NS FRITS

Project Work Plan
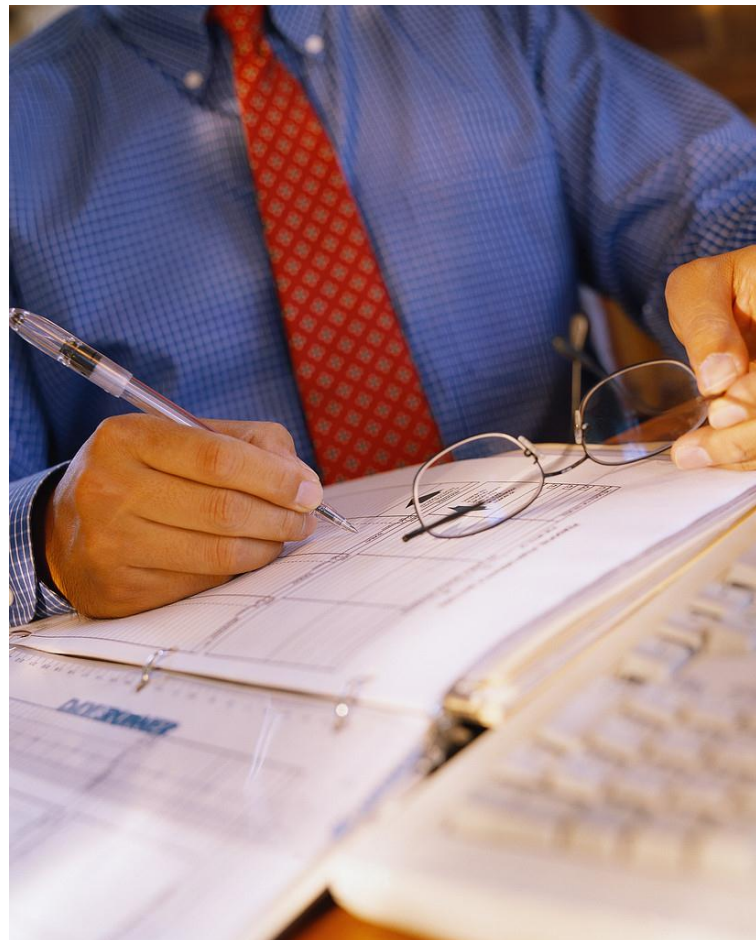
List of abbreviations

|	
Del	Deliverable
DSA	Data Sharing Agreement
HYWP	Half Year Work Plan
IA	Intermediate Achievement
IMG	International Management Group
LB	Lead Beneficiary
MFR	Monthly Flash Report
NS FRITS	North Sea Freight Intelligent Transport Solutions
NSR	North Sea Region
PA	Partnership Agreement
PUAC	People United Against Crime
PWP	Project Work Plan
WP	Work Package
WPA	Work Package Activity
WPL	Work Package Leader

Introduction

The NS FRITS PWP defines the completion stages for each WP.

WPs, WPAs and project phasing were defined in the NS FRITS project submission and are detailed in Appendix 7 – Additional Project Information.

The first section of the PWP links the NS FRITS deliverables to the WPA.

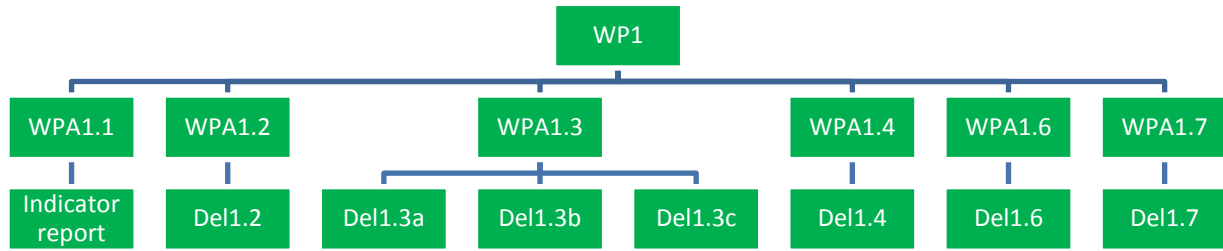The key below shows the current stage of each WPA:

Complete	=	🟩
Partially complete	=	🟧
Not started	=	🟥

The second part of the PWP links the WPA to the IA's. IA's were defined in the Interim Evaluation Report 1.

WP1

The overall management, analysis, evaluation and successful delivery of the project, on time and within budget

WP1 activities are shown as:

WPA1.1 – establish, organise and co-ordinate the transnational IMG

Three IMG meetings to be held each year of the project. An Indicator report is sent to the Interreg IVB NSR Secretariat each year documenting the number of IMGs.
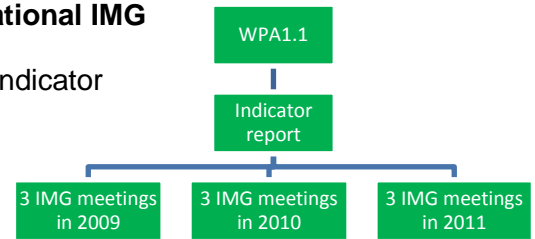
WPA1.2 – produce a project performance framework

Del1.2 is to produce a Performance Management Framework. All partners submit two HYWPs each year which feed into the Project Performance Framework. This allows the WPL1 to monitor future activities.
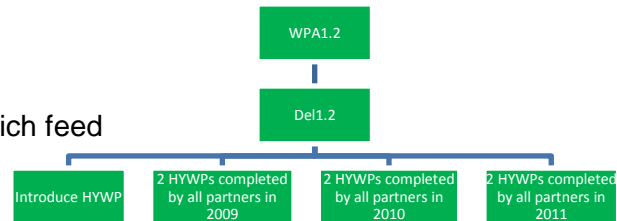
WPA1.3 – liaison with funding body over contractual terms; management of project finances

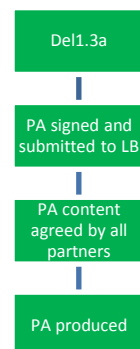WPA1.3 is comprised of three deliverables:

Del1.3a – PA

Del1.3b – Produce interim report for Interreg IVB NSR Secretariat

Del1.3c – Produce final report for Interreg IVB NSR Secretariat

Del1.3a

PUAC produced PA and the content was agreed by all partners. Each partner signed two PAs, one was submitted to PUAC and the other was kept by the partner organisation.
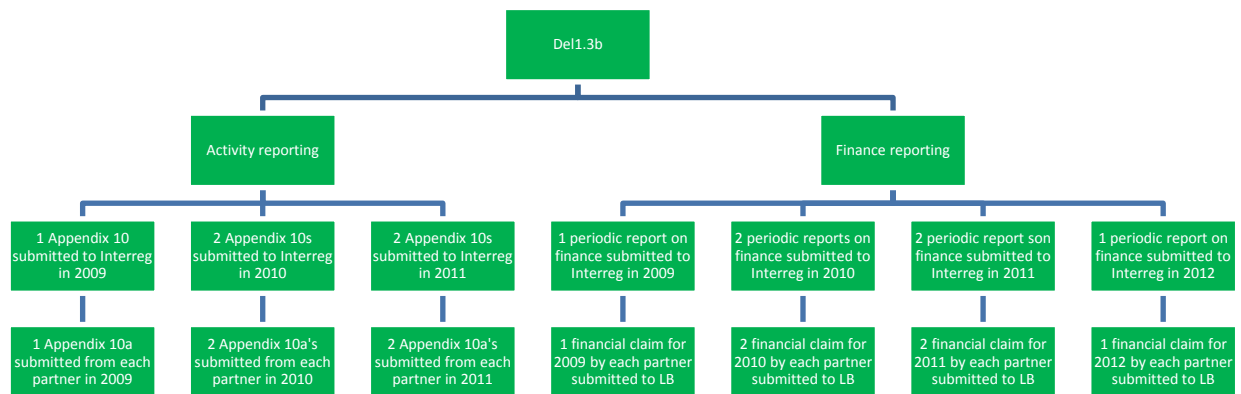
Del1.3b

Each partner completes a periodic report on activities – partner version (appendix 10a) and submits to the LB. The appendix 10a's are reviewed and used to produce a periodic report on activities (appendix 10).

The appendix 10 is submitted to the funding body every six months to provide an update on activities.

Each partner has their expenditure audited and a report is submitted to the LB to coincide with the activity report. The expenditure reports are collated and audited by the Project Controller. The periodic report on finance is produced and submitted alongside the activity report.

Del1.3c

Each WPL will submit a final report summarising the WP at the end of the project. These reports will be collated to form the final report which will be submitted to the Interreg IVB NSR Secretariat.
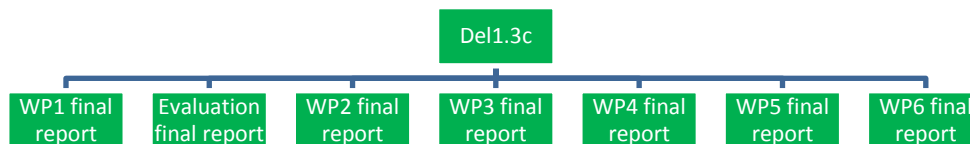
WPA1.4 – monitor and review all relevant project reports, activities and decisions against project objectives and performance framework

Del1.4 is to produce a project work plan. During project implementation, each partner submitted their WPA resource outline stating the number of man days assigned to each WP.

MFRs are submitted each month to document partner activities. An MFR Overview is produced collating all the MFRs and is circulated to the partnership.
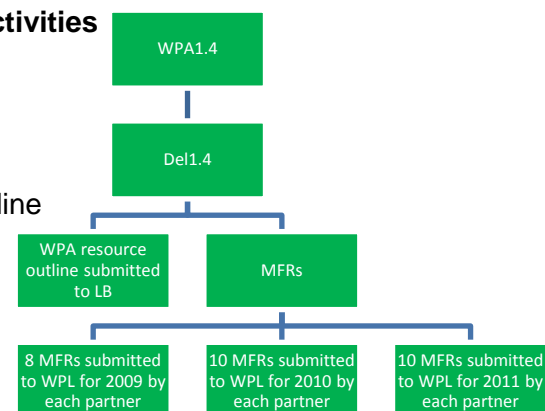
WPA1.6 – where feasible integrate NS FRITS activities with other projects and programmes with the NSR

Del1.6 is to produce a report on collaborative working with other projects and programmes within the NSR. After a scoping exercise of 48 projects was completed ten projects were identified for collaboration and partners were nominated to lead the collaboration. Partners report back to the WPL1 via collaboration templates and MFRs.

```
                                    WPA1.6
                                       |
                                     Del1.6
        _____|_____
       |                                                                 |
10 project identified                                           Collaboration with
for collaboration                                               10 EU projects
       |                    _____|_____
Scoping exercise to        |          |          |          |          |          |          |          |          |          |
identify potential EU   Dryport -   SETPOS/LABEL  Rising -   SISTER -   StratMoS -  HeavyRoute  Integrity  Smartfreight Streetwise  Easyway -
project for             UHull       - Avanti      ISL        Avanti     UHull       - Volvo     - ISL      - PUAC      - UHudd      KLPD
collaboration              |          |          |          |          |          |          |          |          |          |
                        EU collab.  Collaboration Collaboration Collaboration Collaboration Collaboration Collaboration Collaboration Collaboration Collaboration
                        template    template     template   template   template   template   template   template   template   template
                        completed   completed    completed  completed  completed  completed  completed  completed  completed  completed
                           |          |          |          |          |          |          |          |          |          |
                        Approach    Approach     Approach   Approach   Approach   Approach   Approach   Approach   Approach   Approach
                        made        made         made       made       made       made       made       made       made       made
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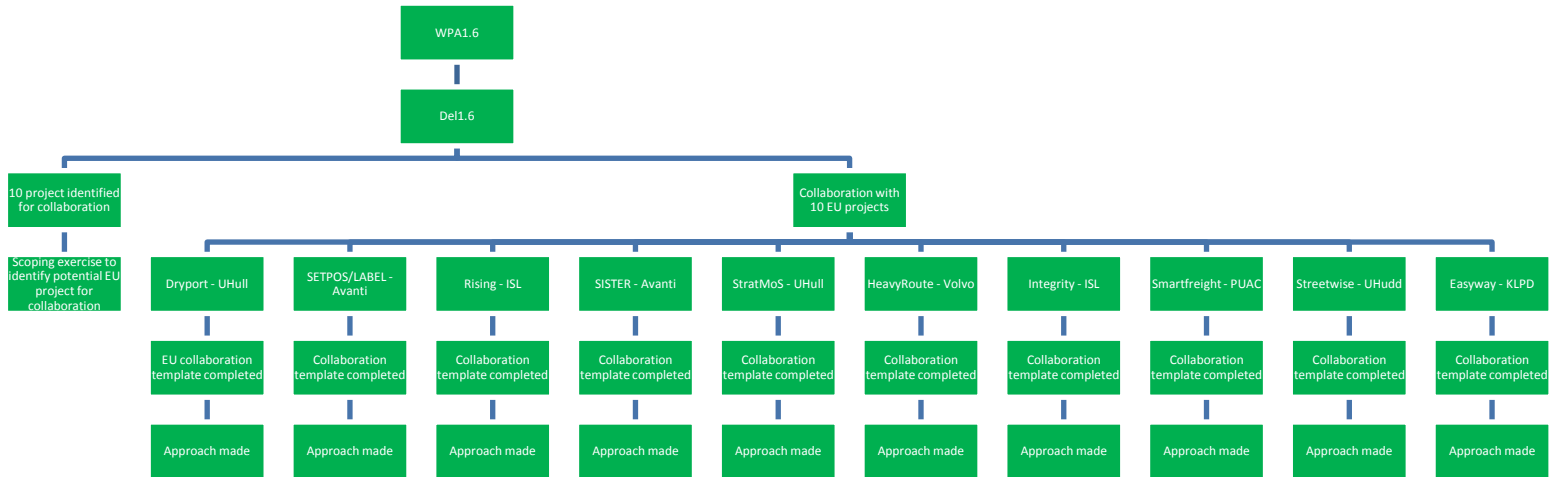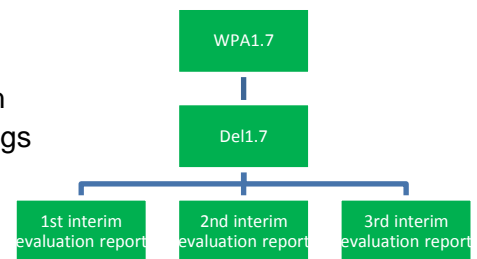
WPA1.7 – to evaluate the economic and environmental impact of the project for businesses and overall NSR competitiveness

Project evaluation is led by the University of Huddersfield.

Del1.7 is to produce interim and final project evaluation reports. Each year an interim report is produced documenting the evaluators' findings and the feedback received from the partners.

```
                 WPA1.7
                    |
                 Del1.7
        _____|_____
       |            |            |
1st interim    2nd interim   3rd interim
evaluation     evaluation    evaluation
report         report        report
```

WP2

Define the technical requirements of an electronic communications and data capture system that can support efficient, safe and secure supply chain management

WP2 activities and deliverables are shown as:
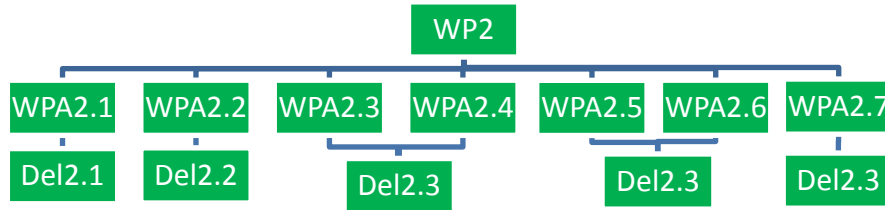
WPA2.1 – to research and identify a relevant and robust communication platform, including any leading edge developments

Del2.1 is to produce the NS FRITS Technical Concept document identifying the technical issues for NS FRITS to address. The research was split into two categories – leading edge technology and EU projects with the potential for collaboration.
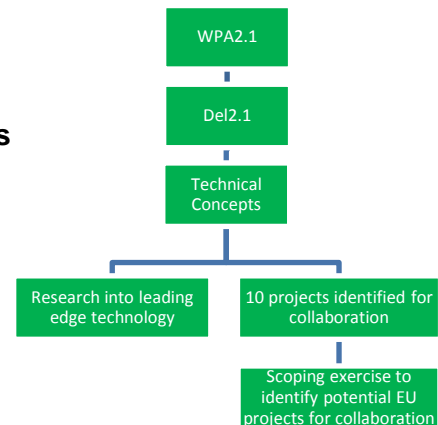
WPA2.2 – requirement / concept definition including mission, user, operational and system requirements

Del2.2 is to produce the NS FRITS System Requirements document including Mission Requirements and User Requirements. This includes analysis of research on state of the art technology, an overview of the system requirements, use cases and feedback from stakeholders.
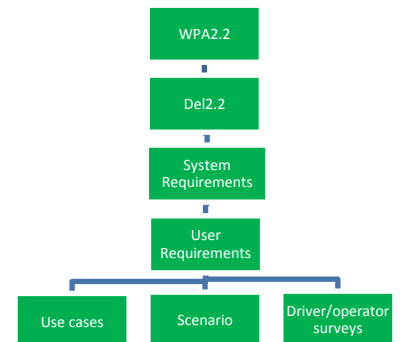
WPA2.3 – to recommend a solution for development that is easily updatable in terms of technology, data collection and transmission and capable of integrating with other platforms including intermodal freight handling systems.

WPA2.4 – to devise and establish the maintenance routines of physical equipment and placements

Del2.3 is to report on the recommendations for the development of NS FRITS including data editing, warehousing and mining, maintenance routines, legal / licensing issues and the capacity for future expansion.
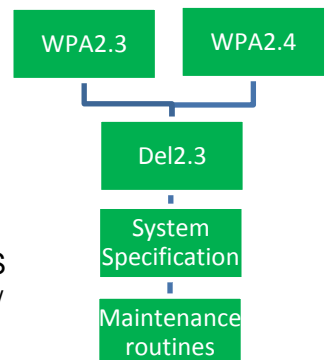
The section of the System Specifications document which satisfies WPA2.3 and WPA2.4 is the recommendations of maintenance routines.

WPA2.5 – to build in the capacity for additionality / growth / expansion (scalability) as the project develops to enable EU wide operations

**WPA2.6 – to build in the capacity for the internationalisation of data**

Del2.3 is to report on the recommendations for the development of NS FRITS including data editing, warehousing and mining, maintenance routines, legal / licensing issues and the capacity for future expansion.

The section of the System Specifications document which satisfies WPA2.5 and WPA2.6 is the capacity for future expansion.

WPA2.7 – to consider and make recommendations on any legal / licensing issues related to the proposed communications platform

Del2.3 is to report on the recommendations for the development of NS FRITS including data editing, warehousing and mining, maintenance routines, legal / licensing issues and the capacity for future expansion.

The section of the System Requirements document which satisfies WPA2.7 is Annex C Recommendations of legal and licensing issues.
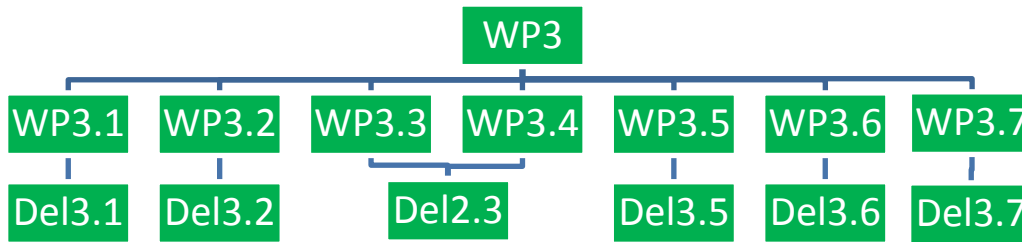
WPA2.5   WPA2.6

Del2.3

System Specification

Capacity for future growth

WPA2.7

Del2.3

System Requirements

Legal and licensing issues
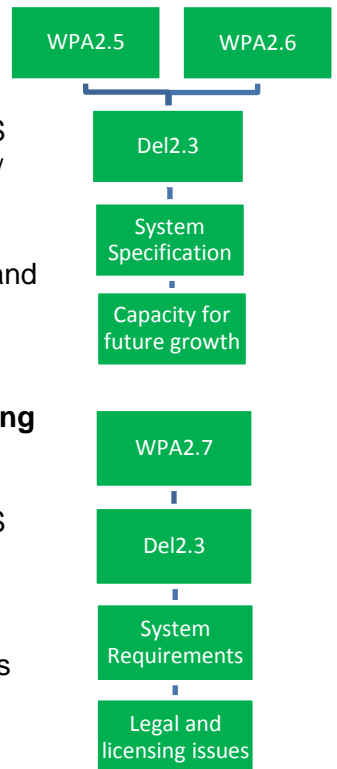
WP3

Identify the type and sources of data to be captured, edited and transmitted, using the NS FRITS communications platform (phase 1 and 2)

WP3 activities are shown as:

WPA3.1 – to identify key stakeholders capable of contributing data to the system

Del 3.1 is to report on the methodology used by NS FRITS to identify and select data supply stakeholders that will provide data for the NS FRITS system.

The WPL3 defined the regions for data research and the data types to be researched. Additionally a data suppliers approach pack was created to ensure a standardised approach to stakeholders.
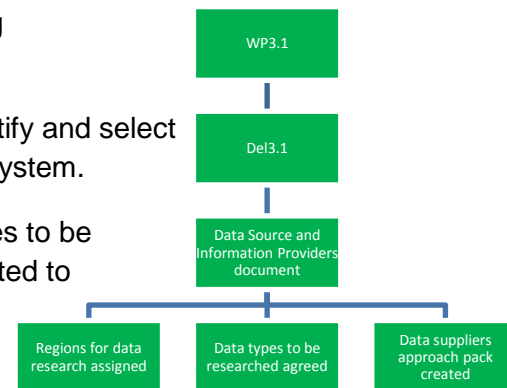
WPA3.2 – to identify appicable data and negotiate data supply and sharing with the originators
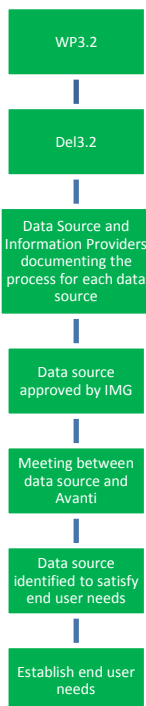
Del3.2 is to report on how data is identified as appropriate for the NS FRITS system and how data supply is negotiated with suppliers.

During the IMG3 meeting the consortium agreed that each data source should be approached by a formal process.

Firstly the needs of the end user should be established and a suitable data source researched to satisfy that need. An initial meeting should be held between the approaching NS FRITS partner and the data source followed by a meeting between Avanti and the technical representative of the data source.

Once it has been established that the data source is suitable, willing and capable of supplying data in a desired format then the data source is presented to the IMG for approval. All decisions are documented in the Data Source and Information Providers document.

This is an ongoing process to supply the system with suitable data.

WPA3.3 – to develop a system for the editing and maintenance of data for efficient use including prioritising and grouping data for transmission

WPA3.4 – to devise a robust, transnational system for data warehousing and mining and to ensure compliance with data capture/sharing and other national and transnational legislation

Del2.3 is to report on the recommendations for the development of NS FRITS including data editing, warehousing and mining, maintenance routines, legal / licensing issues and the capacity for future expansion.

WP3.3	WP3.4

Del2.3

System Requirements

Legal / licensing issues	Data editing, warehousing and mining
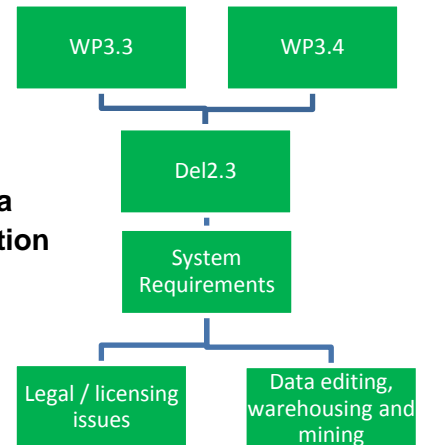
The section of the System Requirements document which satisfies WPA3.3 and WPA3.4 is the recommendations of data editing, warehousing and mining and legal and licensing issues.
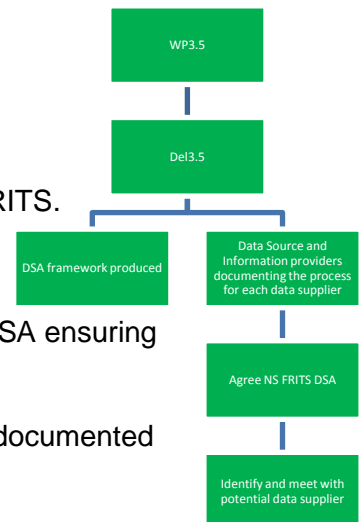
WPA3.5 – to consider and make recommendations on any legal and licensing issues relating to data sources

Del3.5 is to document the legal / licensing issues and recommended solutions relating to data sources and data types to be included in NS FRITS.

The template for the DSA was produced and approved by the WPL3.

Each data source acquired for the NS FRITS system will complete the DSA ensuring all future issues regarding legal and licensing matters can be resolved.

All DSA's produced will be flexible to suit all parties involved and will be documented in the Data Source and Information Providers document.

WP3.5

Del3.5

DSA framework produced	Data Source and Information providers documenting the process for each data supplier

Agree NS FRITS DSA

Identify and meet with potential data supplier

WPA3.6 – to study and analyse how data capture/transmission can encourage innovation and increase use of ICT within the NSR

Del3.6 is to produce a report on how NS FRITS will encourage innovation and increase the use of ICT with the NSR.

Del5.1 is to produce a report justifying further investment in NS FRITS taking into consideration operational and maintenance costs.

The outputs from Del3.6 and Del5.1 will feed into the NS FRITS business plan to be produced at the end of the project.

WP3.6

Del3.6

Innovation and ICT promotional aspect and costs document

WPA3.7 – to make recommendations in the NS FRITS final report about likely permanent application costs

Del3.7 is to contribute to the NS FRITS final report including an indication of likely application costs of the NS FRITS system.

Del3.6 is to produce a report on how NS FRITS will encourage innovation and increase the use of ICT with the NSR.

Del5.1 is to produce a report justifying further investment in NS FRITS taking into consideration operational and maintenance costs.
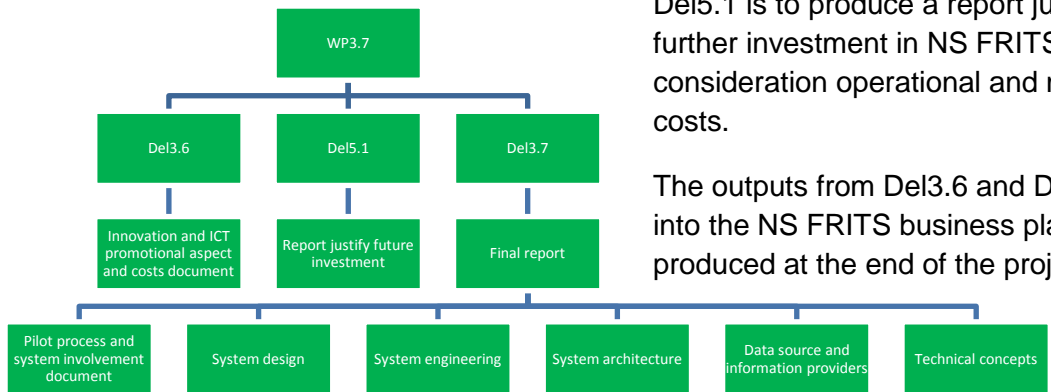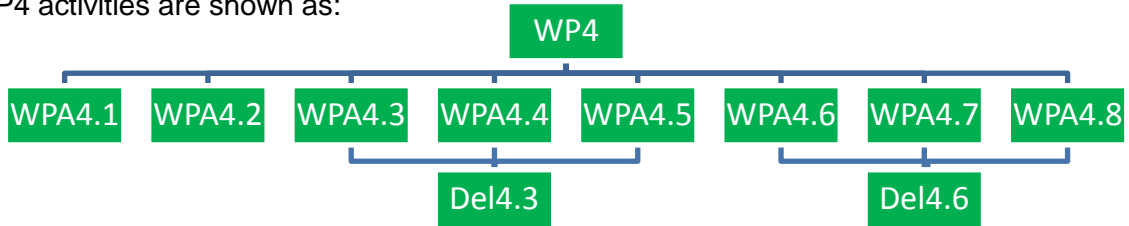
The outputs from Del3.6 and Del5.1 will feed into the NS FRITS business plan to be produced at the end of the project.

WP4

To design and implement the ITS identified and recommended in WP2 and 3

WP4 activities are shown as:

```
                                  WP4
WPA4.1  WPA4.2  WPA4.3  WPA4.4  WPA4.5   WPA4.6  WPA4.7  WPA4.8
                     Del4.3                      Del4.6
```

WPA4.3 – definition of the system architecture

Del4.3 is to produce a document that defines the NS FRITS system architecture and system engineering.

Del4.3 satisfies three of WP4 activities – WPA4.3, 4.4 and 4.5.

As the system architecture is the framework for the system, three deliverables are tied into the completion process – Del2.1, 2.2 and 4.3.

Del2.1 includes the research into technical concepts and state of the art research/leading edge technology in order to discover which would be the most suitable for the NS FRITS system to utilise.
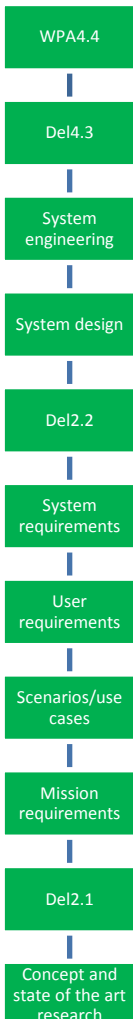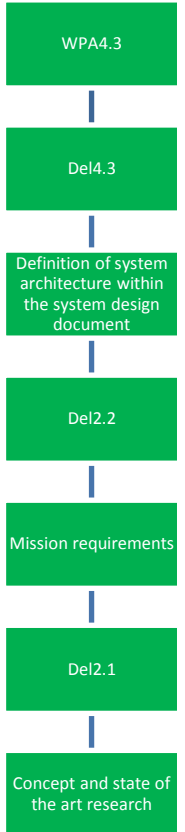
Del2.2 discovers the user needs and the mission requirements as it is imperative that the NS FRITS system is designed for the end user. Using this research and information the system architecture is produced.

The reporting of this process – Del4.3 – is contained the System Design document.

WPA4.4 – system engineering

The system engineering feeds from the system architecture plus the research undertaken in WP2. Therefore it uses the same deliverables – Del2.1, 2.2 and 4.3, however it uses more elements of the research and reporting undertaken.

For example the scenarios/use cases, mission requirements, user requirements and system requirements plus the system architecture all help to define the system engineering.

The more research undertaken the greater understanding the system designers can have of their end user needs.

This also helps to demonstrate the level of WP coordination within the project.

Del2.1 and the mission requirements, scenarios/use cases and user requirements have all been completed. System requirements are due for completion at the end of July 2010.

Flowchart (left, WPA4.4):
WPA4.4 → Del4.3 → System engineering → System design → Del2.2 → System requirements → User requirements → Scenarios/use cases → Mission requirements → Del2.1 → Concept and state of the art research

Flowchart (right, WPA4.3):
WPA4.3 → Del4.3 → Definition of system architecture within the system design document → Del2.2 → Mission requirements → Del2.1 → Concept and state of the art research

WPA4.5 – design and development of the system with continuous development feedback

The design and development of the system utilises the research and the architecture and feeds the continual development into the system design document.

Del4.6 is to document ongoing system developments including the results of laboratory testing and pilot results in collaboration with WP5 leader.

WPA4.6 – laboratory tests of the system

The NS FRITS system will be tested, internally by NS FRITS partners to ensure it is suitable for the external pilots.
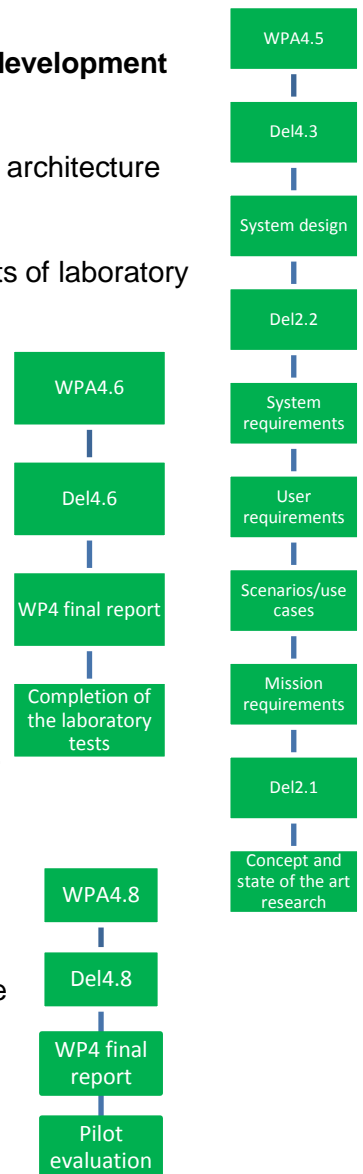
WPA4.7 – Pilot testing / development

Following the internal / laboratory testing, the system will be piloted with external stakeholders. The system will continue to be developed throughout the pilot phase.

**WPA4.8 – compilation and review of test / pilot results**

The results of the system development during the pilot and testing phase will be compile din the system design document which will become the WP4 final report (Del4.8).

WPA4.7
Del4.6
WP4 final report
Pilot tests

WPA4.6
Del4.6
WP4 final report
Completion of the laboratory tests

WPA4.8
Del4.8
WP4 final report
Pilot evaluation

WPA4.5
Del4.3
System design
Del2.2
System requirements
User requirements
Scenarios/use cases
Mission requirements
Del2.1
Concept and state of the art research

WP5
To implement and execute three Pilot Projects at key strategic locations in the NSR

WP5 activities are shown as:
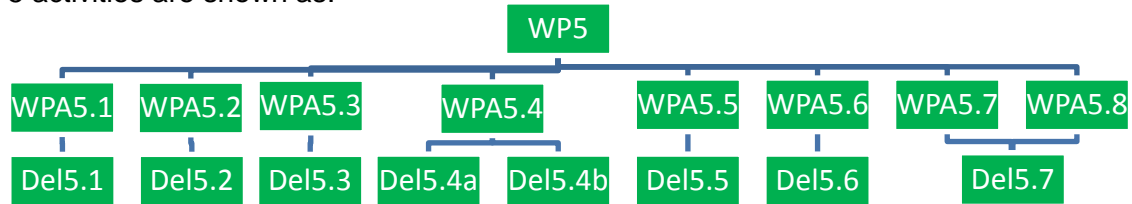
WPA5.1 – to establish and justify investment in the ITS including operational and maintenance costs

Del5.1 is to produce a report justifying further investment in NS FRITS taking into consideration operational and maintenance costs

WPA5.2 – to liaise with and provide feedback to the system designers (WP2/3/4)

Del5.2 is to deliver three demonstration activities (pilots) which test the viability of the ITS and the quality and appropriateness of the data provided.

WPA5.3 – to liaise and negotiate with stakeholders and other externasl bodies over local agreements which facilitate the pilot projects

Del5.3 is to document negotiations between stakeholders and other external bodies to form agreements which facilitate the three pilot demonstrations.
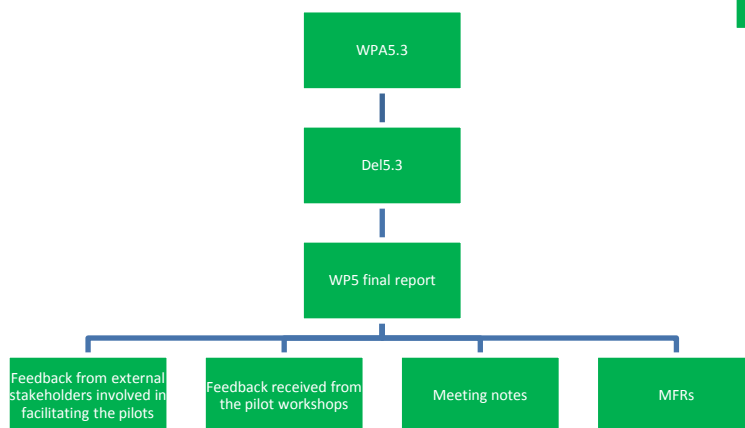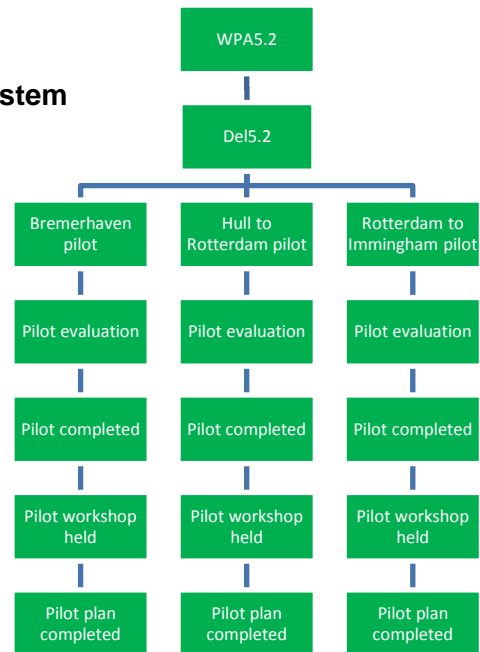
WPA5.4 – to document the processes and systems involved in the three pilot projects for inclusion in the final NS FRITS report

Del5.4a is to produce a report on the long term viability and sustainability of the proposed ITS solutions.

Del5.4b is to document the processes and systems involved in the delivery of three pilots for inclusion in the final report.
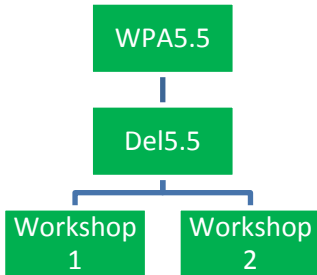
WPA5.5 – to organise and manage meetings, seminars specific to the pilot projects location(s)

Del5.5 is to coordinate two workshops in preparation for the three pilot demonstrations.

WPA5.6 – to identify and resolve all technological challenges in order to provide a robust system

Del5.6 is to document how emerging technological challenges were identified and resolved to ensure NS FRITS is a robust system, fit for purpose and future expansion.

Del5.7 is to document how NS FRITS interfaces and compares with other ITS solutions and contributes to other projects that will support future EU roll-out. Del5.7 influences WPA5.7 and 5.8.

WPA5.7 – to interface with other ITS solutions and contribute to other Interreg / EU RTD / National programmes and objectives
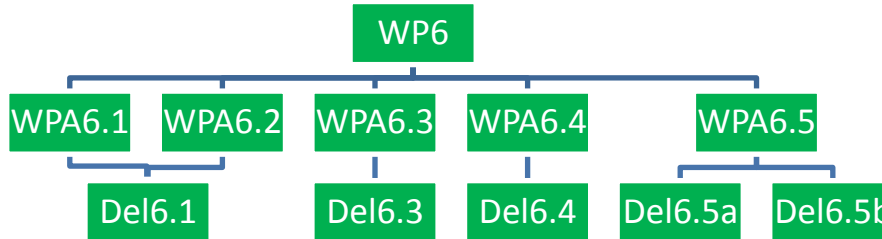
WPA5.8 – to compare the NS FRITS solution against other ITS systems for compatibility and data sharing for future EU rollout
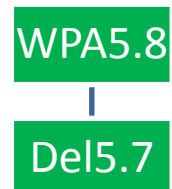
WP6

To manage and co-ordinate the dissemination, communication and publicity activities in collaboration with partners, end users and stakeholders to support and influence regional, national and EU policies

WP6 activities are as shown:

Del6.1 is to record all internal and external individuals and organisations that are involved with / aware of NS FRITS.

WPA6.1 – to disseminate findings to all stakeholders
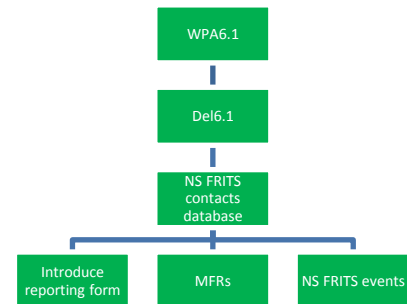
WPA6.2 – co-ordinate contact with partners and external bodies to support and influence regional / national and EU policy

WPA6.3 – maintain an overview of related projects that have the potential to collaborate with NS FRITS
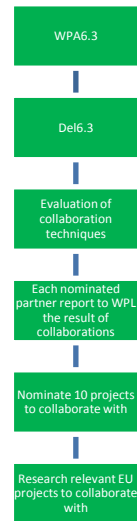
Del6.3 is to document how NS FRITS identifies projects for collaboration and report on outcomes from the collaboration
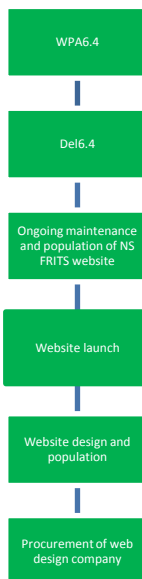
WPA6.4 – design and maintain NS FRITS website

Del6.4 is to develop and maintain NS FRITS website.

WPA6.5 – produce newsletters, coordinate press releases and other publicity events

Del6.5a is to co-ordinate press releases, TV and radio appearances, newsletters, seminars, and conference in accordance with project indicators.

Del6.5b is to produce interim and a final evaluation of the Communications and Publicity strategy

Intermediate achievements (IAs)

The IAs identified below are all taken from the NS FRITS application. These can be described as the measurable outputs and outcomes of NS FRITS, and the mech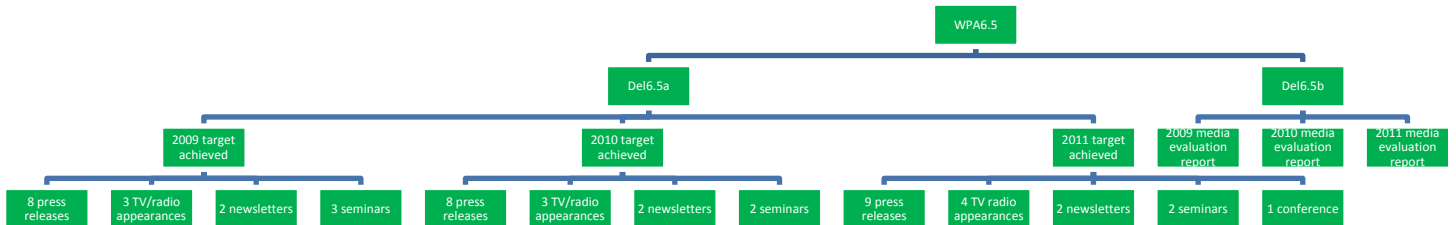anisms that can be used to demonstrate how NS FRITS can achieve its ultimate objectives. The intermediate objectives identified are:

1. To utilise the most relevant Information Communication Technology (ICT) for the freight supply chain
2. To establish an ICT solution that includes telecommunications and the increasing range of sensory, location, security identification and data capture leading edge technologies within the supply chain, which will transmit data at ports and other critical transport corridor points
3. To develop a multi-lingual electronic communications and data capture system into an intelligent transport solution (ITS)
4. Identify and prioritise the nature of the information that is to be transmitted considering quality, quantity and format of the data
5. To place the ITS at strategic positions in the transport network
6. To transmit and receive data in a series of languages to lone workers as they travel through NSR
7. To pilot and develop information hubs to test if they
   a. Improve the liaison between multimodal and multinational operators in the NSR
   b. Improve traffic flow and dispersal throughout the NSR
   c. Improve predictability for the 'just in time' movement of goods
   d. Improve driver safety and reduce road casualties.
   e. Transmit and receive data in a series of languages to lone workers as they travel through NSR
   f. Provide live up to date information (traffic flow, congestion, safety and security)
   g. Provide interoperability and integration between transnational and secondary networks providing visibility across supply chains, sharing data, so that all elements of the supply chain benefit
   h. Reduce economic and social risks that exist in the supply chain, specifically related to losses, late deliveries, security, road safety and driver conditions of service
8. Build functionality and capacity into the system to enable compatibility for additional services to be introduced in the future to meet the changing needs of logistics operators and the growing challenges within the freight supply chain throughout Europe
9. For the public and private sector to work in partnership to develop, populate, administer and benefit from the system
   a. This will enable the wider adoption and use of ICT applications to enable NSR to further develop efficient and effective logistics solutions.
   b. This also requires a sustainable cross-sectoral partnership for the collection and transmission of relevant data that will be used to inform the freight supply chain and other relevant agencies
10. To learn from, add value, support and co-operate with other EU projects

The IAs are linked to the WPA's

WPA	Intermediate achievements										Total
	1	2	3	4	5	6	7	8	9	10	
1.1									x		1
1.2									x		1
1.3									x		1
1.4									x		1
1.6										x	1
1.7									x		1
2.1	x										1
2.2	x										1
2.3	x	x	x					x			4
2.4			x					x			1
2.5								x			1
2.6			x					x			2
2.7		x						x			2
3.1				x							1
3.2				x							1
3.3				x							1
3.4				x							1
3.5				x				x			2
3.6	x	x						x			3
3.7								x			1
4.1		x	x						x		3
4.2		x		x				x	x	x	5
4.3	x	x	x		x	x	x	x			7
4.4	x	x	x		x	x	x	x			7
4.5	x	x	x		x	x	x	x			7
4.6		x	x		x	x	x	x			6
4.7		x	x	x	x	x	x	x			7
4.8		x	x	x	x	x	x	x			7
5.1	x			x	x		x	x	x		6
5.2	x	x	x	x		x	x	x			7
5.3					x		x		x	x	4
5.4	x	x	x	x	x	x	x	x			8
5.5					x				x		2
5.6	x	x	x	x	x	x	x	x			8
5.7	x	x			x		x	x	x	x	7
5.8	x	x	x		x		x	x	x	x	8
6.1				x			x		x	x	4
6.2								x	x		2
6.3									x	x	2
6.4									x		1
6.5									x		1
Total	13	16	14	13	13	9	14	22	17	7	138