

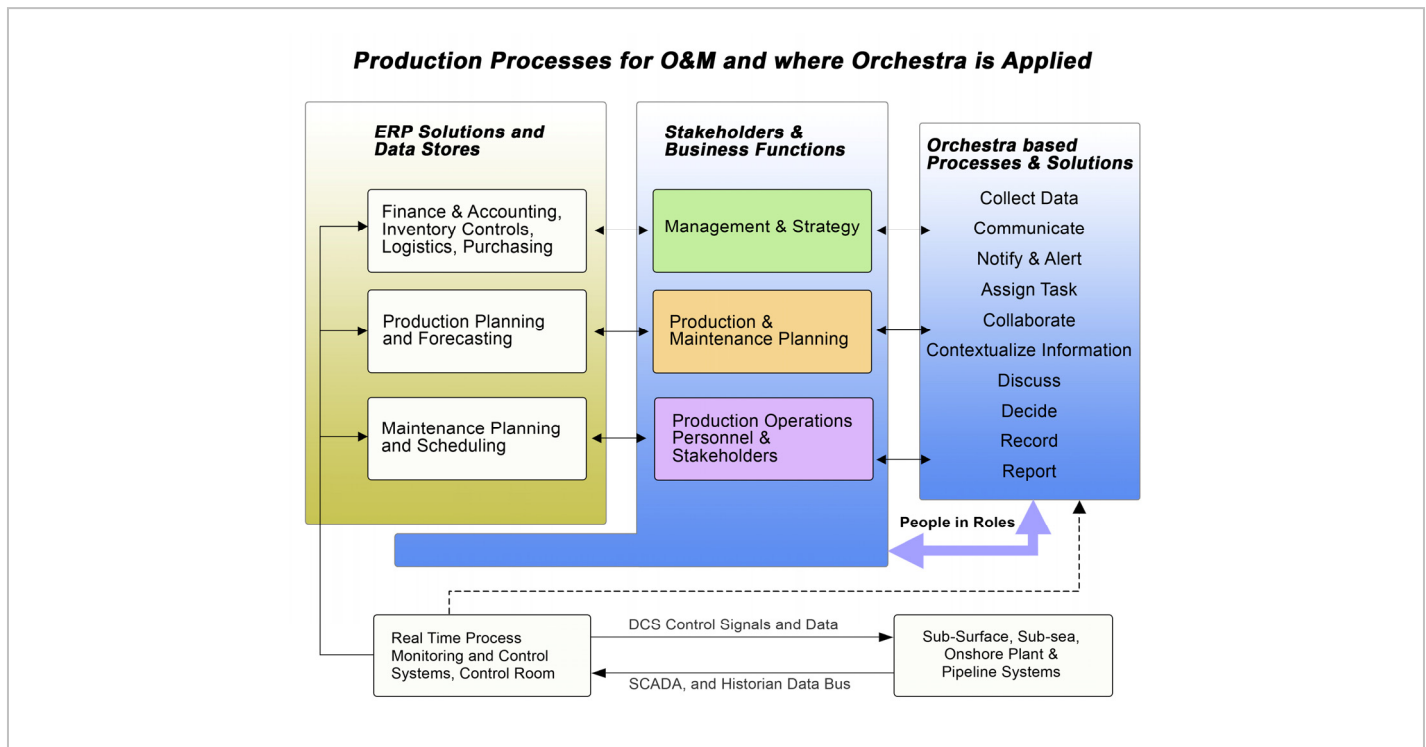


# Orchestrated Business Processes for Production Operations and Maintenance of Oil and Gas Facilities

## Maximizing First Year Operability

The primary production and operations related processes are conducted by control room activities. These are real time decisions that are based on SCADA and DCS data busses. Plant operations also require involvement and approvals by stakeholders responsible for the governance and execution of strategy, planning, HSE, compliance and security. These require people who work outside of the control rooms but who are still required to make “informed decisions” expeditiously. Out of these people-in-the-loop workflows, some workflows and decisions are best automated or assisted by transactional ERP (Enterprise Resource Planning) systems because the inputs (e.g. spares inventory, people availability) or outputs (financial information, production availability-PDMS) reside in ERP.

Operations, planning and strategic workflows that management personnel conduct to keep the plant operating, or maintained require - deliberations among themselves, choreographed collaboration and communications often through emails, SMS, phone calls and exchanged documents. These are people-in-the-loop processes. Conducting these on an ad hoc basis is risky because key people to people steps can be missed and Key steps in the production processes can fall between unintentional cracks. Products of these deliberative decisions are essential for compliance and audit trace ability (e.g. in case of an accident or unplanned shut down); and to build a well organized knowledge base about what decisions were made, under what conditions, and why, on specific systems and by which roles on which O&M processes.



Orchestra is used to provide automation of these people oriented decision processes. At times they may be provided with data from the process data buss or from ERP. But the decisions made employ the experience and skills by accountable stakeholders who are assigned those responsibilities. Orchestra provides the email communication channels that are tuned to the business processes. These emails and associated content and metadata are automatically self-organized into the contexts of the process; the systems and subsystems, and the roles. This information is presented in dashboards, on their emails through notification, and shortly through SMS. This knowledge may be re-visited or re-purposed for improving the maintainability, reliability, and uptime of the plant. Improving First Year Operability is the key to maximizing the return on capital expended on an oil and gas facility.

# IEPS – ( Integrated E&P Suite for Oil & Gas )

