



*“InRule was a perfect fit for our technology stack, it’s very intuitive and easy to pick up, anyone could author business rules, make changes and understand the rules”*

- Luis Agudelo, Director,  
Digital Architect

## CASE STUDY

### PwC Simplifies Expense Management with InRule® and SAP Concur

*PricewaterhouseCoopers (PwC) is a multinational professional services firm. It is considered one of the “Big Four” accounting firms (the four largest firms in the world that provide audit and transaction advisory services). With revenues over \$42 billion, PwC has roughly 276,000 employees across 742 locations in 157 countries..*

*In the Middle East, PwC has had offices for more than 40 years. **PwC Middle East** has more than 4,200 employees across 12 countries, including Bahrain, Egypt, Iraq, Jordan, Kuwait, Lebanon, Libya, Oman, the Palestinian territories, Qatar, Saudi Arabia, and the United Arab Emirates.*

## CHALLENGE

To support its clients’ projects, PwC Middle East employs a large traveling workforce that can collaborate onsite with client teams. As such, this team of traveling consultants accrues travel and other expenses that are often billable to clients. The high volume of these billable expenses created a significant challenge for the finance teams responsible for employee reimbursement and client billing. The firm needed to collect, itemize, invoice, and reimburse these costs in a timely and accurate manner. To accomplish this, PwC deployed SAP Concur, an expense and invoice management tool.

SAP Concur met the firm’s basic needs for expenses and invoices; however, the system fell short when complex logic was applied to reimbursements or invoices. Additionally, varying Value Added Tax (VAT) requirements and regulations across the 13 countries of the region created different rules for how expenses needed to be managed.

These complex rules were all in the minds of the approvers or hard-coded into the firm’s legacy finance application. Further complicating matters was the fact that each of the countries had its own finance application. That meant hundreds of expense and invoice rules and 13 legacy systems needed to integrate with SAP Concur. With a tremendous challenge on hand, the firm needed to find a way to standardize the management of the rules and integrate all systems.

# PROJECT OVERVIEW

PwC Director and Digital Architect Luis Agudelo had previous exposure to decision automation technology and knew this type of solution could help his team overcome the challenges they faced related to complex and variable logic across the region. Agudelo and his colleagues set out to explore the leaders in the market. PwC sought a decision platform that would allow it to:

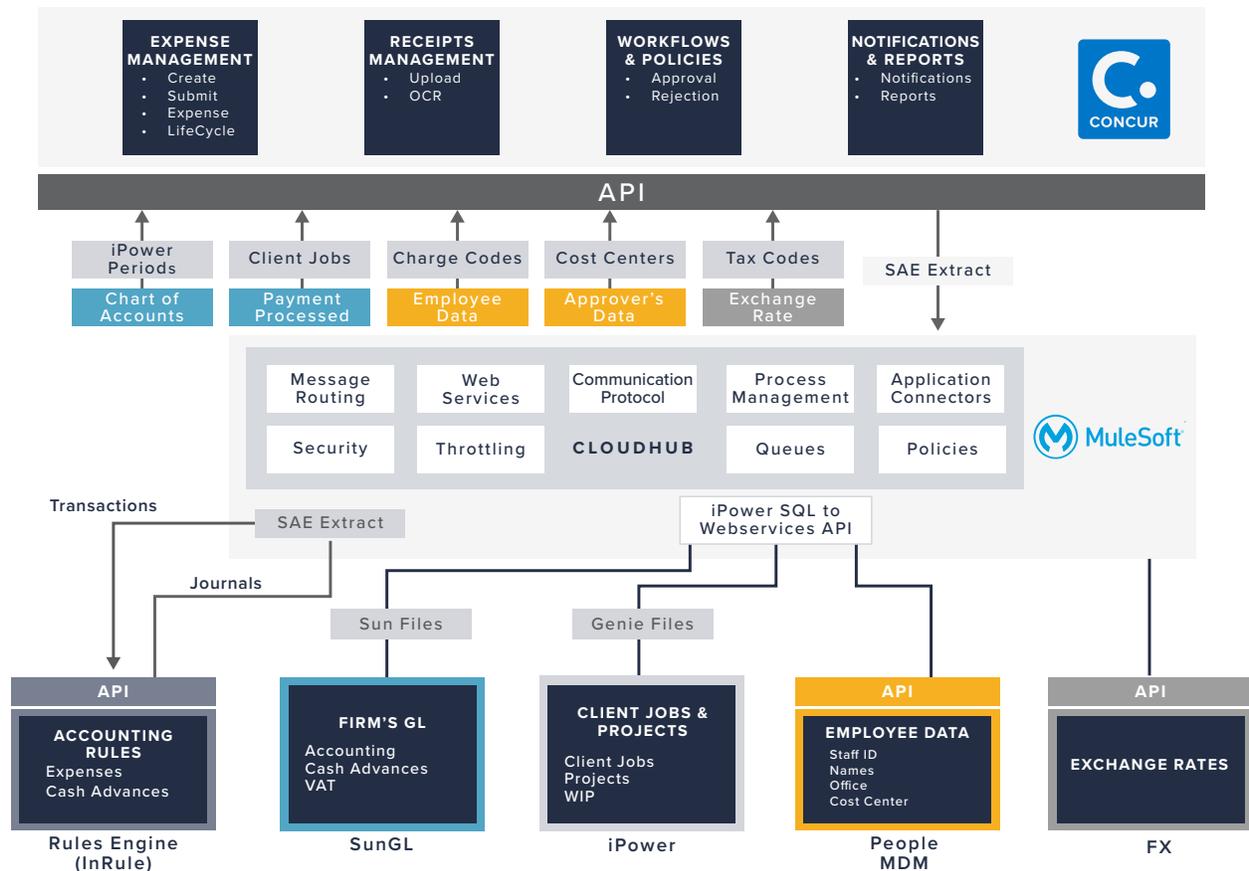
- (1) Centralize the region's expense and invoice decision logic in a single location;
- (2) Extract existing decision logic from application code and transform it into business rules that business users could quickly write, manage and update;
- (3) Leverage existing technology investments by easily integrating with its current stack.

# SOLUTION

After an extensive evaluation process, PwC Middle East selected the InRule® Decision Platform and Rules Engine. InRule's rule authoring experience stood out to the PwC team as it allowed non-technical users to write business rules in straightforward business language. Additionally, InRule's ability to centralize PwC's decision logic in one location and track changes for versioning also stood out to the team. Finally, it was determined that InRule could easily integrate into PwC's technology stack.

Once InRule was selected, the PwC team used Mulesoft to integrate Concur, InRule, and each of its 13 financial systems. The PwC team then began creating hundreds of business rules based on the hard-coded logic that sat inside its legacy systems. Once the rules were created and the systems were integrated, InRule was deployed in the firm's Microsoft Azure cloud.

## CONCEPTUAL ARCHITECTURE



Now, when a PwC employee enters an expense into Concur, it is sent via a webservice with a REST call to InRule which replies with all the credits and debits that need to be input so that the expense can be processed. When the inputs are complete, the completed output journals are then sent back to Concur so the expense can be further managed.

## RESULTS

Adding InRule to the PwC expense management technology stack has been an overwhelming success for PwC Middle East. The region now has a seamlessly integrated expense and invoice management system using a best-of-breed technology strategy. The solution provides easy-to-use business rules authoring and managing capabilities and one central location for the region's decision logic. PwC's new invoice and expense management system is used by 6,000 employees across 13 different countries.

InRule was so easy to use that the PwC Middle East implementation team, comprised exclusively of two technical users, deployed the solution in just a few short months. Luis Agudelo described working in InRule as "very intuitive and easy to pick up." In fact, the team was able to create business rules in InRule prior to receiving any formal product training. Additionally, in light of the fast deployment, ease of use, and overall project success, Agudelo indicated that PwC Middle East is looking to expand the use of InRule to other applications.

## NEXT STEPS

PwC Middle East is considering deploying InRule to manage financial controls for regulatory compliance. Additionally, the firm plans to explore using InRule for data cleansing and master data management for further financial control. Based on the success of their InRule deployment, the team feels there is no shortage of areas within the business where InRule can provide value.