

Service Number	Service Description	Category	Threat Number	Threat Description	Consequences of the Threat	Explanation of the Probability of Occurrence	Explanation of the Level of Impact	Risk rating scheme	Strategy Scenario not defined for these threats
0	General risks	Communication	0.2.4	Much of the functionality in the Architecture relies on communications, the cost of which forms a major part of the overall operating costs.	Although overall deployment of the required communications links may increase, the cost of their use may not drop sufficiently to ensure that the Architecture deployment reaches the expected level.	Communications providers are aware of market forces but are not always sensitive to the impact of high user costs.	Any impact will be blunted by the reaction of the communications providers.	YELLOW	
0	General risks	Cost Benefit	0.3.1	Industry does not develop new systems for services (or parts of services) because the market size does not justify the development cost or provides insufficient pay-back.	Some services do not become totally available to consumers.	For some services there is not yet a large enough market to justify the development costs and provide sufficient cost benefit.	Some services that have a limited use will not be fully deployed.	YELLOW	
0	General risks	Cost Benefit	0.3.2	Many ITS services that are based on system using functionality from the KAREN Framework Architecture will not achieve their objectives, e.g. travel problems are not avoided or their effects reduced.	Acceptance of ITS services based on systems developed from the KAREN Framework Architecture will be impeded because it will be seen that they do not achieve their objectives.	It will prove technically difficult of costly to develop ITS services using systems including some of the functionality in some parts of the KAREN Framework Architecture.	Deployment of parts of the Framework Architecture will be impeded.	YELLOW	
0	General risks	Cost Benefit	0.3.3	The Framework Architecture benefits are difficult to quantify	Reluctance to adhere to the Framework Architecture when developing a new ITS systems.	Framework Architecture is a new concept which needs to prove its value.	Framework Architecture deployment will be slowed down.	YELLOW	
0	General risks	Funding Provision	0.5.1	Non-ITS interest groups/organisations may be powerful enough to limit national funds.	Implementation of the Architecture Framework is jeopardised	If the KAREN Framework Architecture does not consider the needs and interests of all group, they may try to block its implementation.	Implementation of the Architecture Framework may be prevented.	YELLOW	
0	General risks	Legacy	0.7.3	Approval procedures for ITS services will be too complicated by overlapping agency responsibilities.	Private sector promoters of information services are unsure about who to approach for approval to operate their service.	In some areas of Europe it is difficult to find the correct approval authority.	It can take a long time to have a product accepted.	YELLOW	

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0	General risks	Politics	0.8.6	Some parts of Europe do not take "ownership" of the KAREN Framework Architecture because they do not consider it to applicable to themselves.	The KAREN Framework Architecture is only implemented in those parts of Europe that take "ownership" of the Architecture.	Some areas of Europe will strongly believe that the Architecture has nothing to do with them because they do not consider that they have been adequately involved in its development.	Architecture implementation across Europe will be significantly disrupted because there will be "islands" of non-implementation.	YELLOW	
0	General risks	Politics	0.8.7	Some regulations may be treated as "secret" in some countries with respect to terrorism etc.	Thus the new guidelines will not be implemented in these fields.	It is unlikely, that the Architecture Framework will touch these sensible areas.	This will prevent implementation of a few parts of the Architecture Framework.	YELLOW	
0	General risks	Stakeholder Acceptance	0.11.2	There may be a reluctance by parts of either the public or the private sectors to become involved in public/private partnerships to develop, deploy and/or operate new products based on the Architecture functionality.	New products that exploit the advantages of the functionality and interoperability provided by the Architecture will not appear.	Either the public sector will not have sufficient funds, or the private sector will see no commercial benefit resulting from the work.	Framework Architecture deployment will be impeded because new products to exploit its functionality do not come into existence.	YELLOW	
0	General risks	Stakeholder Acceptance	0.11.3	Multi-modal co-operation is not compliant with the business objectives of a public or commercial transport operations.	Information for multi-modal purpose will not be provided	There will be agreement between transport providers who are not present on the same market. There will not be agreement between transport providers when they are on the same market.	Impacts depends whether or not multi-modal information is of high priority or not.	YELLOW	
0	General risks	Standardisation	0.12.4	European standardisation does not produce the required communications mechanisms.	ITS will not be able to communicate with each other in the required way.	European countries invest on different communication means despite current standardisation programmes.	Framework Architecture deployment will be slowed down.	YELLOW	
0	General risks	Standardisation	0.12.5	Location determining techniques are not unique.	Several different type of equipment will be needed and the data will have to be processed by different systems.	Technologies are not yet mature and require extra development funds	Framework Architecture deployment will be slowed down	YELLOW	

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0	General risks	Standardisation	0.12.6	Different countries do not apply the same rules about commercial vehicle safety.	Service cannot be successfully deployed.	Agreement can be adopted at the EC level	The service is not a European priority	BLUE	
0	General risks	Technological Maturity	0.13.1	The technical solutions for functions in the Framework Architecture do not exist and cannot be created.	Parts of the Framework Architecture cannot be implemented.	Although the technical development is going on rather fast, it may not be possible to implement systems with the required functions and reliability.	Will result in delays to the implementation of some systems and services.	YELLOW	
0	General risks	Traveller Acceptance	0.14.1	ITS systems do not take into account the specific needs of impaired people	ITS services seen as a tool only for healthy people and therefore has poor acceptance.	The impact on impaired people is only ignored in a minority of services.	The impact on impaired individuals is large, but on ITS services as a whole it is small.	GREEN	
0	General risks	Traveller Acceptance	0.14.4	Information is not provided in several languages or in a common currency.	Users will prefer to use a service that provides a multi-language and currency capability.	Most of the existing services do not provide multi-language and currency capability.	Multi-language and currency capabilities are comfort capabilities that do not impact ITS deployment.	GREEN	
0	General risks	Traveller Acceptance	0.14.6	End users may not be able to take advantage of all the services and facilities that are available due to unfamiliarity with the systems.	End users may not receive all the benefits that a service has to offer.	Most systems will be designed to ensure that end users can easily get the most out of the facilities that they provide.	Only a small proportion of end users will be affected due to increasing use of complex systems in daily life.	YELLOW	
1	Pre-trip driver Information	Framework Architecture	1.1.1	Shared transport services information is not dynamically managed.	The benefits of including shared transport services without dynamic management in trips are insufficient for end users.	Dynamic management implies that more equipment needs to be provided resulting in a higher investment cost.	Dynamic aspects of shared transport management are not critical.	YELLOW	
1	Pre-trip driver Information	Deployment & Operation	1.4.1	Internet technology provides an attractive means to support ITS information dissemination but this could be un-controlled.	Valid information will be corrupted	By nature, Internet information can not be controlled	There is few interest for anyone to provide corrupted information, and further the valid information providers will rapidly be identified	YELLOW	
1	Pre-trip driver Information	Standardisation	1.12.3	Different time zones have to be taken into account.	Data may not be processed or is inaccurate concerning the time.	This risk is easy to identify and will almost certainly be avoided.	Many programs already exist adapting to the appropriate time zone.	BLUE	

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1	Pre-trip driver Information	Technological Maturity	1.13.1	Data prediction models and data collection systems differ in some countries within Europe.	Wrong anticipation for the whole trip since data will not be inaccurate	The reality is, that there are many systems currently in use which have different calculation methods, that are mostly not interchangeable, because they start from different preferences.	The sources of data can be correlated to reduce the effects of the different calculation methods.	YELLOW	
1	Pre-trip driver Information	Technological Maturity	1.13.2	Internet technology is not used.	New information dissemination support will need to be developed.	Internet technology will naturally impose itself	Technology to migrate under internet exists, is mature and supported by a wide market	BLUE	
2	On-trip driver information	Cost Benefit	2.3.1	The market for tailored subscribed information is not large enough	The service will be not deployed	The concept is simple to understand but still the service is not yet available	Architecture deployment will be slowed down	GREEN	
2	On-trip driver information	Organisational and institutional issue	2.15.1	The infrastructure to collect information is not optimal because the private sector will not be allowed to install monitoring equipment on public roads.	There will be a lack of good quality travel information.	Some countries within Europe do not allow the private sector to have access to the road network to collect meaningful traffic and travel data.	The travel information will be of poor quality and accuracy so that the Service will not be used by travellers.	YELLOW	
4	Personal Information Services	Traveller Acceptance	4.14.1	The information does not include vital information e.g. for tourists whether foreign or from same country.	End users will not accept the System.	Interest groups will ensure that tourist information is included in these systems.	Financing of these systems may cease, if the tourist information is not included.	GREEN	
6	Transportation Planning Support	Stakeholder Acceptance	6.11.1	Companies or authorities may not want to put their data at disposal.	Data is not available.	Several reasons could lead to such behaviour, e.g. data security, funding problems, disliking between authorities etc...	Data sources not available thus the Framework will be severely delayed until the problems are solved.	GREEN	
7	Traffic control	Technological Maturity	7.13.1	Levels of urban and inter-urban traffic grow beyond the point at which the control algorithms implied by the Architecture cease to be effective.	The level of congestion in many urban and inter-urban areas reach unacceptable levels.	Traffic levels are on a steadily increasing trend but this may be counteracted by changes in transport policy within the EU.	The applications provided by the Architecture will appear to be ineffective and will not deliver the benefits that they promise.	YELLOW	

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8	Incident management	Deployment & Operation	8.4.1	The severity and duration of incident impacts will be increased because not enough attention is given to providing post incident management strategies.	Post incident management strategies will not be developed so Network Operators will not take advantage of all the incident management functions provided by ITS services based on systems developed from the KAREN Framework Architecture.	Post incident management strategies will take low priority behind other strategy development work.	Architecture deployment will suffer because it will be seen not to providing all the benefits that can be gained from incident management.	YELLOW	
8	Incident management	Politics	8.8.1	The definition of types disaster differ from area of Europe to another.	Some incident data may not be processed in the same way by all systems.	Possible disasters differ from region to region within Europe.	System sale amounts may drop because they can not process vital data.	GREEN	
8	Incident management	Technological Maturity	8.13.1	Some incident detection algorithms for accurate and automated incident analysis implied by functionality in the Architecture may not be developed due to their high complexity and cost.	The detection of some incident types may not be possible reducing the benefits from deploying this part of the Architecture.	Great advances are being made in the use of new detection techniques, particularly those using new media.	It will only effect the deployment of one or two applications in selected "difficult" areas.	BLUE	
8	Incident management	Technological Maturity	8.13.2	Incident detection algorithms may not be sufficiently reliable or timely to provide accurate and automated incident analysis to enable any form of strategy to be effective.	The detection of incidents may have an unacceptable error rate and/or time delay negating the benefits from deploying this part of the Architecture.	Incident detection will continue to be unreliable due to the variability in the circumstances under which incidents can occur.	It will only effect the deployment of one or two applications in selected "difficult" areas.	YELLOW	
8	Incident management	Technological Maturity	8.13.4	The testing of strategies developed using off-line modelling tools will prove be too complex, or too difficult, or inadequately staffed.	Deployment the incident management part of the Architecture will be hard to justify because it will be hard to substantiate its benefits.	Some modelling tools will be tested where they are in common use, or can be tested by academic organisations as part of student projects.	Architecture deployment will be impeded because it will not be seen to alleviate the effects of incidents.	YELLOW	

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9	Demand management	Technological Maturity	9.13.1	Lack of suitable technology may make it impossible to implement air quality based zone pricing and congestion pricing.	These strategies will not be available for implementation.	Due to technical development these kinds of technology will soon become available.	These strategies are critical to successful transportation management.	YELLOW	
9	Demand management	Technological Maturity	9.13.3	Selective vehicle priority will not be properly implemented because detection equipment cannot distinguish the different types of vehicle within classes.	The effectiveness of selective vehicle priority functionality will be reduced making it unattractive to deploy this part of the Architecture.	It will not prove possible to develop sensors to distinguish between every type of vehicle that may request priority.	Some vehicles will receive priority when they should not because sensors are set to "include" vehicle types rather than "exclude".	GREEN	
10	Policing/enforcing traffic regulations	Legacy	10.7.1	The legal framework is not adapted to allow evidence based on technologies such as electronic license plates or video enforcement to be used in court	Enforcement mechanisms remain basic and do not allow cost-effective enforcement	This is the present situation in a few European countries.	System is not as efficient as it could be.	GREEN	
11	Infrastructure Maintenance Management	Cost Benefit	11.3.1	It will not be cost effective to provide a communications infrastructure that can carry the required data to and from a traffic and travel management or information centres.	The deployment of some or all of the functionality provided in the Architecture will be impeded.	The inability to provide a cost effective communications infrastructure for traffic centre communications will be unusual.	The deployment of the Architecture will be prevented due to lack of access to services at TTIC's and other centres.	YELLOW	
11	Infrastructure Maintenance Management	Deployment & Operation	11.4.3	The communications and highway infrastructure will fall into disrepair because the organisations tasked with their management will not have a budget to cover the on-going maintenance costs.	Some of the functions provided by the Architecture will fall into disuse or prove so unreliable as to make their continued use of little benefit.	The lack of sufficient funding for infrastructure repairs will be a common problem.	Long term deployment and market acceptance of the Architecture and its services will be impeded because they will be perceived as being unreliable.	YELLOW	

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12	Vision Enhancement	Technological Maturity	12.13.2	It will prove impossible to develop a vision enhancement system providing a near perfect view of the highway under all driving conditions. However drivers will be unaware of this and they will be lead to drive in a manner that is unsafe	After initial deployment of this part of the Architecture future deployment will cease as the applications in which it is included are declared unsafe.	It will prove impossible or not cost effective to develop a vision enhancement system that works for all vehicle drivers.	Deployment of the vision enhancement functionality part of the Architecture will be impeded.	YELLOW	
12	Vision Enhancement	Traveller Acceptance	12.14.1	Safety hazards will be created by single traffic stream containing some vehicles that are not using vision enhancement. The hazard will be that drivers using vision enhancement will be frustrated by those that are not.	In some situations drivers will also loose the benefits of the enhancement which will in turn decrease its appeal to drivers. Thus deployment of this part of the Architecture will cease as its reputation becomes apparent.	Not all vehicles will be fitted with vision enhancement systems.	Deployment of the vision enhancement functionality part of the Architecture will be impeded.	YELLOW	
13	Automated vehicle operation	Cost Benefit	13.3.1	The automatic control of vehicles using data from equipment in the highway infrastructure will prove impossible. This will be because of the high cost of deploying, operating and maintaining the highway infrastructure equipment.	The automatic vehicle control functionality in the Architecture will not be fully deployed.	In some EU states, the organisations responsible for the highway infrastructure will not consider it cost effective to provide this equipment.	The deployment of automatic vehicle control systems will be limited to those with reduced functionality.	YELLOW	
13	Automated vehicle operation	Technological Maturity	13.13.1	The development of processors for vehicle sensors will have to be such that vehicles can be correctly positioned on the highway. This will become an area of risk when positioning high speed (+ 60 mph/96 kph) vehicles relative to the highway itself.	If a sufficiently powerful processor cannot be developed, then vehicles will risk collision with other vehicles and objects close to the highway. As a result his functionality within the Architecture will not be deployed.	It may be some years before sufficiently fast processors can be provided cost effectively.	Deployment of automatic vehicle systems will be limited to expensive "top of the range" or "special purpose" vehicles.	YELLOW	

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14	Longitudinal collision avoidance	Cost Benefit	14.3.1	Stakeholders (constructors) do not co-ordinate in order to provide an adapted equipment	Development and production cost for equipment is too high	Technology is still immature and standardisation not yet achieved	Architecture deployment will be slowed down	YELLOW	
14	Longitudinal collision avoidance	Stakeholder Acceptance	14.11.1	Adverse health, safety, and environmental impacts will be associated with the radar equipment used to provide longitudinal collision and object avoidance functionality. This may result in failure to gain the support of public and advocacy groups.	Deployment of the longitudinal collision avoidance functionality in the Architecture will suffer because it will not be seen as environmentally safe by the general public.	The risk to health will not be statistically acceptable in all EU states.	The deployment and use of longitudinal collision avoidance systems will not be uniform across the EU.	YELLOW	
14	Longitudinal collision avoidance	Technological Maturity	14.13.2	Simulation mean are technically difficult to develop	Qualification cost is too high because many different collision situations need to be covered by test and demonstration	Constructors have already developed an important know-how in using simulation means	Know-how will play an important rôle	BLUE	
15	Lateral collision avoidance	Cost Benefit	15.3.2	Stakeholders (constructors) do not co-ordinate in order to provide an adapted equipment	Development and production cost for equipment is too high	Technology is still immature and standardisation not yet achieved	Architecture deployment will be slowed down	YELLOW	
15	Lateral collision avoidance	Stakeholder Acceptance	15.11.1	Adverse health, safety, and environmental impacts may be associated with the radar equipment used to provide lateral collision and object avoidance functionality. This may result in failure to gain the support of public and advocacy groups.	The lateral collision avoidance functionality in the Architecture will not be deployed because it will not be seen as environmentally safe by the general public.	The risk to health will not be statistically acceptable in all EU states.	The deployment and use of lateral collision avoidance systems will not be uniform across the EU.	YELLOW	
15	Lateral collision avoidance	Technological Maturity	15.13.2	Simulation mean are technically difficult to develop	Qualification cost is too high because many different collision situations need to be covered by test and demonstration	Constructors have already developed an important know-how in using simulation means	Know-how will play an important rôle	BLUE	

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16	Safety Readiness	Cost Benefit	16.3.1	The cost of the deployment, operation and maintenance of road side sensors that support road condition monitoring by vehicles will be high. This will particularly apply in rural and inter-urban areas.	The vehicle safety readiness functionality in the Architecture will not be deployed because the high cost of the supporting sensors will not support the benefits that it provides.	The sensors needed to support vehicle safety readiness systems will not be deployed in all EU states.	The deployment of vehicle safety readiness systems will not be uniform across all EU states.	YELLOW	
16	Safety Readiness	Funding Provision	16.5.1	There will be a lack of uniformity in the deployment of road condition monitoring sensors in the highway infrastructure. This is because the sensors will not be used on all highways due to cost and technical considerations.	The vehicle safety readiness functionality in the Architecture will not be deployed because non-uniform deployment of sensors will make its use unattractive to drivers	The sensors needed to support vehicle safety readiness systems will not be deployed in all EU states.	The deployment of vehicle safety readiness systems will not be uniform across all EU states.	YELLOW	
17	Pre-crash restraint deployment	Technological Maturity	17.13.1	Adequate real time communication performance cannot be achieved.	The service is not effective.	Technology is still immature and standardisation not yet achieved	Technology is improving all the time and will eventually resolve the problem.	YELLOW	
17	Pre-crash restraint deployment	Technological Maturity	17.13.2	Simulation system operation is technically difficult to develop.	Qualification cost is too high because many different safety situations need to be covered by test and demonstrations.	There is not enough know-how developed in this field about simulation.	Qualification cost will be high	YELLOW	
17	Pre-crash restraint deployment	Technological Maturity	17.13.3	On board equipment does not possess enough reliability.	The system will be unacceptable to end users.	Technology is still immature and standardisation not yet achieved	Technology is improving all the time and will eventually resolve the problem.	YELLOW	
19	Commercial vehicle administrative processes	Cost Benefit	19.3.1	The system price is high	Only large commercial vehicle operating companies will have enough revenue to be able to afford to purchase the systems.	All stakeholders have not yet allocated financial resources for ITS.	The service is not a European priority.	GREEN	
19	Commercial vehicle administrative processes	Standardisation	19.12.1	Administrative processes are different from country to country.	Architecture functionality is difficult to apply or define.	Agreement can be adopted at the EC level.	The service is not a European priority.	BLUE	

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22	Commercial Fleet Management	Communication	22.2.1	Internet technology is not used.	New information dissemination support will need to be developed.	Internet technology will naturally impose itself	Technology to migrate under internet exists, is mature and supported by a wide market	BLUE	
22	Commercial Fleet Management	Communication	22.2.2	Internet technology provides an attractive means to support ITS information dissemination but this information could be un-controlled	Valid information will be corrupted	By nature, Internet information can not be controlled	There is little interest for anyone providing corrupted information, and further the invalid information providers will rapidly be identified.	YELLOW	
23	Public transport management	Stakeholder Acceptance	23.11.1	Multi-modal co-operation is not compliant with the business objectives of traditional public transport management.	Multi-modal transport management systems will not be implemented.	There will be agreement between transport providers who are not present on the same market. There will not be agreement between transport providers when they are on the same market.	Impacts depends whether or not multi-modal information is of high priority or not	YELLOW	
24	Demand responsive system	Cost Benefit	24.3.1	Demand responsive public transport systems are too expensive.	Transport service providers are reluctant to implement the service.	This is the present situation.	Systems will have to be implemented for public transport to stay competitive.	YELLOW	
24	Demand responsive system	Traveller Acceptance	24.14.1	The service is not fast and reliable enough under high use conditions.	End will reject the system and continue to use cars.	The system will not be used due to the high cost of implementation.	The confidence in the system will be low.	YELLOW	
25	Shared transport management	Cost Benefit	25.3.1	Shared transport services information is not dynamically managed.	The benefits of shared transport services without dynamic management are insufficient for end users.	Dynamic management implies that more equipment needs to be provided resulting in a higher investment cost.	Dynamic aspects of shared transport management are not critical.	YELLOW	
25	Shared transport management	Deployment & Operation	25.4.1	Price for a vehicle to get equipped with location determination mechanism is too high.	Dynamic shared transport management cannot easily be achieved.	The market for location determining equipment already exists through its uses elsewhere.	Dynamic aspects of shared transport management are not critical.	GREEN	
26	Emergency Notification and Personal Security	Safety	24.10.1	Seat belt tightening systems must comply to every national standard (e.g. size of passengers).	System may be not adjustable in a sufficient range thus endangering the passengers.	Passive systems already in use are adapted to national standards.	Sales of equipment will be low until the technical problems have been solved.	BLUE	

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26	Emergency Notification and Personal Security	Technological Maturity	26.13.1	Adequate real time communication performance cannot be achieved.	The service is not effective.	Technology is still immature and standardisation not yet achieved	Technology is improving all the time and will eventually resolve the problem.	YELLOW	
26	Emergency Notification and Personal Security	Technological Maturity	26.13.2	Simulation system operation is technically difficult to develop.	Qualification cost is too high because many different emergency situations need to be covered by test and demonstrations.	There is not enough know-how developed in this field about simulation.	Qualification cost will be high	YELLOW	
26	Emergency Notification and Personal Security	Technological Maturity	26.13.3	On board equipment does not possess enough reliability.	The system will be unacceptable to end users.	Technology is still immature and standardisation not yet achieved	Technology is improving all the time and will eventually resolve the problem.	YELLOW	
27	Emergency Vehicle Management	Cost Benefit	27.3.1	The high cost of fitting emergency vehicles with equipment that aids their speedy progress to incidents will deter it being fitted to all vehicles.	Thus some vehicles will not be as fast as they could be in reaching incidents.	There will be some areas of the EU in which the deployment of the vehicle equipment required to aid speedy progress to incidents will not take place.	The deployment of emergency vehicle management systems will be impeded. This may not lead to an decrease in the duration and impact severity of incidents.	YELLOW	
27	Emergency Vehicle Management	Cost Benefit	27.3.2	There is no payback in deploying ITS services on secondary transport axes.	Emergency vehicles will be only fully effective on primary axes.	It will be difficult to justify the deployment of ITS equipment on secondary transport axes.	There will be some degradation of the efficiency of the emergency services using primary transport axes because of congestion caused by high level of use.	YELLOW	
27	Emergency Vehicle Management	Deployment & Operation	27.4.1	The emergency services that are involved in incident responses cannot or will not communicate with each other.	The impact and duration of incidents will not be decreased because of ineffective deployment by the emergency services.	There will be some areas of the EU where communications between emergency services will be poor or non-existent. This may be due to either failure to install Architecture based applications, or unwillingness to communicate.	The deployment of emergency vehicle management systems will be impeded. This may not lead to an decrease in the duration and impact severity of incidents.	BLUE	

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27	Emergency Vehicle Management	Stakeholder Acceptance	27.11.3	Countries have already developed emergency vehicle management strategies.	Different or extra means for ensuring management will not be widely accepted.	Agreement will difficult to reach at the EC level.	Architecture deployment timescales will be slightly increased.	YELLOW	
27	Emergency Vehicle Management	Stakeholder Acceptance	27.11.4	The incident management strategy is too sophisticated.	Operational testing of the strategy will be difficult to achieve.	Depends upon a mechanism for incident simulation being developed.	Architecture deployment timescales will be slightly increased.	GREEN	
27	Emergency Vehicle Management	Standardisation	27.12.1	There will be no common standard for communications between emergency vehicles and the emergency management centre functions in the Architecture.	The high cost of fitting non-standard communications equipment to emergency vehicles will impede the deployment of the emergency vehicle management functionality in the Architecture.	There will be some areas of the EU where the use of non-standard vehicle to centre communications by emergency services will increase the cost of its installation.	The deployment of emergency vehicle management systems will be impeded. This may lead to an increase in the duration and impact severity of incidents.	GREEN	
28	Hazardous Materials & Incident Notification	Deployment & Operation	28.4.1	It will not be possible to enforce complete route compliance for vehicles with hazardous cargoes.	The location of some vehicles may not be known, thus improving incident response.	Enforcement of route compliance will be impossible without manual intervention through the use of a vehicle escort.	The impact severity of some incidents will not be decreased compared to present situation until new enforcement technology is developed.	YELLOW	
28	Hazardous Materials & Incident Notification	Deployment & Operation	28.4.2	Emergency services will not use a common vehicle management system.	The co-ordination of emergency service vehicles at an incident will not be efficient.	There will be some incidents where the emergency services are unable or unwilling to co-ordinate their activities.	The impact severity of some incidents will not be decreased compared to present situation in the first time.	BLUE	
28	Hazardous Materials & Incident Notification	Standardisation	28.12.1	Laws for deciding whether a cargo shall be traced or not are not the same in each country	Architecture principles can not be deployed in the same way in each country	Agreement can be adopted at the EC level	Architecture deployment will be slowed down	GREEN	
28	Hazardous Materials & Incident Notification	Technological Maturity	28.13.1	It will not be possible to develop sensors that can reliably and automatically indicate that a vehicle with hazardous goods has been involved in an incident and the nature of that incident.	The deployment of the hazardous cargo detection and incident notification functionality will be reduced.	It will take a long time to develop the required sensors because of the complexity of the detection task and the small size of the market.	The impact severity of some incidents will not be decreased compared to present situation in the first time.	GREEN	

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28	Hazardous Materials & Incident Notification	Technological Maturity	28.13.2	Vehicle location equipment will not always provide an accurate location so that vehicles become "lost" for part of their journey.	The determination of vehicle location is not 100% reliable.	There will be areas of the EU where accurate positioning is not possible. This will be because the location equipment will be unable to access data signals needed for location determination.	The impact severity of some incidents will not be increased compared to present situation in the first time.	GREEN	
29	Electronic financial transactions	Stakeholder Acceptance	29.11.1	Each operator wants to remain in control of their revenue stream and are reluctant to use a common payment mechanism.	Electronic payment is not integrated so that a single payment for the whole trip is not possible.	The lack of acceptance of a common payment mechanism is still a problem, particularly across national boundaries.	Current inefficiencies due to multiple payment mechanisms will be slow disappear because standardisation across national borders will be difficult.	YELLOW	
30	Public Travel Security	Funding Provision	30.5.1	Automatic collision detection of vehicles in public car parks requires new equipment to be developed.	Funding needs to be allocated in order to accelerate the equipment development.	Technology is still immature and standardisation not yet achieved	The collisions are not serious, occur infrequently, and detection technology is improving.	YELLOW	
32	Intelligent Junctions and Links	Deployment & Operation	32.4.1	The end user gets accustomed to using the new on-board information display systems and adapts driving behaviour accordingly to rely on the presence and truth of the information.	Accidents will occur due to the non-uniform deployment of junction warning information.	There will be European regulations to control the deployment of these systems, which will ensure that they are deployed and fail-safe.	The number of accidents will rise slightly.	BLUE	
32	Intelligent Junctions and Links	Safety	32.10.1	The display of information will distract the end user from driving.	Accidents will occur due to poorly designed user interface for on-board systems.	The car manufacturers will be forced by time to market constraints to install systems before standardisation can be achieved.	The systems will not be accepted by end users.	GREEN	