



“Building the Next Generation Personal Data Platforms”

G.A. n. 871370

<p>DELIVERABLE D8.3 INTERIM REPORT OF SECOND YEAR (M7-M12)</p>
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WP8 – Project Coordination and Management

Task 8.1 & 8.2 Project and Technical Management

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Dissemination Level

Project co-funded by the EC within the H2020 Programme		
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Approvals

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Coordinator	Marco Mellia	POLITO	02/12/2020

Document history

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List of abbreviations and acronyms

Abbreviation	Meaning
G.A.	Grant Agreement
CA	Consortium Agreement
GA	General Assembly
PB	Project Board
PC	Project Coordinator
PrO	Project Office
IR	Interim Reports

Disclaimer

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Index

1. Project technical description per WP.....	5
2. Effort spent during the period	11
3. Conclusions about overall project development	11

1. PROJECT TECHNICAL DESCRIPTION PER WP

WP1 – Platform specification and demonstration

- **Technical activities description:**

WP1 has been inactive during most of the reporting period under review, as planned in the Grant Agreement. At the beginning of the period, D1.1 - including the project requirements – has been finalized and submitted for review (with the contribution of all partners).

- **Deliverables/Milestones status:**

Deliverable/Milestone completed:

- ✓ D1.1 “*PIMCity requirements and specifications*” has been submitted at the beginning of June (Month 7)

- **Problems and remedial actions: N.A.**

- **Dissemination activities (if any): N.A.**

WP2 – Tools to improve data subjects privacy

- **Technical activities description:**

POLITO led the work in WP2.

In this period, the main accomplished tasks have been related the design of the WP2 modules, namely the Personal Consent Manager, the Personal Privacy Metrics, the Personal Privacy Preserving Analytics and the Personal Data Safe. The partners involved in the WP2 had periodic meetings to discuss the various aspects of the module design. During such meetings, they discussed all the design choices related to architectural design, user and application interfaces and programming tools to be used.

POLITO, GRANDATA and ERMES collaborated for the design of the PDK modules included in the tasks they lead. Beside refining the requirements for each module (see D1.1), the partners have designed the high-level architecture and discussed how they interact with each other. Then, POLITO, GRANDATA and ERMES, in cooperation with all partners, proposed the initial design of the modules. All the details are available in D2.1.

During this period, the technical partners received continuous feedback regarding the users’ point of view (AUI), and the legal aspects (KUL). This cooperation has been fundamental to have the design of the PDK modules complete not only from the technical and operation points of view, but also taking into accounts all the possible usage and legal aspects.

- **Deliverables/Milestones status:**

Deliverable/Milestone completed:

- ✓ MS3 “*Design of the Marketplace and Innovative technology*” due date: 30th of November 2020
- ✓ D2.1 “*Design of tools to improve user’s privacy*” due date: 30th of November 2020

- **Problems and remedial actions: N.A.**

- **Dissemination activities: please see following page**

List of papers published and presentations / talks done during the reporting period, under the scope of this WP and related to this project:

- *Stop Tracking Me Bro! Differential Tracking Of User Demographics On Hyper-partisan Websites*. Pushkal Agarwal, Sagar Joglekar, Panagiotis Papadopoulos, Nishanth Sastry, Nicolas Kourtellis. In ACM WWW 2020, <https://arxiv.org/abs/2002.00934>
- *Clash of the Trackers: Measuring the Evolution of the Online Tracking Ecosystem*. Konstantinos Solomos, Panagiotis Ilia, Sotiris Ioannidis, Nicolas Kourtellis. In IFIP/IEEE TMA 2020, <https://arxiv.org/pdf/1907.12860.pdf>
- *Not one but many Tradeoffs: Privacy Vs. Utility in Differentially Private Machine Learning*. Benjamin Zi Hao Zhao, Mohamed Ali Kaafar, Nicolas Kourtellis. In ACM CCSW 2020, <https://arxiv.org/pdf/2008.08807>
- *FLaaS: Federated Learning as a Service*. Nicolas Kourtellis, Kleomenis Katevas, Diego Perino. In ACM DistributedML 2020, <https://arxiv.org/abs/2011.09359>
- *Does domain name encryption increase users' privacy?* Trevisan Martino, Soro Francesca, Mellia Marco, Drago Idilio, Morla Ricardo, ACM SIGCOMM Computer Communication Review, 2020
- Valentino Rizzo, Stefano Traverso, Marco Mellia, Unveiling Web Fingerprinting in the Wild Via Code Mining and Machine Learning, Proceedings on Privacy Enhancing Technologies, 2020
- *User Interaction with Online Advertisements: Temporal Modeling and Optimization of Ads Placement*. Luca Vassio, Michele Garetto, Carla Chiasserini, Emilio Leonardi, ACM Transactions on Modeling and Performance Evaluation of Computing Systems, 2020

WP3 – Understanding the new data economy

• Technical activities description:

IMDEA's team led the work in the definition of a new data economy ecosystem.

IMDEA's team has been supported by the partners UC3M, TID, GRANDATA, AUI, IAB, KUL providing feedback and requirements (see Deliverable D1.1) from different perspectives: technical perspective (UC3M, TID, GRANDATA), users' perspective (AUI), stakeholders perspective (GRANDATA and AUI) and legal perspective (KUL). Note that the requirements defined in the Deliverable D1.1. have been used as reference during the definition of the new data economy model. The outcome of this collaboration is the Deliverable D3.1 – due at the end of November 2020.

In addition, UC3M, IMDEA and GRANDATA have collaborated towards obtaining a final definition of the three components of the PDK developed within the WP3: The Data Valuation Tools from Market Perspective (DVTMP), The Data Valuation Tools from End User Perspective (DVTUP) and the Trading Engine (TE). In addition, to the definition of each tool, these partners have worked on defining the integration between them to guarantee their interoperability and integration in the PDK component. Moreover, partners such as TID, AUI, IAB and KUL have provided feedback and requirements (see Deliverable D1.1) from technical (TID) and legal perspectives (KUL) as well as the vision from users (AUI) and stakeholders (IAB). The outcome of this joint effort is the Deliverable D3.2 that will be delivered at the end of November 2020.

• Deliverables/Milestones status:

Deliverable/Milestone due date:

- ✓ D3.1 "Design of the user-centric Marketplace" due date: 30th of November 2020
- ✓ D3.2 "Design of data valuation tools and trading engine" due date: 30th of November 2020

- **Problems and remedial actions: N.A.**

- **Dissemination activities:**

List of papers published and presentations / talks done during the reporting period, under the scope of this WP and related to this project:

- *Malvertising in Facebook: Analysis, Quantification and Solution*. A. Arrate, J. González-Cabañas, A. Cuevas, R. Cuevas. MDPI Electronics.
- *Tracking Fraudulent and Low-Quality Display Impressions*. P. Callejo, A. Cuevas, R. Cuevas, M. Esteban-Bravo, J.M. Vidal-Sanz. Journal of Advertising.
- *Establishing Trust in Online Advertising with Signed Transactions*. A. Pastor, R. Cuevas, A. Cuevas, A. Azcorra. Under review at IEEE Access.
- *Measuring ad value without bankrupting user privacy*. M. Pachilakis, P. Papadopoulos, N. Laoutaris, E. P. Markatos, N. Kourtellis. Under review at WWW 2021.
- *How resilient is the Open Web to the Covid-19 pandemic?* P. Callejo, J. González, R. Cuevas, A. Cuevas, A. Fernández-Anta. Under review at WWW 2021.

WP4 – Tools for improved data management

- **Technical activities description:**

TID led this work package and its design and initiated several discussions with partners involved in the work package for finalizing the architecture of WP4, interaction between modules, data flows, etc.

The WP partners used the requirements defined in D1.1 and built on them to provide a first round of design for each tool proposed. There is strong collaboration between TID and the rest of partners, and this was capitalized during this process for the design definition of WP4 tools. Partners collaborated to decide on data usage, what is to be demonstrated, how, interactions of modules with each other, etc. In addition, how the API of each module could be designed, and how each module could also be embedded within the rest of the infrastructure of PDK and EasyPIMs.

LST and TID collaborated closely to define data aggregation pipelines based on k-anonymity, and how these can be reused inside the Data Portability Control tool. Furthermore, TID and IMDEA collaborated towards building a meaningful solution for data governance and watermarking. In addition, NEC, IMDEA, LST and GRANDATA collaborated strongly to define how their individual tools will work together and provide necessary functionalities required in T4.4 regarding knowledge extraction from users' data.

Consultation from user (AUI), companies and advertisers (IAB) and legal (KUL) aspects was received during this period, for finalizing the design of the tools. Finally, in-depth and repeated discussion and collaboration was also performed for building the deliverable D4.1 in a concise and clear fashion, and in alignment with the other technical deliverables D2.1 and D3.2.

- **Deliverables/Milestones status:**

Deliverable/Milestone due date:

- ✓ D4.1 “*Design of tools for improved data management*” due date: 30th of November 2020

- **Problems and remedial actions: N.A.**

- **Dissemination activities: N.A.**

WP5 – Platform design and integration

- **Technical activities description:**

Preliminary activities and conf-call discussion only, as the WP will start in M13.

- **Deliverables/Milestones status:**

Deliverable/Milestone due date: N.A.

Deliverable/Milestone completed: N.A.

- **Problems and remedial actions: N.A.**

- **Dissemination activities: N.A.**

WP6 – Exploitation and dissemination

- **Technical activities description:**

AUI leads this WP that has focused its activity on the following tasks: development of communication materials, dynamization of social networks, participation in events and generation of communities interested in PIMS.

AUI has elaborated the first PIMCity *newsletter* sent in October with the collaboration of IMDEA, AUI, EU and POLITO. In *social networks* we have extended our presence from the web to Twitter (@pimcityproject) and LinkedIn (@Pimcityproject).

AUI has coordinated the presence of PIMCity Project in Eurodig (June), IGFSpain (October) and MyData (December).

We have participated in the preparation of the WORKSHOP ON PRIVACY POLICY in November (web, communication, dissemination of the event).

AUI has established contacts with different organizations (BDVA, EDS, AEPD, MyDATA, DGCONNECT, SEDIA) to present the project and see possibilities of collaboration. We are in the process of creating a forum of organizations of people (users, professionals, women, people with disabilities, etc.) interested in having a voice in matters related to personal data (regulation, standardization, exploitation, etc.) to which 9 organizations have already subscribed.

- **Deliverables/Milestones status:**

✓ D6.3 due date: 30th of November 2020

- **Problems and remedial actions (if applicable)**

✓ The development of a video presentation of the project has been delayed due to COVID-19 pandemic. This video was intended to be starred by people and given the situation we have decided to use animation techniques for its development and hope to have it completed by February 2021

- **Dissemination activities (if any)**

This WP is focused on communication and dissemination.

To emphasize that we have had presence in EURODIG, IGFSpain and MyData in addition to organize a seminar with a very good level of attendance.

WP7 – Data management, legal and ethical requirements

• Technical activities description:

During the period (6 months), KUL has:

- Organized the WORKSHOP ON PRIVACY POLICIES AND CONSENT FORMS on 25th November 2020, primarily collaborating with WP6 and WP8.
- Drafted and coordinated the report on responsible research and innovation RRI (D7.3), aiming for collaboration with all of the partners.
- Advised WP6 and WP8 on legal requirements for website(s) privacy policies.
- Advised the project partners on legal requirements on a daily basis.

These activities have been carried over in collaborations with all partners. In particular, the workshop has seen the support of AIU for the dissemination, and the collaboration of NEC and POLITO which actively participated as presenter during the workshop.

The RRI has been compiled with the support of all university partners (POLITO, UC3M, IMDEA), and industries with more research oriented goals (NEC, TELEFONICA), and the support of IAB-SP.

POLITO and AUI have collaborate to the definition of the privacy policies of pimcity-h2020.eu and pimcity.eu websites, respectively.

• Deliverables/Milestones status:

- ✓ D7.3 “Report on Responsible Research and Innovation (RRI) and societal impact” due date: 30th of November 2020

• Problems and remedial actions

Not all of the partners have been able to contribute to D7.1 and D7.3 requirements. This is expected, given the different role of each partner. These deliverables will be updated at a later stage of the project, hence KUL will receive updated contributions.

• Dissemination activities (if any): N.A.

Communication about the WORKSHOP ON PRIVACY POLICIES AND CONSENT FORMS via social media. Involved researchers have promoted the workshop through KUL and personal communication channels (Twitter, Legal newsletter). They also supported other partners in the creation of the workshop banner, webpage, and newsfeeds.

WP8 – Project Coordination and Management

• Technical activities description:

The Project Office and the Coordinator:

- Followed the day-to-day project management and deliverables/documents submission to the Funding Agency
- Organized regular conference calls on bi-weekly basis (invitation, presentation, minutes, etc.)
- Organized the THIRD GENERAL PLENARY MEETING - held remotely on MsTeams - on November 3rd, 4th and 6th 2020 (agenda preparation, presentation, minutes, etc.).
- Presented a second amendment request (to remove CLIQZ and IAB Europe from the consortium and add IAB Spain as new Partner; with the amendment the Consortium asked a project extension of 3 months), approved on October 8th 2020; a third amendment request is under preparation (please see following paragraph – Problems and remedial actions)
- Updated the documents available on the collaboration tool among Partners (Ms TEAMS)
- handled the Privacy Policy for the project website (<http://www.pimcity.eu>) devoted mostly for community document sharing and activities coordination; POLITO worked

in coordination with KU Leuven in order to come to a content based on the legal framework. To manage the Privacy Policy, Polito installed the plugin MATOMO for Wordpress and it is currently supported by Complianz in collecting anonymized data from the users.

- Constantly uploaded publications on the Participant Portal and collecting them in order to publish such publications on the project website, in coordination with of the partner.

- **Deliverables/Milestones status:**

- ✓ Deliverable 8.3 “*Interim Report Second Period*” due date: 30th of November 2020 (current deliverable)

- **Problems and remedial actions (if applicable):**

Due to the withdrawal of CLIQZ from the Consortium, budget and PMs devoted to demonstration activities have been split and allocated to GDATA and ERMES an, with a limited part to POLITO* as a new demonstration Partner was not identified yet. Later, on October-November 2020, as the Consortium has identified and approved the participation of a new SME, the coordinator started to plan an amendment session in order to transfer budget and PMs from POLITO to the SME selected. A conf-call with the PO is, consequently, required.

TAPTAP, as new SME, has been individuated as possible partner to perform demonstration activities and a web pilot. *TAPTAP Digital is a global advertising technology company with presence in Europe, Africa, North America and South America. Through its proprietary platform, Sonata, TAPTAP leverages geospatial technology and artificial intelligence for multidimensional audience planning, omnichannel media activation and advanced online and offline measurement.*

In addition to this, some key personnel decided to move from GDATA to WIBSON. *Established in October of 2017, Wibson has created a decentralized, blockchain-based personal-data marketplace that provides infrastructure and financial incentives for individuals to securely sell private information that is validated for accuracy, all without sacrificing personal privacy. Wibson, located in Gibraltar, is a project from the team behind GDATA whose mission is to create a trusted universal data platform that maximizes value for both individuals and companies.* For this reason, through the third amendment to be required, GDATA will end its participation in the Consortium and its technical activities/remaining budget and PMs will be carried out by WIBSON as soon as it is added to the Consortium.

- **Dissemination activities:**

Project website <https://www.pimcity-h2020.eu> is constantly uploaded for official dissemination in representation of the Consortium (content and image coordination between AUI and POLITO).

WP9 – Ethical requirements (POLITO)

- **Technical activities description (10 lines):**

POLITO coordinated with KU Leuven. D9.3 is elaborated starting from D7.3 content, available from KUL.

- **Deliverables/Milestones status:**

- ✓ Deliverable 9.3 “*POPD - NEC - Requirement No. 3*” due date: 30th of November 2020 - status: ongoing

- **Problems and remedial actions (if applicable): N.A.**

- **Dissemination activities (if any): N.A.**

2. EFFORT SPENT DURING THE PERIOD

During the second period reported (M7-M12), the project experienced some delays, mainly due to:

- ✓ The restrictions linked to COVID-19 outbreak (work mainly as smart-working at home, inter-personal distancing, interdiction to work in office, etc.). As face-to-face meetings were not possible, the project planned to have conf-calls on bi-weekly basis, but some technical activities suffered from the situation due to lack of personal interaction and the difficulty to work in office
- ✓ Delays linked to the withdrawal of CLIQZ and the need to find a new SME to take over. More work has been done by POLITO as management activity, while at the moment it is not possible to interact with a company for demonstration activities
- ✓ Some activities will be done later, as soon as the technical implementation comes to expected results. From that moment on, it will be required integration among WPs.

A summary of PMs is following. Please note that the number of PMs expected considers the total number of PMs per Partner and each WP duration. For this reason, it is an average purely indicative.

According to this, an amount of 218 PMs was expected to be spent by the Consortium for the period from M1 to M12. According to actual figures, the Consortium spent less, around 184 PMs.

The overall situation is detailed in the table available in the following page, where PMs are detailed per WPs and partners.

3. CONCLUSIONS ABOUT OVERALL PROJECT DEVELOPMENT

Activities have proceeded without relevant problems - with some slowdown due to the COVID-19 pandemic, summer break and effort linked to amendment procedures.

The Project Management Office and Coordinator managed the issues within WP8 and successfully handled them. The Project Coordinator and Technical Coordinator also did their best effort in order to keep Partners updated and coordinated despite of problems and delays linked to COVID-19 outbreak and summer break.

Main deviation:

- NEC has reported less PMs than expected, as during the last period NEC spent less effort than expected. In fact, NEC had received relevant inputs by the different partners that strongly facilitated the tasks required for WP1 (in particular for Deliverable 1.1). As a result, WP1 required less effort than the originally planned. Moreover, WP1 stopped its activities according to project Gantt during the period. As soon as the activities will start again, NEC is forecasting a significant effort to carry on all the activities of integration, review and editing.
- FASTWEB will start the most of the work in upcoming WP5, active from M13. At the moment the number of PMs is limited
- IAB Spain joined the consortium only from May 1st, 2020, taking part to conf-call and starting to cooperate within the partners, especially with AUI (for the workshop organization), KUL and POLITO; more effort is expected in following months

Participant	WP1 Starts M1 - End M(33)		WP2 Starts M3 - End M(27)		WP3 Starts M1-End M(27)		WP4 Starts M4 - End M(27)		WP5 Starts M(13)- End M(30)		WP6 Starts M1 - End M(33)		WP7 Starts M1- End M(33)		WP8 Starts M1- End M(33) (and Ethics WP9)		Total	
	Planned	Actual	Planned	Actual	Planned	Actual	Planned	Actual	Planned	Actual	Planned	Actual	Planned	Actual	Planned	Actual	Planned	Actual
POLITO	2,55	3,94	10,00	13,16	0,00	0	0,00	0	0,00	0	3,27	2,95	1,45	1,60	16,00	11,38	33,27	33,03
NEC	6,91	1,91	8,00	5,65	0,00	0	4,50	9,22	0,00	0	1,45	0	0,73	0	3,27	0	24,86	16,78
ERMES	5,82	4,86	5,60	7,56	0,00	0	2,63	0,82	0,00	0	1,09	2,19	0,73	0,5	0,36	0,2	16,23	16,13
IMDEA	2,55	2	0,00	0	9,78	10	3,75	2,75	0,00	0	3,27	1	0,73	0,3	0,36	0,3	20,44	16,35
UC3M	2,55	2,17	2,40	1,7	12,00	10,57	0,00	0	0,00	0	2,55	1,12	0,73	1	0,36	0,33	20,58	16,89
TID	4,36	4,03	2,40	2,06	2,67	2,28	8,63	7,87	0,00	0	1,45	0,53	0,73	0,66	0,36	0,39	20,60	17,82
FASTWEB	5,82	2,50	0,00	0	0,00	0	0,00	0	0,00	0	1,09	0,50	0,73	0,50	0,36	0,25	8,00	3,75
LSTECH	1,82	1,16	0,00	0	0,00	0	7,88	8,02	0,00	0	0,73	0,29	0,73	0,47	0,36	0,52	11,51	10,45
KUL	2,55	2,5	1,60	1	0,44	0,3	0,75	0,5	0,00	0	1,82	1	8,73	7,45	0,36	0,3	16,25	13,05
AUI	3,27	3	1,20	1,2	1,33	1	1,50	1,2	0,00	0	7,64	7,2	0,73	0,7	0,36	0,36	16,03	14,66
IAB SP	1,75	0,91	0,95	0,36	0,95	0,3	1,27	0,24	0	0	1,5		0,5	0,35	0,25	0,25	7,18	3,41
GDATA	8,00	5,6	4,00	4,91	6,22	6,42	1,88	1,78	0,00	0	2,18	1,66	0,73	0,65	0,36	1,27	23,37	22,29
Total	47,93	34,58	36,15	37,60	33,39	30,87	32,77	32,40	0,00	0,00	28,05	18,44	17,23	14,18	22,80	15,55	218,32	183,61

