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Paper 1 : AI Implementation Maturity in Process Mining

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Introduction :
What is business process management? It's a process that provides an overview of activity flows and an analysis of a company's performance. In this way, process flows can be used to examine activities in relation to corporate strategy, optimize procedures, evaluate the results of business operations, and identify impediments to organizational efficiency.
The development of AI will be the key to reducing costs and delivering a better business experience. Notably, at the operational level, they will enable optimization of company resources and information.
But every advantage has its drawbacks. A mismatch between the techniques used in the different phases of the process, a lack of clarity as to responsibility for the different stages or their results, and unclear objectives for the company.
A maturity model represents the progress made in a particular area, in this case the adoption of AI, which is an innovation that is present in our society today.

I. The beginning of a journey
This document proposes the various stages of the maturity model methodology and associated methods. It is based on scientific research being carried out in the field of information systems (IS) to resolve and develop artifacts (structures or phenomena of artificial or accidental origin which alter an experiment or examination of a natural phenomenon).
This research will help companies and suppliers to understand the success rate of AI in exploring the process in detail.

To this end, we have defined the research problem and scope, starting by identifying the state of the art of the various maturity models and making a comparison based on Kitchenham and Charters. This will enable us to make future modifications.

We need to go through a number of approximations to obtain the model we're looking for. Each approximation defines the domain of interest, the domain, the capability, the levels, the evaluation questions and instruments, the dependency and the improvement actions. These same approximations can be restricted, so we can start with a first one focused on predictive monitoring of processes in a domain where AI is most often used. With this one, we'll have a result of the demonstration and evaluation stages and refine the artifacts.

II. The main stages of the process
- The case study and semi-structured interviews with university practitioners provide a different kind of demonstration. With these results, we can gain additional information about the artifact. In this way, we can determine the best strategy for presenting the artifacts.

- The evaluation stage of the maturity model can provide us with concrete observations for users in particular. The process can be repeated as often as possible until we get what we want.

- The communication or automation stage of the process will help to pass the important BPM cycle. All these changes will help to define the most effective development for enterprise design through AI.

III. Conclusion
To conclude, today's enterprise model presents a challenge in determining the content of its artifacts and the indicators of acceptance at each stage in the science of research.

Maturity models such as BPM, which were developed to measure the ability of organizations to carry out initiatives, indicate only at the organizational level. They are grouped according to various categories: fixed or staggered levels, approaches based on areas of interest or a single

methodology. Among the most popular results of modern Business Process Management (BPM) is the Capability Maturity Model (CMM), which was developed and identifies five maturity levels: initial, repeatable, defined, managed and optimized.

However, there are several drawbacks to the assessment of maturity models, with over 150 existing ones addressing one or more areas of Business Process Management (BPM). Another is the lack of clarity in the process itself.

For this reason, various maturity models have been developed to assess the adoption of artificial intelligence (AI) in companies. The increasing integration of AI into process analysis presents benefits, but also challenges, particularly with regard to process mining. Organizations will need to share data to implement more advanced AI tools, such as predictive process monitoring. This raises questions about data confidentiality and security.

Although maturity models describe levels of maturity, they generally do not provide specific guidance on how to improve. Adopting AI in process analysis should improve organizations' decision-making capabilities in the BPM lifecycle, but this will require careful attention to the various cultures and stages of each organization's business model.