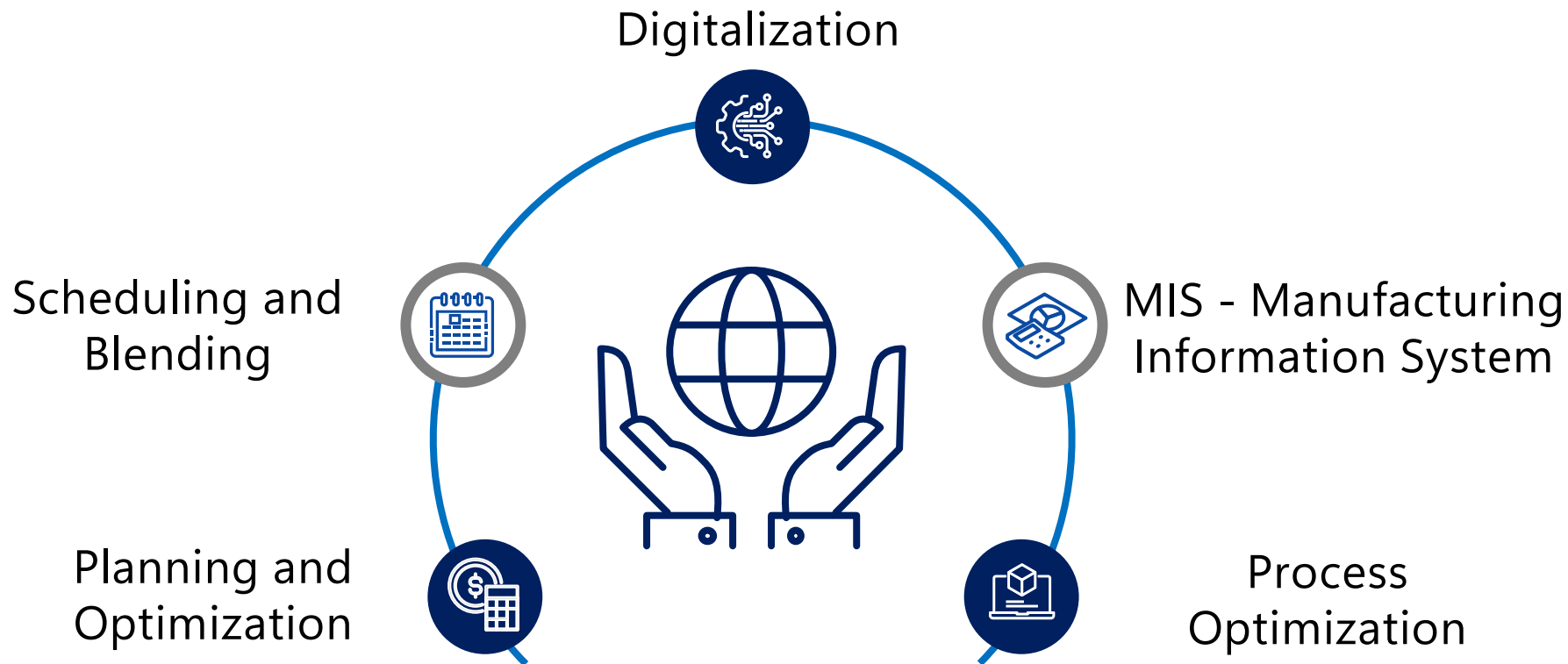# IZZI Business Services

Company Profile

About Us

❖ Reputed and trusted sales as well as service provider since 2016.

❖ Serving manufacturing industries with special focus on Energy sector.

❖ Best in class service by experienced and certified professionals.

  ➢ 19+ implementation and support projects delivered.

  ➢ 16+ consulting service assignments executed.

❖ Stands firm on pillars of moral values and ethical business practices.

❖ Registered as LLP in India and LLC in UAE.

Service domains

Digitalization

Scheduling and Blending

MIS - Manufacturing Information System

Planning and Optimization

Process Optimization

Our services

Implementation

We provide operational technology implementation services to build models for clients with industry best standards. We also provide integration services for seamless data flow across various business applications.
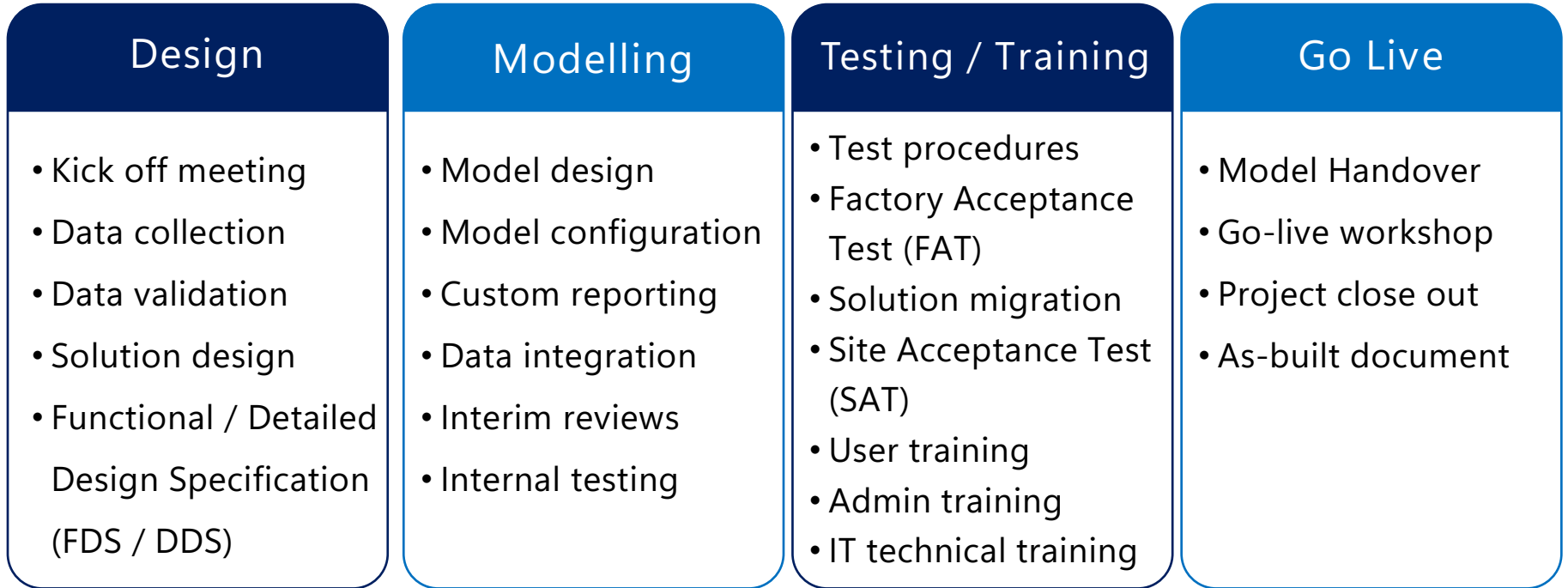
Consulting

We provide technical and project management consulting services to our clients to elevate their business processes and model utilizations to align with industry best practices.

Support

We provide continuous and need based support services to our clients, to ensure maximum benefits are achieved by effective utilizations of existing systems.

Training

We provide standard and customized training programs for business processes and applications, in line with client requirements.

Implementation services

Design

- Kick off meeting
- Data collection
- Data validation
- Solution design
- Functional / Detailed Design Specification (FDS / DDS)

Modelling

- Model design
- Model configuration
- Custom reporting
- Data integration
- Interim reviews
- Internal testing

Testing / Training

- Test procedures
- Factory Acceptance Test (FAT)
- Solution migration
- Site Acceptance Test (SAT)
- User training
- Admin training
- IT technical training

Go Live

- Model Handover
- Go-live workshop
- Project close out
- As-built document

Project Management

Consulting services

- ❖ Business process consulting

    - ➢ As-Is business process review

    - ➢ Industry best practices

    - ➢ Gap analysis & improvement strategies

    - ➢ To-Be business processes mapping

- ❖ Architecture design for OT applications

- ❖ Requirement specifications / scope of work documents

- ❖ Project management consulting (PMC) services

- ❖ Refinery configuration studies

- ❖ Profit improvement studies / consulting services

Training services

Technology specific training	• Standard product training • Client specific customized training

Remote training

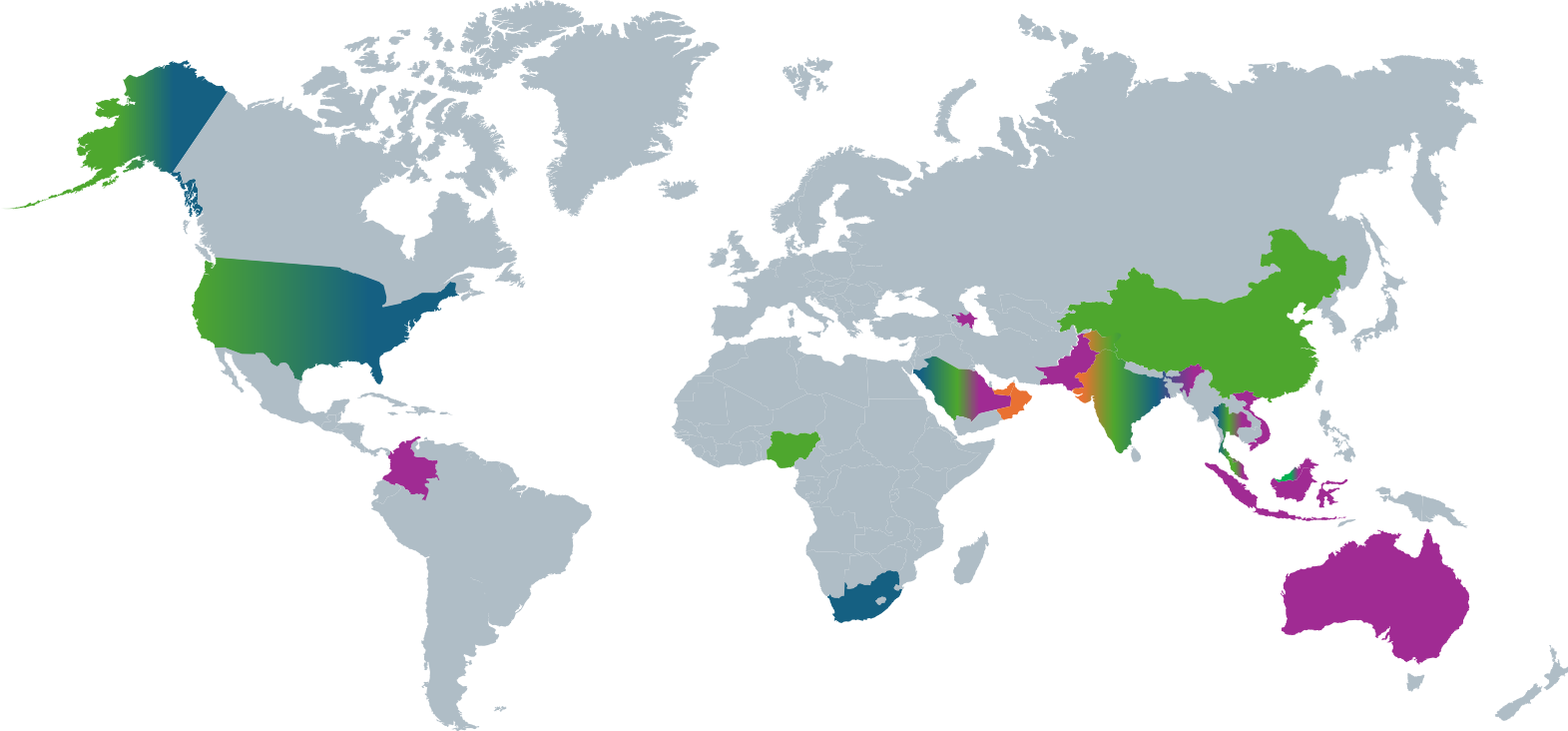|	
Business domain training	• Standard training • Advanced customized trainings

Onsite classroom training

Support services

❖ Continuous and uninterrupted support services to ensure the maximum benefits are achieved by customers.

❖ Onsite and remote support services

➢ Functional support for business processes

➢ Technical support for model maintenance and update

❖ Flexible support models as per client requirements

➢ Continuous support with dedicated engineers

➢ Need based support to optimize service cost

➢ Onsite, remote or combination of both

Our global clients

| Planning | Scheduling | Digitalization | Consulting |

Our Partners

Manufacturing Supply Chain

Crude assay management

❖ Crude oil analysis

❖ Crude assay synthesis or updates using lab data

❖ Crude tower tuning using distillation data

❖ Crude assay integration with planning and scheduling models

❖ Crude net back value calculations

Technologies

- Aspen Assay Manager
- AVEVA USC Assay
- AVEVA ECKM*
- Haverly H/CAMS
- Haverly H/COMET

*Enterprise Crude Knowledge Management

Planning and optimization

❖ Build, review and update LP models for single-plant, multi-plant & multi-period

❖ Model conversion from one LP tool to another

❖ Cost / benefit evaluation

❖ Profit improvement opportunities identification

❖ Unit configuration studies for green field and brown field refinery and petrochemicals

❖ Planning process and LP model trainings

Technologies

- Aspen PIMS
- Aspen Unified PIMS
- Aspen Unified Multisite for PIMS
- AVEVA USC Plan
- Haverly GRTMPS
- Chevron Petro LP

Scheduling and blending

❖ Build, review and update scheduling & blending optimization models for refinery and petrochemicals

❖ Logistics scheduling

❖ Short-term and long-term scheduling business process

❖ Data integration with required business applications for seamless work process

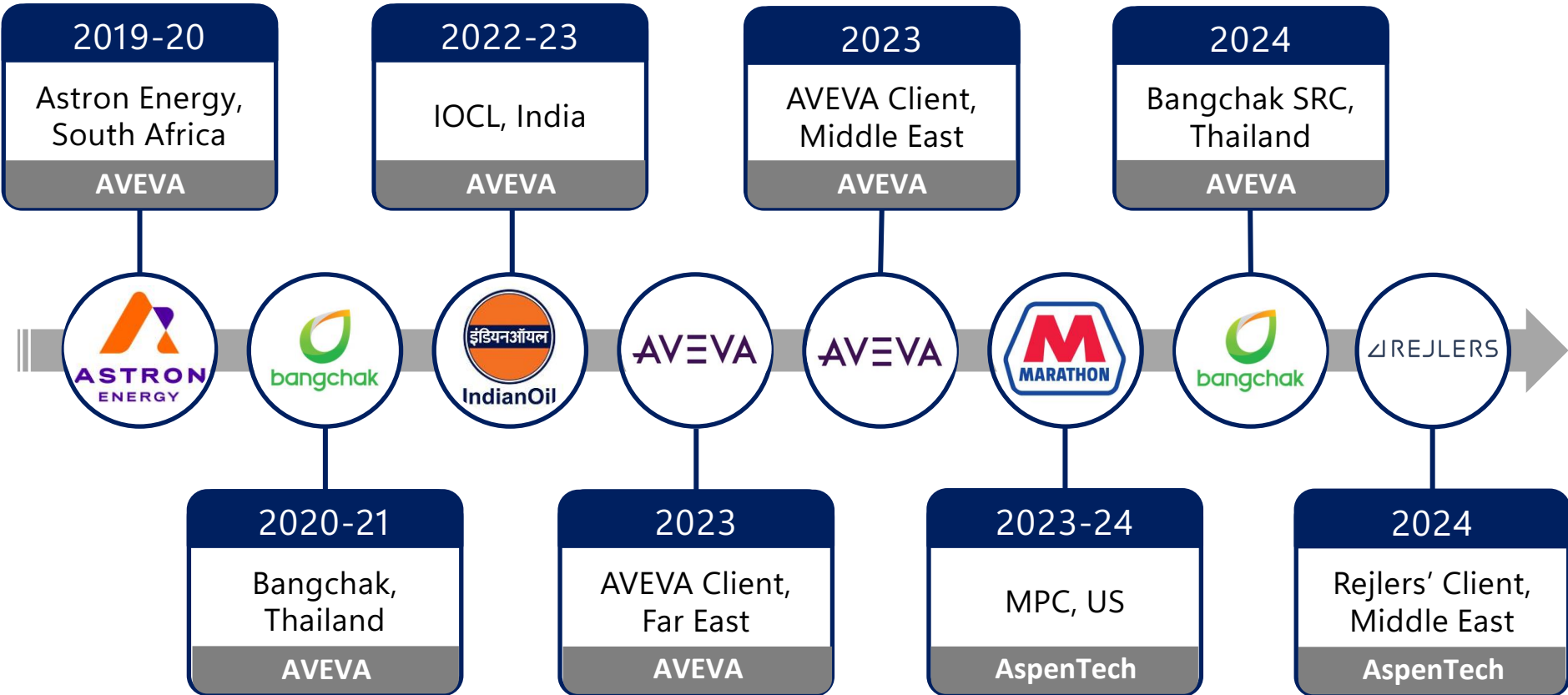❖ Scheduling, logistics & blend optimization training

Technologies

- Aspen – APS and ARMBO
- Aspen Unified Scheduling
- AVEVA USC Schedule
- KBC VM Supply Chain Schedule
- Custom Excel based scheduling models

Scheduling and blending - AspenTech

❖ Acquired standard Aspen Unified Scheduling (AUS) training.

❖ Integrating Aspen Unified PIMS (AUP) with APS (legacy).

❖ Aspen application data integration with other applications to enable seamless business process for Baseline update & roll forward process, Approval based workflow and Reports/visualization.

Technologies

- Aspen Petroleum Scheduler (APS)
- Aspen Refinery Multi-blend optimizer (ARMBO)
- Aspen Unified Scheduling
- Aspen Report Writer (ARW)

Planning Projects

2020-2021: Planning Model Implementation

Planning model implementation using AVEVA USC Plan

- ❖ Turnkey refinery planning model implementation project covering different project phases from KOM, data collection, FDS, model building, FAT, UAT, trainings, go-live, post implementation support.
- ❖ Delivered multi-period planning model with inventory optimization.
- ❖ Performed and proved performance guarantee by improving model accuracy against the base case.
- ❖ Excel based templates for planning inputs.
- ❖ Custom excel template-based reports for monthly operating plan and crude indifference value (CIV).

Client – Bangchak, Thailand

Partner – AVEVA

2024: Planning Model Implementation

Planning model for Sriracha Refinery using AVEVA USC Plan

❖ Refinery planning model development project using AUSC Plan from legacy LP tool covering different project phases from KOM, data collection, model building, FAT, SAT, trainings, go-live, post implementation support.

❖ Multi-period planning model with inventory optimization.

❖ Excel based templates for planning inputs.

❖ Excel based custom reports for planning results.

❖ Standard product training

Client – Bangchak SRC, Thailand

Partner – AVEVA

2019-2020: Planning Model Implementation

LP model development using Aveva USC Plan

❖ Refinery planning model development project to convert existing LP model from legacy tool to AUSC Plan.

❖ Full Integration of AUSC Plan model with AUSC Crude Assay Manager.

❖ Validation of results for converted LP model against legacy LP cases.

Client – Astron Energy, South Africa

Partner – AVEVA

2023-2024: Planning Model Consulting

Opportunity case analysis using Aspen XPIMS

❖ Analyzing the opportunities for improvement using Aspen XPIMS models for South (covering 2 refinery sites) and North (covering 4 refinery sites) regions.

❖ Services mainly included case setup, case runs, infeasibility troubleshooting, cases comparison.

❖ Highlight the benefits of using XPIMS model over PPIMS model.

❖ Identify and capture the benefits based on various LP runs.

Client – Marathon Petroleum Corporation, US

Partner – Proclink

2023: Planning Model Implementation

Planning model conversion using Aveva USC Plan

❖ Refinery planning model development to convert existing LP model from legacy tool to AUSC Plan.

❖ Key highlights of the model are detailed below:

➢ Process model structures with yield variability based on different throughputs.

➢ Mixed integer program (MIP) configuration for various units based on mode, severity, feed bracket constraints.

Client – AVEVA Client, Far East

AVEVA

Partner – AVEVA

2023: Planning Model Implementation

Planning model conversion using Aveva USC Plan

❖ Refinery and petrochemical planning model development to convert existing LP model from legacy tool to AUSC Plan.

❖ Key highlights of the model are detailed below:

➢ Configuration of refinery process units, ethane cracker and petrochemical units.

➢ Process unit configuration with stochiometric yields, product-based throughput, utility and operating conditions for petrochemical units.

➢ Detailed modelling with component-based tracking of naphtha from CDU to aromatics complex.

Client – AVEVA Client, Middle East

Partner – AVEVA

2024: Planning model support

Planning model update using Aspen XPIMS for Rejlers' client and economic sensitivities

❖ The project scope involves providing LP model support for updating Aspen PIMS-AO model.

❖ Services mainly included submodel modifications as per project data, case setup, case runs, infeasibility troubleshooting, cases comparison.

❖ Additionally, the study incorporated feasibility evaluations through Aspen XPIMS to assess the impact of throughput sensitivity to identify bottlenecks of profit-making unit & impact on other refinery operations and profitability.

Client – Rejlers' Client, Middle East

⊿REJLERS

Partner – Rejlers

2022-2023: Planning Model Support

> ## Planning model implementation support using Aveva USC Plan

❖ Support the final project phase for delivery of planning model using AVEVA USC Plan

❖ Modification of the plan model in line with best practices

❖ Resolution the open punch items and prepare for SAT
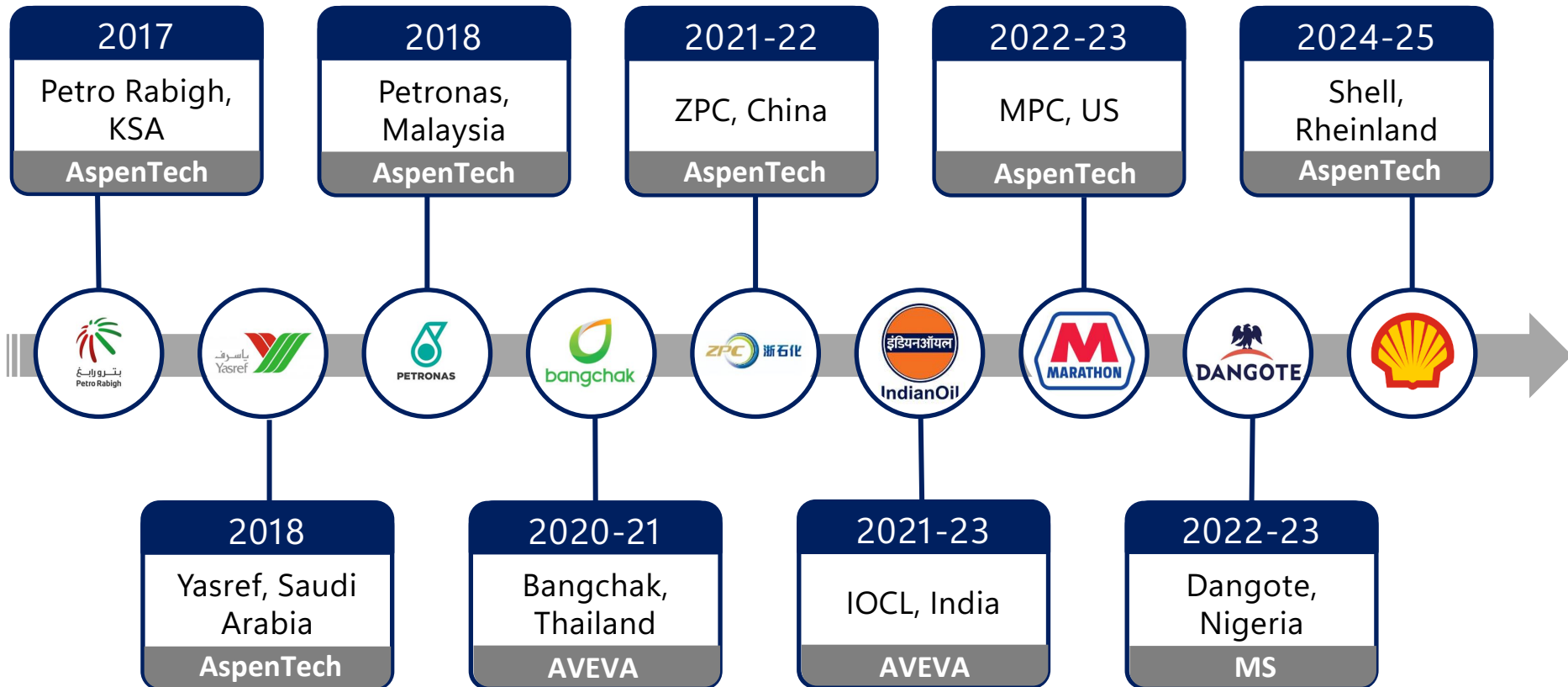
❖ As-built documentation

IndianOil

Client – Indian Oil Corporation, India

proclink picture the future

Partner – Proclink

Scheduling Projects

2017	2018	2021-22	2022-23	2024-25
Petro Rabigh, KSA	Petronas, Malaysia	ZPC, China	MPC, US	Shell, Rheinland
AspenTech	**AspenTech**	**AspenTech**	**AspenTech**	**AspenTech**

2018	2020-21	2021-23	2022-23
Yasref, Saudi Arabia	Bangchak, Thailand	IOCL, India	Dangote, Nigeria
AspenTech	**AVEVA**	**AVEVA**	**MS**

2021-2023: Scheduling Model Implementation

Multi-site scheduling model implementation using AVEVA USC Schedule

- ❖ Project implementation scope was refinery scheduling models for 9 refineries and 1 PetChem complex.
- ❖ IZZIBS scope covered KOM, onsite data collection, FDS and model design for 7 refineries.
- ❖ IZZIBS scope also covered model building, FAT, SAT, trainings, go-live for 4 refineries.
- ❖ Support to integration team for testing of baseline data and custom reports.

Client – Indian Oil Corporation, India

Partner – AVEVA

2020-2021: Scheduling Model Implementation

Scheduling model implementation using AVEVA USC Schedule

❖ Turnkey refinery scheduling model implementation project covering different project phases from KOM, data collection, FDS, model building, FAT, UAT, trainings, go-live, post implementation support.

❖ Excel based templates for baselining data.

❖ Support for custom scheduling reports.

❖ Unified environment covering integration with AVEVA Plan and AVEVA Assay.

Client – Bangchak, Thailand

Partner – AVEVA

2017: Scheduling Model Implementation

Scheduling model development using Aspen Petroleum Scheduler (APS)

❖ Scheduling model development project for Petro Rabigh refinery and Petrochemical complex, Saudi Arabia covering KOM, data collection, FDS, model building, report generations, UAT, SAT, training, go-live and as-built document.

❖ Some of the highlights of the model are as below:
  ➢ SMCs for refinery and petrochemical units
  ➢ Configured #LP for FO blending
  ➢ Inbound integration and custom reporting

❖ Project completed and signed off before time.

Client – Petro Rabigh, KSA

Partner – Accenture

2022-2023: Scheduling Model Implementation

Multiple APS models for crude scheduling and logistics

❖ 5 scheduling model development using Aspen Petroleum Scheduler (APS) for 19 desks to manage the crude network

❖ Configure EIUs to create bulk events into APS

❖ Model and EIU testing and validation

❖ Desk wise training to schedulers

❖ 4 weeks hyper care support post go-live for each desk

❖ As-built and user guide documentation

❖ Integration support for APS with other applications

Client – Marathon Petroleum Corporation, US

Partner – Proclink

2018: Scheduling & blending SME Services

> **Subject matter expert (SME) services for scheduling & blending optimization**

- ❖ Scheduling model development assistance for Aspen Petroleum Scheduler / Multi Blend Optimizer
- ❖ Design documents review and update
- ❖ Model testing and update
- ❖ ARW reports development and delivery
- ❖ Provided expert inputs for inbound and outbound integration to / from APS
- ❖ Support for model and integration SAT
- ❖ Onsite APS training delivery

PETRONAS

Client – Petronas, Malaysia

accenture
High performance. Delivered.

Partner – Accenture

2021-2022: Scheduling Model Implementation

> **Scheduling model update and delivery using Aspen Petroleum Scheduler (APS)**

❖ Project implementation partner with Shell Global Solutions for integrated refinery and petrochem scheduling models project for ZPC, China.

❖ Project scope covers
  ➢ Rigorous testing of already built APS model
  ➢ FAT comment resolution
  ➢ 2+ months long interactive SAT with client
  ➢ Trainings
  ➢ As-built and user documentation
  ➢ Go-live workshop

Client – Zhejiang Petrochemical Corp, China

Partner – Shell GS

2024-2025: Scheduling Model Support

Scheduling model modifications support using Aspen Petroleum Scheduler (APS)

❖ Project implementation partner with Shell GS for modifications in scheduling model for two of the Shell's refineries in Rheinland.
❖ Project scope covers
  ➢ Modification of existing APS models due to decommissioning of existing units like CDU, VDU, VBU.
  ➢ Modification of SMCs for updated process units.
  ➢ Modification of APS model to allow for new inter-site transfers between two refineries as part of major turnaround.
  ➢ ARW and custom Report modifications
  ➢ Rigorous testing of Model, Interfaces (for baseline update, Assay Import & Events Import) and Reports

Client – Shell Energy, Rheinland

Partner – Shell GS

2022-2023: Scheduling Model Implementation

Custom scheduling model development

❖ Refinery wide scheduling model development using Microsoft Excel with custom scheduling logics.

❖ Single and multi grade of gasoline blend optimization using solver Add-In.

❖ Summarized inventory and product lifting data with chart visualization.

❖ Plan vs schedule vs actual comparison.

❖ Validation of the model with test cases.

❖ User guide documentation.

Client – Dangote Oil Refinery, Nigeria

2018: Scheduling Onsite Support Services

> **Onsite scheduling and blending model support for APS and MBO**

❖ Provided technical and functional support for APS & MBO to utilize the system effectively.

❖ Supported modifications and testing related to APS integration data.

❖ APS model updates and ARW report modifications.
  - ➢ SMC update for process units
  - ➢ Crude assay updates
  - ➢ Scheduling logics in excel

❖ On-the-job training to schedulers for carrying out day to day activities.

Client – Yasref, Saudi Arabia

Partner – Wipro

Scheduling and logistics training

2023

Bangchak Refinery, Thailand
3 days onsite classroom training for refinery scheduling and logistics with more than 20 participants.

2017

Dubai, UAE
A comprehensive and advanced training program on refinery scheduling and logistics system.

Digitalization
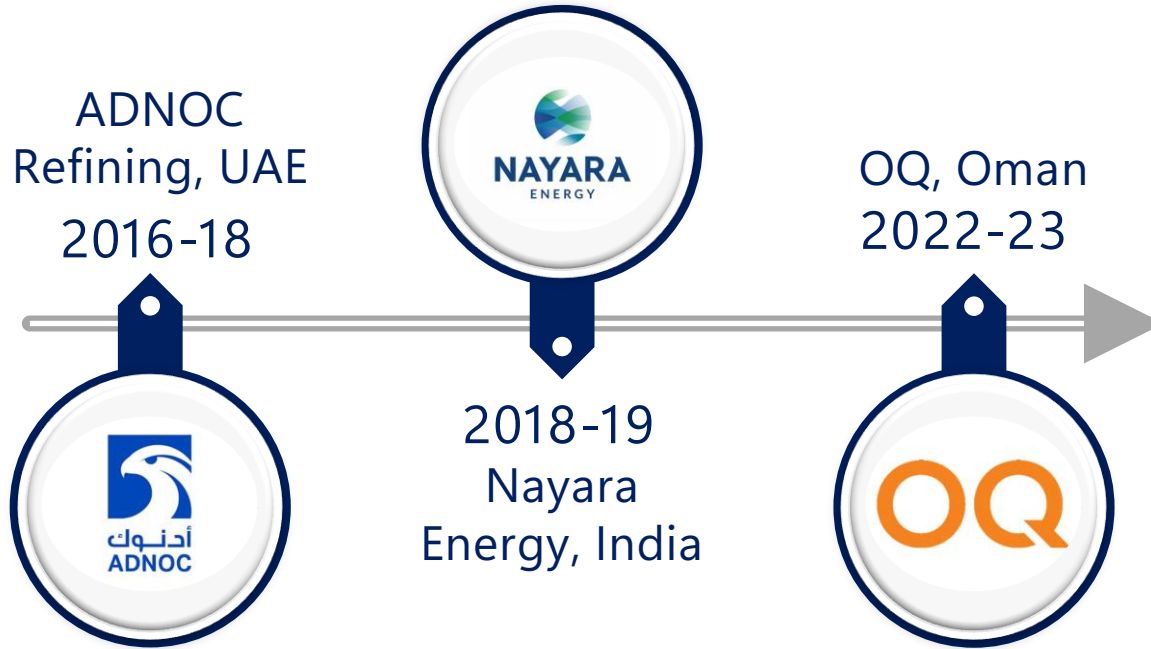
Digitalization

❖ Centralized data management system

❖ IT-OT application data integration

❖ Enterprise application architecture design

❖ Process data historian and analytics

❖ Dashboards - Self-service, interactive & role-based

❖ Reports automation - on-demand & auto-generated

❖ KPIs, notifications & asset performance management

❖ Digital logbook - operations & maintenance

Technologies

- inSis Suite
- Aspen Inmation
- Aspen InfoPlus.21
- Custom Data integration

Digitalization Projects

ADNOC
Refining, UAE
2016-18

2018-19
Nayara
Energy, India

OQ, Oman
2022-23

2018-2019: Digitalization Implementation

Implementation of refinery wide digitalization solution

Implementation of the digitalization solution using Jaajitech inSis Suite to automate the Reports, create real-time Dashboards, KPIs and Alerts:

❖ Manufacturing Information System (MIS) reports automation
  ➢ 35+ reports
  ➢ Process monitoring, daily refinery operation report, etc.
❖ 200+ refinery KPI management
  ➢ Operations, process, safety, reliability etc.
❖ Role based dashboards & data analytics
❖ Refinery Process Information Centre Portal (RPIC Portal)
❖ Email/SMS alerts and notifications
❖ Mobile access view

Client – Nayara Energy, India

Partner – Jaaji Technologies, India

2016-2018: Digitalization PMC service

> ## Project management consulting services - planning, scheduling, pricing & performance management

RIS (Refinery Information System) project scope covers integration and digitalization of multiple application for three ADNOC refineries:

- ❖ IZZIBS provided PMC services for data collection, design review (FDS/DDS), Factory / Site Acceptance Test (FAT / SAT), integrated FAT / SAT, Performance Acceptance Test (PAT), go-live workshop
- ❖ Inputs and testing of key data integrations
  - ➢ Planning (PIMS) reports automation
  - ➢ Pricing data to LP models
  - ➢ Scheduling (APS) output to Oil Movement Monitoring System
  - ➢ Integration between two Scheduling (APS) models
  - ➢ Plan vs schedule vs actual report
  - ➢ Performance management system (Honeywell TCD) testing

Client – ADNOC, UAE

Partner – TRUTECH, UAE

2022-2023: Digitalization PMC service

PMC for Integrated Management Systems (IMS)

Project scope covers PMC for scheduling models integration with IMS and other OQ applications:

❖ Define requirements for APS outbound integrations
❖ Design and provide technical inputs to Integration team
❖ IMS DDS review
❖ APS model review and define modelling changes required in APS model to meet integration requirements.
❖ SQL query development to extract scheduling & blending data required for IMS
❖ Participating in FAT, SAT and other testing phases of IMS project

Client – OQ, Oman

Partner – Tech Mahindra

Process Optimization & improvement studies

❖ Conduct profit improvement studies to optimize process and make it more efficient

Explore & evaluate new crude processing feasibility

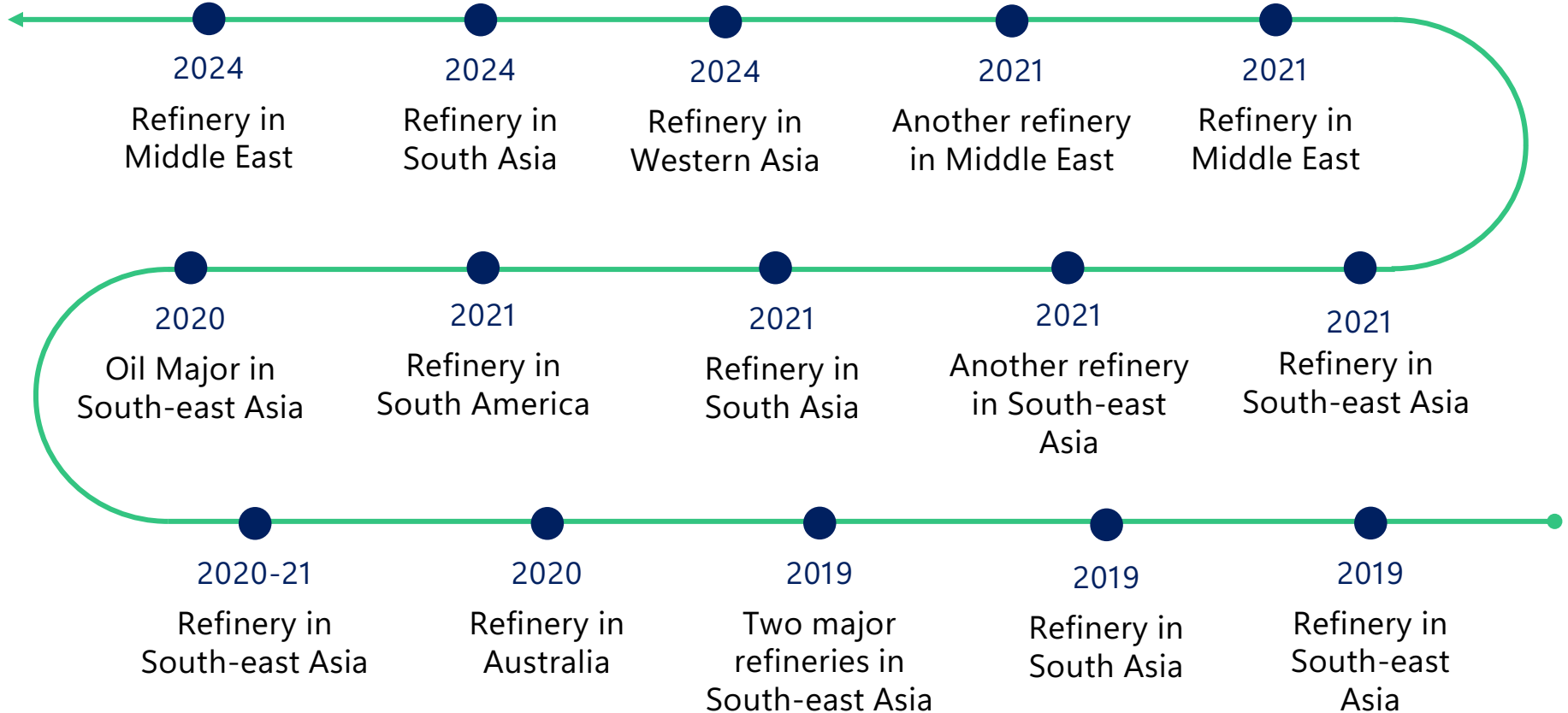Optimize process unit operations / parameters

Upgradation of low economic streams to high value products

Explore & evaluate new intermediate processing feasibility

Minimize QGA

Identifying bottlenecks

Consulting assignments with McKinsey

2024 — Refinery in Middle East

2024 — Refinery in South Asia

2024 — Refinery in Western Asia

2021 — Another refinery in Middle East

2021 — Refinery in Middle East

2020 — Oil Major in South-east Asia

2021 — Refinery in South America

2021 — Refinery in South Asia

2021 — Another refinery in South-east Asia

2021 — Refinery in South-east Asia

2020-21 — Refinery in South-east Asia

2020 — Refinery in Australia

2019 — Two major refineries in South-east Asia

2019 — Refinery in South Asia

2019 — Refinery in South-east Asia

2024: Consulting services

Consulting study for AIL octane booster blending with Gasoline

To enhance the understanding of techno-commercial valuation of the AIL octane booster in gasoline from the standpoint of refinery users:

❖ Develop excel based optimization models for valuation of different commercial scenarios for different refinery and traders.
❖ Technical analysis:
  ➤ Proposal of joint studies with Refineries.
  ➤ Conduct lab tests with AIL octane booster blends in gasoline sample to evaluate the impact on key specs.
❖ Commercial value analysis:
  ➤ Develop pricing correlation.
  ➤ Evaluation of octane enhancement with AIL octane booster
  ➤ Evaluation of naphtha upgradation with AIL octane booster
  ➤ Evaluation of Methyl tert-butyl ether (MTBE) vs AIL octane booster
  ➤ Evaluation of Pyrolysis Gasoline (Pygas), Naphtha and AIL octane booster

AARTI INDUSTRIES

Client – Aarti Industries Ltd., India

Process Modelling and Simulation

❖ Build, review and update rigorous steady state process simulation model

❖ LP vectors generation for LP models

❖ Re-calibration of rigorous steady state simulation models

❖ Facilitating and conducting test runs

Technologies

- Aspen Hysys
- Aspen Plus
- KBC Petro Sim

2024: Simulation Model Support

Simulation model tuning & integration using KBC Petro-SIM

- ❖ CDU Refinery plant simulation model tuning using KBC Petro-SIM.
- ❖ Simulation Model integration with third party historian.
- ❖ Two separate simulation models were developed as following:
  - ➢ One model for calculating fouling factors of heat-exchangers where crude side temperatures are defined from historian tags.
  - ➢ Second model to simulate the exchangers with fouling factors and running the various scenarios for e.g., the effect if one or more heat exchangers are bypassed.
- ❖ Two separate excel files are built to integrate the data from historian to the simulation model and run the model from excel.
- ❖ Simulated scenario with optimized crude exchanger shuffling based on pinch technology principles to enhance process efficiency.

Client – McK client, South Asia

McKinsey & Company

Partner – McKinsey & Company

Manufacturing Information System (MIS)

- ❖ Production accounting system
  - ➢ Data integration with production systems such as oil movements, LIMS, ERPs and web based manual forms
  - ➢ Production accounting / reconciliation
  - ➢ Customized reporting
- ❖ Oil movement systems
  - ➢ Production tracking, monitoring, trending, controlling and analyzing oil movements
  - ➢ Integration with scheduling and production accounting

Technologies

- Aspen Operations Reconciliation and Accounting (AORA)
- Aspen Unified Reconciliation and Accounting (AURA)
- Aspen Tank and Operations Manager (ATOMS)
- AVEVA Production Accounting

Contact Details

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