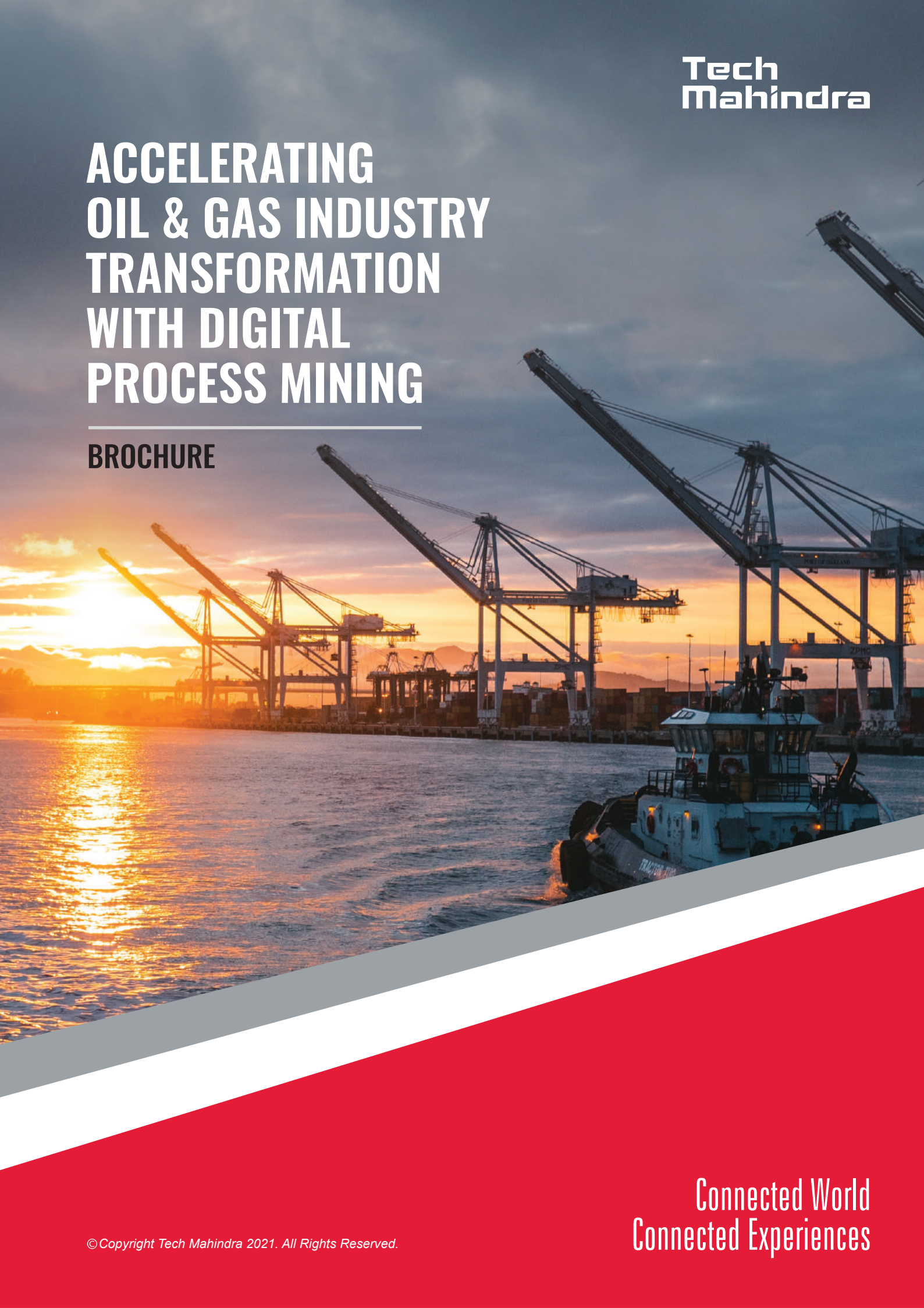


ACCELERATING OIL & GAS INDUSTRY TRANSFORMATION WITH DIGITAL PROCESS MINING

BROCHURE



- ✓ **Analyze Finance & Procurement performance**
- ✓ **Provide intelligent recommendations to reduce costs**
- ✓ **Meet regulatory and security requirements**

From the smallest independents to the supermajors, CFOs/CPOs of Oil and Gas companies are under margin pressures. Its time that they investigate the FAO & Procurement workstreams like AP, AR, GL, P2P, O2C, R2R, S2C et al. across business units to instantly dig through vast amounts of data that reveal cost benefits. Process mining can produce clean & reliable insights of value using correct & adequate amount of technology.

Oil and Gas processes are very complex & involve many different IT-based activities that create huge amounts of data. Tech Mahindra can apply Remote Process Mining techniques that can help Oil and Gas companies achieve full transparency and higher efficiency in their workflows. It will read the event logs to learn more about the business processes and prioritize the automation opportunities leading to more efficient deployment of BOTs along with waste elimination while reducing cost-to-serve, thus improving processes across the **Upstream, Midstream & Downstream Service Value Chain**.

STRATEGIC WAYS TO UTILIZE PROCESS MINING:



Faster & better decisions through process transparency



Optimizing expense structure and controlling costs



Monitor real performance and compare them with targets



Identify sources of additional revenue



Auditing, Compliance, Fraud prevention

WHAT IS PROCESS MINING?

With time, every process exhibits some friction, like an aging ERP leading to negative working capital impact, Low Productivity and compliance risk. Other issues that exist, includes:

Do we have a clear view of your end-to-end processes & associated digital process maps?

During pandemic situations like COVID-19, Process Mining can apply advanced analytics to extract knowledge from existing data and variety of Accounting, Billing and Reporting systems be it legacy/digital.

Do we make use of existing company data to improve processes and digitize them?

Data Mining algorithms are used to identify trends and other details hidden in the event logs. The new knowledge improves & enhances the business processes & reduces cost-to-serve

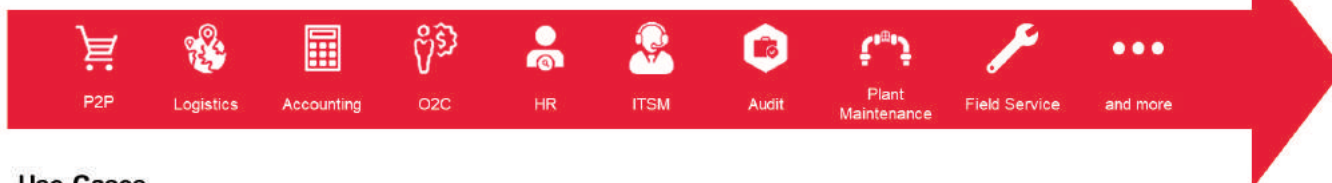
Do you often end up implementing process changes and automation based on gut feel rather than fact?

Process Mining gives us clear visuals of workarounds, patterns & discrepancies in internal processes. This helps diagnose problems based on facts & resolve them quickly.

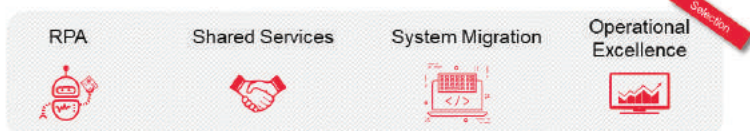


PROCESS MINING ALONG THE ENTIRE VALUE CHAIN

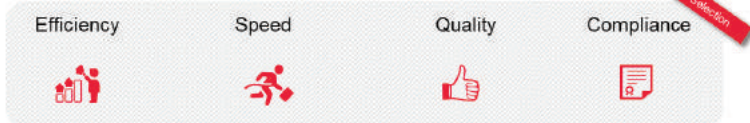
Processes within integrated O&G companies



Use Cases



Earnings



100% transparency: workflows are visualized in real-time



ERP: Enterprise Resource Planning
CRM: Customer Relationship Management

KEY IMPACT ACROSS PROCESSES & SYSTEMS

| Typical Processes from our Customer Base in Oil and Gas Industry & Chemicals |
|--|
| Procurement |
| Order-to-Cash |
| Plant Maintenance |
| Customer Service |
| Logistics |
| Production Planning |
| Warehouse Management |
| Human Resources |
| Master Data Management |
| Payables |
| Receivables |
| IT Service Management |

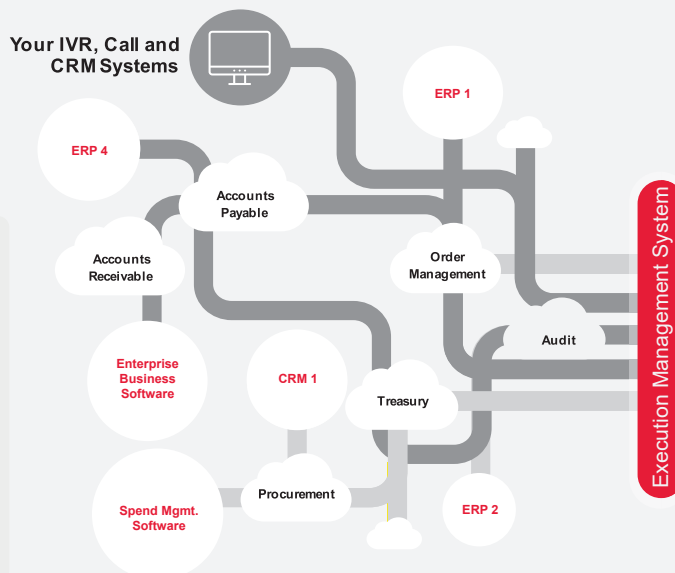
| Type | Use Case | Realization* |
|------------|-----------------------|-----------------|
| Efficiency | Manual Changes | 30% Reduction |
| | Manual Validation | 30% Reduction |
| Speed | Automation | 30% Improvement |
| | Loops | 25% Reduction |
| | Throughput Time | 25% Reduction |
| Quality | Validity Check | 70% Improvement |
| | Rework | 25% Reduction |
| | Duplicates | 50% Reduction |
| | Cancelations | 30% Reduction |
| | First Time Right | 40% Improvement |
| | Customer Satisfaction | 50% Improvement |
| Compliance | Segregation of Duties | 80% Improvement |
| | Compliance Issues | 70% Reduction |

*All results are based on empirical values of our customers.

Result: Average savings per process per year: 1.2M - 2.9M USD

HOW DATA-DRIVEN PROCESS EXECUTION IN OIL & GAS COMPANY CREATE FINANCIAL VALUE

Enterprise Processes



Create Financial Value

Visualization of the actual processes



AI-powered root cause analysis & improvement



Optimize Working Capital

High Productivity

Compliance Confidence

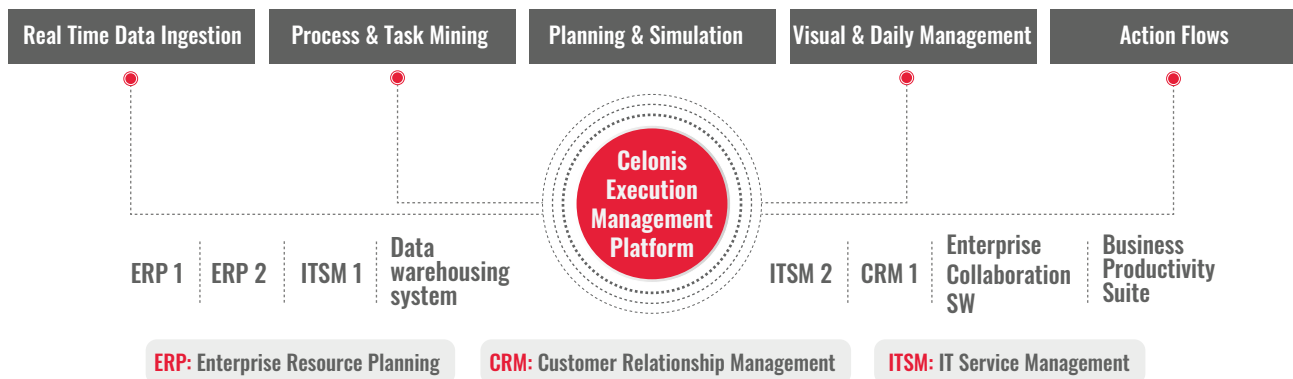
ERP: Enterprise Resource Planning
CRM: Customer Relationship Management

Celonis Execution Management System

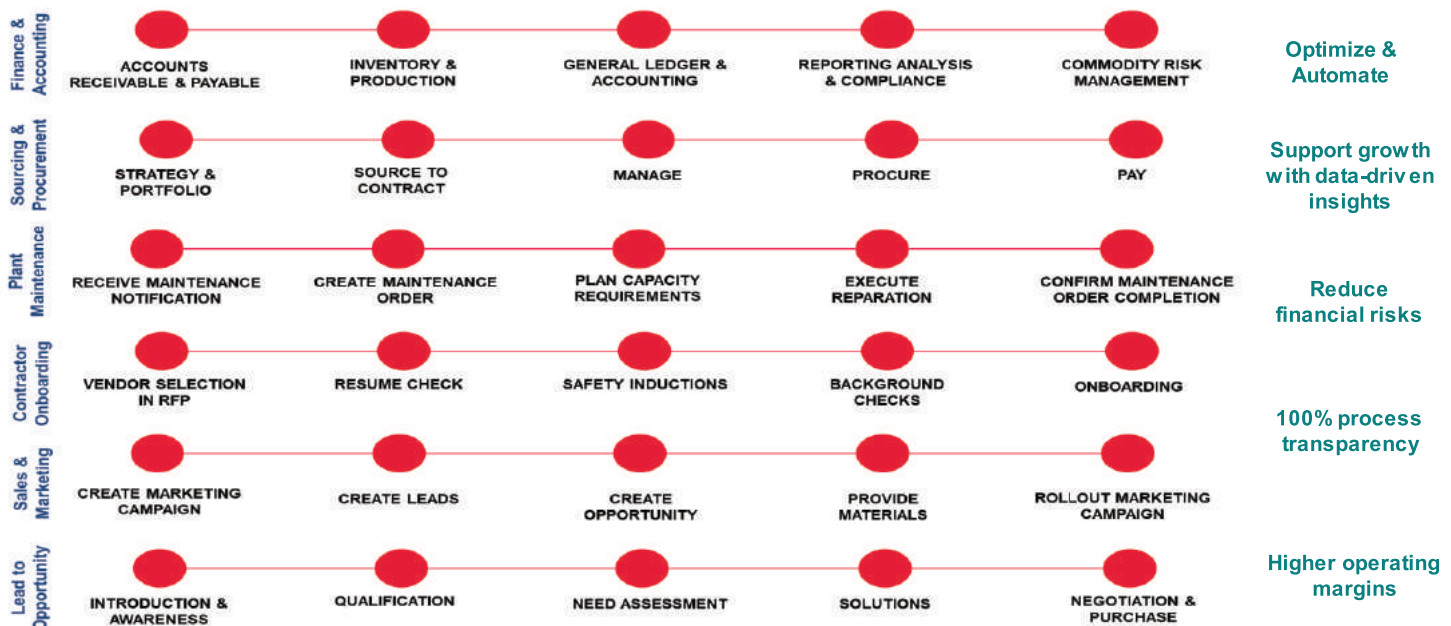
Celonis Execution Management System (EMS) offers companies a modern way to run their business processes entirely driven by data and intelligence. The Celonis EMS is powered by Process Mining. Celonis pioneered Process Mining 10 years ago and now, they dominate this market with over 2000 deployments, including 30+ Global Oil & Gas and utility companies.

Celonis Execution Management System

Execution Apps

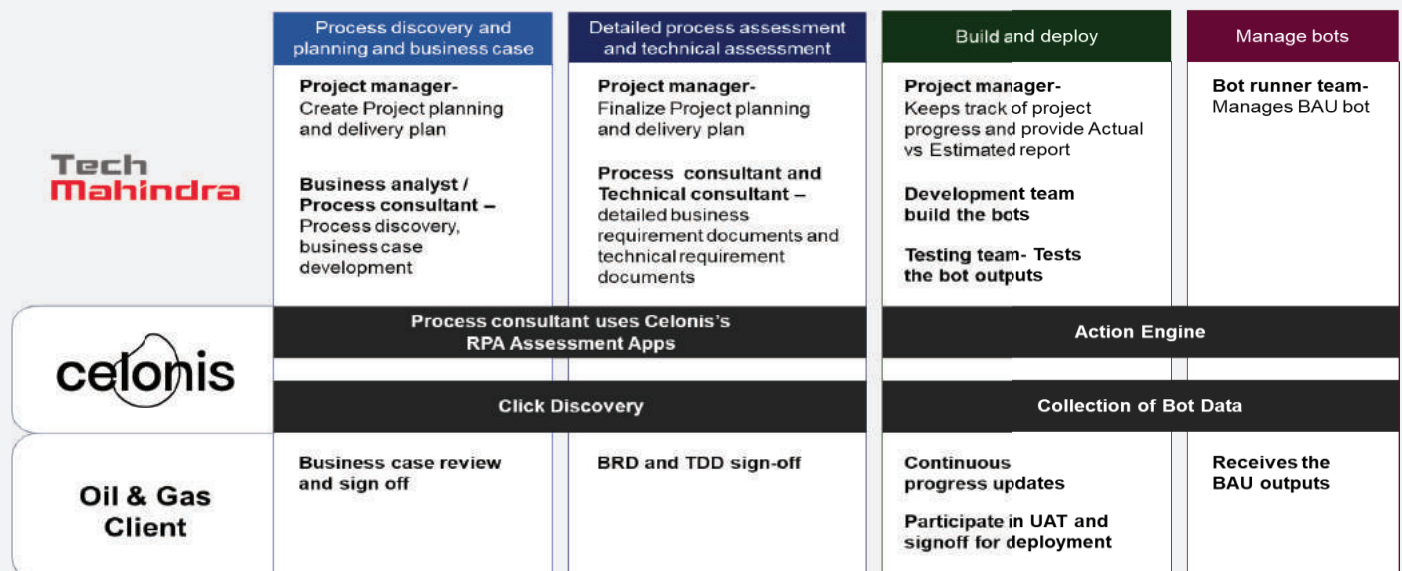


MAJOR INTERVENTIONS ACROSS PROCESSES FOR STREAMLINED BUSINESS OPERATIONS



HOW TECHM & CELONIS CAN JOIN FORCES FOR THE OIL AND GAS INDUSTRY

3 Way Collaboration Approach



OUTCOMES DELIVERED WITHIN THE OIL AND GAS PROCESSES

Reduce Goods Movement Involved

By detecting patterns in good movement activities and relocating parts and equipment, we were able to increase the **on-time completion rate from 57% to 78%**

Rejection of Service Notifications & Work Order Approval

Within five months, we were able to **improve the cycle time of purchasing by 4.6 days while reducing the need of ad hoc purchases overall to 12%**

Speed Up Lead To Opportunity Processes

Using the Action Engine, the rate of delayed conversation of leads to opportunities was **reduced from 38% to 10%**.

Speed Up Contractor Onboarding

Using the Action Engine, the rate of late contractor onboarding was **reduced from 23% to 8%**.

TYPICAL USE CASES FOR PROCESS MINING

Process mining in Oil and Gas is beneficial to many situations in large organizations. Most common use cases are mentioned below:

Robotic Process Automation

Understand the actual processes, variations, and automation opportunities in order to succeed in RPA projects like Collections, Customer Service Management and others across upstream, midstream & downstream processes

Process KPI Reporting

Create complete process KPIs and dashboards for any given process. This will include optimization of Oil and Gas production leading to conservation.

Digital Transformation

Understand the "big picture" – demographic study on demand habits, enabling a know-how of what to prioritize and areas of transformation which can enable the society to avoid loss of resources.

Auditing & Compliance

Drive compliance with agreed processes, rules and regulations. At the same time keeping CX also as a priority.

Process Improvement

Identify bottlenecks, rework, and other symptoms of inefficient processes. This would prioritize automation interventions in these areas to increase operational efficiency & reduce churn.

IT & ERP Development

Support ERP consolidation, new deployments and major version upgrades.

PARTNER SUCCESS STORIES

Transformed refinery maintenance, and spare parts management, improving stocks, and **on time delivery by 20%**

American O&G MNC

Signed in January 2019 and went live with **Plant Maintenance and P2P within 2 months**. Upsell of additional 4 processes in May 2019.

British O&G MNC

Transformed **their key processes** and now want to expand into industry specific use cases.

Anglo-Dutch O&G MNC

Transformed the IT delivery process introduction of a new ERP affecting more than **20,000 users and prepared for S/4**

US headquartered oilfield services MNC

Implemented and transformed more than **10 processes by themselves** connecting 8+ source systems such as SAP IS-OIL and other customized solutions.

Finnish Oil refining company

CONCLUSION

The selection of where to apply process mining is important. Organizations will get the best value from applying it to processes that have been digitized (i.e. supported by an IT system) and where there is still unstructured work & unorganized data that is managed outside the IT infrastructure.

We have the skilled resources who can do a quick remote diagnostic of your processes and present the business ROI, the opportunities to automate and optimize the processes and the associated volume reduction it can do.

For more details, please write to us at:

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