



Project Management Plan

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1 Introduction

This document describes the structure and processes for managing the AutoMate project. The major goals of the project management are to create and monitor a plan for achieving the project results as defined in the Grant Agreement (Annex 1) at the highest level of quality. Project results include reports and software as defined in the project deliverable list.

2 Project Organisation and Management Processes

The AUTOMATE project consortium is of medium size, thus we apply a lean and efficient management structure that allows fast decision making in order to ensure that the objectives will be met during the project runtime. The project management is hosted in WP8.

2.1 Project Management Structure

The management structure, illustrated in Figure 1, is composed of two levels with different bodies to ensure a lean organisation associated with a strong coordination. The executive level comprises the Project Manager, Technical Manager and Dissemination & Exploitation Manager as well as three committees. The three executive managers perform and are in charge of the operational day-to-day management tasks in close cooperation with the committees they are heading. The Project Manager reports to the European Commission (EC), meaning the Project Officer. At the implementation level, Work Package Leaders and Task Leaders manage the execution of technical development.

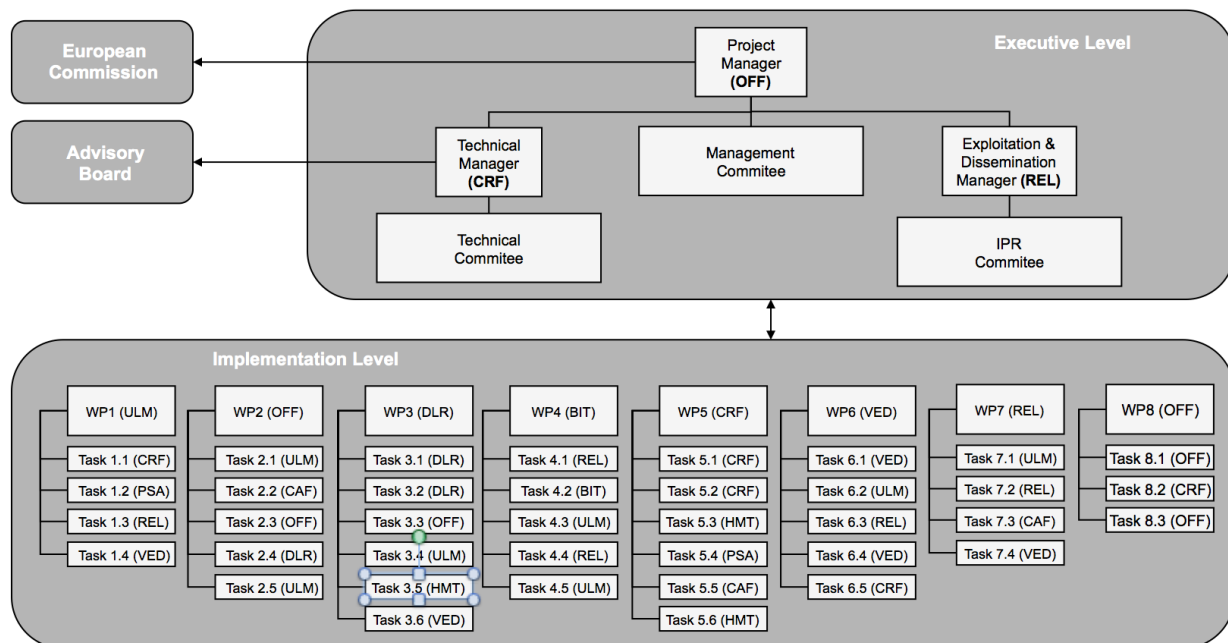




Figure 1: Project management structure and responsibilities

OFF, as coordinator, assumes the responsibility for the project management. OFF, as an organisation, comprises a complete infrastructure capable of handling the management of research projects. This organisation has many years of experience in multi-partners programs.

Project Manager (PM)

The PM performs the day-to-day administrative management of the project on the executive level in close collaboration with the other executive managers. Actions to be performed are: (1) financial monitoring and tracing (Budget, Expenditures); (2) coordinate and supervise all financial, legal and contractual aspects including the preparation of the consortium agreement and the reporting (towards the EC); (3) organisation of regular Management Committee meetings incl. preparation of relevant decisions; (4) organisation of regular consortium management meetings and annual review meetings with the EC in cooperation with the Technical Manager; (5) coordination of reporting within the consortium; (6) assurance of inter-project communication; (7) coordinate and solve IPR (Intellectual Property Rights) issues; and (8) serve as a back office, secretary and archive for the project.

Dr. Andreas Lüdtkke is the PM for AutoMate. He and his group have an outstanding experience in European Projects and have coordinated three projects in the 7th European Framework Programme (all within Transportation) and two projects funded by ARTEMIS Joint Undertaking. The PM has established communication and information exchange channels between the partners to effectively implement their role.

Management Committee (MC)

The MC is the ultimate decision-making body of the Consortium and is chaired by the PM. It will be composed of one officially appointed management representative from each partner. It is in charge of finding solution to the issues that have a potential impact on the work plan, financial, legal and IPR issues, resources and achievement of planned objectives, definition of the necessary contingency plans. The MC decides on matters relating to the reports and financial overviews for past periods, defaulting partners, the acceptance of new partners, the structure and restructuring of the work packages, shift of effort and budget between partners, amendments to the Grant Agreement, and the premature completion/termination of the project. Ordinary meetings of the MC will take place at least twice a year. The kick-off meeting took place in October 2016 (month 02). In addition, anyone of the partners can request such a meeting in case of conflicts. The MC is formally empowered through the Consortium Agreement. The detailed voting principle, rights and legal relationships and responsibilities between partners will be elaborated in the Consortium Agreement.

Technical Management

The technical management is done by the Technical Manager (TM) supported by the Technical Committee (TC) and the Work Package Leaders (WPL) as well as Task Leaders (TL) (cf. Section 3)



Exploitation & Dissemination Manager (EDM)

Exploitation and dissemination activities, hosted in WP7, are performed by the EDM (cf. 9)

IPR Committee (IPRC)

The IPRC supports the EDM in finding solution to all knowledge and IPR issues. It performs the IPR Management described in Section 10. It is composed of one officially appointed representative from each partner (e.g. legal advisors and IPR specialists) and is chaired by the EDM. At the beginning of the project the PM and the EDM have prepared the Consortium Agreement in coordination with the IPRC. The IPRC decides on matters relating to all knowledge and IPR issues. It ensures that these issues are treated consistently to the rules set forth in the Consortium Agreements.

2.2 Administrative and Financial Management

The main management instruments for Administrative and Financial Management are the Project Review Plan and the Budget Plan. The PM is responsible to coordinate and supervise all financial, legal and contractual aspects including the reporting. Corresponding progress reviews and reports incl. cost statements and budgetary overviews are performed to verify the planned activities from an administrative and financial point of view. The internal review points are foreseen at the main milestones times. The PM coordinates the progress reports supported by the TM and EDM. The cost statements are collected and checked by the PM on the basis of the scheduled work plan and sent to the EC.

2.3 Conflict resolution process

In order to ensure an efficient project management, all day-to-day technical decisions that do not affect the achievement of the overall project goals are taken at the implementation level by the WP Leaders. Technical decision with an effect on the overall project goals will be taken at the executive level by the TM supported by the TC. Dissemination and exploitation issues are dealt with by the EDM supported by IPRC. Administrative decisions will be taken by the PM. Major conflicts/decisions that may affect the allocated effort and budget as fixed in the Grant Agreement and/or Consortium Agreement will be solved by the MC. The MC will be formally empowered through the Consortium Agreement to take decisions affecting budget and to solve any conflicts through the formal rules set forth in the Consortium Agreement.



3 Technical Management (including Quality Assurance)

The technical management (including quality management) is part of the executive level (cf. Figure 1) and is done by the Technical Manager supported by the Technical Committee and the Work Package as well as Task Leaders.

Technical Manager

In details, the Technical Manager (TM) performs the day-to-day technical management of the project, resolves conflicts (if any) and monitors the work progress with respect to the project plan. Fabio Tango (CRF) is the Technical Manager for the project. Actions to be performed by the TM are:

- coordinate all technical activities and detect deviations to ensure timely achievement of the project objectives at the highest quality;
- monitor project progress (e.g. Deliverables, Milestones, Gantt Chart) and initiate corrective actions for deviations within the WPs by addressing the WP Leaders
- organize the work flow between the WPs e.g. defining interfaces and ensuring hand-over of results within the project;
- establish a complete view over the work progress;
- perform the Risk Management incl. preparation of contingency plans;
- perform Data Management, together with the responsible partner of the corresponding task
- organize regular consortium meetings in cooperation with the PM as well as specific technical meetings in cooperation the WP Leaders.

In case of disputes between two or more parties within the WPs the TM shall try to resolve the conflict amicably and internally by involving the Technical Committee; if there is no compromise solution, the TM has to reach arbitration within the Management Committee.

Technical Committee

The TC comprises the WP Leaders and is chaired by the TC. It will support the technical day-to-day management performed by the TM. Actions to be performed are: (1) support monitoring of technical progress and major deliverables; (2) support risk management; (3) develop and perform quality management activities to assure proper technical quality of each of the results of the project including the handling of deliverables and their peer reviews; (4) provide methodological and technical assistance to all WPs and Tasks; (5) coordinate updates of the work plans and performance of respective change management tasks; (6) keep track of the State of the Art of all research activities; (7) conducting periodical technical coordination meetings; (8) assure of cooperation between the WPs as defined in the work plan; and (9) control progress on WP level.

Work Package Leaders and Task Leaders



The Work Package and Task Leaders at the implementation level deal with the development tasks and take care of the overall coherence and technical implementation of the project outputs. The project is divided into 9 WPs and for each one a WP Leader has been appointed with the responsibility to ensure the achievement of the WP objectives in the planned time constraints. Each WP Leader is responsible for planning, coordinating and monitoring the technical activities of her/his WP in order to guarantee the reachability of the objectives and the production of the deliverables in the scheduled times. The WP Leaders ask directly to the Task Leaders the inputs for the WP activities and collect contributions from them to produce the deliverables. The WP Leaders report to the TM. For each task within a WP a Task Leader has been appointed who is responsible for the delivery of the output of the tasks according to the project schedule. The allocation of responsibilities for the WP and task management is shown in Figure 1.

3.1 Responsibilities for Reviewing Work Processes and Project Results

The main management instruments for Technical Management is represented by the Project Management Plan, which include a Quality Assurance Plan, a Risk Register and several Action Lists for WPs and Tasks, as well as takes into account requirements, KPIs, milestones and Gantt chart.

In fact, in order to ensure the success of the project, we define a series of requirements for the technology development and KPIs for the Project Objectives, as well as evaluation activities to be performed at specific stages (notably the milestones). All these activities are fully in progress (mainly in WP1) at this time of writing.

Each WP has its own work plan (in accordance to the project's objectives and schedule) that is controlled by the executive level managers (WP and Task Leaders). The progress of the project is monitored by using the Critical-Path Method on a project level. In a case that a certain slippage in any WP technical-output or milestone accomplishment is discovered, suitable corrective actions will be taken in order to recover and to return the WP performance back to the program original plan.

The TM consolidates the project planning, progress reports and milestone reports, being continuously in contact with the WP Leaders in order to monitor the technical activities progress and to guarantee the production of the project deliverables according to the planning. Moreover, the PM performs the risk management activities in coordination with the TC as described in Section 4.

3.2 Quality Management Processes

Project Planning and Risk Management is done by each WPL, as well as by the TM and the PM at an administrative level. Corresponding progress reviews and reports are performed to verify the planned activities:

- A review of an Action List is done every two weeks during the Regular Teleconference.



- Periodically, as part of the WP Leader conference call, each WP Leader will report to the Technical Manager about the progress of the work, on the basis of the planned activities. The reporting will include information on the degree of the technical process, results (deliverables) obtained and timing information.
- The Management Committee (MC) discusses the current project status every 3-4 weeks by a conference call and also meets during the consortium meetings to review the current state of the project.
- The progress reports are coordinated by the PM.

3.3 Quality Management of Deliverables

Since there are a lot of deliverables (around 50), clearly it is not possible to manage them one by one, but it is necessary to provide a common procedure, especially for the review process, in order to assure the quality of the document. This process is shown in Figure 2. In addition, we have a common template, provided by the Project Manager.

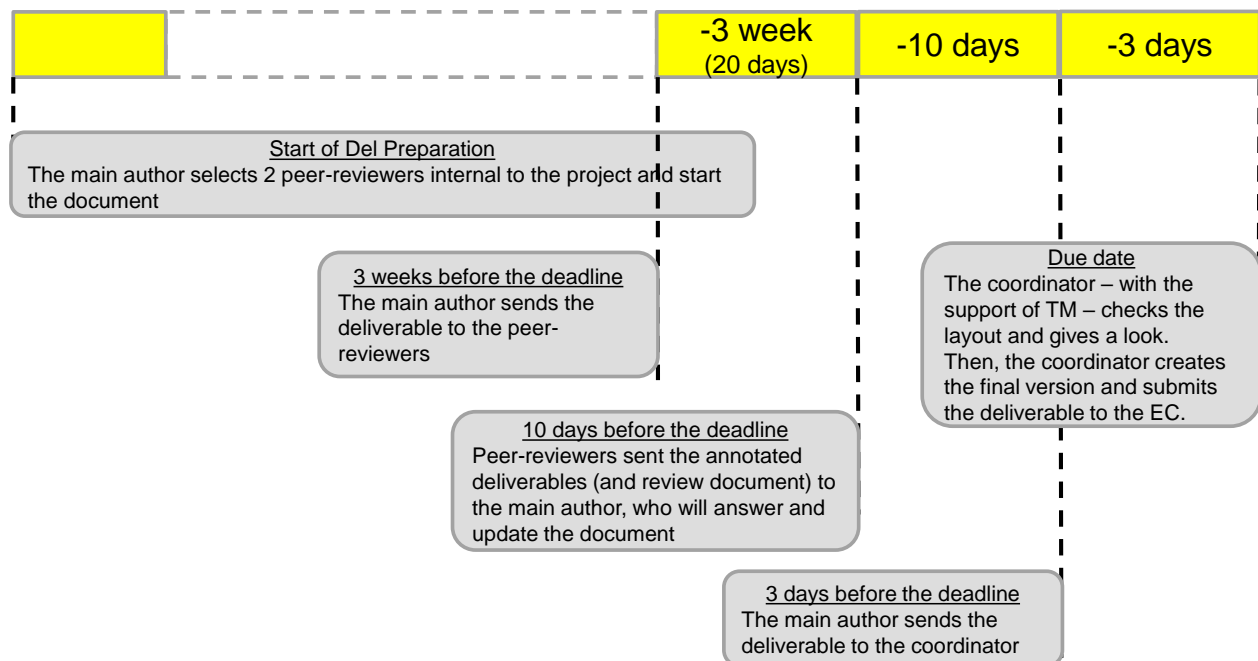


Figure 2: Process for deliverable writing and reviewing.

As illustrated in the Figure 2, in the start-phase of deliverable preparation, the main author selects two (possibly) peer-reviewers internal to the project, as well as s/he proposes a document structure with the main sections (chapters and paragraphs) and partners that have to contribute.

Three weeks before the deadline, the main author sends the document to the (two) reviewers, who should send their comments ten days before the deadline.



After receiving this annotated document, the main author shall update and modify the deliverable, contacting also the other contributing partners, if necessary.

Three days before the deadline, the main author sends the deliverable to the coordinator, who – with the support of TM – gives a look for the final approval (big issues, format problems, etc.).

The best option is to choose two peer-reviewers, at least one in very specific and particular case, to be agreed and decided by the Management Committee (MC). The choice of the right persons to ask for review should be done by the author(s), with the support mainly of the WPLs and TM. The criteria for a good selection are:

- Reviewers do not belong to the authors' list
- Reviewers come from other WP (whenever possible)

The use of a dedicated external peer-review can be taken into account, if regarded as necessary by the consortium.

4 Risk Management

The risk management is carried out by the Technical Manager, in cooperation with the WP Leaders (WPLs) and the Project Manager, analysing potential risks to ensure suitable management plans and mitigation solutions.

Therefore, an initial risk assessment has been proposed during proposal preparation and the results serve as a baseline for the project Risk Register and Risk Management Plan. Risk management is a continuous task performed during the whole project runtime incorporating assessment of the risks and measures, as well as definition and execution of risk recovery actions.

A dedicated tool is employed for that, such as the Risk Register, is updated by Work-Package Leaders (WPLs) at least every 6 months and included in the progress reports. The goal of the risk management process is to help to identify most, if not all, of the risks that can occur in the course of the project. The main elements of this process are:

- Risk identification
- Risk analysis
- Risk evaluation
- Risk assessment

Based on that, the risk-management depicts the results of such a process and further integrates the elements of risk treatment and the related mitigation strategies.

4.1 Risk Management Process

The purpose of this activity is to collect the risks and opportunities related to the project, to characterize and categorize them as early and as precisely as possible in



the Risk & Opportunity register, to validate them and appoint a risk/opportunity owner.

In order to manage risk and opportunity systematically the following risk management process is defined for this project:

- Uncertainty description shall be clear and unambiguous with specification of causes and effects.
- Proposed risk or opportunity shall be checked and validated as relevant for the given scope by the TM and discussed with PM.
- Each risk/opportunity shall be assigned a single owner.
- A unique risk/opportunity identifier shall be assigned allowing traceability.
- Issues are not to be managed in the Risk and Opportunity management system. We will address issues with no immediate effect on project goals or on the schedule within the day-to-day technical management.
- Top risks and opportunities shall be periodically reviewed.

As exhaustive identification is not feasible, new risks or opportunity new proposals shall be periodically considered and contingency for so-called “unknown unknowns” shall be taken into account.

4.1.1 Risk Identification

Each person involved in the project shall contribute to the identification of risks and opportunities (R&O), even if it addresses an R&O which is out of his scope of activities. R&O can be identified at any stage during the project by various means and methodologies like brainstorming, check-lists, lessons learned, and so on.

Formal identification phase, as well as a reassessment of identified R&O, should occur for each major project milestone.

4.1.2 Risk Quantification

Once identified and validated, R&O shall be assessed in terms of probability of occurrence and impact on cost, schedule and performance objectives. Assessment can be qualitative, mostly used for ranking and prioritizing, or quantitative, mostly used for financial aspects and statistical analysis. Qualitative assessment is made by using matrix described below; taking the maximum among cost, schedule and performance most likely impacts (index 1 to16 indicates the severity ranking from the most to the less severe):



Probability	NC	12	7	3	1
	Li	13	9	5	2
	M	15	11	6	4
	L	16	14	10	8
		L	M	H	VH
Risk Impact					

Figure 3: Qualitative R&O Assessment Matrix. The legend is the following (for row and column, respectively): L = Low, M = Medium, H = High, VH = Very High; L = Low, M = Medium, Li = Likely, NC = Nearly Certain. All these parameters are defined in the main text

All the Top risks (Red cells) and opportunities should be quantitatively assessed. The default quantitative score (issued from qualitative assessment) is considered as sufficiently accurate to quantify the probability of occurrence unless better data is available. The correlation between qualitative levels and quantitative figures for impact on the project takes into account the impact on scope/quality; in particular (with reference to the row in Figure 3):

- One requirement will not be met / No influence ⇒ Low (L).
- A section of requirements will not be met / Dissatisfied ⇒ Medium (M).
- Several sections of requirements will not be met / Highly dissatisfied ⇒ High (H).
- Project objectives will not be fulfilled / Refusal to accept the delivery ⇒ Very High (VH).

Finally, for the risk probability, we have the following table that shows the correlation between qualitative levels and quantitative figures for probability of occurrence and default quantitative score used for weighting:

Qualitative Levels	Low (Unlikely)	Medium (Possible)	Likely	Nearly Certain
Quantitative Range	(1÷25)%	(26÷50)%	(51÷75)%	(76÷99)%
Quantitative Score	10%	35%	65%	90%

Table 1: Quantification of probability and occurrence.

A measure that may be defined qualitatively or quantitatively and used to compare the relative significance of risks or opportunities, is the severity or risk level. Severity is determined by combining the probability of occurrence and the impact, namely:



$$\text{Severity (risk level)} = \text{Probability} * \text{Impact}$$

Severity or risk level determines the top risk or opportunities. For these risks most effort shall be taken to develop an adequate risk response strategy. Furthermore these top risks and opportunities shall be periodically reviewed every 6 months during the update of the Risk Register by the WP-leaders.

4.1.3 R&O Responses

After validation of identification and assessment, a management strategy has to be defined to control the uncertainty. This is done using the steps described below; by order of precedence:

- Exploit or Avoid: total elimination of the uncertainty.
- Share or Transfer: transfer the liability or ownership of the uncertainty to 3rd party (e.g. supplier).
- Enhance or Mitigate: reduce for a risk (or increase for an opportunity) impact and/or probability of occurrence.
- Accept: Take no response action but continue to monitor and review.

Once the response strategy has been defined, detailed responses plan with action(s), action owner(s) is to be specified. Some of the following rules can be considered. Response strategy and plan should be defined for each risk and opportunity identified and validated, but a specific focus shall be given to RED and ORANGE cells in the assessment matrix (see Figure 3). In addition, it must be agreed between PM, TM and R&O owner. Target post-response severity must be evaluated. (Residual Risk / Secondary Risk).

4.1.4 Risk Documentation

Output of this Risk Management Process is in the Risk & Opportunity (R&O) register. Every identified risk and opportunity, its characteristics (e.g. probability/impact) and the defined risk response will be documented in the risk management register. The R&O register will be under responsibility of the TM.

In details, the R&O register shall contain:

Field	Meaning
<i>Risk/Opportunity ID</i>	A unique identifier to allow traceability
<i>Status</i>	Status of the identified risk during development process: <u>Active/Dormant/Retired</u> .
<i>Description of Risk</i>	Description of the realistic scenario if the risk or opportunity event was to occur. The root cause of the R&O can be described. Precise identification of cause is a strong enabler for response plan definition
<i>Probability</i>	An estimate of the likelihood of occurrence of a R&O based on available knowledge.
<i>Impact</i>	The assessed level of impact on schedule, cost,



	performance/quality aspects.
<i>Severity (Risk and Opportunity Level)</i>	Results from combination of probability and impact. Provides the indication of the level of attention required.
<i>R&O owner</i>	Responsible person for managing the R&O response of the risk he owns. Nomination of a responsible person is mandatory.
<i>Response Strategy</i>	Any active or passive conscious approach taken to manage a R&O.
<i>Proposed risk mitigation measures (Response Actions)</i>	Specific activities to be performed as R&O response based on selected response strategy.
<i>Deadline</i>	Time within the recovery action has to be completed.

Table 2: R&O table register.

4.1.5 Initial List of Risks per Work Package

An initial list of risks for each WP can be found in Annex 1 of this document.

5 Project Planning

This section describes the types of plans used in AutoMate to coordinate the project. Furthermore the process for updating and reviewing these plans is described.

5.1 Types of Plans

The following types of plans are used within AutoMate:

- **Project Plan:** The project plan is described in the Grant Agreement. It contains a description of the overall objective as well as general strategy, the WPs with their interrelations, a breakdown of the WPs in Tasks, the timing of the WPs and Tasks, and finally a list of planned deliverables. For each WP the person-month per partner is indicated.
- **WP Plans:** These plans are specified at the beginning of each WP describing the contribution of the involved partners to the WP Tasks and planned deliverables. Furthermore, intermediate working documents and/or software releases as well as foreseen meetings or telephone conferences are planned.
- **Task Plans:** These plans are a concretisation of the WP Plan in concrete actions. Within AutoMate actions are maintained in a dedicated action list which is available via Redmine.
- **Deliverable Plans:** These plans describe how results produced in the different tasks are integrated into a project deliverable. Like Task Plans Deliverable Plans consist of concrete actions maintained via Redmine.



5.2 Maintaining and Reviewing Plans

The project plan has been specified during the preparation of the project proposal. It may only be changed by the Management Committee in exceptional circumstances. Such changes have to be communicated to Project Officer immediately.

The WP Plans have to be prepared by the WP leader at the beginning of a WP in correspondence to the Project Plan. It has to be made available via Redmine in order to be discussed with all involved partners.

The Task Leaders are responsible for setting up Task Plans at the beginning of a Task. The associated actions have to be added to the Actions List in Redmine.

The Deliverable Leaders are responsible for setting up Deliverable Plans. The associated actions have to be added to the Actions List in Redmine. Such plans must be started early enough to allow a process with iterative phases of preparing an intermediate version and collecting comments from all involved partners.

The Action List (on Redmine) should always reflect the current state of the task and deliverable actions by setting the status of action to either "not started", "in progress", "completed" or "deferred". Deadlines should only be changed for good reasons. In such events the reasons should be discussed with the responsible WP leader and the Technical Manager in a dedicated telephone conference.

The action status is monitored by the WP leaders and the Technical Manager on a day-to-day basis. In case of passed deadlines a telephone conference will be called upon in which the responsible Task or Deliverable Leader provide an explanation and an updated plan.

6 Document Management

This section describes the different types of documents (e.g. deliverables) and the process for preparing such documents.

6.1 Types of Documents

The following types of documents are prepared within AutoMate:

- Progress reports for the PO (at month 18 and 36),
- Deliverables of type "report",
- Intermediate reports to produce and discuss intermediate results which will later be integrated with other intermediate reports to form a deliverable,
- Power Point presentations,
- Minutes of meetings,
- Minutes of telephone conferences,
- Publications for dissemination events (e.g. conferences).



6.2 Templates

The following templates have been prepared for documents within AutoMate (all templates are available via Redmine):

- Deliverables of type report and intermediate reports
- Minutes of meetings
- Minutes of telephone conferences
- Power Point presentations

6.3 Naming Conventions

Naming conventions are mainly intended to deal with version management by using a special format for document names. We use the following structure:

<Deliverable No.>"-"<Deliverable_Name>"-"<Date>

6.4 Process for working with documents

Documents are shared via the AutoMate Redmine Site. A specific Ajax-Explorer has been installed for the purpose of sharing documents.

The different document types can be found in the following folders:

- Deliverables of type "report": The final deliverables are stored in the folder "Project Results".
- Intermediate reports are stored in the corresponding WP, task or deliverable folders.
- Power Point presentations given at project meetings are stored in the corresponding meetings folder.
- Minutes of meetings are stored in the corresponding meetings folder.
- Minutes of telephone conferences are stored in the corresponding meetings folder.
- Publications for dissemination events are stored in the folder for WP7.

7 Communication and Collaboration

This section describes the general communication and collaboration strategy and dedicated rules that have been defined within the AutoMate consortium.

7.1 General strategy for communication and collaboration

Integrated consortium meetings play the central role in the communication process, supported by the use of electronic data exchange (e-mail, Redmine and website) and electronic communication means (tele-, video- and web-conferences) for day-to-day communication. The PM together with the TM ensure that all information is communicated to all partners as required. This shall guarantee a shared view on the project progress, developed results and encountered problems. All information



(technical and management) is accessible via the Internet-based Collaboration Platform Redmine for internal communication to which partners can upload files and data and from which partners can request and download information.

An important component of the communication strategy is further to keep all partners fully informed about developments in the H2020 Work Programme, to ensure that close contact is maintained with other related projects and initiatives.

In order to communicate the projects results to the public suitable press releases will be drawn up at appropriate times during the project. A dedicated public website has been established to communicate news and public deliverables, papers and talks (www.automate-project.eu). The aim is to support visibility and understanding of the importance and the progress of the AutoMate project and the Work Programme in general for the public at large.

The effectiveness of the current communication strategy will be reviewed continuously.

7.2 Communication via email

In addition to discussion in documents email is used to exchange ideas and viewpoints. Email discussion on topics that are of central interest for the project should be documented in a dedicated discussion document by the leader of the associated task in order to archive the discussion providing a trace of arguments and decisions made in the different stages of the project.

Email should be sent additionally in the following occasions:

- When new material relevant for a certain task or deliverable is uploaded to or modified on Redmine all partners involved in the task or deliverable should be informed via email; the email should contain the link to the material in order to facilitate navigation,
- If a response/action from partners is required, it should be announced via email to that partner.
- When an action has started that requires others to deliver input, the action should be announced by sending an email to the involved partners.
- Shortly before the deadline of an action, an email should be send reminding the partners who have not yet provided their input.

All emails should contain the text “[AutoMate]” in the subject line, plus additional keywords, to help everybody to easily assess if the email is important for herself/himself. Example:

[AutoMate-D1.1/<ActionNr>] <Subject>,
[AutoMate-T1.2/<ActionNr>] <Subject>.

The Task and Deliverable Leaders maintain implicit email lists to which people can subscribe when a task is started (or during a task) by sending an email with a corresponding subscription request to the leader.



7.3 Discussions in documents

Discussions about the contents of documents should be done directly in the document. The following process should be followed:

- Providing comments to parts of a document or to other comments :
 - by using the Word "Add Comment" function, or
 - by writing the comment directly into the text, in this case the comments must be highlighted and must begin by giving the name of the commenter.
- Answering comments:
 - it is the responsibility of the document leader (either Deliverable or Task Leader) to provide answers to all comment. This should be done directly in the text by indenting the comment as well as the answer (see below).

Example for answering comments:

Regular text, regular text, regular text, regular text, regular text, regular text, regular text, regular text, regular text, regular text, regular text, regular text.

Name of commenter: comment, comment, comment, comment, comment, comment, comment, comment, comment, comment.

Name of answerer: answer, answer, answer, answer, answer, answer, answer, answer, answer, answer, answer.

In case someone modified the text due to the comment this person should provide a clear indication where the modifications can be found to make it easy for the commenter to spot how this person dealt with the comment.

8 Planning and Performing Meetings

This section describes the type of meeting within AutoMate and the process we are following in order to plan and perform meetings.

8.1 Types of Meetings

Within AutoMate the following types of meetings are held:

- Regular periodic technical and management meetings where all partners participate are held every 3 months as a physical meeting.
- Technical specific meetings to deal with project technical issues in detail are called on a necessity base. Here only the partners involved in the corresponding technical work participate. These meeting can be physical or as telephone conference.
- A telephone conference is held every two weeks (see below).



- Dissemination events.
- Meetings with the Project Officer are held at the end of the reporting periods and on a case to case basis.

All meetings are documented via minutes archived in Redmine.

In order to plan meeting dates we use the Web-base service "doodle" (<http://www.doodle.com>).

8.2 Planning Physical Meetings

The following process is followed to plan physical meetings:

- If the meeting is specific to a certain WP then the WP Leader is responsible for inviting the involved partners. If it is a regular technical and management meeting then the Project Leader invites all partners.
- The inviting person starts a process to fix a date using the Web-service "doodle".
- The inviting person provides travel information via email.
- The agenda is agreed between the Technical Leader and the WP Leaders as well as with the partner who is hosting the event.
- All partners indicate via email, which persons will attend.
- The inviting person is responsible for writing the minutes. The minutes will be distributed via Redmine.

8.3 Regular Teleconferences

A regular consortium telephone conference is held every four weeks. The list of topics to be discussed is suggested in the week before the teleconference by the Project Manager and the Technical Manager. In this way each partner can prepare and can add topics to the list.

9 Dissemination and Exploitation Management

This section describes the responsibility of Dissemination and Exploitation activities foreseen in the AutoMate project.

9.1 Dissemination

The communication and dissemination activities are under the responsibility of the Dissemination and Exploitation manager of the project (Re:LAB).

All partners contribute to the dissemination activities to support the Global Communication and Dissemination Plan and according to their Individual Dissemination Plans.

The Communication strategies for the AutoMate project have the objective of ensuring proper communication of the project activities and intermediate results



internally and externally to the public, addressing the full range of potential users and uses.

By taking into consideration the project expected impacts, the communication and dissemination strategy, outlined at Month 4 in Deliverable 7.3, will be revised throughout the project life cycle in order to ensure that the objectives of the project are well-communicated and the plan fits into the development stage of the project.

The Dissemination manager acts as a continuous reviewer of the list of dissemination material and associated plans giving further recommendations on inclusion of missing items and potential activities, thus preparing and regularly updating the Dissemination and Communication Plan & Report (D7.4, D7.5, D7.7) due in month 12, 24 and 36.

All partners will be asked to actively contribute to the dissemination of project results. A project identity will be ensured through the initial preparation of a Press Media Package, as a set of guidelines and materials to be taken into consideration whenever AutoMate gains public visibility.

Within the Dissemination and Exploitation work package (WP7), dedicated tasks deal with:

- Data management, which is under the responsibility of ULM, and it aims to ensure that information produced in AutoMate will be divided in public and confidential information. Confidential information will not be disseminated. The dissemination process is therefore made under the responsibility of the owner and in respect of the IPR provisions defined in the Consortium Agreement.
- Clustering and liaising with other relevant RDI (Research and Development Initiavite) Projectswill be carried out, under the responsibility of REL, by means of specific dissemination and communication workshops with selected stakeholders.

9.2 Exploitation

Exploitation in AUTOMATE will facilitate the industrial use of the project results as well as prepare their commercialization in relevant markets.

The Dissemination and Exploitation manager (Re:LAB) will be the owner of the exploitation activities.

In tight cooperation with the project partners, especially CAF (Continental Automotive), it will set up the AutoMate Innovation Ecosystem (see 11.4).

The development of the AutoMate target market will be constantly monitored in order to provide an early feedback and initiate corrective actions when required.

The Exploitation Plan & Report will be regularly updated (D7.6, D7.8, due in month 18 and 36).

All partners will contribute to the exploitation activities to support the Global Exploitation Plan, the AutoMate Innovation Ecosystem and according to their Individual Dissemination Plans.



10 IPR Management

The successful exploitation of its results by each partner requires that rules be agreed on the Intellectual Property Rights (IPR) on knowledge arising from the project (the Knowledge), and that provisions be taken for the access rights to the IPR.

The Automate partners agreed, before project start, on rules defining the access rights to the IPR on the Knowledge and on the Pre-Existing Know-How, for the purpose of the achievement of the project on one side, and for further exploitation of those results on the other side.

This was made through the joint signature of a Consortium Agreement signed by all parties. The Consortium Agreement complements the Grant Agreement, notably in describing further the rules for sharing the access rights to IPR, upon the principle to guarantee that each partner gets the information required both to achieve its share of the project, and to exploit its results after it.

This Consortium Agreement covers what is the pre-existing know-how that any partner may need from another one, and the conditions under which this pre-existing know-how is made available. An initial list has been provided by each partner at the beginning of the project and include as an annex to the CA. This description will be updated during the course of the project to ensure that the partners can exploit the results of their work. If needed specific agreements shall be made and signed between the different partners, to secure the individual or joint exploitation of results

The management of the IPR on Pre-Existing Knowhow and collection of IPR on results arising in the course of the project from the partners will follow a regular process on demand from project partner assuming an intermediate overview at month 18 and a final version by the end of the project.

The whole process is managed by CAF.

11 Innovation Management

Innovation Management is performed by CAF. Innovation management is considering several topics that will be tracked all along the project duration.

One of the most critical and original issue of this innovation management will be to support the exploitation of AutoMate innovative results and products.

If the exploitation of those innovation within the major industrial partners of AutoMate project is pretty clear and obvious, the originality of AUTOMATE project is to look about the possibility to exploit and further develop those product through the rising of an AutoMate innovation ecosystem which should give the opportunity to deploy the project results outside from the initial consortium.

The growing of this AutoMate innovation ecosystem will be strongly supported by the achievement of a strong market analysis and business plan considering IPR between project partners.



The innovation management task will consider all this aspect to provide a reliable plan for the exploitation of AutoMate results.

11.1 Business Plan

TeamMate products developed within the frame of the Automate project can be proposed for different level of automation, following a progressive introduction of these technologies.

TeamMate Business plan will consider short, medium and long term applications of AutoMate products. The short term applications handles very simple situations that can be integrated in the releases of already existing/commercialized assistance functions (automation level 0/1 according to the SAE classification). The medium term applications addresses higher automation levels when the system performs both lateral and longitudinal control, in specific situations, like for example traffic jam assist (automation levels 2 and 3). The long-term application considers TeamMate approach and associated technologies to be fully exploited up to the highest level of automation where the driver is still involved (up to level 4). This encompasses the introduction of more sophisticated adaptive models of the driver driving behaviors covering all potential road scenarios.

The AutoMate Business plan will consider:

- The Analysis of the various assistance functions that could be impacted by the AutoMate products.
- The Automated functions road map (see Figure 5) presenting a first view on the assistance functions where automate products could be implemented.
- The Market size and evolution considering the various levels of automation and assistance functions.
- The market share considering the market positions of Automate Industrial partners.
- The barriers for the introduction of Team Mate products.
- The targeted customers and commercial strategy relying on existing industrial partners networks.
- The Competitors.
- The potential new market targeted by the AUTOMATE Innovation ecosystem committee.

An initial version of the business plan has been provided in AutoMate Grant Agreement (Annex 1, Section 2.1.1.2 and 3.2.4). A consolidated version will be provided at month 18 and the final version by the end of the project.

The business plan development is lead by CAF with the help of the industrial partners

11.2 Market observation

AutoMate addresses the market of safety enhancing vehicle automation systems. The TeamMate Car technology will significantly increase drivers' acceptance of and



trust in highly automated systems. This will boost the willingness to buy such systems accelerating the market development for such technologies

Many factors can influence the Driver assistance and vehicle automation market, considering that this is very dynamic and evolutive market.

National and EU policies are strongly focusing on the improvement of road safety and efficiency. New regulations provided by National government and EU are of course one of the major factors for the deployment of more and more sophisticated assistance function. (e.g. From 1 November 2015, all new trucks and buses must also be equipped with advanced emergency braking systems as well as lane departure warning systems).

The European evaluation program for Automotive (EURONCAP) and its star rating system is also strongly pushing forward the car manufacturers to integrate ADAS technologies into the new automobiles as far as they want, mainly for marketing and differentiation issues, to achieve the highest rating.

Moreover new actors are now involved in that market. This new players are pulling forward innovations and introduction of more and more automated vehicles on the road (Google, Tesla...).

Last and not least the ADAS and autonomous vehicle market is supported by technological breakthrough and advance and driven by very ambitious road maps provided by both car manufacturers and suppliers.

Within AUTOMATE project we develop a continuous process for market observatory which aims at monitoring all this aspects: regulation, technology evaluation, positioning of new actors, OEMs and supplier road maps technology advance. This activity is managed by CAF with the help from the project partners.

A first market observation report will be delivered at month 18 and the a final market observation report by the end of the project

11.3 Identification of potential customers

The project results will strengthen the position and competitiveness of the industrial consortium partners (and beyond) as direct customers for AUTOMATE products in the European and worldwide market.

Considering the current market position of the AUTOMATE Industrial Partners, the consortium is in an excellent position to achieve a significant economic impact. PSA and CRF, representing the FIAT Group, together had 18.5% share of EU unit sales in 2014 and PSA was the second largest player in the EU market (close to 11,7% market share in 2014). They have also a relevant position in the global market. The two car manufacturers in the project (CRF and PSA) have already a consolidated (global) market share, distributors and dealers worldwide (sales channels), and both have already marketed partially autonomous vehicles, although with limited or no driver-automation interaction.

Apart from the OEM partners in the consortium, the Automotive Suppliers Continental Automotive is one of the world leaders in the field of ADAS technologies and functions, and it is also strongly involved in the development of new concepts



for vehicle automation. Continental has already marketed powerful and intelligent components, systems, and software for vehicles with autonomous features. Continental customer network include all major medium and small car manufacturers in the world.

11.4 The AutoMate Innovation Ecosystem

In parallel to the direct exploitation of AUTOMATE results by the industrial partners of the consortium, it has been decided to create an AUTOMATE Ecosystem under the responsibility of the Automate partner VEDECOM. The aim of this eco-system is to give the possibility to organizations that have not been involved in AUTOMATE to implement new features or functions from the technologies developed in the project. To do so, AUTOMATE will develop a TeamMate system architecture equipped with a Software Development Kit (SDK) (WP5, Task 5.3) that allows extension, augmentation and exploitation of the TeamMate technologies and data also after the project. Furthermore, the TeamMate architecture will provide data secure software interfaces (API, developed in WP5, Task5.2) to exploit the real-time data collected by the overall system (vehicle, driver, environment) to allow third party companies to create e.g. mobile applications that provide complementary services to the driver (e.g. vehicle efficiency maintenance to identify in advance potential faults and enhance reliability of the vehicle and reduce repairing costs; insurance services to cut the cost of the insurance for drivers with a safe driving style).

The concrete organization and plan for the Ecosystem will be defined in two dedicated deliverables of WP7 (D7.6 and D7.8).

An Innovation Committee will be set up during the project under the responsibility of VEDECOM and it will organize a kick-off event for the AUTOMATE Innovation Ecosystem in the 2nd or 3rd year of the project. The innovation committee will contribute actively to the set up of the AutoMate business plan.

11.5 Identification of innovation potentials

According to the AUTOMATE description provided into the Grant Agreement, AUTOMATE is structured around six enablers, each of these enablers providing opportunities for innovations. Opportunities for innovation will be identified with a bottom-up and a top-down approach. Potential innovations will be collected and synchronized (top-down) by the WP Leaders on a WP level. At the same time, each partner (bottom-up) will identify possible results for innovative products, services or processes individually. CAF will coordinate and support both approaches.

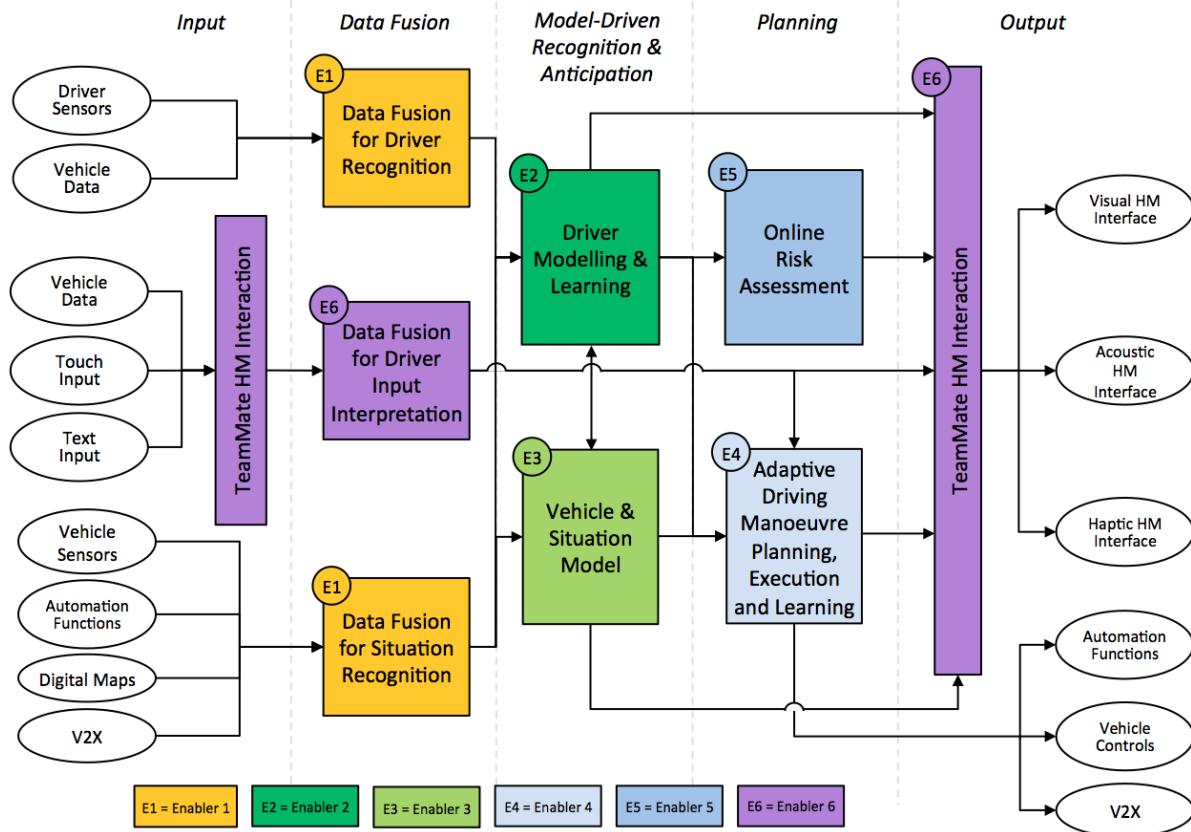


Figure 4: Overview on AutoMate Enablers

According to those enablers AUTOMATE innovation will focus on (cf. Figure 4):

- Driver & Situation Monitoring, Understanding, Assessment & Anticipation defining assessment as probabilistic recognition of the current state, and anticipation as prediction of the possible future states of driver, vehicle and situation (enablers 1,2,3)
- Adaptive & Safe Driving Strategies, considering the developments of algorithms for maneuver planning, execution & learning (Enabler 4) and the online risk assessment (Enabler 5).
- The development of techniques for driver-automation interaction and cooperation to ensure that the automation is perceived as the driver's transparent and comprehensible cooperative teammate (Enabler 6).

The management of innovation potential and arising in the course of the project from the partners will follow a regular process on demand from project partner assuming an intermediate overview at t0+18 and a final version by the end of the project.

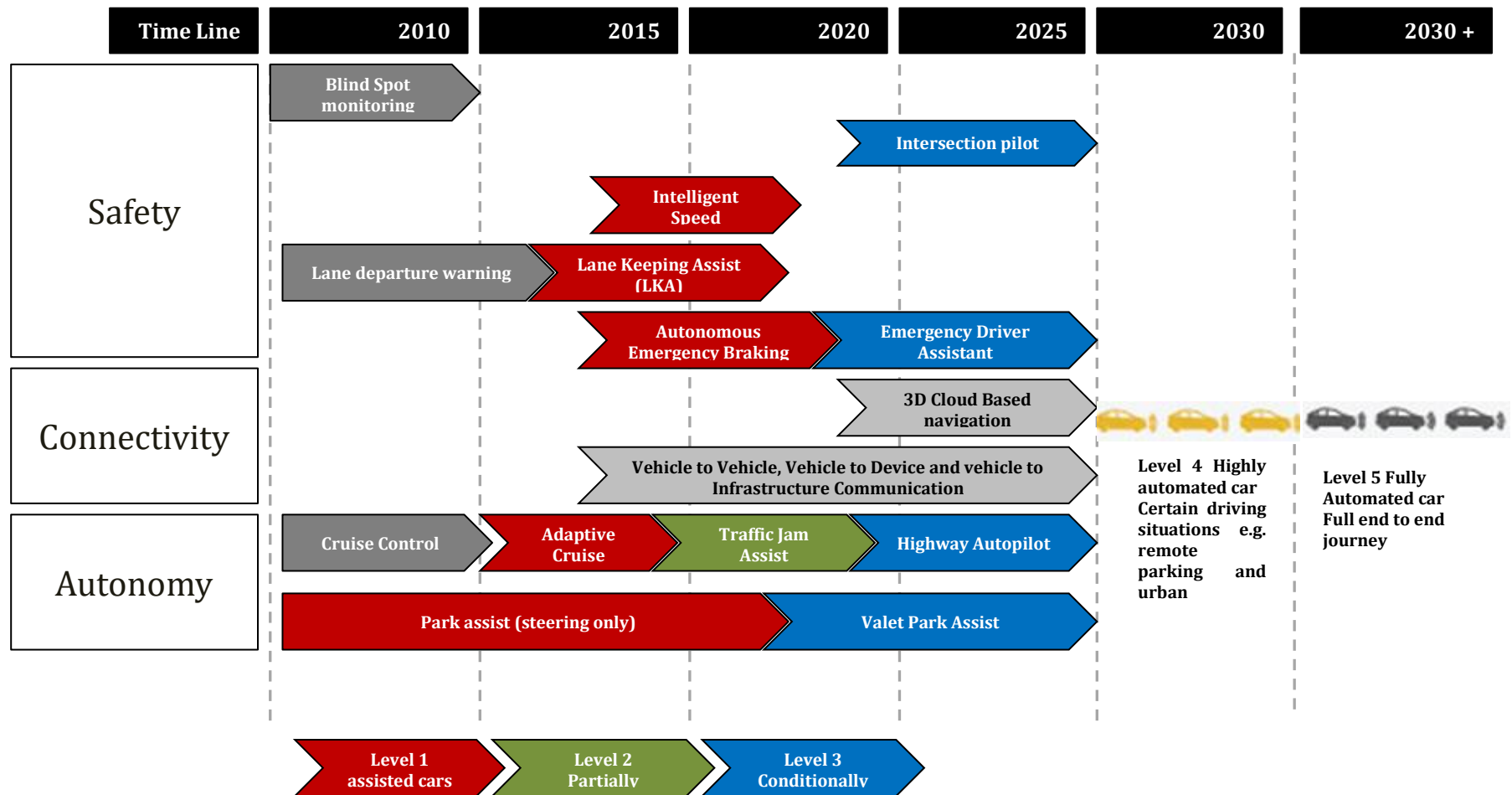


Figure 5: Time line for automation systems