced below.

3.2   D2.2, European ITS User Needs

This document itself has not been changed. However the Excel file that provides the list of User Needs has been updated. The changes are described in Appendix 1 to this Document.

3.3   D3.1, Functional Viewpoint – Main Document

This document has been re-structured to include additional information about the conventions and methodology behind the European ITS Framework Architecture and to remove the descriptions of the Data Flow Diagrams (DFDs) that illustrate High-level Functions. The only DFDs that remain in the document are those for the Functional Areas. Additional information about the conventions and methodology has been taken from the deleted Annexes.

3.4   D3.1, Functional Viewpoint – Annex 1, Function Specification

This document has not been updated and has been deleted from the FRAME Web Site. Access to its contents is provided through the FRAME Browsing Tool.

3.5   D3.1, Functional Viewpoint, Annex 2, Data Flow Definitions

This document has not been updated and has been deleted from the FRAME Web Site. Access to its contents is provided through the FRAME Browsing Tool

3.6   D3.1, Functional Viewpoint, Annex 3, Data Store Definitions

This document has not been updated and has been deleted from the FRAME Web Site. Access to its contents is provided through the FRAME Browsing Tool

3.7   D3.6, Overview, Annex 1 Trace Tables

This document has not been updated and has been deleted from the FRAME Web Site. Access to its contents is provided through the FRAME Browsing Tool

4. European ITS Framework Architecture Update - Details

4.1   Introduction

This section describes the changes that have been to the actual European ITS Framework Architecture. They affect the User Needs, Functional Viewpoint and Trace Tables. The descriptions are intended to make it easy to find what has actually been changed.

4.2   European ITS User Needs

Changes have been made to the European ITS User Needs for two reasons. They have been made for the following reasons.

(1) To respond to Update Request 2.004 from the MOBISERVICES Project – revise the wording in some User Needs to emphasise the multi-modal aspects.

(2) To respond to Update Requests 2.007 from the ARTIST Project – extra columns have been added to provide more information about each User Need.

(3) To respond to Update Requests 2.008 from the ARTIST Project – some extra User Needs have been added to a few Categories.

(4) To fix Problem Report 4 – missing Categories have been added.

(5) To fix Problem Report 5 – extra User Need added to avoid some implementations having to use one User Need that is served by Functional Area 8.

More information about these will be found in Annexes 1 and 2 to FRAME Deliverable Document D11. The revised version of the User Needs will be found in the revised list that is published as a separate Excel file. They can also be accessed using the FRAME Browsing Tool.

A description of the actual changes that have been made to the User Needs is provided in Appendix 1 to this Document.

4.3   Functional Viewpoint

4.3.1 Introduction

The changes to the Functional Viewpoint have been divided up to show those in each Functional Area separately. Any Areas not included, as separate sub-sections below are unchanged.

4.3.2   Functional Area 1 – Provide Electronic Payment Facilities

The changes to Functional Area 6 have been made in response to Problem Report Number 1. More information about this will be found in the details of the Update Request from MISRA that will be found in Annexes 1 and 2 to FRAME Deliverable Document D11.   Revisions have been made to the following descriptions of Functions, Data Flows and Data Store within this Functional Area.

<u>High-level Functions</u>

1.1 Set up Contract
1.3 Perform Electronic Payment Transaction
1.4 Manage Operators' Revenue
1.5 Detect Fraud, now called Access and Credit Control

<u>Low-level Functions</u>

1.1.1 Create EP Contract
1.1.2 Establish Contract Statistics
1.1.3 Manage Service Data
1.2.1 Load User's Account
1.2.2 Debit User's Account
1.2.3 Inform Users on Transactions
1.3.1 Detect User
1.3.2 Identify User
1.3.3 Check User's Contract
1.3.4 Inform and Guide User
1.3.5 Compute Service Fee
1.3.6 Check Advanced Payment
1.3.7 Recover Fee
1.4.1 Distribute Fees Revenue
1.4.2 Credit Operator's Account
1.4.3 Inform Operators on Transactions
1.5.1 Check User's rights
1.5.2 Detect Payment Violations
1.5.3 Detect Access violations
1.5.4 Block Access
1.6.1 Manage Tariffs
1.6.2 Manage Access Rights

<u>Data Stores</u>

D1.2 User's Account Store
D1.3 Service Information Store
D1.4 Transactions Store

In each case the changes are to the wording that has been used in the text and are intended to provide a better understanding of what the Function does, or the Data Flow/Data Store contains. In the case of High-level Functions, their allocation of User Needs has been removed, as this is no longer relevant with the advent of the FRAME Selection Tool.

4.3.3 Functional Area 2 – Provide safety And Emergency Facilities

No changes.

4.3.4 Functional Area 3 – Manage Traffic

No changes

4.3.5 Functional Area 4 – Manage Public Transport Operations

No changes

4.3.6 Functional Area 5 – Provide Advanced Driver Assistance Systems

Functional Area 5 has been completely re-written so that the dedicated in-vehicle functionality is removed from the EITSFA. The reasoning behind this change provided by the details of the Update Request from MISRA that will be found in Annexes 1 and 2 to FRAME Deliverable Document D11. All of the existing Functions, plus many of the Data Flows and Data Stores have been deleted. Details are provided in Appendix 2 of this document.

4.3.7 Functional Area 6 – Provide Traveller Journey Assistance

Details of the changes that have been made to Functional Area 6 are described in Appendix 3 to this document. They have been made in response to Problem Report Number 2. Details of this will be found in the section on the Update Request from MISRA in Annexes 1 and 2 to FRAME Deliverable Document D11.

4.3.8 Functional Area 7 – Provide Support for Law enforcement

Details of the changes that have been made to Functional Area 7 are described in Appendix 4 to this document. They have been made in response to item 4 in part 6 of the Update Request from the ACTIF Project.. Details of this will be found in Annexes 1 and 2 to FRAME Deliverable Document D11.

4.3.9 Functional Area 8 – Manage Freight and Fleet Operations

No changes.

4.4 Trace Tables

There are no specific changes to the Trace Tables. However the relationship between the Functions and the User Needs will have altered as a result of some of the changes described above.

Appendix 1 Changes to the User Needs

1. Delete all references to UN 5.4.3 – someone entered it in error

2. Delete all references to UN 7.1.10.9 – someone entered it in error

3. The presentation of the User Needs in the Browsing Tool is not correct as it only show two levels of headings and not the three that exist. Worse it shows Level 1 (e.g. 5 – Emergency Services) and Level 3 (e.g. 5.1.0 – Basic Services). Since the Level 3 headings refer to Level 2 (e.g. 5.1 Emergency Notification and Personal Security), they currently often seem a bit meaningless. The labels for Level 2 must be in the Repository because they appear correctly in the Selection Tool (via the Extraction Tool).

4. Allocate the following existing (unallocated) User Needs to the following existing Functions

User Need Number	Function Numbers
9.5.0.1	8.1; 8.1.1.1; 8.1.1.3; 8.3
9.5.1.9	8.1; 8.1.1; 8.1.2.3; 8.2; 8.2.1; 8.2.2.1.3; 8.2.2.2.1; 8.3; 8.3.1.3; 8.3.3
9.5.2.1	8.2; 8.3
9.5.2.11	5.8; 8.2.2.1.2; 8.3.1.4.6; 8.3.2.2; 8.3.2.4; 8.3.3; 8.3.4
9.5.3.19	5; 8.3.2.1.4; 8.3.2.2; 8.3.2.4
9.5.3.25	7; 8.3.3

5. Add the following exiting Functions to the following existing User Needs (with some allocations already)

User Need Number	Function Numbers
9.5.1.1	8.3.1.4.1
9.5.2.13	8.3.1.4.6, 8.3.2.2, 8.3.2.3, 8.2.3.4
9.5.3.22	8.3.1.4.4, 8.3.1.4.6
9.5.1.7	8.2.2.1.1, 8.2.2.1.2, 8.3.1.1, 8.3.1.2
9.5.1.8	8.2.2.1.1, 8.2.2.1.2, 8.3.1.1, 8.3.1.2

6. Add the following new User Needs and allocate them to the following existing Functions.

User Need No	Description	Function Numbers
6.1.2.11	The system shall be able to provide information about "Points of Interest", e.g. location, opening times, price of service, nearest transport service points.	
6.1.2.12	The system shall be able to receive information about a point of interest from the providers/owners/managers of that "Point of Interest".	
6.1.2.13	The system shall be able to provide information to travellers so as to influence their choice of destination and/or mode of travel, e.g. to protect the environment of a "Point of Interest", or geographic area.	
6.1.2.14	The system shall be able to provide information to travellers about the personal support services, e.g. doctor, in a specific locality.	
6.1.2.15	The system shall be able to receive information about a personal support service, e.g. doctor, from the providers/owners/managers of that service.	
6.2.0.7	The system shall be able to know where it is in the transport network, and hence provide the position of vehicle or person carrying it.	6.3.1
6.2.2.14	The system shall be able to modify a travel plan if the traveller does not follow the original travel plan.	6.3.1, 6.3.7
6.4.0.5	The system shall be able to provide a driver with a suitable alternative route, when the original planned route becomes unavailable.	6.3.1, 6.3.6, 6.3.7
9.4.0.5	The system shall be able to report to the home base when incorrect driver behaviour persists (e.g. driver is ill, or an unskilled driver is in control).	8.3.2.1.4
9.5.1.12	The system shall be able to transfer any data that has been recorded on a vehicle to the home base and/or any other authorised third party.	8.3.1.4.6
9.5.3.26	The system shall be able to record supplementary information about events recorded by the tachograph, e.g. reason for waiting time.	8.3.2.1.2, 8.3.1.4.6, 8.3.3

User Need No	Description	Function Numbers
9.5.3.27	The system shall be able to provide the driver with relevant information about client sites (consignors & consignees), e.g. location, pick-up/delivery times, average waiting time.	8.3.1.4.3
9.5.3.28	The system shall be able to collect and record information about collection/delivery operations, e.g. arrival & waiting times, additional work, incidents.	8.3.1.4.6
9.5.3.29	The system shall be able to time-stamp data recorded during a trip, e.g. current location.	8.3.1.3
9.5.3.30	The system shall be able to produce a message about a new collection of cargo that has been made.	8.3.1.2
9.5.3.31	The system shall be able to provide a list of all the servicing and repair actions that have been done, and any special accessories that have been installed, for confirmation by the driver prior to departure.	8.2.2.1.2, 8.3.2.2, 8.3.2.4
9.5.3.32	The system shall be able to identify cargo, e.g. during loading and unloading, compare it for compliance with a manifest, and issue a warning in case of non-compliance.	8.3.1.1, 8.3.1.2, 8.3.2.3
9.5.3.33	The system shall be able to identify the vehicle and/or equipment, e.g. to gain access to a controlled site.	8.3.2.2, 8.3.2.4, 8.3.1.4.6, 8.3.3
9.5.3.34	The system shall be able to locate an item of cargo within the vehicle and/or equipment.	8.3.1.4.4, 8.3.1.4.6, 8.3.2.2, 8.2.3.4
9.5.3.35	The system shall be able to record the location of operational points, e.g. pick up, delivery, home base.	8.2.2.1.1, 8.3.1.4, 8.3.1.4.3, 8.3.1.4.4, 8.3.1.4.6
9.5.3.36	The system shall be able to transfer site access details to the driver from the home base.	8.3.1.4.4, 8.3.1.4.6
9.5.3.37	The system shall be able to record guidance details of regular and/or frequent trips so that they do not have to be re-calculated.	8.3.1.4.4, 8.3.1.4.6
9.5.3.38	The system shall be able to report automatically the receipt and/or reading of incoming messages to the sender.	8.2, 8.3

User Need No	Description	Function Numbers
9.5.3.39	The system shall be able to add a time stamp and/or vehicle position to any message sent from the vehicle; this data to be added at the time the message was formulated and/or the time it was sent.	8.3.2.2, 8.3.1.4.6
9.5.3.40	The system shall be able to record details about pallets, and provide this information to the home base when required.	8.3.2.4
9.5.3.41	The system shall be able to assist the process of confirming that the driver is suitable qualified to take a given cargo, e.g. dangerous goods.	8.2.2.1.1
9.5.3.42	The system shall provide information in the native language of the driver.	8.3.4

7. Change the Descriptions of the following User Needs and Headings (the changes are shown using "track changes").

    Comments on these changes (instigated by Mobiservices)

    - It has not been possible apply all the "Modality – Public Transport" suggestions because the List of European ITS User Needs are primarily targeted at road transport users, and these suggestions request an explicit expansion to multi-modality (with a consequent need for additional functionality – although this issue was recognised in the draft Update Notes, it does not appear in the final version).

    - Nevertheless the highlighted User Needs have been reviewed and an attempt has been made to make the mono-modal / multi-modal issues clearer.

    - Some of the problems mentioned relate to the (appalling) structure imposed on the List of European ITS User Needs by the instruction to follow the original version of the ISO User Services. E.g. there is no obvious place to put "Pre-Trip Public Transport Information" even though "On-Trip Public Transport Information" is a second level heading. This cannot be resolved without a major overhaul of the structure of the entire List of European ITS User Needs.

    - No changes have been made for "Interactivity". As stated in UN 6.3 personalised services are just a special case of all the Travel Information and Guidance User Needs – the more localised information you have, the more personal it becomes. No explicit European Personalised Information Services were found during KAREN, and one cannot help wondering whether those requesting it now are thinking about 'technology'.

    - No changes have been made for "Volatility". Whilst this is a valid issue, it is at a level of detail below that covered by the European ITS

Framework Architecture. Additional User Needs to cover this issue could be added before a Specific Architecture was created.

- "Other Issues" – UN 6.4.0.2 re-worded, and UN 10.1.0.2 re-worded as part of "Modality". What is the problem with Group 10.5? These are just a set of high level UNs; it does not matter that 'potentially three different technologies' have been identified. They can always be split into lower level User Needs if required.

- An overview description of the rationale of the structure of List of European ITS User Needs will have to be added to the main text.

Heading	User Need No	Description	Function Numbers
	6.1.0.7	The system shall be able to provide information so that travellers may share a vehicle with others for all or part of a (multi-modal) journey.	See Appendix 3
	6.1.1.2	The system shall be able to provide trip information on other modes of transport, e.g. for demand-spreading when major events occur, or when weather conditions, strikes, cultural or sports events etc cause problems for one mode.	See Appendix 3
	6.1.1.3	The system shall be able to provide current and forecast traffic and travel information for all modes at local, regional, national and international levels.	See Appendix 3
	6.1.1.4	The system shall be able to provide extensive multi-modal trip information, e.g. prices, fares, routes, forecast & current traffic situations, traffic control, demand mgt measures, local warnings, special events, weather conditions, hotels etc.	See Appendix 3
	6.1.2.2	The system shall be able to provide information on the cancellation of departures from an inter-modal interchange (e.g. railway station, an airport , a port or a coach station) due to the weather; strikes or other reasons.	See Appendix 3

Heading	User Need No	Description	Function Numbers
	6.1.3.5	The system shall be able to provide (multi-modal) booking & pre-payment services from all places that provide (multi-modal) route planning information, e.g. railway stations, airports, ports etc.	
	6.1.3.6	The system shall enable a traveller to book a parking space at Park and Ride sites as part of a multi-modal trip.	
	6.1.3.7	The system shall provide information via (public) terminals located at strategic locations: e.g. home, office, inter-modal interchanges (.e.g. bus, railway and metro stations), vehicle, restaurant, etc.	
6.2 On-trip Information			
6.2.0 Basic Services	6.2.0.1	The system shall provide emergency, or urgent, information to all users free of charge.	
6.2.1 Mode Change	6.2.1.1	The system shall be able to provide alternative routes or mode-switch recommendations when it detects, or is informed, that problems have occurred on a mode.	
	6.2.1.2	The system shall be able to display alternative routes or modes at inter-modal interchanges, or at places where tourism information is available.	
	6.2.1.3	The system shall be able to provide information about other transport modes: e.g. location of P+R areas, PT timetable, etc.	
	6.2.2.14	The system shall be able to provide access information for those travellers with special needs (e.g. physical access, lifts, escalators, parking & toilets, nappy changing rooms, access for (guide) dogs, etc.) at relevant areas, e.g. transit areas.	6.3.7

Heading	User Need No	Description	Function Numbers
	6.4.0.2	The system shall not base its decisions on a restricted sub-set of the road network, e.g. motorways only.	See Appendix 3
	7.3.0.2	The system shall receive up-to-date information on those factors that will influence the demand management strategy, e.g. traffic levels, car park usage, other modes usage, fares, tolls, etc.	See Appendix 3
	7.3.0.5	The system shall be able to simulate potential capacity reduction, e.g. due to road works.	See Appendix 3
	10.1.0.2	The system shall be able to manage one or more modes of PT.	See Appendix 3
10.1.4 Information Handling	10.1.4.1	The system shall be able to inform travellers about PT operations for a mode of transport, e.g. travel times, delays, fares etc.	See Appendix 3
	10.1.4.2	The system shall be able to provide information about a PT service to the travellers before and during the journey.	See Appendix 3
	10.1.4.3	The system shall be able to provide an update of arrival/departure information in real-time and present it to travellers of that mode before and during the journey.	See Appendix 3
10.4.1 Information Handling	10.4.1.1	The system shall be able to provide in-vehicle general (dynamic) PT information, as well as the arrival time at, and name of, the next stop for this vehicle.	See Appendix 3

Appendix 2 Changes to the Provide Advanced Driver Assistance Systems Functional Area

The following new Functions have been included in the Provide Advanced Driver Assistance Systems Functional Area (5) to replace all of the existing Functions in Version 2 of the EITSFA.

High-Level Functions

5.11 Provide Driver Monitoring and Mayday
5.12 Provide Vehicle Communications Interfaces
5.13 Provide Vehicle Data and ISA

Low-level Functions

5.11.1 Monitor Driver Status
5.11.2 Enhance Driver Alertness
5.11.3 Provide Mayday Call
5.11.4 Record Operational Data
5.11.5 Provide Operational Data

5.12.1 Provide Vehicle to Vehicle Communication
5.12.2 Provide Communications with In-Vehicle Systems
5.12.3 Collect Road Infrastructure Data
5.12.4 Provide Traffic Regulations
5.12.5 Provide Vehicle ID
5.12.6 Detect Illegal Use

5.13.1 Provide Vehicle Position Determination
5.13.2 Prepare Floating Car Data
5.13.3 Provide ISA Facilities
5.13.4 Provide ISA Speed Limits
5.13.5 Provide Current Speed Limits

New Functional Data Flows

padas_accident_detected	padas_speed_limit_data
padas_current_time_1	padas_traffic_regulations
padas_current_time_2	padas_mayday_information
padas_driver_condition	padas_warnings_from_other_vehicles
padas_driver_failed	padas_platooning_data_from_other_vehicles
padas_driver_impaired	padas_platooning_data_to_other_vehicles
padas_driver_status_for_store	padas_status_data_from_other_vehicles
padas_guidance_data	padas_status_data_to_other_vehicles
padas_illegal_use	padas_status_data_for_fcd
padas_tvd_incident_data	padas_revised_speed_limit_for_ISA
padas_vehicle_data	padas_vehicle_ID_for_illegal_use
padas_vehicle_ID	padas_vehicle_ID_for_fcd
padas_status_data_for_fcd	padas_vehicle_position_for_fcd

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padas_vehicle_position_for_ISA   padas_regulations_from_other_vehicles
padas_vehicle_position_for_mayday   padas_vehicle_position_for_illegal_use
padas_warnings_to_other_vehicles   padas_vehicle_speed_limit_from_ISA
padas_regulations_to_other_vehicles   padas_current_speed_limit_from_ISA

Modified Functional Data Flows

padas_driver_status
padas_infrastructure_diagnostics (was padas_infra_diag)
padas_driver_stored_data (was padas_ stor_data)
padas_tvd_scenario

Deleted Functional Data Flows

padas_active_safe_lat   padas_inter_area_out   padas_road_reg
padas_active_safe_long   padas_lateral_control   padas_speed_val
padas_antiglare_to_vehicles   padas_lat_is   padas_stolen_data
padas_area_intelligence   padas_lat_lc   padas_stolen_pos
padas_assist_pos   padas_lat_lk   padas_stolen_track
padas_auto_control   padas_lat_over   padas_tele_data_in
padas_auto_stop   padas_lat_park   padas_tele_info
padas_auto_warn   padas_lat_rl_io   padas_travel_data
padas_control_release   padas_lat_s&g++   padas_trip_data
padas_control_take_over   padas_longit_control   padas_v.i._comm
padas_distance   padas_long_acc   padas_vehicle_stat
padas_driver_alert   padas_long_aeb   padas_vehicle_status
padas_driver_control   padas_long_isa   padas_visibility_to_controls
padas_driving_scenario   padas_long_park   padas_visibility_to_driver
padas_eft   padas_long_s&g   padas_visibility_to_vehicles
padas_engine_stop   padas_long_se   padas_vision_to_driver
padas_floating_pos   padas_long_vp   padas_vtov_data
padas_i.v._comm   padas_mayday   padas_v_ov_comm
padas_inter_area_in   padas_ov_v_comm

Modified Context-level Terminator Data Flows

From Law Enforcement Agency   To Law Enforcement Agency
From Road Related System   To Road Pavement
To Driver   To Road Related System
To External Service Provider

Deleted Context-level Terminator Data Flows

To Weather Systems (not used by any other Functional Areas so can be deleted)

New Medium-level Terminator Data Flows

flea-padas_inputs
tlea-padas_outputs

Modified Medium-level Terminator Data Flows

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fd-padas_inputs   frp-padas_inputs
fesp-padas_inputs   fv-padas_inputs
flea-padas_inputs   tv-padas_outputs
fmo-padas_inputs

Deleted Medium-level Terminator Data Flows

frrs-padas_inputs   trp-padas_outputs
td-padas_outputs   trrs-padas_outputs
tesp-padas_outputs   tws-padas_outputs

New Low-level Terminator Data Flows

fesp.g-ISA_data   tv.hmi-alert_warning
flea-request_for_incident_data   tv.hmi-current_speed_limit_from_ISA
frp-guidance_data   tv.hmi-mayday_response
fv.hmi-initiate_mayday   tv.hmi-traffic_regulations
fv.ov-input_data   tv.ov-input_data
fv.ov-lights_anti-glare_request   tv.ov-lights_anti-glare_request
fv.ov-collision_warning   tv.ov-collision_warning
fv.ov-lane_changing_warning   tv.ov-lane_changing_warning
fv.ov-other_platooning_data   tv.ov-other_platooning_data
fv.ov-regulations   tv.ov-regulations
fv.ov-status_data   tv.ov-status_data
fv.vs-input_data   tv.vs-output_data
tlea-incident_data

Modified Low-level Terminator Data Flows

fd-driver_status (was fd-driver_behaviour)
fd-driver_data
fesp.g-data
flds-vehicle_location
fmo-infrastructure_diagnostics (was fmo-infra_diagnos)
frp-location_data
ftrfc-traffic_data

Deleted Low-level Terminator Data Flows

fd-auto_control_on/off   fv-lat_crossing   fv-road_sign
fd-data   fv-lat_friction   fv-vehicle_data
fd-data_HMI   fv-lat_lane   td-data_HMI
fesp.b-data   fv-lat_obj_det   tesp.b-data
frrs-data   fv-lat_rear   trp-data
fv-autocom_diag   fv-lat_sm   trrs-data
fv-data_HMI   fv-long_ca   tv-actuation_tracing
fv-data_vehicle   fv-long_friction   tv-autocom_control
fv-data_vision   fv-long_lane   tv-auto_accel
fv-diagnostics_lat   fv-long_obj_det   tv-auto_diff_brake
fv-diagnostics_long   fv-long_sm   tv-data_HMI
fv-lat_ca   fv-road   tv-data_vehicle

tv-light   tv-pre_crash   tws-vr_data

New Data Flows between Functional Areas

mt.padas_inter-   padas.mffo_vehicle_data
urban_traffic_regulations   padas.mffo_driver_status
mt.padas_speed_settings   padas.psef_mayday_call_data
mt.padas_urban_traffic_regulations

Modified Data Flows between Functional Areas

mt.padas_driving_regulations
mt.padas_inter-urban_speed_settings
mt.padas_urban_speed_settings
padas.mt_floating_car_data (was padas.mt_floating_cars)
padas.mt_inter-urban_floating_car_data
                (was padas.mt_inter-urban_floating_cars)
padas.mt_urban_floating_car_data (was padas.mt_urban_floating_cars)
padas.pepf_vehicle_ID
padas.pepf_vehicle_position
padas.psef_stolen_vehicle_notification
padas.psle_vehicle_ID
padas.ptja_floating_car_data (was padas.ptja_floating_cars)
pepf.padas_vehicle_ID_request
psef.padas_mayday_call_final_acknowledgment
psef.padas_mayday_call_first_acknowledgement
psle.padas_vehicle_ID_request (was psle.padas_ ID_request)

Deleted Data Flows between Functional Areas

mffo.padas_incident_notification   padas.psef_vehicle_position
mt.padas_inter-   padas.psle_rule_violation
urban_network_conditions   padas.psle_vehicle_data
mt.padas_inter-   padas.ptja_request_and_data
urban_traffic_predictions   padas.ptja_travel_planning_request
mt.padas_inter-   pepf.padas_service_cost
urban_traffic_vehicle_updates   pepf.padas_transaction_ack
mt.padas_traffic_output_data   pepf.padas_vehicle_data
mt.padas_urban_network_conditions   psef.padas_call_acknowledgment
mt.padas_urban_traffic_predictions   psef.padas_road_assistance
mt.padas_urban_traffic_vehicle_updates   psef.padas_vehicle_information
mt.padas_vehicle_data   ptja.padas_information_and_guidance
padas.mt_traffic_data   ptja.padas_multimodal_transport_data
padas.mt_visibility_range   ptja.padas_pre_trip_information
padas.pepf_vehicle_data   ptja.padas_route_guidance
padas.psef_mayday   ptja.padas_travel_info
padas.psef_transfer_data

Appendix 3 Changes to the Provide Traveller Journey Assistance Functional Area

A 3.1   Introduction

This Appendix provides an overview of the changes that have been made to the Provide Traveller Journey Assistance Functional Area (6). The following sections provide background information, further information can also be found from Annexes 1 and 2 to the FRAME Deliverable Document D11.

After the background information, the tables on the following pages provide information about the changes that have been made to the Functions, Data Flows and Data Stores. The definitions of the new Functions, Data Flows and Data Stores can be found by from the Framework Architecture using the FRAME Browsing Tool.

A 3.2   Purpose of the Changes

There are two purposes behind the changes that have been made to Functional Area 6.

  (a) To make the Functions more flexible in the way that they can be used when a sub-set ITS Architecture is being created.

  (b) To provide Function allocations for any User Needs in Group 6 not currently served, unless they belong to the Physical or Communications Viewpoints.

Also a study of Functional Area 6 in Version 2 of the Framework Architecture has revealed issues that should also be addressed with any revised version.

  (1) It appears that F6.2.2 only does a little bit more that F6.2.1 for the Traveller. Therefore why is the functionality in F6.2.2 not combined with that in F6.2.1? It also has an input of data about hazardous goods, but why is that input at this point?

  (2) F6.2.3 appears to enable more trip criteria to be entered, but why aren't they in F6.2.1?

  (3) The trip alternatives proposed to the Traveller in F6.2.3 only appear to cover PT services, since at this point the road segment has not been calculated.

  (4) F6.2.4 appears to enable the booking situation to be sorted out. But how can this be done when the trip has not been fully planned yet? It would appear that when F6.2.4 has completed, the PT and "tolled roads" parts of the trip have been selected, if they are required.

  (5) There is no return path from F6.2.4 to F6.2.3 if the booking process does not work, or the Traveller decides that it is too expensive.

  (6) The way that the Functions are currently structured is inflexible. For example F 6.2.4 and F6.2.7 are required, even when there is nothing to book.

(7) Extra functionality has been added to accommodate some of the new trip planning related User Needs produced by the ARTIST Project.

Changes have been made to Functional Area 6 to resolve the issues identified above.

A 3.3   Overview of the changes

<u>General</u>

The general aim of the changes has been to make the functionality more flexible. For example it is now possible to build a physical sub-system in which only the road parts of trip planning are included. An alternative would be to build one in which only Public Transport trip planning is provided.

Also the functionality for the start of the process has been changed, as it appeared that there were too many Functions all doing roughly the same thing. Also there was some processing of Data Flows that would be better located in the actual "trip planning" functionality.

<u>User Needs</u>

As will be seen from the table of changes, the allocation of the some User Needs has been changed and the number of un-allocated User Needs greatly reduced. This has been achieved by the changes to the existing Functions and/or the addition of new Functions. In some cases User Needs have been deleted from Functions and in other cases added.

<u>Functions</u>

Details of the Functions that have been replaces and the new Functions are provided after the table of changes. Details of their specifications can be found by using the FRAME Browsing Tool.

<u>Data Flows</u>

Several tables are provided to show the changes to the Data Flows. These comprise new Data Flows, those with changes to their source and/or destination, and deleted Data Flows. The descriptions of the new Data Flows can again be found by using the FRAME Browsing Tool.

<u>Data Stores</u>

Two new Data Stores have been added. Their descriptions can also be found by using the FRAME Browsing Tool.

Table 1 – Revised distribution of previously un-allocated User Needs affecting Functional Area 6

User Need		Allocated Function	Comments
Number	**Description**		
6.1.0.1	The system shall provide emergency, or urgent, information to all road users free of charge.	F6.5.1 Define Traveller Trip Preferences	The Function serves this User Need by providing the option for Travellers to be charged for services.
6.1.0.2	The system shall be able to require payment for non-emergency, or non-urgent, information.	F6.5.1 Define Traveller Trip Preferences	The Function serves this User Need by providing the option for Travellers to be charged for services.
6.1.2.4	The system shall be able to support a database of events with links between events that occur concurrently and at the same or adjacent locations.	F6.5.3.2 Collect Road Traffic Data F3.2.4 Manage Incident Data	The required data comes from the Incident Management part of the Manage Traffic Functional Area (3). Note that changes to the allocation of User Needs in Functional Area 3 (Manage Traffic) are also required.
6.1.2.5	The system shall be able to analyse, process and retrieve data from different combinations of sources (including floating car).	F6.5.3.1 Plan Traveller Trip F6.5.3.2 Collect Road Traffic Data F6.5.3.3 Collect PT Data F6.5.3.4 Provide FFM Data & Routes	This User Need is jointly served by each of these Functions.
6.1.2.6	The system shall be able to provide road and traffic information adapted to different classes of users, e.g. travellers, radio broadcasters, service operators.	F6.5.1 Define Traveller Trip Preferences F6.5.2 Provide Trip Planning Interface F6.5.3.1 Plan Traveller Trip F3.1.1.4 Manage Urban Traffic Data F3.1.2.4 Manage Inter-urban Traffic Data	This User Need is jointly served by each of these Functions. Note that changes to the allocation of User Needs in Functional Area 3 (Manage Traffic) are also required.
6.1.2.11	The system shall be able to provide information about "Points of Interest", e.g. location, opening times, price of service, nearest transport service points.	F6.5.3.1 Plan Traveller Trip	This is a new User Need that is fulfilled by a new Function.

User Need		Allocated Function	Comments
Number	Description		
6.1.2.12	The system shall be able to receive information about a point of interest from the providers/owners/managers of that "Point of Interest".	F6.5.3.1 Plan Traveller Trip	This is a new User Need that is fulfilled by a new Function.
6.1.2.13	The system shall be able to provide information to travellers so as to influence their choice of destination and/or mode of travel, e.g. to protect the environment of a "Point of Interest", or geographic area.	F6.5.3.1 Plan Traveller Trip	This is a new User Need that is fulfilled by a new Function.
6.1.2.14	The system shall be able to provide information to travellers about the personal support services, e.g. doctor, in a specific locality.	F6.5.3.1 Plan Traveller Trip	This is a new User Need that is fulfilled by a new Function.
6.1.2.15	The system shall be able to receive information about a personal support service, e.g. doctor, from the providers/owners/managers of that service.	F6.5.3.1 Plan Traveller Trip	This is a new User Need that is fulfilled by a new Function.
6.1.3.2	The system shall be able to require payment for one-off usage of the service.	F6.5.1 Define Traveller Trip Preferences	
6.1.3.3	The system shall enable the traveller to use cash or electronic means to pay for the one-off usage of the service, where appropriate.	F6.5.1 Define Traveller Trip Preferences	
6.1.3.5	The system shall be able to provide booking & pre-payment services from all places that provide route planning information, e.g. railway stations, airports, ports etc.	N/A	This User Need would be served through the Physical Viewpoint.

User Need		Allocated Function	Comments
Number	Description		
6.1.3.7	The system shall provide information via (public) terminals located at strategic locations: e.g. home, office, bus station, railway, metro station, vehicle, restaurant, etc.	N/A	This User Need would be served through the Physical Viewpoint.
6.1.3.10	The system shall provide information for fixed and mobile terminals using "open" standard communication protocols.	N/A	This User Need would be served through the Communications Viewpoint.
6.1.3.5	The system shall be able to provide booking & pre-payment services from all places that provide route planning information, e.g. railway stations, airports, ports etc.	N/A	This User Need would be served through the Physical Viewpoint.
6.1.3.7	The system shall provide information via (public) terminals located at strategic locations: e.g. home, office, bus station, railway, metro station, vehicle, restaurant, etc.	N/A	This User Need would be served through the Physical Viewpoint.
6.1.3.9	The system shall communicate with other information systems using "open" standard protocols.	N/A	This User Need would be served through the Communications Viewpoint.
6.2.0.1	The system shall provide emergency, or urgent, information to all road users free of charge.	F6.5.1 Define Traveller Trip Preferences	The Function serves this User Need by providing the option for Travellers to be charged for services.
6.2.0.2	The system shall be able to require payment for non-emergency, or non-urgent, information.	F6.5.1 Define Traveller Trip Preferences	The Function serves this User Need by providing the option for Travellers to be charged for services.

User Need		Allocated Function	Comments
Number	Description		
6.2.0.3	The system shall be able to be activated automatically by another system, e.g. traffic management.	F6.5.3.2 Collect Road Traffic Data F6.5.3.3 Collect PT Data F6.5.3.4 Provide FFM Data & Routes F6.5.3.5 Provide Emergency Services Routes	These Functions are activated when a Data Flow is received from another Functional Area, which may be in another part of the Physical Viewpoint, which will be another application.
6.2.0.7	The system shall be able to know where it is in the transport network, and hence provide the position of vehicle or person carrying it.	F6.3.1 Track Traveller and Implement Trip Plan	This is a new User Needs that is already fulfilled by an existing Function.
6.2.2.10	The system shall be able to collect data from a variety of different sources, e.g. road/traffic management, police, weather services, floating car etc.	F6.5.3.1 Plan Traveller Trip F6.5.3.2 Collect Road Traffic Data	The data from the Police comes indirectly through a variety of sources, e.g. traffic management and incident management, unless the Police themselves have direct control of them.
6.2.2.11	The system shall be able to provide operators with an overall view of all active events in an area.	F6.5.3.6 Provide Operator Access to Trip Planning Data F3.2.4 Manage Incident Data	Note that changes to the allocation of User Needs in Functional Area 3 (Manage Traffic) are also required.
6.2.2.12	The system shall provide Information Management tools for the operator.	F6.5.3.6 Provide Operator Access to Trip Planning Data	
6.2.2.14	The system shall be able to modify a travel plan if the traveller does not follow the original travel plan.	F6.3.7 Assess Need for Trip Plan Changes	This is a new User Need that is fulfilled by a new Function.
6.2.2.7	The system shall be able to support a database of events with links between events that occur concurrently and at the same or adjacent locations.	F6.5.3.2 Collect Road Traffic Data	

User Need		Allocated Function	Comments
Number	Description		
6.2.2.9	The system shall be able to adapt the information to different classes of users, e.g. travellers, radio broadcasters, service operators.	F6.5.1 Define Traveller Trip Preferences F6.5.2 Provide Trip Planning Interface F6.5.3.1 Plan Traveller Trip F3.1.1.4 Manage Urban Traffic Data F3.1.2.4 Manage Inter-urban Traffic Data	This User Need is jointly served by each of these Functions. Note that changes to the allocation of User Needs in Functional Area 3 (Manage Traffic) are also required.
6.2.3.8	The system shall be able to provide road and traffic information using road-side equipment, e.g. VMS.	F3.1.1.5.5 Provide Urban Output Actuation F3.1.2.5.5 Provide Inter-urban Output Actuation	Note that changes to the allocation of User Needs in Functional Area 3 (Manage Traffic) are also required.
6.2.3.9	The system shall be able to provide in-vehicle road, traffic, route guidance and parking information via locally sited equipment, e.g. beacon.	N/A	This User Need would be served through the Communications Viewpoint.
6.4.0.2	The system shall not base its decisions on a restricted sub-set of information about the road network.	F6.5.3.1 Plan Traveller Trip	
6.4.0.4	The system shall be able to modify its navigation instructions if an incorrect turn is made.	F6.3.6 Provide Traveller Guidance	This Function replaces F6.3.4 to provide guidance to Travellers for all modes of travel.
6.4.1.6	The system shall provide information which is consistent with any other information being presented about the road.	F6.5.3.1 Plan Traveller Trip	
6.4.2.1	The system shall provide route guidance using visual and voice instructions.		This User Need would be served through the Communications Viewpoint.
6.4.2.3	The system shall enable bi-directional voice and data communication with the vehicle.		This User Need would be served through the Communications Viewpoint.

Table 2 - Comparison of original and new Functions and Data Stores

Original Version		New Version		Comments on changes
Functions	**User Needs**	**Function**	**User Needs**	
F6.1 Define Traveller's GTP	6.1.0.4, 6.1.0.5, 6.1.0.6, 6.1.0.7, 6.1.2.8, 6.1.3.1, 6.1.3.8, 6.2.2.8, 6.2.3.1, 6.2.3.2, 6.2.3.3, 6.2.3.4, 6.2.3.5, 6.2.3.6, 6.2.3.7, 6.4.1.4, 6.4.2.2, 10.2.1.9			Retain
F6.2 Plan Trip		F6.5 Prepare Trip Plan		Replaces F6.2 because contents and relationship with other parts of Area 6 have changed.
F6.2.1 Define Traveller's ATP	6.1.0.5, 6.1.0.6, 6.1.0.7, 6.1.3.8, 6.2.2.3, 6.2.3.1, 6.2.3.2, 6.2.3.3, 6.2.3.4, 6.2.3.5, 6.4.1.4, 10.2.1.9	F6.5.1 Define Traveller Trip Preferences	6.1.0.1, 6.1.0.2, 6.1.0.5, 6.1.0.6, 6.1.0.7, 6.1.2.6, 6.1.3.2, 6.1.3.3, 6.1.3.8, 6.2.0.1, 6.2.0.2, 6.2.2.3, 6.2.2.9, 6.2.3.1, 6.2.3.2, 6.2.3.3, 6.2.3.4, 10.2.1.9	The name has been changed as no one understands what "ATP" means Traveller interface functionality from F6.2.2 and F6.2.3 has been included
F6.2.2 Define Prime Criteria	6.1.0.4, 6.1.0.5, 6.1.0.6, 6.1.0.7, 6.2.3.1, 6.2.3.2, 6.2.3.3, 6.2.3.4, 6.2.3.5, 6.4.1.4	Deleted		Traveller interface functionality has been moved to F6.5.1. The "mffo" Data Flow has been moved to be an input to F6.5.4. The "padas" Data Flow has been removed.

Original Version		New Version		Comments on changes
Functions	User Needs	Function	User Needs	
F6.2.3 Propose Trip Alternatives	6.1.1.1, 6.1.1.2, 6.1.1.3, 6.1.1.4, 6.1.2.2, 6.1.2.10, 6.2.1.1, 6.2.1.3, 6.2.2.2, 6.2.3.1, 6.2.3.2, 6.2.3.3, 6.2.3.4, 6.2.3.5, 6.4.1.3, 6.4.1.4, 6.4.1.5, 7.3.0.1, 10.1.4.2, 10.1.4.4, 10.4.2.1, 10.4.2.2	F6.5.2 Provide Trip Planning Interface	6.1.1.1, 6.1.1.2, 6.1.1.3, 6.1.1.4, 6.1.2.2, 6.1.2.6, 6.1.2.10, 6.2.1.1, 6.2.1.3, 6.2.2.2, 6.2.2.9, 6.2.3.1, 6.2.3.2, 6.2.3.3, 6.2.3.4, 6.2.3.5, 6.4.1.3, 6.4.1.4, 6.4.1.5, 7.3.0.1, 10.1.4.4, 10.4.2.1, 10.4.2.2	This Function now initiates the trip planning process and when completed then asks the Traveller if it is OK. If it is not, then the Traveller can propose some "secondary criteria". Functionality to use data from "mpto" Data Flows has been moved to a new Function F6.5.3.3.
F6.2.4 Select and Define Bookings	6.1.1.4, 6.1.2.3, 6.1.2.10, 6.1.3.1, 6.1.3.4, 6.1.3.6, 6.2.2.1, 6.2.2.3, 6.2.3.1, 6.2.3.2, 6.2.3.3, 6.2.3.4, 6.2.3.5, 6.4.1.1, 7.3.0.1	Deleted		Functionality for interface with PEPF moved to F6.5.3.1. Traveller bookings interface moved to F6.5.4 with some changes.
F6.2.5 Plan Road Trip(s)	6.1.3.6, 6.2.0.4, 6.2.1.3, 6.2.2.5, 6.2.2.6, 6.2.3.1, 6.2.3.2, 6.2.3.3, 6.2.3.4, 6.2.3.5, 6.4.0.1, 6.4.1.1, 6.4.1.3, 6.4.1.4, 7.3.0.1, 7.3.4.1	F6.5.3 Trip Planning		New High-level Function created to provide more flexibility for selection of functionality.

Original Version		New Version		Comments on changes
Functions	**User Needs**	**Function**	**User Needs**	
		F6.5.3.1 Plan Traveller Trip	6.1.0.7, 6.1.1.2, 6.1.2.5, 6.1.2.6, 6.1.2.11, 6.1.2.12, 6.1.2.13, 6.1.2.14, 6.1.2.15, 6.2.0.4, 6.2.1.3, 6.2.2.5, 6.2.2.9, 6.2.2.10, 6.2.3.1, 6.2.3.2, 6.2.3.3, 6.2.3.4, 6.2.3.5, 6.4.0.1, 6.4.0.2, 6.4.1.1, 6.4.1.3, 6.4.1.4, 6.4.1.6, 7.3.0.1, 7.3.4.1	Prepares trip plan according to criteria provided by F 6.5.2, or as a result of a revision to a trip plan whilst it is in progress (F6.3.8). The Function will only use those modes that are selected by the Traveller. When a trip has been prepared, it is sent back to F6.5.2 for the Traveller to see and approve. A modified trip is sent back to F6.3.8. Includes functionality to go and get details of services and fares for Other Transport Modes from the External Service Provider Terminator – see "f/tesp.mntp" Data Flows, plus information about points of interest (poi) and personal services (ps) – see "f/tesp.gip". Contains functionality to get Toll Road charges from PEPF, as was originally included in F6.2.4.
		F6.5.3.2 Collect Road Traffic Data	6.1.2.4, 6.1.2.5, 6.2.0.4, 6.2.2.5, 6.2.2.7, 6.2.2.10, 6.2.3.3, 6.2.3.4, 6.4.1.1, 6.4.1.3, 6.4.1.4, 7.3.4.1	Contains functionality to collect data provided in "mt.ptja" Data Flows, as was originally included in F6.2.5.
		F6.5.3.3 Collect PT Data	6.1.2.5, 6.2.1.3, 6.2.3.3, 6.2.3.4, 6.2.3.5, 6.4.1.3	Contains functionality to collect data provided in "mpto.ptja" Data Flows, as was originally included in F6.2.3.

Original Version		New Version		Comments on changes
Functions	**User Needs**	**Function**	**User Needs**	
		F6.5.3.4 Provide FFM Data & Routes	6.1.2.5, 6.2.2.6, 6.2.3.1, 6.2.3.2, 6.2.3.3, 6.2.3.4, 6.2.3.5, 6.4.1.3	Contains functionality to collect respond to requests that were contained in "mffo.ptja" Data Flows, which was originally included in F6.2.5.
		F6.5.3.5 Provide Emergency Services Routes	6.2.2.5, 6.2.3.1, 6.2.3.2, 6.2.3.3, 6.2.3.4, 6.2.3.5, 6.4.1.3	Contains functionality to collect respond to requests that were contained in "psef.ptja" Data Flows, which was originally included in F6.2.5.
		F6.5.3.6 Provide Operator Access to Trip Planning Data	6.1.2.9, 6.2.2.11, 6.2.2.12	Contains functionality that enables the Travel Information Operator to manage the Trip Planning Data
		D6.3 Road Trip Planning Data		This is a new Data Store that contains all the road data provided by functionality in the Manage Traffic (MT) Functional Area (3).
		D6.4 PT Trip Planning Data		This is a new Data Store that contains all the PT data provided by functionality in the Manage Public Transport Operations (MPTO) Functional Area (4).
F6.2.6 Perform Bookings and Payments	6.1.3.1, 6.1.3.4, 6.1.3.6, 6.2.3.1, 6.2.3.2, 6.2.3.3, 6.2.3.4, 6.2.3.5	F6.5.4 Perform Bookings and Make Payments	6.1.3.1, 6.1.3.4, 6.1.3.6, 6.2.3.1, 6.2.3.2, 6.2.3.3, 6.2.3.4, 6.2.3.5	This Function is now only used if there are any bookings and payments to make. It includes the ability of the Traveller to change the bookings if there are problems with those originally selected in F6.5.3.1.

Original Version		New Version		Comments on changes
Functions	**User Needs**	**Function**	**User Needs**	
F6.2.7 Produce Itinerary and Trip File	6.1.2.7, 6.2.2.4, 6.2.3.1, 6.2.3.2, 6.2.3.3, 6.2.3.4, 6.2.3.5, 6.4.0.1, 6.4.1.3	F6.5.5 Produce Trip Plan and Trip File	6.1.2.7, 6.2.2.4, 6.2.3.1, 6.2.3.2, 6.2.3.3, 6.2.3.4, 6.2.3.5, 6.4.0.1, 6.4.1.3	This Function can be reached directly from the Trip Planning Function (F6.5.3)
F6.2.8 Provide GTP Store Operator Interface	6.1.2.9	F6.5.5 Provide Operator Access to General Trip Preferences Data	6.1.2.9	
F6.3.1 Track Traveller and Implement Trip Plan	6.4.0.3, 6.4.1.2		6.2.0.7, 6.4.0.3, 6.4.1.2	This Function already fulfils the requirement of this User Need.
F6.3.2 Assess Perturbations	6.1.1.4, 6.1.2.1, 6.1.2.2, 6.2.0.6, 6.2.2.13	F6.3.7 Assess the need for Trip Plan Changes	6.1.1.4, 6.1.2.1, 6.1.2.2, 6.2.0.6, 6.2.2.13, 6.2.2.14	One of the input Data Flows to the original Function (F6.3.2) mt.ptja_road_network_perturbations has been split into its components. The changes to the functionality are to enable revised trip plans to be calculated when the Traveller departs from the planned trip.
F6.3.3 Inform Traveller	6.1.0.3, 6.1.2.3, 6.1.2.2, 6.2.0.4, 6.2.0.5, 6.2.0.6, 6.2.2.1, 6.2.2.2, 6.2.2.3, 6.2.2.4, 6.2.2.5, 6.2.2.13			
F6.3.4 Provide Route Guidance	6.2.1.1**,** 6.2.1.2, 6.2.2.2**,** 6.2.3.1**,** 6.2.3.2**,** 6.2.3.3**,** 6.2.3.4**,** 6.2.3.5, 6.4.0.1**,** 6.4.1.1**,** 6.4.1.2**,** 6.4.1.5**,** 6.4.2.4**,** 10.2.3.1	F6.3.6 Provide Traveller Guidance	6.2.1.1**,** 6.2.1.2, 6.2.2.2**,** 6.2.3.1**,** 6.2.3.2**,** 6.2.3.3**,** 6.2.3.4**,** 6.2.3.5, 6.4.0.1**,** 6.4.0.4, 6.4.1.1**,** 6.4.1.2**,** 6.4.1.5**,** 6.4.2.4**,** 10.2.3.1	

Original Version		New Version		Comments on changes
Functions	User Needs	Function	User Needs	
F6.3.5 Provide Trip File Management Operator Interface	6.1.2.9			

Table 3 - New Data Flows with their Sources and Destinations

Name	Source	Destination	Parent/Components
fesp.gip-poi_information	Terminator	F6.5 Trip Planning and Information F6.5.3 Trip Planning F6.5.3.1 Plan Traveller Trip(s)	fesp-ptja_inputs
fesp.gip-ps_information	Terminator	F6.5 Trip Planning and Information F6.5.3 Trip Planning F6.5.3.1 Plan Traveller Trip	fesp-ptja_inputs
fesp.mmtip-requested_travel_information	Terminator	F6.5 Trip Planning and Information F6.5.3 Trip Planning F6.5.3.1 Plan Traveller Trip	fesp-ptja_inputs
fesp-ptja_inputs	Terminator	Provide Traveller Journey Assistance Functional Area (6)	From External Service Provider
fo.tio-trip_planning_data_requests	Terminator	F6.5 Trip Planning and Information F6.5.3 Trip Planning F6.5.3.6 Provide Operator Access to Trip Planning Data	fo-ptja_inputs
ft-revised_booking_choices	Terminator	F6.5 Trip Planning and Information F6.5.4 Perform Bookings and Make Payments	ft-trip_planning_information
ft-trip_planning_payment	Terminator	F6.5 Trip Planning and Information F6.5.1 Define Traveller Trip Preferences	ft-trip_planning_information
ptja.psef_emergency_route_information	Provide Traveller Journey Assistance (6)	Provide Safety and Emergency Facilities (2)	ptja.psef_emergency_route_guidance ptja.psef_emergency_route_plan

Name	Source	Destination	Parent/Components
ptja.psef_emergency_route_guidance	F6.3 Support Trip F6.3.6 Provide Traveller Guidance	Provide Safety and Emergency Facilities (2) F2.1 Manage Emergencies F2.1.5 Provide Access and Maintenance Data For Emergencies	ptja.psef_emergency_route_information
ptja_full_trip_description_no_bookings	F6.5.2 Provide Trip Planning Interface	F6.5.5 Produce Trip Plan and Trip File	
ptja_modified_trip_plan_requirements	F6.5.2 Provide Trip Planning Interface	F6.5.3 Trip Planning F6.5.3.1 Plan Traveller Trip	
ptja_read_PT_trip_planning_data	D6.4 PT Trip Planning Data	F6.5.3.6 Provide Operator Access to Trip Planning Data	
ptja_read_road_trip_planning_data	D6.3 Road Trip Planning Data	F6.5.3.6 Provide Operator Access to Trip Planning Data	
ptja_retrieve_ffm_route_planning_data	D6.3 Road Trip Planning Data	F6.5.3.4 Provide FFM Data & Routes	
ptja_retrieve_psef_route_planning_data	D6.3 Road Trip Planning Data	F6.5.3.5 Provide Emergency Services Routes	
ptja_retrieve_PT_trip_planning_data	D6.4 PT Trip Planning Data	F6.5.3.1 Plan Traveller Trip	
ptja_retrieve_road_situation_data	D6.3 Road Trip Planning Data	F6.5.3.4 Provide FFM Data & Routes	
ptja_retrieve_road_trip_planning_data	D6.3 Road Trip Planning Data	F6.5.3.1 Plan Traveller Trip	
ptja_revised_trip_plan_requirements	F6.3 Support Trip F6.3.7 Assess Need for Trip Plan Changes	F6.5 Trip Planning and Information F6.5.3 Trip Planning F6.5.3.1 Plan Traveller Trip	

Name	Source	Destination	Parent/Components
ptja_revised_trip_plan	F6.5 Trip Planning and Information F6.5.3 Trip Planning F6.5.3.1 Plan Traveller Trip	F6.3 Support Trip F6.3.7 Assess Need for Trip Plan Changes	
ptja_store_ffm_and_hazardous_goods_data	F6.5.3.4 Provide FFM Data & Routes	D6.3 Road Trip Planning Data	
ptja_store_PT_trip_planning_data	F6.5.3.3 Collect PT Data	D6.4 PT Trip Planning Data	
ptja_store_road_trip_planning_data	F6.5.3.2 Collect Road Traffic Data	D6.3 Road Trip Planning Data	
ptja_traveller_trip_description	F6.5.3 Trip Planning F6.5.3.1 Plan Traveller Trip	F6.5.2 Provide Trip Planning Interface	
ptja_traveller_trip_proposal	F6.5.2 Provide Trip Planning Interface	F6.5.3 Trip Planning F6.5.3.1 Plan Traveller Trip	
ptja_update_PT_trip_planning_data	F6.5.3.6 Provide Operator Access to Trip Planning Data	D6.3 Road Trip Planning Data	
ptja_update_road_trip_planning_data	F6.5.3.6 Provide Operator Access to Trip Planning Data	D6.3 Road Trip Planning Data	
tesp.gip-request_poi_information	F6.5 Trip Planning and Information F6.5.3 Trip Planning F6.5.3.6 Provide Operator Access to Trip Planning Data	Terminator	tesp-ptja_outputs

Name	Source	Destination	Parent/Components
tesp.gip-request_ps_information	F6.5 Trip Planning and Information F6.5.3 Trip Planning F6.5.3.6 Provide Operator Access to Trip Planning Data	Terminator	tesp-ptja_outputs
tesp.mmtip-request_travel_information	F6.5 Trip Planning and Information F6.5.3 Trip Planning F6.5.3.1 Plan Traveller Trip	Terminator	tesp-ptja_outputs
tesp-ptja_outputs	Provide Traveller Journey Assistance Functional Area (6)	Terminator	To External Service Provider
to.tio-trip_planning_data_responses	F6.5 Trip Planning and Information F6.5.3 Trip Planning F6.5.3.6 Provide Operator Access to Trip Planning Data	Terminator	to-ptja_outputs
tt-request_trip_planing_payment	F6.5 Trip Planning and Information F6.5.1 Define Traveller Trip Preferences	Terminator	tt-trip_planning_information
tt-route_guidance_info	F6.3 Support Trip F6.3.6 Provide Traveller Guidance	Terminator	tt-ptja_outputs

Table 4 – Existing Data Flows whose origin and/or destination have been changed

Name	Original		Revised	
	Source	**Destination**	**Source**	**Destination**
fo.tio-GTP_requests	Terminator	F6.2.8 Provide GTP Store Operator Interface	Terminator	F6.5.6 Provide Operator Access to Trip Planning Data
ft-booking_approval	Terminator	F6.2.6 Perform Bookings and Payments	Terminator	F6.5.4 Perform Bookings and Make Payments
ft-factual_parameters	Terminator	F6.2.1 Define Traveller's ATP	Terminator	F6.5.1 Define Traveller Trip Preferences
ft-final_approval	F6.2.7 Produce Itinerary and Trip File	Terminator	F6.5.5 Produce Trip Plan and Trip File	Terminator
ft-trip_selection	Terminator	F6.2.8 Propose Trip Alternatives	Terminator	F6.5.2 Provide Trip Planning Interface
ft-secondary_criteria	Terminator	F6.2.8 Propose Trip Alternatives	Terminator	F6.5.2 Provide Trip Planning Interface
mffo.ptja_freight_and_hazardous_goods_information	Manage Freight and Fleet Operations (8)	F6.2.2 Define Prime Criteria	Manage Freight and Fleet Operations (8)	F6.5.3.4 Provide FFM Data & Routes
mffo.ptja_information_and_requests	Manage Freight and Fleet Operations (8)	Manage Freight and Fleet Operations (6)	Manage Freight and Fleet Operations (8)	Manage Freight and Fleet Operations (6) F6.5 Prepare Trip Plan F6.5.3 Trip Planning
mffo.ptja_on_board_informations_and_requests	Manage Freight and Fleet Operations (8)	F6.2 Plan Trip	Manage Freight and Fleet Operations (8)	F6.5.3.4 Provide FFM Data & Routes

Name	Original		Revised	
	Source	**Destination**	**Source**	**Destination**
mffo.ptja_request_on_pollution_situation	Manage Freight and Fleet Operations (8)	F6.2.5 Plan Road Trip(s)	Manage Freight and Fleet Operations (8)	F6.5.3.4 Provide FFM Data & Routes
mffo.ptja_request_on_traffic_situation	Manage Freight and Fleet Operations (8)	F6.2.5 Plan Road Trip(s)	Manage Freight and Fleet Operations (8)	F6.5.3.4 Provide FFM Data & Routes
mffo.ptja_request_on_weather_situation	Manage Freight and Fleet Operations (8)	F6.2.5 Plan Road Trip(s)	Manage Freight and Fleet Operations (8)	F6.5.3.4 Provide FFM Data & Routes
mffo.ptja_route_optimisation_request	Manage Freight and Fleet Operations (8)	F6.2.5 Plan Road Trip(s)	Manage Freight and Fleet Operations (8)	F6.5.3.4 Provide FFM Data & Routes
mpto.ptja_available_pt_services	Manage Public Transport Operations (4)	F6.2.3 Propose Trip Alternatives	Manage Public Transport Operations (4)	F6.5.3.3 Collect PT Data
mpto.ptja_current_fares	Manage Public Transport Operations (4)	F6.2.3 Propose Trip Alternatives	Manage Public Transport Operations (4)	F6.5.3.3 Collect PT Data
mpto.ptja_journey_time_prediction	Manage Public Transport Operations (4)	F6.2.3 Propose Trip Alternatives	Manage Public Transport Operations (4)	F6.5.3.3 Collect PT Data
mt.ptja_carpark_occupancy	Manage Traffic (3)	F6.2.5 Plan Road Trip(s)	Manage Traffic (3)	F6.5.3.2 Collect Road Traffic Data
mt.ptja_incident_information_PRT	Manage Traffic (3)	F6.2.5 Plan Road Trip(s)	Manage Traffic (3)	F6.5.3.2 Collect Road Traffic Data
mt.ptja_inter-urban_network_conditions	Manage Traffic (3)	F6.2.5 Plan Road Trip(s)	Manage Traffic (3)	F6.5.3.2 Collect Road Traffic Data
mt.ptja_inter-urban_network_perturbations	Manage Traffic (3)	F6.2.5 Plan Road Trip(s)	Manage Traffic (3)	F6.3.7 Assess Need for Trip Plan Changes

Name	Original		Revised	
	Source	**Destination**	**Source**	**Destination**
mt.ptja_inter-urban_traffic_predictions	Manage Traffic (3)	F6.2.5 Plan Road Trip(s)	Manage Traffic (3)	F6.3.2 Collect Road Traffic Data
mt.ptja_pollution	Manage Traffic (3)	F6.2.5 Plan Road Trip(s)	Manage Traffic (3)	F6.5.3.2 Collect Road Traffic Data
mt.ptja_road_network_characteristics	None – components are part of other DF's	F6.2.5 Plan Road Trips	None – components are part of other DF's	F6.5 Trip Planning and Information
mt.ptja_road_network_perturbations	None – components are part of other DF's	F6.2.5 Plan Road Trips	None – components are part of other DF's	F6.3 Support Trip
mt.ptja_urban_network_conditions	Manage Traffic (3)	F6.2.5 Plan Road Trip(s)	Manage Traffic (3)	F6.5.3.2 Collect Road Traffic Data
mt.ptja_urban_network_perturbations	Manage Traffic (3)	F6.2.5 Plan Road Trip(s)	Manage Traffic (3)	F6.3.7 Assess Need for Trip Plan Changes
mt.ptja_urban_traffic_predictions	Manage Traffic (3)	F6.2.5 Plan Road Trip(s)	Manage Traffic (3)	F6.5.3.2 Collect Road Traffic Data
mt.ptja_walking_and_cycling_info	Manage Traffic (3)	F6.2.5 Plan Road Trip(s)	Manage Traffic (3)	F6.5.3.2 Collect Road Traffic Data
mt.ptja_weather_information_PRT	Manage Traffic (3)	F6.2.5 Plan Road Trip(s)	Manage Traffic (3)	F6.5.3.2 Collect Road Traffic Data
pepf.ptja_service_price	Provide Electronic Payment Facilities (1)	F6.2.4 Select and Define Bookings	Provide Electronic Payment Facilities (1)	F6.5.3.1 Plan Traveller Trip
psef.ptja_route_computation_request_PAMDE	Provide Safety and Emergency Facilities (2)	F6.2.5 Plan Road Trip(s)	Provide Safety and Emergency Facilities (2)	F6.5.3.5 Provide Emergency Services Routes

Name	Original		Revised	
	Source	**Destination**	**Source**	**Destination**
psef.ptja_route_computation_request_PEI	Provide Safety and Emergency Facilities (2)	F6.2.5 Plan Road Trip(s)	Provide Safety and Emergency Facilities (2)	F6.5.3.5 Provide Emergency Services Routes
ptja.mffo_answer_on_pollution_situation	F6.2.5 Plan Road Trip(s)	Manage Freight and Fleet Operations (8)	F6.5.3.4 Provide FFM Data & Routes	Manage Freight and Fleet Operations (8)
ptja.mffo_answer_on_traffic_situation	F6.2.5 Plan Road Trip(s)	Manage Freight and Fleet Operations (8)	F6.5.3.4 Provide FFM Data & Routes	Manage Freight and Fleet Operations (8)
ptja.mffo_answer_on_weather_situation	F6.2.5 Plan Road Trip(s)	Manage Freight and Fleet Operations (8)	F6.5.3.4 Provide FFM Data & Routes	Manage Freight and Fleet Operations (8)
ptja.mffo_route	F6.2.5 Plan Road Trip(s)	Manage Freight and Fleet Operations (8)	F6.5.3.4 Provide FFM Data & Routes	Manage Freight and Fleet Operations (8)
ptja.mffo_ground_route_and other_informations	N/A	F8.2 Manage Commercial Fleet F8.2.2 Manage Fleet Operations	F6.5 Prepare Trip Plan F6.5.3 Trip Planning	F8.2 Manage Commercial Fleet F8.2.2 Manage Fleet Operations
ptja.pepf_payment	F6.2.6 Perform Bookings and Payments	Provide Electronic Payment Facilities (1)	F6.5.4 Perform Bookings and Make Payments	Provide Electronic Payment Facilities (1)
ptja.pepf_service_data	F6.2.4 Select and Define Bookings	Provide Electronic Payment Facilities (1)	F6.5.3.1 Plan Traveller Trip	Provide Electronic Payment Facilities (1)

Name	Original		Revised	
	Source	**Destination**	**Source**	**Destination**
ptja.psef_emergency_route_plan	F6.2.5 Plan Road Trip(s)	Provide Safety and Emergency Facilities (2)	F6 Provide Traveller Journey Assistance F6.5 Trip Planning and Information F6.5.3 Trip Planning F6.5.3.5 Provide Emergency Services Routes	Provide Safety and Emergency Facilities (2)
ptja_applicable_parameters	D6.1 General Trip Preferences	F6.5.1 Define Traveller's Trip Preferences	D6.1 General Trip Preferences	F6.5.1 Define Traveller's Trip Preferences
ptja_full_trip_description	F6.2.5 Plan Road Trip(s)	F6.2.6 Perform Bookings and Payments	F6.5.2 Provide Trip Planning Interface	F6.5.4 Perform Bookings and Make Payments
ptja_trip_parameters	F6.2.1 Define Traveller's ATP	F6.2.2 Define Prime Criteria	F6.5.1 Define Traveller's Trip Preferences	F6.5.2 Provide Trip Planning Interface
ptja_trip_plan_complete_L	F6.2.7 Produce Itinerary and Trip File	D6.2 Private Trip File	F6.5.5 Produce Trip Plan and Trip File	D6.2 Private Trip File
ptja_GTP_data_output	F6.2.8 Provide GTP Store Operator Interface	D6.1 General Trip Preferences	F6.5.6 Provide Operator Access to Trip Planning Data	D6.1 General Trip Preferences
ptja_GTP_data_input	D6.1 General Trip Preferences	F6.2.8 Provide GTP Store Operator Interface	D6.1 General Trip Preferences	F6.5.6 Provide Operator Access to Trip Planning Data
ptja_trip_plan_complete_PITP	F6.2.6 Perform Bookings and Payments	F6.2.7 Produce Itinerary and Trip File	F6.5.4 Perform Bookings and Make Payments	F6.5.5 Produce Trip Plan and Trip File

Name	Original		Revised	
	Source	**Destination**	**Source**	**Destination**
to.tio-GTP_responses	F6.2.8 Provide GTP Store Operator Interface	Terminator	F6.5.6 Provide Operator Access to Trip Planning Data	Terminator
tt-booking_mishap	F6.2.6 Perform Bookings and Payments	Terminator	F6.5.4 Perform Bookings and Make Payments	Terminator
tt-itinerary_initial	F6.2.7 Produce Itinerary and Trip File	Terminator	F6.5.5 Produce Trip Plan and Trip File	Terminator
tt-request_preferences	F6.2.1 Define Traveller's ATP	Terminator	F6.5.1 Define Traveller's Trip Preferences	Terminators
tt-trip_alternatives	F6.2.3 Propose Trip Alternatives	Terminator	F6.5.2 Provide Trip Planning Interface	Terminator

Table 5 - Data Flows that have been removed

Name	Source	Destination	Comment
ft-booking_choice_and_sequence	Terminator	F6.2.4 Select and Define Bookings	Not required as all the information is now provided in one single Data Flow - see Table 4
ft-prime_criteria	Terminator	F6.2.2 Define Prime Criteria	Not required as all the information is now provided in one single Data Flow - see Table 4
ft-road_trip_preferences	Terminator	F6.2.5 Plan Road Trip(s)	Not required as all the information is now provided in one single Data Flow - see Table 4
padas.ptja_travel_planning_request_DPC	Provide Advanced Driver Assistance Systems (5)	F6.5.3.1 Plan Traveller Trip	Not required following the update to F2 Provide Advanced Driver Assistance
ptja.padas_information_and_guidance	F6 Provide Traveller Journey Assistance	Provide Advanced Driver Assistance Systems (5)	Not required following the update to F2 Provide Advanced Driver Assistance
ptja.padas_multimodal_transport_data_PTA	F6.2.3 Propose Trip Alternatives	Provide Advanced Driver Assistance Systems (5)	Not required following the update to F2 Provide Advanced Driver Assistance
ptja.padas_pre_trip_information_PRT	F6.2.5 Plan Road Trip(s)	Provide Advanced Driver Assistance Systems (5)	Not required following the update to F2 Provide Advanced Driver Assistance
ptja.padas_route_guidance_PRG	F6.3.4 Provide Route Guidance	Provide Advanced Driver Assistance Systems (5)	Not required following the update to F2 Provide Advanced Driver Assistance
ptja.padas_travel_info_PRG	F6.3.4 Provide Route Guidance	Provide Advanced Driver Assistance Systems (5)	Not required following the update to F2 Provide Advanced Driver Assistance
ptja_road_trips_description	F6.2.4 Select and define Bookings	F6.2.5 Plan Road Trips	Not required because F6.2.5 replaced

Name	Source	Destination	Comment
ptja_search_parameters	F6.2.2 Define Prime Criteria	F6.2.3 Propose Trip Alternatives	Not required because F6.2.2 removed
ptja_trip_skeleton_description	F6.2.3 Propose Trip Alternatives	F6.2.4 Select and Define Bookings	Not required because F6.2.4 removed
td-route_guidance_info	F6.3.4 Provide Route Guidance	Terminator	Not required because F6.3.4 has been replace by F6.3.6 to provide guidance for all modes of travel
tt-booking_alternatives	F6.2.4 Select and Define Bookings	Terminator	Not required because F6.2.4 removed
tt-request_criteria	F6.2.2 Define Prime Criteria	Terminator	Not required because F6.2.2 removed
tt-road_trip_alternatives	F6.2.5 Plan Road Trip(s)	Terminator	Not required because F6.2.5 replaced

Appendix 4 Changes to the Provide Support for Law Enforcement Functional Area

A 4.1   Introduction

This Appendix provides an overview of the changes that have been made to the Provide Support for Law Enforcement Functional Area (7). The following sections provide background information, further information can also be found from Annexes 1 and 2 to the FRAME Deliverable Document D11.

After the background information, the tables on the following pages provide information about the changes that have been made to the Functions, Data Flows and Data Stores. The definitions of the new Functions, Data Flows and Data Stores can be found by from the Framework Architecture using the FRAME Browsing Tool.

A 4.2   Purpose of the Changes

The purpose of this revision is to remove the need for Functions in the Functional Area 1 and Functional Area 7 to share a single Data Store (D1.6). This Data Store is used by Functional Area 1 to store information about payment and access frauds and by Functional Area 7 to store information about all types of violation, including those detected by the Manage Traffic Functional Area (3).

A 4.3   Overview of the changes

General

The change that has been made is to replace D1.6 in Functional Area 7 by a new Data Store, D7.3 Violations Store. This contains everything that is in D1.6, plus the "violations" detected in Functional Area 3. One new Function and several Data Flows have been created and some Data Flows have been renamed in Functional Area 7.

User Needs

There are no changes to the allocation of User Needs.

Functions

Only one new Function has been created – F7.5 Store Violation Data in Functional Area 7. It replaces F7.4 Store Fraud.

Data Flows

A new Data Flow and Function to transfer the "fraud" data from Functional Area 1 to Functional Area 7 is not needed. This is because information about payment and access frauds is transferred through the following two Data Flows:

> pepf.psle_fraud_notification_DAV: from F1.5.3 Detect Access violations to F7.3.1 Sort Fraud Notifications.

pepf.psle_fraud_notification_DPV: from F1.5.2 Detect Payment Violations to F7.3.1 Sort Fraud Notifications.

The Data Flows that are used within Functional Area 7 to send data to and from D1.6 have been either replaced, or renamed. This is shown in the first table. Those that have been renamed have not had their contents changes, and the new name is intended to remove the confusion between "fraud" and "violation".

Data Stores

The specification of D1.6 has been modified to remove the Data Flows that were formally only used in Functional Area 7. Those in Functional Area 1 have been retained and the definition of the data that it contains has remained the same. Therefore there are no revisions to any Functions or Data Flows in Functional Area 1.

Table 6 - Comparison of original and new Functions and Data Stores

Original Version		New Version		Comments on changes
Functions	User Needs	Function	User Needs	
F7.4 Store Fraud	3.1.0.2, 3.1.0.5	F7.5 Store Violations Data	3.1.0.2, 3.1.0.5	This new Function is needed because so many of its Data Flows have had their names changed, and it is accessing a new Data Store (D7.3) – see below. F7.4 should be deleted.
		D7.3 Violations Store		This new Data Store has the same contents as the old D1.6, plus additions for use in FA7.

Table 7 - Data Flows that have been renamed – with their sources, destinations and parents

Original			Revised			
Name	**Source**	**Destination**	**Name**	**Source**	**Destination**	**Parent**
flea-psle_fraud_data_request	Terminator	F7.4 Store Fraud	flea-psle_violation_data_request	Terminator	F7.5 Store Violations Data	flea-psle_inputs
psle_fraud_data_for_store	F7.4 Store Fraud	D1.6 Fraud Store	psle_load_violations_store	F7.5 Store Violations Data	D7.3 Violations Store	
psle_fraud_history	D1.6 Fraud Store	F7.3 Process Fraud Notifications	psle_violation_history	D7.3 Violations Store	F7.3 Process Fraud Notifications	
psle_fraud_notification_SF	F7.3.1 Sort Fraud Notifications	F7.4 Store Fraud	psle_violation_notification_SF	F7.3.1 Sort Fraud Notifications	F7.5 Store Violations Data	
psle_fraud_seriousness	D1.6 Fraud Store	F7.3 Process Fraud Notifications F7.3.1 Sort Fraud Notifications	psle_violation_seriousness	D7.3 Violations Store	F7.3 Process Fraud Notifications F7.3.1 Sort Fraud Notifications	
pepf_fraud_history_for_notification	D1.6 Fraud Store	F7.3 Process Fraud Notifications F7.3.1 Sort Fraud Notifications	psle_violation_history_for_notification	D7.3 Violations Store	F7.3 Process Fraud Notifications F7.3.1 Sort Fraud Notifications	psle_violation_history

Original			Revised			
Name	**Source**	**Destination**	**Name**	**Source**	**Destination**	**Parent**
pepf_fraud_history_for_prosecution	D1.6 Fraud Store	F7.3 Process Fraud Notifications F7.3.2 Establish Prosecution File	psle_violation_history_for_prosecution	D7.3 Violations Store	F7.3 Process Fraud Notifications F7.3.2 Establish Prosecution File	psle_violation_history
psle_requested_fraud_data	D1.6 Fraud Store	F7.4 Store Fraud	psle_read_violations_store	D7.3 Violations Store	F7.5 Store Violations Data	
tlea-psle_fraud_notification	F7.4 Store Fraud	Terminator	tlea-psle_violation_notification	F7.5 Store Violations Data	Terminator	tlea-psle_outputs
tlea-psle_fraud_prosecution_file	F7.4 Store Fraud	Terminator	tlea-psle_violation_prosecution_file	F7.5 Store Violations Data	Terminator	tlea-psle_outputs