



capri

**Cognitive Automation Platform
for European PProcess Industry
digital transformation**

Deliverable

DI.7 Report 3-Minutes of project management meetings (MI8)

Deliverable Lead: CARTIF

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EXECUTIVE SUMMARY

This document belongs to the framework of WP1 (Coordination and Management) of the CAPRI project and provides minutes of discussions held in the Third periodic meeting (month 18). As stated in the GA once every six months there will be a periodic meeting of all partners to assess progress on ongoing tasks, evaluate potential risks, review next steps, and adjust the work plan if necessary.



RELATED DELIVERABLES

Table 1: Related deliverables

Number	Full name
D1.1	Kick-off meeting result report, financial and technical agreements (M1)
D1.3	Report 1-Minutes of project management meetings (M12)
D1.6	Report 2-Minutes of project management meetings (M18)
D1.8	Report 4-Minutes of project management meetings (M24)
D1.9	Report 5-Minutes of project management meetings (M30)
D1.10	Report 6-Minutes of project management meetings (M36)
D1.11 (final version)	Final Report: Minutes of project management meetings (M42)



I Deliverable description

The present document gathers the main conclusions of the different points of the agenda of the third Consortium Meeting of the project, which was held by online means via Microsoft Teams in 29th September 2021.

CARTIF, acting as project coordinator arranged the details of the project meetings (including the agenda) in a timely manner. At least one representative from each consortium members assisted to the meeting and shared their experience concerning the development of CAPRI project. They evaluated the actions taken in the previous six months (M12-M18) of the project and also study the upcoming activities.

The presentations of each partner were previously uploaded to Alfresco shared repository, and could be seen by all the members of CAPRI consortium.

Below is presented the whole list of partners.

No	Name	Short name
1	FUNDACION CARTIF	CAR
2	ENGINEERING – INGEGNERIA INFORMATICA SPA	ENG
3	RESEARCH CENTER PHARMACEUTICAL ENGINEERING GMBH	RCPE
4	POLITECNICO DI MILANO	POLIMI
5	VDEH-BETRIEBSFORSCHUNGSINSTITUT GMBH	BFI
6	EIFFAGE INFRAESTRUCTURAS SA	EIF
7	SIDENOR ACEROS ESPECIALES SL	SID
8	MONDRAGON SISTEMAS DE INFORMACION SOCIEDAD COOPERATIVA	MSI
9	ASOCIACION DE INVESTIGACION METALURGICA DEL NOROESTE	AIMEN
10	CORE INNOVATION AND TECHNOLOGY OE	CORE
11	PRIVREDNO DRUSTVO ZA PRUZANJE USLUGA ISTRAZIVANJE I RAZVOJ NISSATECH INNOVATION CENTRE DOO	NISSA
12	APPLIED MANUFACTURING SCIENCE SPOLKA Z OGRANICZONA ODPOWIEDZIALNOSCIA	AMS

2 Agenda schedule

Below It can be found attached the agenda of the meeting. There were slots for each WP and extended time dedicated to the three pilots involved in the project (asphalt plant, steel plant and pharma pilot plant). The duration of different sessions included a slot of time for questions, discussions and agreements among partners.



ITEM	start	end	PRESENTER
Welcome, telco guidelines and agenda	9:00	9:05	CAR
WP1 – General explanation	9:05	9:15	CAR
• WP1- Next Steps	9:15	9:20	CAR
WP3+WP4	9:20		
• POLIMI: introduction about WP3 status, deliverable D3.1	9:20	9:30	POLIMI
ENG: WP4 overview and Tasks description			ENG
• ASPHALT: To avoid the description of CSs and the plant. Focus on: Progresses (follow the GANTT) Expected delays and contingency plan Results to be shown in a “measurable” manner.	9:30	9:50	CAR/AIMEN/CORE
• STEEL: To avoid the description of CSs and the plant. Focus on: Progresses (follow the GANTT) Expected delays and contingency plan Results to be shown in a “measurable” manner.	9:50	10:10	BFI
• PHARMA: To avoid the description of CSs and the plant. Focus on: Progresses (follow the GANTT) Expected delays and contingency plan Results to be shown in a “measurable” manner.	10:10	10:30	RCPE
• CAP / COGNITION	10:30	10:50	NISSA/POLIMI/ENG
• Focus on next steps and innovative aspects and features (to be disseminated)	10:50	10:55	POLIMI/ENG
COFFE BREAK	10:55	11:10	
WP 5 – General explanation	11:10	11:20	CAR
• WP5- Next Steps	11:20	11:25	CAR
WP6 – General explanation	11:25	11:40	CORE
• WP6 – T6.3	11:40	11:50	POLIMI
• WP6- Next Steps	11:50	11:55	CORE/POLIMI
WP7 -- General explanation - T7.1	11:55	12:15	MSI
• WP7 - T7.2	12:15	12:25	CAR
• WP7- Next Steps	12:25	12:30	
Advisory Group: ALL the partners explains their candidates. Rules for participation	12:30	12:50	ALL
AoB	12:50	13:00	



Session

The presentation of WP1, about management and coordination, was held by Ms. Cristina Vega, from CAR and coordinator of the project. She provided an overview of the tasks/deliverables carried out in this period and the estimated timetable for the upcoming deliverables.

It was reminded also that once all the payment forms of First Periodic Report has been gathered by the coordinator, the funding will be released next month (October 2021).

The coordinator has presented the risks associated to this WP, and the future plan to work in the project to mitigate the risks.

The coordinator has created a file with the reviewers of each deliverable from now, to the end of the project to ensure that appointed partners reserve time in advance to perform the review and ensure a review of quality on time.

The new methodology to create the deliverables is centered in the schedule of the documents to generate and avoid delays. This schedule has to start 2 months before the due date. As pointed by a partner (ENG), in case of several deliverables in the same due date, 2 months in advance can be few time. It was decided that the starting time should a minimum of 2 months. In the coming weeks, and especially regarding the deliverables of WP3 (prototypes of selected cognitive solutions) a more accurate planning will be delivered.

WP2 ended in the previous period from the last review meeting without any deviation to be applicable in this new period month 12- month 18.

A brief overview of the WP3 was provided by the leader of the work package, Ms. Silvia Razetti. POLIMI as lead partner for WP3 has identified delays in the due development of this WP scheduled to end in 6 months (M24) that could affect the expected due date of the pending deliverables (mostly month 24).

After the general description of the Wp3, the general description of the Wp4 started. These two work packages have been developed and reviewed hand to hand during all the project. The leader of the Work Package 4 is Engineering, represented by Antonio Salis in this meeting.

Concerning WP4, milestone MS3 is specially relevant. Such MS involves the Alpha release this month of the final cognitive automation architecture and technology validation of cognitive solutions for control level in relevant industrial environment. The current status of Cognitive Solutions involves sensors and controls in-lab conditions ready to progress in the integration. It is also mentioned that such MS and the information associated can be interesting for dissemination purposes but it is needed to define in the coming days what aspects of the CS will contribute to the achievement of the milestone. Apart from the roadmaps defined regarding the cognitive sensor and control solutions for process industries (tasks T4.1 and T4.3) it is needed to start with the roadmap development of cognitive operation solutions (task T4.3).

Once the general overview of WP3 and WP4 finished it was time for the review of activities and next steps in each of the three pilots (asphalt, steel and pharma).

The first pilot to be explained was the **Asphalt** one. This Pilot is run by Eiffage, Aimen, Core and Cartif (these three last ones as technical partners) and explained their work done and developed during these last six months. This pilot has measured the delay of development for some electronics needed due to the global component and raw materials shortage. This delay can be measured from 2 weeks to 2 months, but this kind of detected delays don't affect to the development of the CS solutions at this point of the project. There are countermeasures in place to avoid impact like parallel developments and foreseen dissemination plan regarding the spreading of the activities done so far. There is always a risk to take into account, which are the COVID restrictions. The expected planning could be affected with some new restrictions. At present, the situation in each country is slowly progressing positively. Face to face meeting among countries is still not advised.



The **Steel** pilot: the explanation of the job done during this period was centered in the dependency analysis among CSS and the issue of the missing bar tracking to be installed in the pilot line, which is still under revamping, Sidenor and BFI are exploring other ways to access to this needed information. The contingency plan is already set in place. The steel team explained that the development of the new sensors is experimenting some delays, in reference to the Gantt of the WP, but these delays don't affect to the deliverables due dates.

The **Pharma** pilot explained that the model identification pilot plant experiments are successfully executed and the experimentally acquired data has been utilized for model identification purposes. The development of the CS's are on time, the delays are less than 2 weeks. During the next period of the project, pharma pilot will work to improve the model and in the control concept.

The last part of this WP3, was devoted to the role of cognition in pilots, explained by NISSA. NISSA started the explanation of the report included in the D6.5 and D3.1. The challenge of implementing the foreseen cognitive architecture solutions in the process industry is the complexity, instability and unpredictability of the processes. It also requires (usually) a huge amount of high quality data for ensuring the learning process has precision and efficiency. NISSA explained the need of using ontologies, knowledge models or graphs. NISSA also presented the current results up to date regarding the cognitive approach applied to Steel and Pharma. One of the main conclusions was the big difference in terms of stability of both processes, being Pharma the more stable one. For the asphalt use case, it was decided that the application of such cognitive approach needs an initial reflection about which could be the more appropriate starting point. It seemed that focusing initially in one cognitive sensor would be appropriate.

WP5, CAR, as the leader of the Work Package, explained the structure of this WP, tasks and associated deliverables. This WP has not started yet, CAR explained that the starting of the WP5 and task T5.1, about "Integration of cognitive technology components into pilots", will be the next month. In addition of this first task, it will be studied when the task T5.4 about replicability of the project should start as is currently planned to happen during the last 6 months of the project. Intermediate actions should be planned to ensure the replicability plan is setup earlier so sustainability of project results is ensured.

Ms. Ilija Kantarzi from CORE, leader of communication and dissemination activities gave a presentation about WP6. CORE created a new subpage of the website¹ containing all the public deliverables.

Also, she provided the figures of the impact of the project, suggesting to enrich social media profiles although at present has a higher share of followers than the rest of projects belonging to the same SPIRE call. Capri has for example 32% of followers from countries not belonging to the consortium ones which is a good point. CORE explained the new website articles, that are planned to be delivered on a monthly basis and the status of stakeholders database in this moment.

CAPRI has recently created his own account in Zenodo repository², and here datasets of the project will be uploaded.

In WP6 it was reminded the most important goal to be achieved in the next six-month period: compliance with the publication schedule. It was reminded by the coordinator the procedure to be followed in order to inform the rest of the partners about their publications. It is covered in section 8.4 and 8.5 of the CA fixing as a preventive measure to avoid problems with the rest of the partners and it's to send a communication of any planned publication, at least 45 days ahead. If no objection is made within the time limit stated above, the publication is allowed to be published (tacit approval).

¹ <https://www.capri-project.com/project-deliverables>

² https://zenodo.org/communities/capri_project/



No deviations occurred in the development of this WP in the period M12-M18.

The task T6.3 led by POLIMI, was dedicated to talk about the deliverables to be submitted this month and concerns to all partners (not only contributors): the presentation of unique Capri selling points to create several website news (Process industry Hub or PIHUB, Process industry Cognitive architecture or PICO, ...). Thematic workshops are very relevant and will be defined in the coming weeks regarding the contents and schedule.

The WP7 was explained by MSI, Laura Rodríguez, leader of this Work Package. She explained the obtained results in the survey sent to all the consortium partners to evaluate the possibility of marketing acceptance of the CS's in the real world. She explained the next steps about the exploitation strategy that will generate a preliminary business model canvas for each selected key exploitable result.

After the general explanation of WP7 and T7.1, CAR, Anibal Reñones, talked about the T7.2, This task is led by CAR, and explained the necessity of use all the Data Management Plan and continue developing the generated datasets. CAPRI as part of ORDP needs to share datasets with the open community. This can be done through the recently created Zenodo account and in case the datasets don't have any confidentiality or IPR issue. This task has three main risks (availability of data, delay of tasks related to data generation and confidentiality of data) that can be mitigated at this state of the project mainly through the advantage of experimental laboratory data available for the majority of cognitive solutions. The availability of open datasets will be also a powerful asset for the planned paper publications in coming months.

During final block of the meeting it was covered the creation of project's Advisory Board. The main duties of the advisors were mentioned: observe the progress of the project from the end-user perspective, provide support in key deliverables assessment and ensure the business perspective near the end of the project. It was covered also the periodicity of the meetings to be held, being chaired by CARTIF (no more than 2-3 meetings as the feedback received needs time to be implemented).

