

November 21, 2023

Eric Lefkofsky
Chief Executive Officer
Tempus Labs, Inc.
600 West Chicago Avenue, Suite 510
Chicago, Illinois 60654

Re: Tempus Labs, Inc.
Amendment No. 8 to
Submitted November
CIK No. 0001717115

Draft Registration Statement on Form S-1
13, 2023

Dear Eric Lefkofsky:

We have reviewed your amended draft registration statement and have the following comments.

Please respond to this letter by providing the requested information and either submitting an amended draft registration statement or publicly filing your registration statement on EDGAR. If you do not believe a comment applies to your facts and circumstances or do not believe an amendment is appropriate, please tell us why in your response.

After reviewing the information you provide in response to this letter and your amended draft registration statement or filed registration statement, we may have additional comments.

Amendment No. 8 to Draft Registration Statement on Form S-1
Business
The Tempus Platform
Proprietary Software Tool Solutions, page 143

1. We note that your proprietary software employs AI techniques such as neural networks, deep learning, and other statistical techniques. Please explain how you developed and validated your artificial intelligence (AI) model. In the explanation, please include the data quality and robustness of the relationship predicted by the model over time, the experience of the personnel that developed the model, when the model was developed, and how long the model has been used in a clinical setting.

Eric Lefkofsky
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AI Applications, page 164

2. We note that as your AI Applications product gains adoption, you intend to leverage large language models and generative AI algorithms. Please disclose whether you intend to develop proprietary technology, utilize open-source technology, or license the use of such technology. To the extent you intend to license existing or future technologies or plan to utilize open-source technology, please also consider revising the relevant risk

disclosure to address any related risks.

General

3. Given the nature of your business, please consider including definitions of "AI," "generative AI," "deep learning," "large language models," "neural networks," and any other industry-specific terminology.

Please contact Claire DeLabar at 202-551-3349 or Robert Littlepage at 202-551-3361 if you have questions regarding comments on the financial statements and related matters. Please contact Kyle Wiley at 202-344-5791 or Jan Woo at 202-551-3453 with any other questions.

Sincerely,

Division of

Office of

Corporation Finance

Technology

cc: Courtney Tygesson