# AI that shows how your business flows

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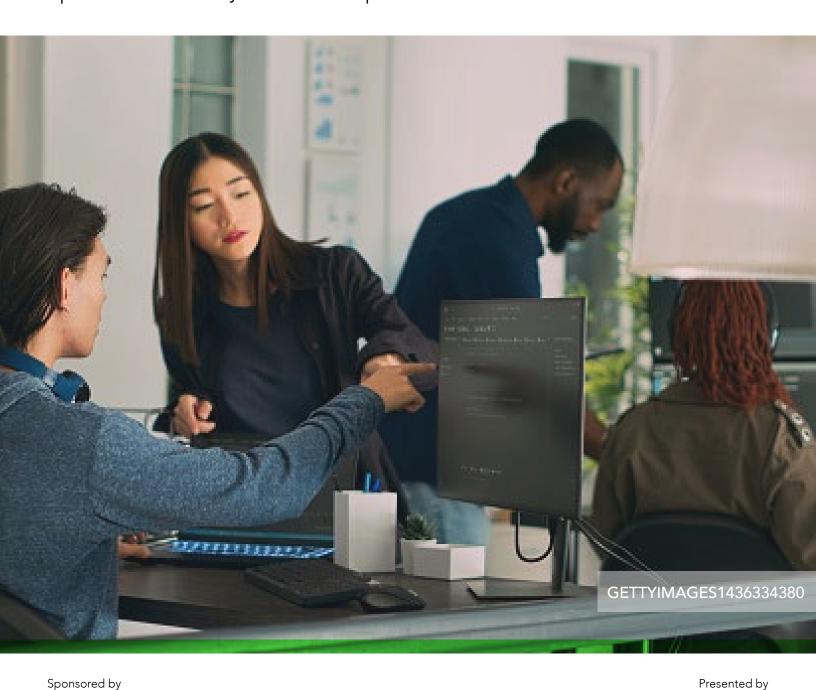
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# AI that shows how your business flows

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## Speakers

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## Moderator

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American Banker

Financial institutions have used artificial intelligence (AI) and machine learning (ML) for decades, from detecting unusual transactions that may be fraudulent, to automating routine tasks like data entry, to underwriting and credit scoring.

Generative AI and large language models (LLM) represent the next generation of these technologies. While traditional machine learning uses a clean, structured data set to model a specific task, generative AI and LLMs ingest all data types to create general purpose models that can be tailored for specific tasks.

During a roundtable hosted by American Banker and sponsored by Celonis, a panel of experts discussed how financial institutions can leverage process intelligence, along with generative AI and LMM, to increase operational efficiency, reduce costs, and improve business performance.

### Build or Buy?

One challenge that financial institutions face is whether to buy or build their models. That decision will depend on the type of model and how you plan to use it. Ari Yacobi, Innovation Lead, Data and AI, Accenture, categorizes LLM into three use case types:

- Turnkey or general-purpose models
- Models specific to a task or role within your organization
- Models deemed core to your business because they give you a competitive edge.

For the first two use cases, select a commercial option that best aligns with your technology stack from a company that has already invested billions of dollars building the model and creating security controls, advises Yacobi. Then, fine-tune and customize the model to meet the needs of a specific use case.

However, if the model represents a core competency use case, Yacobi recommends building on top of an open-source base and then customizing and fine-tuning the model.

### Using Process Intelligence in Banking

Financial institutions have used process modelling approaches such as Six Sigma and Business Process Management (BPM) to collect and analyze process data and identify bottlenecks and improve efficiency for years.

With the advent of AI and LLM, financial institutions can now take advantage of process intelligence, an advanced approach to process modelling. Process intelligence allows financial institutions to view and monitor processes using data from the IT systems the processes are executed in, explains Joaquim Nogueira, Industry Principal, Banking, Celonis.

Processes that don't work well are candidates for process intelligence, notes Nogueira. "The best way to leverage this technology isn't to put it on top of very well-designed processes because there's not much to improve. The worse the processes are, the better this technology performs.

On the other hand, when used for continuous monitoring, process intelligence technology will prevent a well-designed process from going out of track by immediately signalling degradation tendencies or even preventing undesired outcomes from occurring.

Keri Smith, Global Banking Data and AI Lead, Accenture, says financial institutions have successfully used process intelligence across the front, middle, and back office to drive employee productivity, optimize costs, and enable more efficient processes. For example, a financial institution may focus on IT developer productivity and the software development lifecycle (SDLC). In operations, it may focus on the contact center, data and knowledge management processes, and risk functions, explains Smith.

Process intelligence is not just about process mining but also about leveraging data and AI and workflow tools, adds Nogueira.

## Responsible AI

With powerful capabilities comes great responsibility, and that includes generative AI. Financial institutions are incorporating ethics and compliance into their AI efforts.

While part of the focus on responsible use is driven by regulatory pressures, financial institutions also want to do the right thing, says Ratzan. "Financial institutions believe that customers are more likely to use  their products if they implement AI safely and responsibly," he notes.

From a regulatory perspective, the government has issued administrative executive orders to ensure that companies are transparent and protect privacy. As the regulatory landscape evolves in response to generative AI, financial services companies will need to anticipate these changes.

While it's challenging to monitor the global regulatory landscape because the standards and frameworks for controlling and using generative AI are still in flux, financial institutions are up for the task. "The good news is that banks already had strong risk management policies and a tradition of responsible AI. They need to focus now on model risk management as an example, and proactively enhance their current policies, procedures, and governance to address the new risks introduced," says Smith.

To mitigate generative AI risks, Accenture benchmarks models for accuracy and correctness before putting them in production, says Yacobi. "Clients use our frameworks and tools to run checks and benchmark models before they go live. We also make sure that there is a human in the loop. Since models tend to drift over time as they learn from new inputs, clients continuously monitor their models," he explains.

It's also important to address responsibility from the start. And finally, "We recommend that responsible AI has a seat at the table from the very beginning," Yacobi adds.

**Today, technology companies are investing billions of dollars in generative AI and LLM, growing exponentially the universe of commercial and open-source LMM.**

**"These investments will transform the way we work in the next three to five years."**

**– Dr. John Ratzan**
Managing Director
NorthEast Data and AI Lead,
Accenture

Smith agrees that financial institutions must address regulations and risk when embarking on generative AI projects. "We encourage organizations to engage their risk and compliance leaders early in the process to allow for collaborative design with the business and to enable greater transparency regarding risk management actions needed," says Smith

She adds that risk practitioners should have their own learning and education program around advances in emerging technology and how it ties into existing policies so they can proactively advise the business and help them keep pace with not just innovation but organizational demands as well.

### Privacy, Hallucinations, and Bias

Even though the regulatory environment is still evolving, financial institutions must remain vigilant about risk when implementing generative AI and LLM, agrees Cong Yu, Vice President of Engineering, Celonis. From a technical perspective, Yu believes that the most important aspects to consider are privacy, hallucinations, and bias.

Privacy means ensuring proprietary data does not go elsewhere without your permission, explains Yu. Eliminating hallucinations requires faithful and fresh insights.

Retrieval augmented generation can help. With retrieval augmented generation, whenever a LLM needs to access information, the instructor model calls a knowledge base to retrieve accurate data, solving both hallucination and privacy problems. "Retrieval augmented generation is an effective mechanism to leverage your own knowledge database in models," says Yu.

Especially in credit and mortgage applications, bias is a huge issue. "Unfortunately, since data is biased, there's a lot of work to do," explains Yu.

### Use Cases: From Trade Management to Regulatory Reporting

Process intelligence and generative AI complement each other very well. Process intelligence uses the data from the financial institution as well as all the knowledge accumulated about its data while generative AI relies on external data for instructions to perform and expand its learning. However, private enterprise data remains separate from the LLM.

Banks have a vast amount of data and applying a process lens enables better outcomes. The key is to develop reusable intelligence in a way that drives faster and higher levels of efficiency. "Different use cases still have commonalities," explains Smith. "Identify these patterns and harness commonalities across similar functional areas."

"As you build out and leverage generative AI in broader process intelligence capabilities, you're able to drive more business impact and cover a larger landscape with your investment dollars," says Smith.

There's enormous opportunity in using process intelligence with AI, Yu concurs. "Imagine an advisory investment service you provide to your most important customers and being able to extend those services to your entire customer base," says Yu.

Several banks in North America are using process intelligence in trade management and payments to address straight through processing and overall cycle time. In payments, process intelligence combined with LLM can detect duplicates.

And as faster payments become a reality, generative AI and process intelligence improves fraud detection.

Other financial institutions are using process intelligence to reduce costs of regulatory reporting. Creating a validation layer over data lineage processes enables you to discover opportunities to automate data extraction and validation or verify the timeliness and accuracy of reporting.

A bank in the U.K. is using process intelligence to monitor customer-facing processes for negative outcomes. In credit collections and recovery, one bank reduced recovery time from 150 days to just 50 days, Another is using process intelligence for credit applications and has saved over $2 million in labor costs.

Some of Celonis' most mature banking customers are taking a holistic approach, using process intelligence to improve entire lines of business, says Nogueira. Use cases include digital onboarding, customer care, account servicing, card disputes, trade payments, sourcing, ITSM, KYC, and transaction monitoring.

A bank in South Africa is using process mining to improve their entire operations. Since all core business processes run through operations, as a result, they will improve most of their business processes.

**Leveraging generative AI and process intelligence is a very powerful way to optimize costs.**

## What's Next?

Most financial institutions are in experimentation mode with artificial intelligence, but Ratzan believes that there will be a massive scale of generative AI implementations in the next couple years which will accelerate capability significantly. In fact, many banks are performing diagnostic readiness assessments to understand the path to setting the right foundation in place to align their investments and adopt change management.

To take advantage of higher value use cases, modernize your data architecture and leverage cloud and data tools, advises Yacobi.

Leveraging generative AI and process intelligence is a very powerful way to optimize costs. For instance, generative AI in the back office is helping companies reinvent finance. There are also opportunities in sales using knowledge bases. In HR, generative AI plays an important role allowing employees to interact with employee benefits and or check how much paid time off they have.

A common theme, notes Smith, is tapping into the human component for enhanced customer-centricity, customer experience, and personalization to get to a customer of one. From the employee experience perspective, it's making AI relevant to their day-to-day tasks.

Front end use cases have matured around the contact center, customer service management, and conversational agent experiences, says Yacobi. "Technology development and software development lifecycle are one of the highest impact areas because gen AI plays a huge role in code generation, code completion, test plan creation, and test generation."

## About Celonis

Since 2011, Celonis has helped thousands of the world's largest and most esteemed companies yield immediate cash impact, radically improve customer experience, and reduce carbon emissions. Its Process Intelligence platform uses industry-leading process mining technology and AI to present companies with a living digital twin of their end-to-end processes. For the first time, everyone in an organization has a common language for how the business runs, visibility into where value is hiding, and the ability to capture it. Celonis is headquartered in Munich, Germany and New York City, USA with more than 20 offices worldwide.

For more information, visit celonis.com.

## About Accenture

Accenture is a leading global professional services company that helps the world's leading businesses, governments and other organizations build their digital core, optimize their operations, accelerate revenue growth and enhance citizen services—creating tangible value at speed and scale. We are a talent- and innovation-led company with approximately 743,000 people serving clients in more than 120 countries. Technology is at the core of change today, and we are one of the world's leaders in helping drive that change, with strong ecosystem relationships. We combine our strength in technology and leadership in cloud, data and AI with unmatched industry experience, functional expertise and global delivery capability. We are uniquely able to deliver tangible outcomes because of our broad range of services, solutions and assets across Strategy & Consulting, Technology, Operations, Industry X and Song. These capabilities, together with our culture of shared success and commitment to creating 360° value, enable us to help our clients reinvent and build trusted, lasting relationships. We measure our success by the 360° value we create for our clients, each other, our shareholders, partners and communities.

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