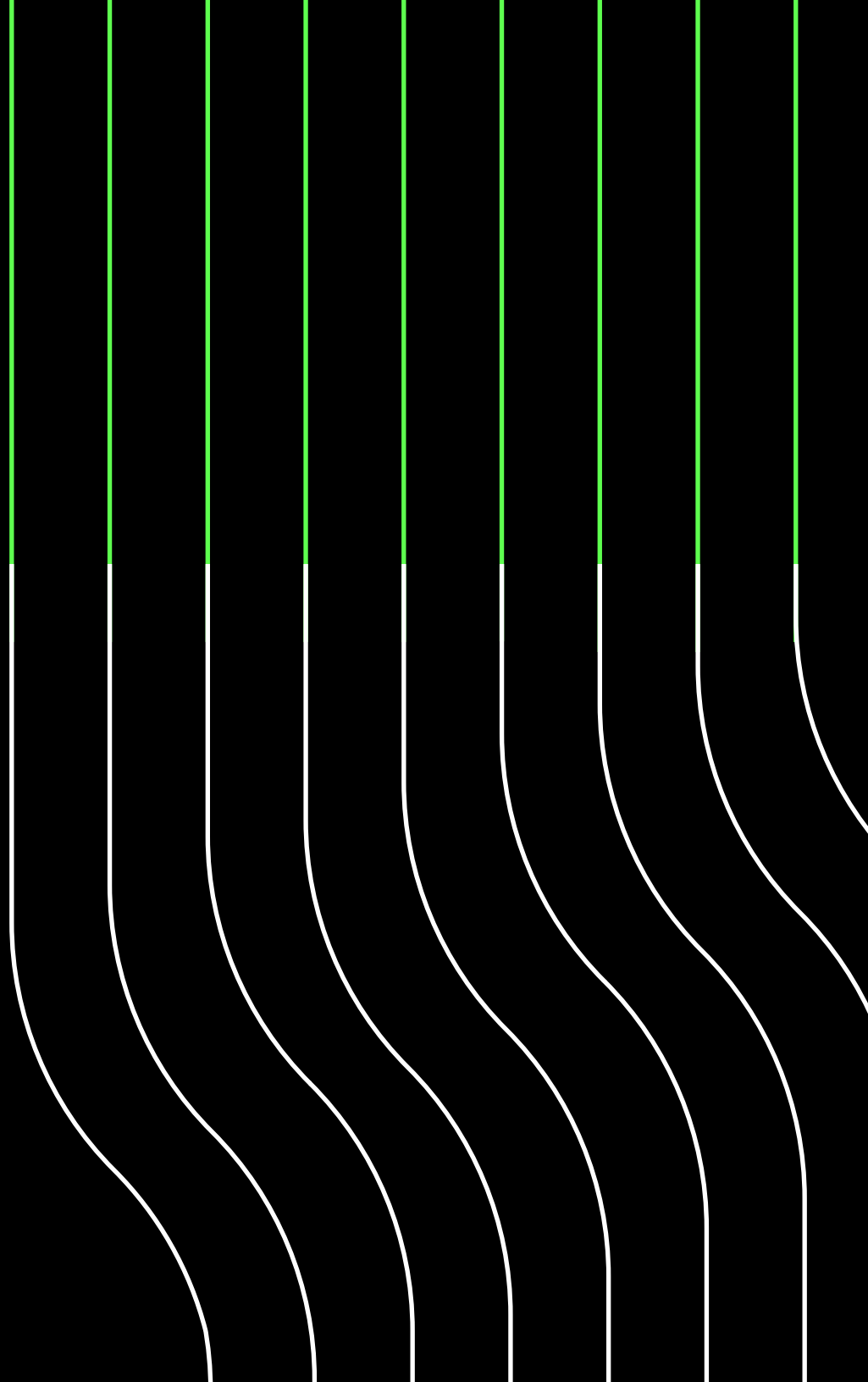




Task Mining

DATA PROTECTION BY DESIGN



Preliminary Note

This white paper provides information relating to the design of Celonis Task Mining that may contribute to a rigorous data protection. Herein the focus is on the specifics of Task Mining.

Furthermore, we recommend reading our other white papers on Data Protection and Information Security for the Execution Management System (EMS). All documents can be downloaded from our website:

<https://www.celonis.com/trust-center/>.

Celonis acknowledges that use cases for Celonis Task Mining will depend on applicable privacy and employment laws. Therefore, the core of Celonis' Task Mining Technology is strictly designed according to the requirements of Data Protection by design, helping our customers, the Controller, to execute the software according to their privacy policies.

Please note that we are not providing any legal advice in this document. This document is being provided for informational purposes only.

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What are the specifics of Celonis Task Mining?

When it comes to understanding the inherent workings of any enterprise, there are two major sources of data to look at – Business Data and User Interaction Data. Business Data – found in an operational system – provides the basis for process mining. User Interaction Data, i.e. everything that happens on the desktop of a user outside the actual source systems, has been completely untapped in recent years.

With the Execution Management System (EMS) Celonis offers a state-of-the-art tool for analyzing business processes within a company. With Celonis Task Mining, this service is now expanded by a new opportunity: Analyzing user interaction with an application or workflows in general enables an in-depth analysis that cannot be realized with other means.

In detail this means that Celonis Task Mining captures User Interaction Data that happens outside of the Celonis products. The Task Mining Software is running in the background of a user's desktop, like anti-virus software, and is activated when a defined application is used. It collects e.g., clicks, scrolls, user actions, and the corresponding timestamps. This data is then uploaded to the EMS for detailed analysis. Within the EMS, Optical Character Recognition & AI add context and support the grouping of user interactions into activities – such as “approving a purchase order”. After that, the Task Mining Data can, optionally, be matched to the Business Data based on e.g., IDs, activity and time to correlate user interactions with Business Data in the operational systems in order to understand the impact of the desktop process on the business outcomes as well as to identify best practices and simplify the processes. Task Mining is built to support the optimization of processes – in the context of a defined project period and in close cooperation with the involved employees.

The combination of Business Data and User Interaction Data collection gives enterprises a comprehensive picture of how their business truly runs.

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What is Data Protection by Design?

Data Protection by Design is an approach to systems engineering and demands that privacy principles shall be taken into account throughout the whole engineering process.

Within the EU General Data Protection Regulation (GDPR), this data protection through technology design was specifically included into the legal framework. Based on the obligation in Art. 25 GDPR Controllers have to implement appropriate technical and organizational measures as well as safeguards to protect the rights of data subjects. And Processors are obliged to create GDPR-compliant products and services that enable Controllers, to fulfill their data protection obligations.

Celonis Task Mining is designed and developed with a focus on data protection principles as explained in detail in this document.

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Data protection principles related to processing of personal data

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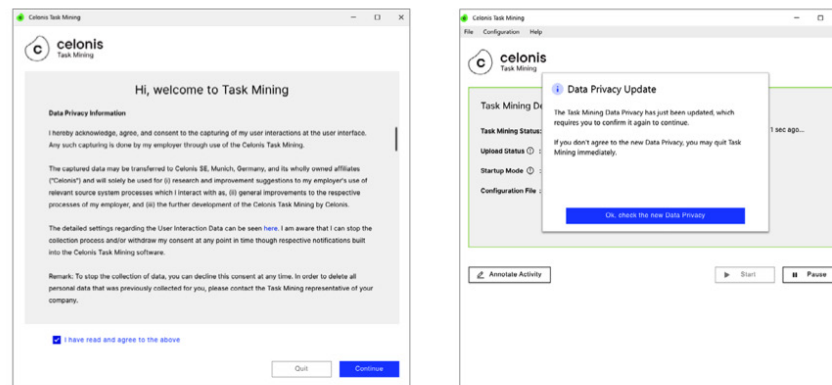
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LAWFULNESS AND FAIRNESS

GDPR requires the Controller to process personal data “lawfully, fairly and in a transparent manner in relation to the data subject“. This especially means that the Controller shall identify a valid legal basis for the processing of personal data and inform the data subject about the collecting and processing.

In order to comply with this principle, Celonis has built into its technology a screen that appears before the initial collection of data after the installation of the software. This screen can be adapted based on an organization or a specific use case to meet applicable employment laws and privacy requirements, e.g., it can either be configured to ask for explicit consent and/or to include required information on the data processing. The data subjects/ the user can inspect the data collection settings and/ or may withdraw consent at any time.



Exemplary configuration of screens asking for consent

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TRANSPARENCY

Ahead of the processing: The Controller shall be clear and open with the data subject from the start how data will be collected, used and shared. Besides setting up the window mentioned in Art. 4.1, we highly recommend that organizations using our software inform their employees in detail about the data processes ahead of the implementation. This information should include all aspects mentioned in Art. 12-15 GDPR, such as

- Purpose of the processing, e.g., identification of automation potentials and improving effectivity of work activities, no analysis of personal work performance
- Nature of the processing, e.g., automated analysis of your work activity regarding chosen software applications that will then be anonymized and aggregated
- Data categories involved, e.g., timestamp, activity, application, etc.
- Time-frame, e.g., from dd/mm/yy to dd/mm/yy
- Recipients, e.g., external Processors such as Celonis, internal consultants
- Data retention, e.g., all captured data will be deleted after 3 months or upon request of the data subject

During the processing: When Task Mining is running, it is displayed in the system tray. By clicking on the tray, more details are shown. Through this on-screen information the user can check which interactions have been captured.

After the processing: To build trust, it is recommended to show involved data subjects, that processing their data served the purpose and that the company's success could be supported by realizing process optimizations.

PURPOSE LIMITATION

Data shall strictly be collected for specified, explicit and legitimate purposes and not further processed in a manner that is incompatible with those purposes.

With Celonis Task Mining, the design of the processing can be easily shaped by what is necessary to achieve the purposes.

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DATA MINIMIZATION

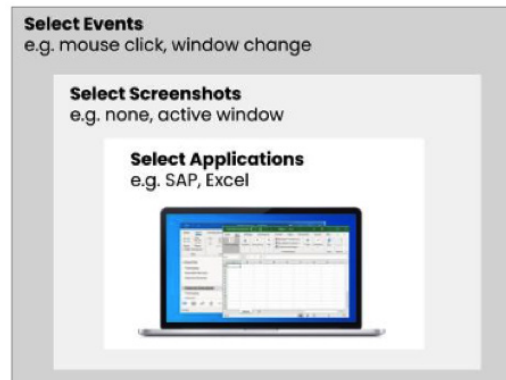
Only personal data that is adequate, relevant and limited to what is necessary for the purpose shall be processed.

Celonis Task Mining is designed to limit data collection and processing to those data categories that is relevant and required for the analysis of the desired processes. These settings are all implemented on the desktop computer, therefore events which don't satisfy the rule will never be sent to the EMS or leave the desktop computer. This means that, a Controller is in full control of which data is sent to the EMS.

There are several levels for filtering information and hence limit the categories of data to be collected

- Select or exclude single applications
- Solely collect that a certain application was used without further details
- Collect minimal context such as the window title, general headline, etc.
- Deactive text input and screenshots to protect personally identifiable information

Celonis Task Mining provides full configuration flexibility per use case: the settings can be configured for each purpose individually.



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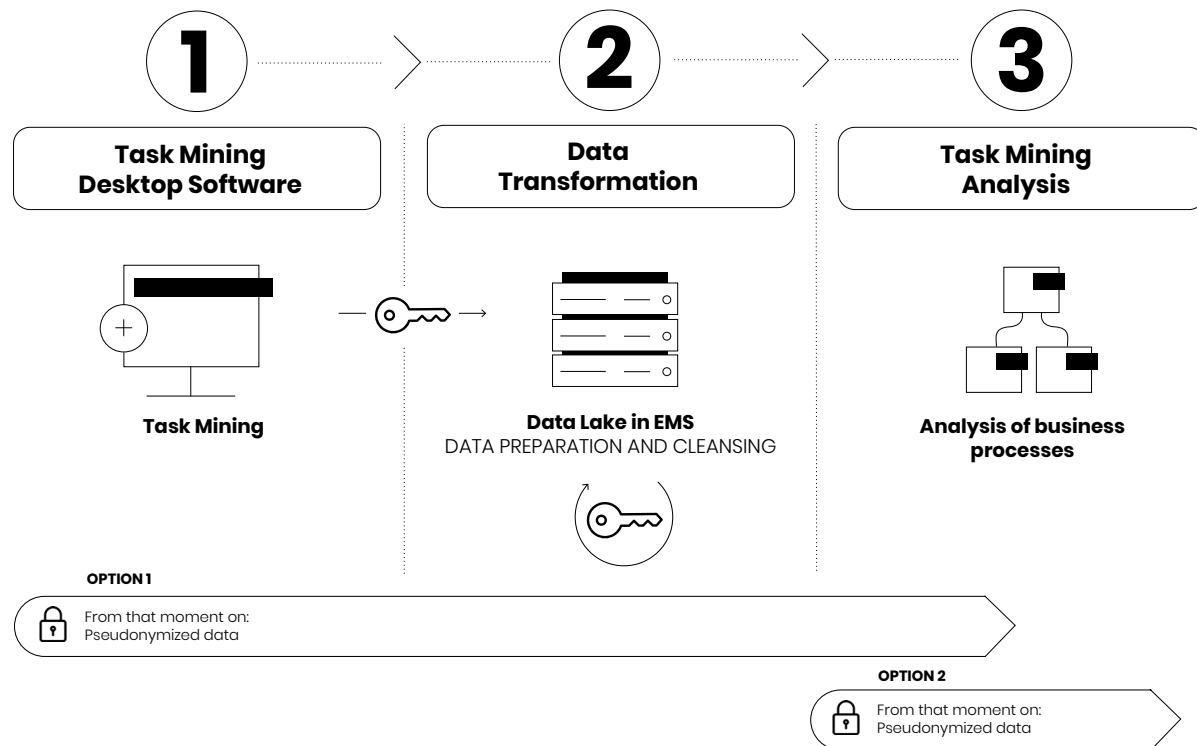
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PSEUDONYMIZATION

To mitigate risks for the data subjects, personal data shall be anonymized/pseudonymized as soon as it is no longer necessary to have directly identifiable personal.

Celonis Task Mining provides granular controls to specify which of the data categories collected should be pseudonymized, e.g., usernames, entered text, clipboard content, application path and/or application title, name of active windows or elements can be obscured. In this case, personal data will be converted into non-trackable hash-values by algorithms from the SHA1/2 family.

Data can be pseudonymized on desktop software (directly while capturing user interactions in the Task Mining Desktop Software) and/or during data transformation (when uploading it to the data base within the EMS): Once uploaded to the EMS, data derived from Task Mining will be processed as all to the settings of the core Celonis Process Mining Technology.



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STORAGE LIMITATION

Personal data has to be kept in a form which permits identification of data subjects for no longer than is necessary for the purposes for which the personal data are processed.

Celonis Task Mining offers variable erasure routines that can be configured in alignment with internal deletion policies. A Controller can, at all times, initiate the deletion of parts of the data or the complete data set if required. In any case, all data will be deleted after termination of the contract.

INTEGRITY AND CONFIDENTIALITY

Personal data shall be protected against unauthorized or unlawful processing and accidental loss, destruction or damage.

Celonis is dedicated to high security across all aspects of the organization. Following best-in-class standards, our software has been designed to deliver end-to-end data security. For further information (including our certifications), please refer to:

<https://www.celonis.com/trust-center/>

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Celonis has implemented multiple safeguards which provide maximum control and flexibility at the Controller's end in order to allow for the best available use of Celonis Task Mining as well as to adhere to strict privacy policies at the same time..

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