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# ARTIFICIAL INTELLIGENCE IN THE BANKING SECTOR : EMPLOYMENT AND SKILLS

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Observatoire des métiers, des qualifications  
et de l'égalité professionnelle entre les femmes  
et les hommes **dans la banque**



# Summary

## **#1. Banks are deeply impacted by AI.**

They are among the first companies that have had their transactions computerized. Hence, they can collect, store and maintain millions of relevant customer data. Such data is needed by AI.

Banks also rely on statistical models developed in-house in order to optimize tasks such as targeted marketing goals, counterparty risks thanks to expert systems and score computing, handling systems or fraud detection.

Banks also developed a strong culture around editorial and wording issues, both contractually with their clients and formalising internal control procedures. The regulator has indeed a direct influence supported by the departments of the internal and/or the compliance control.

Although they took early advantage of AI-based tools, such as expert systems, they are now struggling to use nowadays tools, especially those based on machine learning, used by Internet giants.

## **#2. There is a plethora of IA projects in the banking sector. This applies to all banks and all along the hierarchical ladder.**

Jobs in support functions are among the most active. Those are then followed by Operations Processing teams, and then client-facing operations. Regarding operation processing, banks are focused on the deployment of robots, called RPAs or robotic process automation<sup>1</sup>, used for automating repetitive tasks.

However, there is no overall AI plan. Few of those plan to be 5 years old. They focus on proof of concept (PoC) formulas to get an idea of the potential of AI in very narrow fields of application. The same ones from one bank to another: email analyser, management of a document database, KYC<sup>2</sup>, fraud prediction, cross-fertilization of skills to bolster in-bank job mobility.

There is no single IA referent that leads or centralizes all of a bank's AI projects. This lack of coordination can lead to choices of adverse AI-based solutions to handle the same features (e.g. conversational agent).

AI projects focus on the automation, optimization and improvement of existing activities, i.e. in a form of continuity with traditional computerization. It is also a way of absorbing additional workloads caused by new regulations or new typologies of flows (e.g. emails, social networks). There are few disruptive or revenue-developing projects.

The current stage of development of AI is semantic analysis. This uses so-called learning functions. This is the case for optical character recognition (OCR), analysis of emails or secure messages and response proposals, management of a documentary database (reference texts, internal procedures, various notes on distributed products and services, etc.).

Projects target human-machine interaction (e.g. chatbot). These technologies are progressing, but for the time being they do not allow a fluidity and depth complies in exchanges with machine.

## **#3. The observed trend is to import banking knowledge to the machine. The machine gradually builds its own expertise, putting the role of bank employees and tomorrow's skills to do a job in question.**

In general terms, banking jobs<sup>3</sup> as we know them won't be overturned – no creation nor extinction of entire job category associated with AI is to be expected in the short term - in the near future, the skillset needed will be revaluated. Until now, the technical skills, i.e. those related to the banking profession, have been the most and best valued. With the AI deployment, so-called transversal skills should be the most in demand. If we draw a

<sup>1</sup> These tools are not in the scope of this study

<sup>2</sup> Know Your Customer

<sup>3</sup> Excluding IT and data processing



parallel with the medical sector, the bank adviser, for example, would be closer to a general practitioner, or a hybrid profile with more seniority, than to a specialist. The exercise of its profession would be less technical and less specific than the banking sector's. Career paths would then have to be rethought in their entirety, as would the managerial role. However, this orientation ultimately depends on the choices and decisions made by the institutions. At this stage, it cannot be understood as the only way forward. AI-based tools are thought to support a transformation strategy, not the other way around.

The concept of activity gradually gives way to the notion of skill. Training institutions should revise their programs to develop behavioural and relational skills, or even cognitive functions.

**#4. As opposed to the ideas sometimes conveyed, the AI operational transformations are deeper than the prior ones.**

They affect not only the activities, but also the very nature of the skills needed and even the cognitive functions. The founding fathers of this field of research set themselves the goal of simulating learning mechanisms and other features of the human brain in a machine since the beginning of 1956.

The overall progress in AI research depends on the data quality, the computing power and the latest findings about the human brain way of functioning. So far, it remains hard to know when AI-based tools will show sufficient autonomous and interaction skills.

Besides, we should not underestimate the size, timing and technological dimension of AI projects. They require a strong professional expertise in order to relay knowledge and datasets -leading the training phase. The diffusion rate of these technologies is also linked to the regulation system in force and to the freedom allowed by the states to the different actors.

**#5. Lastly, the AI adoption movement in the banking sector will continue and grow, unless a regulation tightening occurs.**

Banks should give priority to a more global and exhaustive AI approach; they should not be targeting only a handful of activities. Their positions currently expressed on employment would be objectified, and they would take the time to manage the transition for their current collaborators.

Who could carry out such a project in the banks? Given the nature of the questions raised, including those concerning skills, and the work schedules required to complete digital projects, the Human Resources Department (HRD) seems to be in the best position to carry it out. It could objectively study the nature of the time saved and the organisation of the new working time, be a source of proposals in this area and answer questions on the complementarity between man and machine. The forward-looking management of jobs and skills is well within its remit. Perhaps we should put an M for Machines alongside the acronym HRD ? The adoption speed and deployment of AI-based tools remains a business choice.

# Recommendations

R1

Realize a comprehensive AI plan to optimize the use of different domains of AI and streamline technology selection

R4

Carry out an assessment of AI use cases in all activities and not only those which are « repetitive » or « low value-added »

R5

Realize detailed studies about the time transferred to the AI tools based on the deployment plan to enhance potential impacts

R2

Take in consideration the conditions of industrialisation as soon as possible during an AI project

R6

Prioritize a skills approach rather than an activity/tasks approach when assessing HR impacts of the deployment of AI-based tools

R3

Appoint an AI executive in charge of coordinating the AI plan and to act as an interface between internal and external staff

R7

Endeavour a cognitive function approach to improve the required innovation in training approach

R8

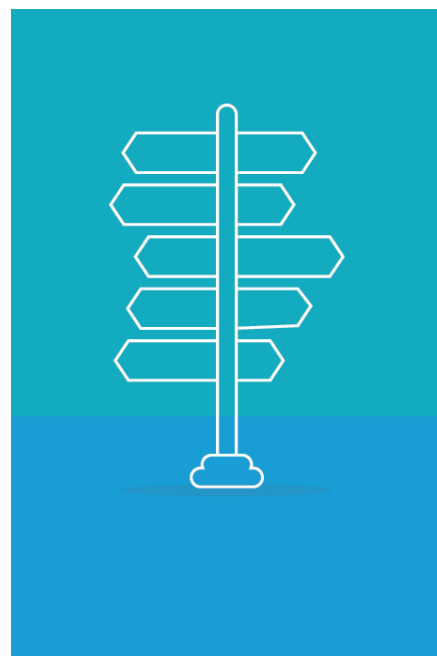
Develop acculturation of managers and leaders to the topic of AI

R9

As part of AI impact, or even coordination of the central AI plan, to the Human Resources Department, which would become an HRMD (Human Resources Machines Department)

R10

Whitin the banking sector, pool the investments in research and development and share the resources in non-strategic fields



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