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Digital labor within financial services: Operations risk
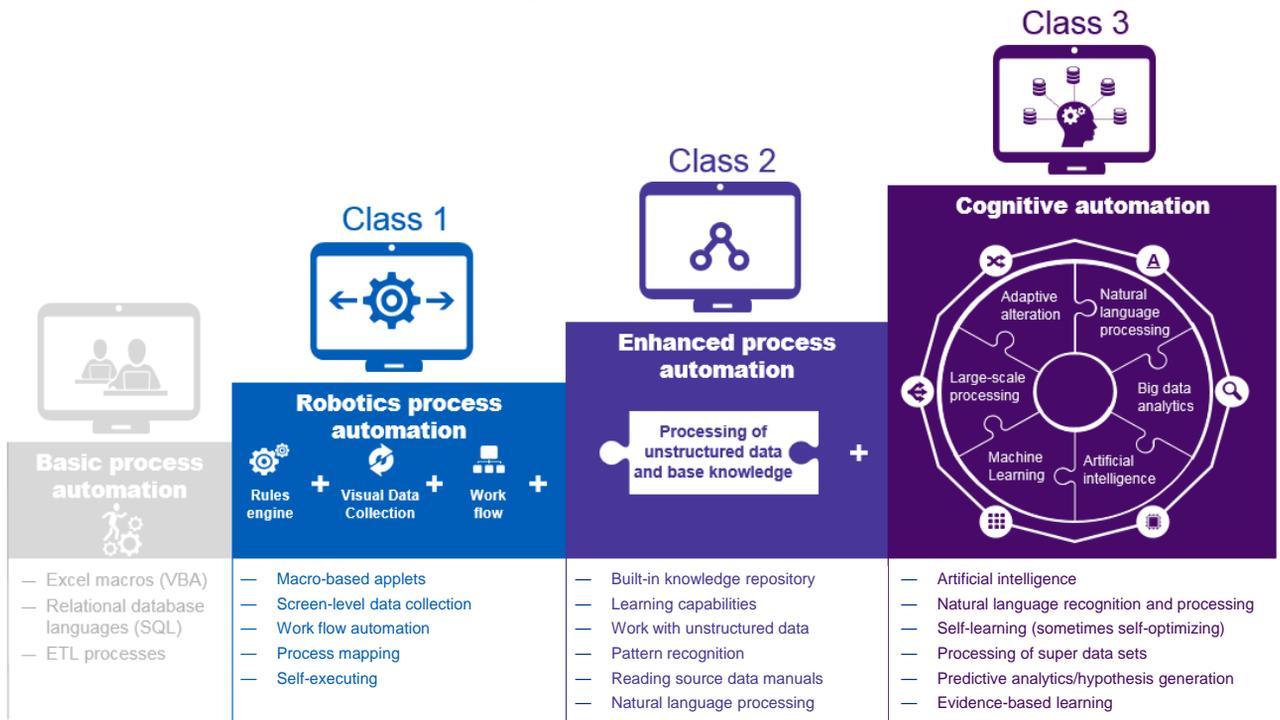
Digital Labor could impact the jobs of 100 million people globally by 2025[1]

Currently, many banks' business processes require complicated and time-consuming manual labor to solve seemingly simple issues, providing a ripe opportunity to increase the level of task automation and knowledge augmentation.

KPMG LLP (KPMG) refers to Digital Labor as the automation of labor by leveraging digital technologies to augment, or automate, the tasks undertaken by people in your business. The spectrum of automation can be broken into three distinct categories to help better differentiate the types of Digital Labor automation.

1. Robotic Process Automation, dealing with automation of routine procedural tasks, that follows a defined set of rules

2. Enhanced Process Automation, wherein the robot/machine is able to self-learn and formulate new rules based on its previous experience

3. Cognitive Automation, an advanced level of artificial intelligence that has the ability to analytically evaluate vast unstructured data from various sources and perform predictive analytics and evaluate probabilistic situations for strategic decisions

From identifying processes that are procedural, repetitive, and time-consuming for businesses, to implementing cognitive software that can mimic human activities such as inferring, hypothesizing, and reasoning, KPMG can help our clients leverage Digital Labor to enhance their operational efficiency and help minimize the costs associated with performing these tasks.

Basic process automation	Robotics process automation	Enhanced process automation	Cognitive automation
— Excel macros (VBA)	— Macro-based applets	— Built-in knowledge repository	— Artificial intelligence
— Relational database languages (SQL)	— Screen-level data collection	— Learning capabilities	— Natural language recognition and processing
— ETL processes	— Work flow automation	— Work with unstructured data	— Self-learning (sometimes self-optimizing)
	— Process mapping	— Pattern recognition	— Processing of super data sets
	— Self-executing	— Reading source data manuals	— Predictive analytics/hypothesis generation
		— Natural language processing	— Evidence-based learning

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[1] McKinsey Global Institute – "Disruptive technologies: Advances that will transform life, business and the global economy." May 2013

Deep domain and process knowledge

KPMG's Operations Risk practice has deep banking, capital markets, and insurance industry knowledge and a holistic approach to Digital Labor—from strategy to execution—to enable our clients to optimize operational productivity, reduce expenses allocated to performing simplistic tasks, and invest in innovative solutions that leverage their businesses to expand their competitive advantage.

Operations Risk Services

Innovation Discovery
Utilizing knowledge of industry to find uses of digital labor for our clients

—Deliver executive presentations on strategic use of automation
—Share automation market knowledge and conduct current state assessment
—Analyze/segment automation process ideas
—Assist in prioritizing automation use cases

Strategy & Road Map
Defining target operating model, creating plan to reach TOM

—Develop detailed use cases and personas
—Develop quantitative and qualitative benefits models for each use case
—Develop a corpus strategy, and assess quality and availability of content/data
—Develop a detailed journey map
—Develop a preliminary solution concept and architecture
—Design governance model and change management

Implementation & Execution
PMO, Quality Control, Change Control, Quality and Risk Management

—Design automation solution
—Configure and teach automation solution
—Define the boundaries for solution acceptance
—Conduct unit and performance/volume scale testing
—Operationalize automation and support metrics reporting
—Execute governance model and change management strategy

Sample Use Cases

Class 1	Class 2	Class 3
Challenge	**Challenge**	**Challenge**
The evolving landscape of mortgage origination activity requires consistent QA processes and reporting capabilities in order to accommodate current regulatory expectations.	Improve operational efficiency of AML monitoring and suspicious activity investigation processes as they require complicated and time-consuming manual interventions to analyze and process large volumes of transactions and investigations.	Enhance efficiency and accuracy of activities related to reconciliation, right from establishing the contract, through the receipt of the documents and its review, to finally publishing discrepancies and facilitating negotiations.
Solution	**Solution**	**Solution**
By using robotic process automation (RPA) and natural language processing (NLP), many of the repetitive as well as labor and paper intensive tasks and activities are performed by bots.	A machine learning based intelligence augmentation/decision support system throughout the Know Your Customer (KYC), investigations, risk rating, and reporting processes.	Automated reconciliation enables definition of rules and processing of structured and unstructured data to automatically match contract documents.
Potential benefits	**Potential benefits**	**Potential benefit**
Provide automated and consistent QA processes and reporting capabilities, while freeing up testing personnel.	Significantly reduce AML/OFAC personnel needed, and free up time to perform other tasks.	The whole reconciliation process that currently utilizes around 4–5 FTEs per transaction and takes around 4–5 processing days, can be executed within hours with involvement of a single FTE.

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